

INTELLECTUAL CAPITAL REPORTING AND CORPORATE FINANCIAL PERFORMANCE OF QUOTED FIRMS IN NIGERIA

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ABSTRACT

The aim of this study is to explore the empirically extent to which Intellectual Capital Reporting influences the corporate performance of quoted manufacturing firms in Nigeria. The study used secondary data of twelve (12) manufacturing firms listed on the Nigerian Stock Exchange (NSE) from 2011-2015. Public's Value Added Intellectual Coefficient (VAICTM) model was modified in measuring the Intellectual Capital indices and x-raying their impact on corporate performance. The data collected were analyzed using multiple regressions with the aid of SPSS version 22 and e-views version 8. The study findings showed a mixed result: Human Capital has a significant impact on corporate performance; Structural Capital has positive & negative relationship with market share & debt-equity ratio respectively while Relational Capital showcased a downhill relationship with corporate performance. We conclude that the inputs by proficient and competitive staff of manufacturing firms yield consistent return on the share of the organisation within the industry and will definitely grant the organization the status of a market leader in the long run. It is recommended that firms should harness the benefits accruable in external relationships, while practitioners must recognize that although human capital (HR), structural capital (ICT) and relational capital (Marketing) departments of manufacturing firms are typically disparate units that often do not integrate their services, they must attempt to reconcile their divergent views and coordinate their various processes so that a more holistic perspective on the intangible value of the firm can be more readily realized.

Keywords: Intellectual Capital Reporting; Corporate Financial Performance, Market Share, Manufacturing Firms and Return on Equity.

Introduction

In the recent years, there has been a growing concern from stakeholders of organizations that corporate annual reports must showcase at a glance, the “health” of the firm. This “health” of the organization represents its corporate performance. Corporate performance is a composite assessment of how well an organization executes on its most important parameters, typically financial, market and shareholder performance (Aboodg & Lev, 2000; Al-Ali, 2003; Bassi, 2006; Bratianae, 2009; Chan, 2009; Holim, 2010; Ibakule; Oba & Nwafor, 2016).

The accounting profession therefore, is currently more than ever being challenged to reinvent itself. This move emanates from the inherent deficiencies of conventional accounting, which has failed to recognize the intangibles/knowledge acquired by organization as non-current assets. Therefore, there is need for a more elaborate platform of financial reporting that could capture knowledge and other Intellectual Capital (IC) components in quantitative terms in financial information for informed decision-making. The continuous exclusion of these IC components implies the neglect of the enormous intangible values and investments incurred by firms in the acquisitions and development of intellectual properties (Onyekwelu & Ubesie, 2016).

This practice has aptly culminated in the undervaluation of firms and the often huge gap that exists between book value and market value of firms. The reward earned by firms through their investment in intellectual properties is often attributed to intellectual capital and this is argued to be a major value creator (Onyekwelu & Ubesie, 2016). The task of measuring the performance of intellectual capital in organization becomes a major step to investigating the reasons for low or high performance of workers. Hence the measurement of corporate performance needs to include the firm’s total resources (physical and intellectual) as the wealth of the modern economy no longer depends on only physical assets but on the contrary it depends on intangible assets (Uadiale & Uwuigbe 2011).

Owing to the need for manufacturing organizations to reflect the value of their firms by copiously reporting the value created by the intellects, it becomes essential that organizations’ performance be measured on regular basis in order to ensure sustainability. Numerous papers and books have come to the conclusion that our traditional accounting systems do not suffice for today’s organizations, whose value creation often depends more on intellectual capital type resources rather than monetary or physical resources (Burgman, Roos, Boldt, & Pike, 2007). It is pertinent therefore, to note that accounting research is currently focused on the utility paradigm, which stresses the need for accounting information to be truly relevant to good decision making by its users (Adam, 1963; Bath & Kasznik & McNichlas, 2001; Bassi & Mcurra, 2006).

However, accounting in the public sector has traditionally focused on financial and budget information (Martin and Moneva, 2009), ignoring other types of information such as data on the social responsibility of their activities (Melle, 2007) or the key intangible elements in their value creation (Ramirez, 2010; Hussi, 2004). Local manufacturing firms are a prime

example of this, since the information provided focuses on guaranteeing financial control of the organization without paying attention to the needs of other groups of interest (Martin, 2006). Gray (2006) considered that the information supplied in traditional financial reports is not enough, thus he highlighted the need to establish more extensive communication and accounting mechanisms which take into account the needs of the different groups of interest. Consequently, the current socio-economic climate creates the need for local manufacturing firms' financial statements to provide all the relevant information on their activities and the key factors of their success – their intangible resources (Becker 1996; Bozzolan, 2003)..

The growth of the knowledge-intensive economy over the last two decades has precipitated considerable interest in the role of intellectual capital in organizations. There seems to be a general consensus that intellectual capital is an integral part of a firm's value-creating processes and is important for creating and maintaining competitive advantage (OECD, 2006; Holland, 2006). Indeed, firms invest heavily in intellectual capital (also called intangible assets), such as research and development, brand development, franchises, customer-base creation, and staff development. However, these internally generated assets are either immediately expensed in the financial statements or arbitrarily amortized and therefore are not fully reflected in the financial statements. Consequently, the information asymmetries between firms and users of financial reports have become more acute (Barth, Kasznik, & McNichols, 2001; Holland, 2006), particularly given that intellectual capital investments are unique to specific firms and cannot be inferred by looking at other firms. This has precipitated debate about the value-relevance of traditional financial reports given their failure to fully reflect information about the corporate value-creating processes and activities of the firm (Francis & Shipper, 1999; Lev, 2001).

A fundamental issue surrounding the debate about corporate reporting is whether firms benefit from improved disclosure via a lower cost of capital. A commonly expressed view by academics (Leuz and Verrecchia, 2000; Lev, 2001), Practitioners (Levitt, 1998), accounting bodies and regulators (FASB, 2001; IASB, 2002; OECD, 2006) is that enhanced disclosure lowers the cost of capital. The logic of this view derives from the theory which suggests that greater disclosure reduces information asymmetry between managers and investors thus enhancing market liquidity which lowers the required rate of return (Diamond & Verrecchia, 1991). However, empirical research on the relationship between disclosure and cost of capital is inconclusive (Botosan, 1997; Richardson & Welker, 2001; Botosan & Plumlee, 2002; Gietzmann & Ireland, 2005). Further empirical work suggests that different types of disclosure may affect the cost of capital in different fashions. Consequently, Botosan (2006) calls for additional research 'to further our understanding of the impact of different types of disclosure on cost of equity capital (Carrel & Dittrich, 1998; Callan, 1986; Cabrita & Bontis, 2008).

With the emergence of the knowledge –based economy, greater attention has been drawn to the inability of the traditional financial reporting framework to meet the needs of users (Barsky, Catanach, Rhoades-Catanach, & Thibodeau, 2003; Beattie, McInnes, & Fearnley,

2004; Byrnes & Henry, 2001; Collins, 2003; Holland, 2004). Furthermore, the widening gap between market and book values also suggest that the traditional financial reporting framework presents an incomplete account of a firm's value (Guthrie et al., 2006; ICAEW, 2003; Roselender & Fincham, 2003).

Given the increasing importance of IC to individual organizations and to national economies, it is therefore clear that without effective reporting of IC, the representation of organizations' activities conveyed by annual reports risks becoming increasingly irrelevant (see, for example, Beattie et al., 2004; Holland, 2004; Roselender & Fincham, 2003; Task Force on Human Capital Management, 2003). Research has demonstrated that managers of many publicly quoted companies are acutely aware of the need for corporate reporting to continue to adapt so that it effectively communicates information about increasingly important knowledge-based value drivers to capital markets (see, for example, Holland, 20014 for evidence of this in the UK context). Despite the development of several models for measuring and reporting IC (Brennan & Connell, 2000; Celemi, 1998; DATI, 1998; Edvinsson, 1997; Edvinsson & Malone, 1997; Kaplan & Norton, 1992, 1996; Petty & Guthrie 2000; Society for knowledge Economics, 2005; Sveiby, 1988; Sveiby, 1997), there is little reporting regulation in this area- notwithstanding its recognized growing importance to understanding organizational performance and value (Guthrie & Petty, 2000).

As the reporting of IC has been largely voluntary, it has the potential to be inconsistent between organizations. Lack of consistency in rendering an account of IC may hamper comparability between organizations. It also allows the possibility of 'creative' biased Intellectual Capital Reporting (ICR), with organization focusing on the positive aspects of their management of IC. According to Danish Agency for trade and industry (1997), intellectual capital accounts constitute a tool to represent the intellectual capital of a company. Through the accounts, a company both internally and externally communicates its value as being highly influenced by its intellectual capital, that is, the assets related to the employee knowledge and expertise. This will increase the customer confidence in the company and its products.

The Danish Agency memorandum, states that intellectual capital also referred to as "knowledge capital" helps to explain the difference between the company's market value and book value because the intellectual capital is not included in financial accounts. This is so because traditional accounts are prepared to show a firm's financial position. The intellectual capital account thus helps pave way for the company to its future. Many studies have been conducted on intellectual capital in many developed countries of the world because of its vital role in enhancing corporate performance (Meditinos, Šević, & Tsairidis, 2009, Ahmad & Mushraf, 2001, Cabrita & Bontis, 2008).

Knowledge being the new engine of corporate development has become one of the great clichés of recent years, as such, there is no doubt that successful companies tend to be those that continually innovate, relying on new technologies, the skills and knowledge of their

employees rather than assets such as plants and machinery (CIMA, 2001). Effective management of knowledge-based intellect and intangible assets thus has become a key to corporate success, especially in the knowledge-based environment like ours (Tseng and Goo, 2005; Quinn, Anderson, & Finkelstein, 1996).

The difference between the market value and book value of a company is said to represent its intellectual capital (Tseng and Goo, 2005; Edvinson & Malone, 1997; Roos & Roos, 1997; Sveiby, 1997; Bukh, Larsen, & Mouritsen, 2001). Intellectual capital can be seen as the knowledge-based equity of a company (IFAC, 1998). It includes assets relating to employee knowledge and expertise, customer confidence in the company and its products, brands, franchises, information systems, administrative procedures, patents, trademarks and the efficiency of company processes (Danish Trade and Industry Development Council 1997, Ernest & Young, 2000).

With this growth in significance of intangible, knowledge-based, intellectual factors (also known as intellectual capital) in driving business success, it is important that accounting and reporting practices develop to effectively account for these major aspects of business performance. In the area of corporate reporting, accountancy practices historically evolved to enable managers to report to external stakeholders (primarily providers of capital) on managers' stewardship of tangible resources (Edvinson & Malone, 1997). Now financial accounting and reporting practice needs to continue to adapt to provide stakeholders (especially shareholders and investment advisors) with effective information regarding the key Intellectual Capital (IC) value drivers of any business. Without the provision of such information, corporate reports would be an ineffective medium for stakeholders to rely upon when making decision, such as investors' decisions regarding whether to buy, hold or sell shares (Holland, 2004, 2006).

Over the past century, national economies have witnessed major transformations in the factors of economic production. The industrial economy (making tangible goods) in many western nations has largely been superseded by the service economy (delivering knowledge solutions). In contemporary times, many organizations and national economies derive their competitive advantage from intangible, knowledge intensive resources – even where their main products derive from tangible forms of production (Boedker, Guthrie & Binney, 2007). Within this context, managing relationships, business structures and processes, information systems and technology, and human capital are critical to organizational wealth and sustainability (Holland, 2004, 2006; Roslender & Fincham, 2003).

Although the intellectual capital concept was first developed as a framework to analyze the contribution of intellectual resources in for-profit enterprises, it was soon taken over by public and non-profit organizations due to its importance (Mouritsen, Thorbjørnsen, Bukh, & Johansen, 2004; Kong & Prior, 2008; Ramirez, 2010). Also, there is a growing interest in applying an intellectual capital approach in local manufacturing firms, since among the main goals of manufacturing companies, there is the production and diffusion of knowledge and

their most important investments are in research and human resources (Leitner & Warden, 2004; Sánchez, Elena,&Castrillo,2009; Brătianu, 2009; Veltri, Mastroleo, & Schaffhauser, 2012; Wu, Chen,& Chen, 2012). The local manufacturing companies are, therefore, an ideal framework for the application of the ideas related to intellectual capital theory. Necessities like the increasing stakeholder demand for greater transparency, the increasing demand for quality goods at affordable prices, the increasing competition between local production and imports, and greater autonomy, push manufacturing companies towards the adoption of new reporting systems which should necessarily incorporate intangibles (Sánchez et al., 2009).

Accounting regulations around the world, for example, the Accounting Standards Board in the UK (before adopting IFRS), issued guideline (such as the Operating and Financial Review) to assist firms in reporting information, including intellectual capital information. Indeed the Disclosure and Transparency Rules (FSA, 2007) and the business review (Companies Act, 2006) require firms to report on some intellectual capital information. Inspired by such calls and guidelines, a number of studies investigated the extent to which firms report intellectual capital information in annual reports and other media of communication (Bozzolan, Favotto, & Ricceri, 2005; Unerman, Guthrie, & Striukova, 2007; Guthrie, Cuganesan, & Ward, 2007). However, there is a dearth of research on intellectual capital reporting and its effects on corporate performance in Nigeria.

The rest of this paper is organized as follows: Section ii provides the theoretical framework, concept and review other literature related to the phenomenon of interest. Section iii presents the methodology. Section iv analyses the data and discusses the empirical results. While section v concludes the paper and makes recommendations.

Review of Related Literature and Hypothesis Development

It is imperative to anchor the concept of Intellectual Capital Reporting and Corporate Performance within the framework of certain theories that have been propounded to suit their essence.

Knowledge creation based theory, Nonaka (1994) construed that organization knowledge creation is the process of making available and amplifying knowledge created by individuals as well as crystallizing and connecting it to an organization's knowledge system. There are two types of knowledge: tacit and explicit. Tacit knowledge is subjective and experience based knowledge that cannot be expressed in words, sentences, numbers or formulas, often because it is context specific. This also includes cognitive skills such as beliefs, images, intuition and mental models as well as technical skills such as craft and knowhow. Explicit knowledge is objective and rational knowledge that can be expressed in words, sentences, numbers or formulas (context free).

Some evolutionary paths that have impacted organization and management theory have been described as the definition of knowledge and the concept of knowledge creation. More specifically, research established that knowledge vision, activism, organizational forms and

leadership impact organizational knowledge creation (Nonaka & Takeuchi 1995; Nonaka, Von Krogh & Voelpel, 2000). As organizational knowledge creation theory evolved further, it also shed new light on the nature of the firm and advanced the concept of “knowledge strategy” (Nonaka & Toyama 2005). It is argued that while new knowledge is developed by individuals, organizations play a critical role in articulating and amplifying that knowledge. Since this theory supports the construct of Structural Capital as used in this work, the researcher found it useful as a tool that will foster, when adequately applied, the overall performance of manufacturing firms in Nigeria.

Intellectual Capital Reporting (ICR)

There is, considerable support within the accounting literature for the analysis of company performance using annual report, stating that statutory regulations require these reports to be produced on a regular basis, and they therefore provide a consistent historical of the company. Hines (1988) argues that annual reports are probably the most important documents for constructing a company’s social image. Tilt (1994) supports this view, suggesting that companies can symbolically demonstrate values and views to the relevant public through the annual report. Campbell (2000) provides two further reasons to support the use of annual reports. Firstly, annual reports are the most widely distributed of all public produced documents of a company, and, secondly, management has complete editorial control of the discretionary disclosure of information in the annual report. Tay and Parker (1990) argue that actual reporting practices may be assessed more accurately from annual reports.

Sveiby (1997) supports this view by arguing that annual financial statements will always remain the centerpiece of corporate communication, and that their historical and symbolic values are unrivalled, despite the existence of other methods of conveying company data. The question arises of how traditional annual reports relate to the larger measurement of intellectual capital. Annual reports offer the best feedback for establishing whether or not intellectual capital is performing. If a certain intellectual capital index or indicator, such as customer satisfaction or employee morale, never makes itself felt in the income statement or balance sheet, then it actually measures nothing of value. As intellectual capital develops and its measures and forms become standardized, it will be the financial test that will play a crucial role in establishing those standards. Much as intellectual capital is considered a major contributor in the value-creating processes of the firm (Beattie and Thomson, 2007).

The values involved with these intangible assets are either immediately expensed in the financial statements or arbitrarily amortized, and therefore are not adequately reflected in the financial statements. For example, Generally Accepted Accounting Practice (GAAP) attempts to measure and record intangible assets. The International Accounting Standard (IAS 38: Intangible Assets) defines an intangible asset as an identifiable non-monetary asset without physical substance, it being probable that future economic benefits attributable to this asset would flow to the entity and its cost could be measured reliably. Recalling that as already discussed, intellectual capital consist of knowledge, IAS 38 states that knowledge

may give rise to future economic benefits. The problem arises whether an entity controls those economic benefits (a key element in the definition of an asset). According to IAS 38, an entity only controls those benefits if the knowledge is protected by legal rights such as copyright or restraint of trade agreements or by a legal duty on employee to maintain confidentiality. IAS 38 states that an entity may have a team of skilled workers and be liable for identifying incremental staff skills leading to future economic benefits from training. However, the entity usually has insufficient control over the expected future economic benefits arising from a team of skilled staff and from training for these items to meet the definition of an intangible asset. Paragraph 16 states that an entity may have a portfolio of customers or a market share. In the absence of legal rights to protect or in other ways to control the relationships with customers or the loyalty of the customer to the entity, then the entity usually has insufficient control over the expected economic benefits from customer relationship and customer loyalty. In the light of the evidence on the growing gap between market and book values of firms, it has been argued that the traditional financial reporting model has become of limited relevance to investors because it fails to reflect information about a wide range of value-creating intangible assets (Francis & Schipper, 1999; Lev & Zarowin, 1999; Baskey et al , 2003). The Jenkins Report (AICPA, 1994) in accepting this fact suggested that *...a large part of the immediate problem...is the limited usefulness of today's financial statements. They do not, for example, reflect information-age assets, such as information capacity for innovation, and human resources. As a consequence, there have been a declining proportion of the information inputs to investors' decision making....* As an example, the 'new' intangibles such as employee competencies, customer relationships and computer and administrative systems are not recognized in the traditional financial reporting model. Although regulatory reporting requirements require traditional intangibles such as brand equity, patents and trademarks to be incorporated in the financial accounts, they are only recognized if they meet some stringent criteria (Holland, 2003; Beattie & Thomson, 2004).

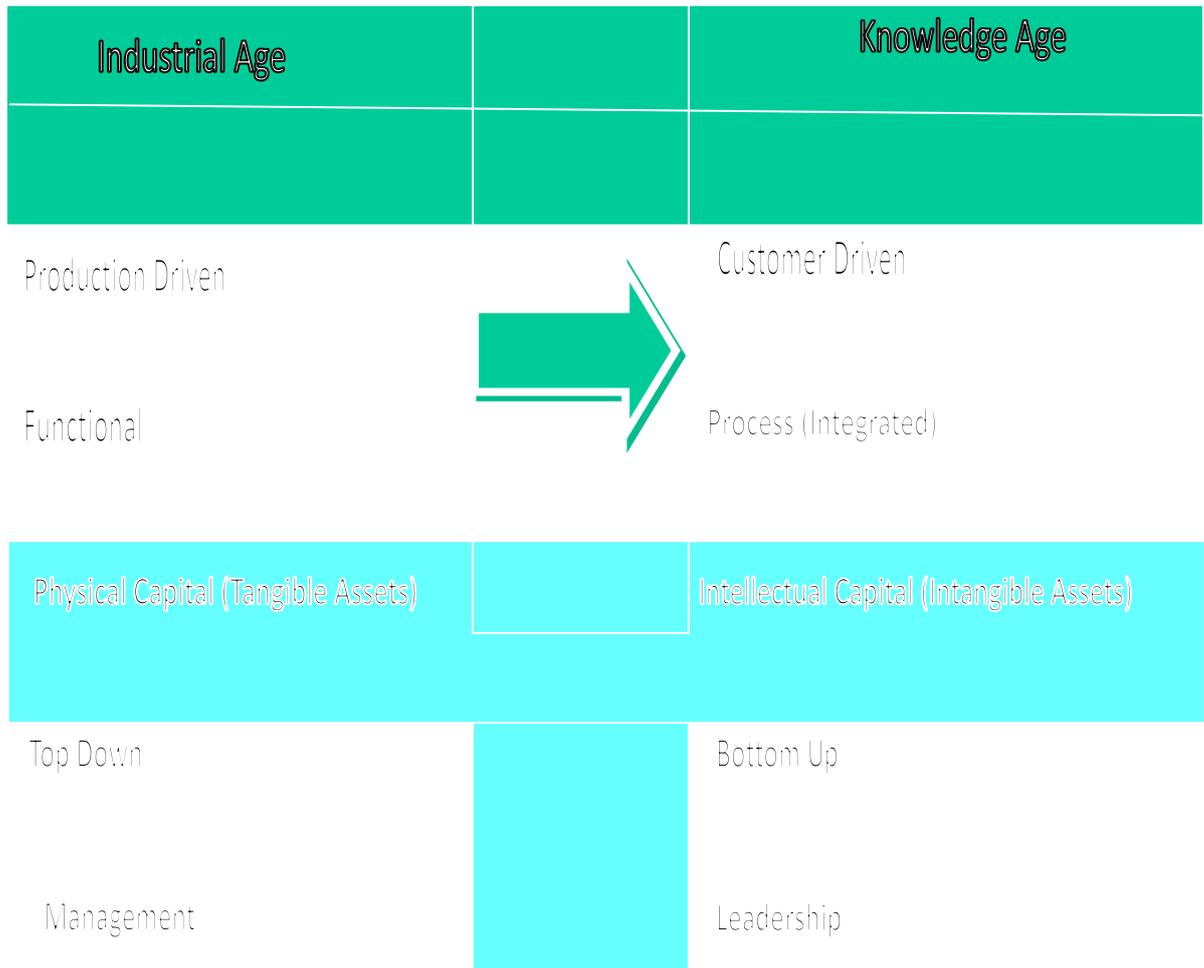
Bukh (2003) argues that the traditional reporting model is not able to reflect investments in intangible assets and that this failure of reflection has given rise to increasing information asymmetry between firms and users (Rylander, Jacobsen, & Roos, 2000; Barth et., 2001; Holland, 2003) which has increased opportunities for moral hazard, adverse selection and other opportunistic behavior by managers (Aboody & Lev, 2000; Holland, 2006). Consequently, this has caused concerns within the capital market on the ability and relevance of the accounting number reported in the financial reports for making economic decisions (Barth et al., 2001). Eccles & Mavrinac (1995) and Lev (2001) contend that reporting of investments in intellectual capital in the firm is an important way of bridging this information asymmetry gap between managers like physical assets (Bontis et al., 1999; Mohiudin, Najibullah, & Shahid, 2006), which implies that knowledge and information become even more valuable to companies than before. Having a sound knowledge base in the corporation means that in the future years, the company can start leveraging that base to create even more knowledge, thereby increasing its advantage on the competitors (Arthur, 1996).

The fact that investors and financial markets attach values to the skills and expertise of CEOs and other top management (Bontis, 2001) can be understood by observing stock prices reacting to change in management. If intellectual capital did not exist in organizations then stock process would not have reacted to actions such as changes in managements, an element of human capital not recognized in financial statements as assets (Bontis, 2001). This fact questions the reliability and adequacy of accounting mechanisms that companies use, developed a few centuries ago to help merchants in the feudal era, to make the key success factors of the information age visible (Mohiuddin et al., 2006). Unfortunately, being invisible and intangible, a measurement value of knowledge cannot be captured very well by any of the traditional measures-accounting or otherwise, that corporations master in their everyday operations (Chen et al., 2005). Intellectual capital can be an objective proxy for the value of corporate knowledge (Hussain, Chakraborty, & Rahman, 2010; Mohiuddin et al., 2006). Companies therefore require a reliable, accurate, and adequate measure of corporate performance which objectively reflects the intrinsic components of intellectual capital and sufficiently demonstrates its true impact on company value at the market to narrow the gap between book and market values.

The Motivation and Rationale for Electing Intellectual Capital Reporting by Nigerian Manufacturing Firms

Within the last two decades, there has been increasing attention from both the academia and practitioners on the need to recognize and record Intellectual Capital (IC). IC was discerned as a key value driver of firms operating in the new economy as well as the instruments of determining the value of enterprises (Edvinsson & Malone, 1997). The operation and production of businesses involve the use of both physical capital and Intellectual Capital. The former refers to tangible assets such as land, machinery, and monetary capital while the latter refers to intangible assets such as knowledge, creativity, skill and corporate culture. In other words, IC can be viewed as the aggregation of all knowledge-based resources. Traditional business, like mass production in the agricultural and industrial sectors, emphasized the employment of physical capital as a means to create firm' value (Bontis, 2001). However, there has been a change from the traditional economy or the industrial age to the knowledge-based economy or the information age (see figure 2.1). Competitive advantage of these new businesses has shifted from physical capital to IC (Chareonsuk & Chansa-ngavej, 2008; Goh, 2005). IC allows a modern company to improve its competitive advantage through the management of knowledge, organizational techniques, professional skill, customer relationships and experience. A firm can sustain and enhance its profitability by establishing a knowledge base and transforming it into a business resource (effectively through capitalization). Hence, IC has become a most powerful factor for all companies, especially those in the knowledge based economy, in generating their competitive competence and achieving corporate success (Wang, 2008). The manufacturing companies in Nigeria being part of this new economy therefore, must not only recognize the contributions of IC but must pay keen attention to reporting IC so as to maintain leadership and retain the confidence of stakeholders for future patronage that will lead to both their sustenance and survival.

The shift from industrial age to the knowledge age



INTELLECTUAL CAPITAL REPORTING AND CORPORATE PERFORMANCE

Corporate performance is a composite assessment of how well an organization executes on its most important parameters, typically financial, market and shareholder performance.

Business performance is defined as measurable result of the level of attainment of organizations goals or measurable result of the organization’s management of its aspects (ISO 1999), or mechanism for improving the likelihood of the organization successfully implementing strategy. Business performance evaluation is the process to help management decisions regarding an organization’s performance by selecting indicators, collecting and analyzing data, assessing information against performance criteria, reporting and communicating and periodically reviewing and improving the process (Coelho, YIvisaker & Turkstra, 2005).

Financial statements, prepared by following commonly accepted accounting principles, have rarely been agreed upon to be a sufficient measure of corporate performance to assist in objective evaluation of a firm in the market, as evident by the growing gap between market and book values of a firm (AI-Ali, 2003; Hussain et al., 2010; Lev & Daum, 2004; Lev, 2001; Lev & Radhakrishnan, 2003; Lev & Zaowin 1999). This apparent deficiency of traditional

financial accounting methods has induced many researchers to carry out investigations on the role of intellectual capital, an element not fairly recognized in the financial statements, in identifying the relationship between share price on the stock market and the book value extracted from the financial statements (Cezair, 2008; Hussain et al., 2010; Lev, 2001). Intellectual capital plays a significant role in the modern approach to value creation and hence the management of intellectual capital has evolved as the core of enterprise operation in the present knowledge era (Gu & Lev, 2001; Lee & Guthrie, 2010).

Although a firm's market and book values have hardly ever been exactly the same, the gap between market and book values in most countries have been increasing at an alarming rate over the past few years (Lev, 2001). This increasing gap has drawn wide attention for researchers to explore any invisible value unattended in the financial statements (Lev & Radhakrishnan, 2003; Lev, 2001; Lev & Zaowin, 1999). Recent studies suggest that knowledge and information are physical assets (Bontis, Dragonetti, Jacobsen, and Roos, (1999); Mohiuddin et al., 2006), which implies that knowledge and information become even more valuable to companies than before. Having a sound knowledge base in the corporation means that in the future years, the company can start leveraging that base to create even more knowledge, thereby increasing its advantage on the competitors (Arthur, 1996). Corporate performance analysis is a subset of business analytics/business intelligence that is concerned with the "health" of the organization, which has traditionally been measured in terms of financial performance. However, in recent years the concept of corporate health has become broader.

Like the concept of business sustainability, corporate health is now considered to involve not only financial considerations but also other factors (that is non-financial performance) including social responsibility and reputation, innovation, employee morale and productivity. As such, performance is no longer measured only on key performance indicators (KPI) such as revenue, return on investment (ROI), overhead and operational costs. Since it takes the aggregate of all these factors to sufficiently assess the health of a business concern, and since the image of manufacturing firms are boosted more by the "intangibles", it will be inadequate to use only financial performance to measure the growth of an organization. This is why this research is measuring corporate performance of manufacturing firms in Nigeria. The need for performance measurement derives from the fact that if organizations cannot measure performance, they cannot manage their business (Kaplan & Norton, 1996); and if organizations are to survive and prosper in information age competition, they must use measurement and management systems derived from their strategies and capabilities (O'Reilly, Wathey, Gelber, 2000).

Hypothesis Development

H₀₁: There is no significant relationship among Human Capital, Structural Capital, Relational Capital and Firms' Market Share of quoted companies in Nigeria.

The vital hypothesis of this study is a welcome forgoing discourse, leading as to predict a priori a negative Rivers State among Human Capital, structural Capital, Relational Capital and Firms Market Share of quoted companies in Nigeria

Methodology

This research launched an empirical investigation into the relationship between intellectual capital reporting and corporate performance of quoted manufacturing firms in Nigeria. The study will use quasi experimental design for its analysis. Quasi experimental design as used in the social sciences is an empirical study used to estimate the casual impact of an intervention on its target population (Dinardo 2008). It involves selecting groups, upon which a variable is tested, without any random pre-selection processes; implying that there is no control element being studied as obtainable in the pure sciences.

Secondary data will be deployed for the study. The data will be retrieved from the annual reports and accounts of the sampled manufacturing companies, particularly, particulars from their Statement of Profit or Loss and other Comprehensive Income, and Statement of Financial Positions covering the period from 2011 to 2015; sourced from the Nigerian Stock Exchange portal and websites of the sampled manufacturing companies, consistent with previous research (Goh, 2005; Mavridis, 2005; Joshi, Cahill, Sidhu & Kansal, 2013).

The ex-post facto research design was adopted for this study. This was chosen based on its ability to generate data from documentary records with ease of verification devoid of disputes. The researcher will adopt multiple regressions to enable a time series analysis of the annual reports and accounts of the companies studied. The multiple regression (Ordinary Least Square) will be employed because of its strength in exhibiting a meaningful relationship between two or more variables in consonance with previous studies (Pulic 1998, Chu, Chan, & Wu 2011, 2003, Maditinos, Chatzoudes, Tsairidis, & Theriou, 2011).

To achieve this purpose, the following will be done:

Firstly, a unit test will be carried out to ascertain the level of stationarity of all variables in the model. This will be done to estimate the relationship between variables using time series. To achieve this purpose, the Augmented Dickey – Fuller (ADF) unit root test approach will be adopted because of its wide usage (Maddala 2001). Secondly, pair wise Granger causality will be used to ascertain if one variable Granger cause the other, and the direction of the causality. The Granger test thus will help to predict the future values of time series using Econometric e-views (e-views) version 8.

Finally, Bivariate and multivariate statistical models will be adopted in ascertaining the correlation and extent of influence of the predictor variable on the criterion variables of the study. The analyses will be conducted using Statistical Package for Social Sciences (SPSS) version 22.

Model Specification

In an attempt to ascertain the influence of Intellectual Capital Reporting on the Corporate Performance of quoted manufacturing companies in Nigeria the researcher specified the following econometric model:

Functional Equation

$$Y = f(X_1, X_2, X_3) \dots\dots\dots 1$$

$$CP = f(HCE, SCE, RCE) \dots\dots\dots 2$$

Where Y represents the criterion variables (MSH, DER) and X₁, X₂, X₃ represent the predictor variables (HCE, SCE, RCE).

Mathematical Equation

$$CP = \alpha_0 + X_1 \beta_1 + X_2 \beta_2 + X_3 \beta_3 \dots\dots\dots 3$$

Therefore,

$$MSH = \alpha_0 + \beta_1 HCE + \beta_2 SCE + \beta_3 RCE + \varepsilon \dots\dots\dots 4$$

Econometric Equation

$$CP = \alpha_0 + X_1 \beta_1 + X_2 \beta_2 + X_3 \beta_3 + \dots\dots\dots X_t \beta_t + \varepsilon \dots\dots\dots 5$$

Where

CP = Corporate Performance

HCE = Human Capital Efficiency

SCE = Structural Capital Efficiency

RCE = Relational Capital Efficiency

MSH = Market Share

MVAIC= Modified Value Added Intellectual Coefficient

α_0 = Constant

β = Beta

ε = Stochastic error term

Empirical Results and Discussion

This section presents empirical results of the analysis performed on the dated collected and multiple regression analysis were carried out with the aid of the econometric e-view version 8 and statistical package for social sciences (SPSS) version 22.

Base on the Biviarate Analysis, the empirical results indicates that human capital has very strong positive correlation with market share (at .529) and a very strong negative correlation with debt-to-equity ratio (at -.390). In the same vein, structural capital has very strong positive correlation with market share (at .278). Relational capital on the other hand has strong negative correlation with market share (at-.184).

H0₁: There is no significant relationship between Human Capital, Structural Capital, Relational Capital and firms' Market Share in Nigeria

Model 1 = hypothesis 1:

The results shows the model summary with a correlation coefficient 'R' = .561 and $R^2 = .315$ coefficient of determination. Therefore, the predictor variables used in regression model have described 31.5% of the variations taking place in corporate performance in Nigeria. Also, the Durbin Watson valve of 2.475 indicates that there is no problem of autocorrelation among the predictor variables.

The ANOVA in table in appendix 2 is aimed at testing whether the overall regression model is a good fit for the table. The result shows that the predictor variables statistically significantly ($F= 8.568$; Sig.000) predict the criterion variable. Meaning the regression model is a fit of the data

The coefficient table in appendix 2 indicates that Human Capital have positive and significant ($\beta=.480$, $t= 4.160$ and sig., =.000) effect on Market share. Also, Structural capital positively correlate ($\beta=.137$, $t=1.190$ and sig., =.239) with market share. However, Relational capital indicated a downhill relationship ($\beta= -.122$, $t= -1.098$ and sig., =.277) with Market share. Therefore the null hypothesis was rejected.

Conclusion and Recommendations

Drawing from the analysis of the data derived from the annual reports of manufacturing companies from 2011 to 2015, it follows that Human Capital have positive and significant effect on Market share of manufacturing firms in Nigeria. This implies that the inputs by proficient and competitive staff of manufacturing firms yield consistent return on the share of the organization within the industry.

It then follows that continuous training and utilization of motivated staff will definitely grant the organization the status of a market leader in the long run. Also, Structural capital positively correlates with market share in the manufacturing activities in Nigeria. This is a showcase of the benefits of a worthy combination of intellectual property and infrastructural artifacts within the organizations. Again, Relational capital indicated a downhill relationship with Market share. The implication could be that manufacturing companies have either not been able to harness the growth potentials derivable from their external relationships or if they are harnessing, they have not been able to reflect same in the financial reports. The empirical findings having further pointed out a positive relationship between the market share of manufacturing firms and Intellectual Capital Reporting, it therefore supposes that IC is a vital resource that drives market performance of a manufacturing firm. The findings therefore support the statement that enterprises with a higher degree of IC will present a higher market performance. The highly positive relationship between HC, SC and MSH is indicative that investors appreciate the contribution that both tangible and intangible assets make in the value creation process. This is consistent with the previous findings of Riahi-Belkaoui (2003) and Chen, et al. (2005). Based on the above, we recommend that:

1. Since HCE and SCE have been shown to be key drivers of value creation especially MSH, 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. They should equally organize programmes that will increase their structures and enhance information technology. These could stimulate better Market Share.
2. Firms should harness the benefits accruable in external relationships as no one firm is an island. Customers, suppliers and others must be seen as partners in progress and where they have been recognized; their activities should be well reported.

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