Quest Journals
Journal of Research in Business and Management
Volume 2 ~ Issue 10 (2014) pp: 11-25
ISSN(Online) : 2347-3002
www.questjournals.org

Research Paper

Spotlighting Intellectual Capital to Compete For the Future

[1]Anthony Thiagarajan, Dr. Utpal Baul[2]
Research Scholar Department of Management, Birla Institute of Technology, Ranchi, India
Professor, Department of Management, Birla Institute of Technology, Ranchi, India

Received 10 September, 2014; **A**ccepted 20 November, 2014 © The author(s) 2014. Published with open access at **www.questjournals.org**

ABSTRACT:- **Purpose**– The aim of this paper is to reflect on the empowering elements of Intellectual Capital (IC) for strategic differentiation by leveraging the path-breaking works of IC thought leaders and scholars.
Design/methodology/approach–This article is based on the authors' reflections of the past and vision for the futureto identifies possible research paths useful for theoretical and practical relevance in the domain of IC-driven business.
Findings– IC literature is rich in theory matured over the past two decades. The work of scholars, practitioners and thought leaders need to be integrated to pave the way for an empowered, maximization approach to reap the benefits of IC power by all stakeholders..
Practical implications–It is hoped that the implication of this paper for IC research and practice is to evolve a leading-edge approach bundling together the total resources of an organisation.This paper makes a case to deploy the total capitals of an organisation to achieve corporate performance. This would warrant an 'interdependent and integrated monolithic-IC recipe' which this paper seeks to map.
Originality/value– The paper is a first attempt to present "an optimization IC model providing atheoretical map culled from IC thought leadership detailing all resources. It provides a deeper understanding of how companies can create and realize value for impact by leveraging both financial (physical and financial) and non-financial (intellectual, social, environmental, governance) capitals and report them externally for decision-making by stakeholders.

Keywords:- Market Value, Intellectual Capital, IC reporting, Value Chain Blueprint, Sustainability, Governance.

I. INTRODUCTION

There is a belief among financial accountants that market value and future profits (two contemporary grand theories of IC) have already been factored into the value of the firm, regardless of the drivers of value or future profits (Dumay, 2012, p.5). These grand theories represent barriers to the use of IC practices by many mainstream organisations (Dumay, 2012, p.6). To progress this agenda, practitioners and academics need to abandon grand theories and develop what Llewellyn refers to as differentiation theories of practice (Llewelyn, 2003, pp. 670-2). In support of this, Guthrie et al., (2012) in their study of ten years of published IC research (2000-2009) have identified an emerging "third stage" of IC research. This theory opines that the focus of past research into IC has in the past been to blame for some of the lack of adoption of IC because of "a concentration of top-down ostensive research instead of bottom-up performative research" (see also Dumay, 2009b, 2009c). As grand theories are "formulated at a high level ofgenerality and reflect ideas that have been arrived at by thinking through the ideas andrelationships in an abstract way – rather than being derived from empirical research". (Llewelyn, 2003, p. 676), the researcher must develop the skills required for *critical* (Alvesson and Deetz, 2000, p. 20) and *performative research* (Mouritsen, 2006, pp. 829-32). Hence, this paper is an attempt to cause people to think more clearly about what IC is and how it can be better managed to create value in the "new economy" (Dumay, 2012, p.13)

II. THE NEED FOR A BIG-PICTURE THINKING OF BUSINESS

The stock market has traditionally been viewed as an indicator or "predictor" of the economy. Many believe that large decreases in stock prices are reflective of a future recession, whereas bullish trend in stock prices suggest future economic growth.(Waliullah, 2010).Apart from being used as a measure of the wealth of

an organization in terms of its intangible assets, intellectual capital concepts can also be used for strategic analysis and to drive organizational strategy (Roos et al., 2001; Sveiby, 2001; chatzkel, 2002). Intellectual capital can be defined as intellectual resources that have been "formalized, captured and leveraged" to create assets of higher value (Prusak,1998). Also, IC is the "stuff that you cannot see but makes you rich" (Stewart, 1997), "weightless wealth" (Andriessen and Tissen, 2000) or "unseen wealth" (Blair and Wallman, 2000) and generally contributes to strategic debates in the board room and policy debates in government (Teece, 2000). To date, many business disciplines (such as marketing and human resource management) have recognised the importance of intangible resources (Marr and Mustaghfir, 2005) and researchers have developed models for their measurement and reporting (e.g. the Intangible Asset Monitor, Sveiby, 1997a). These have been well received by organisations and countries around the world, for example by the European Commission, Germany, Japan and China (Edvinsson, 2013).

III. MARKET VALUE AND INTELLECTUAL CAPITAL

Concepts such as intellectual capital (Edvinsson and Malone, 1997; Roos et al., 1997),intangibles (Lev, 2001; Sveiby, 1997) or even digital capital (Tapscott et al., 2000) assume acomplementary approach in the traditional view of knowledge, including the processeslinked with its dynamic capture, transformation and dissemination (Nonaka and Takeuchi,1995). With those terms having become a part of the business lexicon, the increasingly competitive business environment makes continuousinnovation of products, services and business processes (supply chains, for example) a matter of life and death for companies in practically every economic sector. Innovation, in turn, is achieved by massive investment in intangibles: R&D, acquired technology, information systems, brands and talented employees. Over the past two or three decades, intangible assets rose to become the major value drivers of businesses, high- as well as low-tech, manufacturing and sevices alike. Physical assets are now, by and large, commodities, available to all. All this is hardly controversial. The remarkable worldwide intangibles-knowledge revolution has gone unnoticed by accountants. Coca-Cola's major asset, its unique brand, which surely accounts for most of its $147 billion capitalization, in March 2011 is nowhere to be seen on its balance sheet (yet "vital" Coke assets such as the $150 million short-term investments or its $1.6 billion inventory are proudly exhibited on the assets list) (Lev, 2012, p. 156).

Most investments in growth – R&D, brand enhancement, software, employee training – are immediately expensed in the income statement, thereby understating corporate earnings and asset values. Not just growth investments are expensed; the value of stock options, a staple of growth companies, is expensed too. And the intangible assets built during the growth process – patents, trademarks, unique business processes – are absent from the balance sheet. Investors are, therefore, in the dark regarding much of the value creation of growth companies, until it is finally reflected in sales and earnings. This adversely affects the fund-raising required to finance the growth, as well as suppliers' and customers' confidence in the long-term viability of the company. It is, therefore, incumbent on managers to augment the largely deficient GAAP-based financial reported with targeted information (Lev, 2012, p. 308) with a path-to-growth template with value drivers (including intermediate and ultimate outputs) like innovation, customers, human capital, connectivity, internet activities, organisation capital and risk management (Lev, 2012, p. 165).

Market value is both known and unknown. Nevertheless, in general, financial market estimates use limited information-based primarily on financial performance and tangible assets – with information on intangible assets quite scarce even in the best of cases (Lev, 2001). Further, performances based on earnings and cash flow misses a major part of what IC is all about – creating future growth. With the economy shifting to an increased reliance on intangible/intellectual assets (Lev, 2001), the use and recognition of these resources is both important and topical. To galvanize this perspective, non-accounting researchers defined "intellectual capital" as the "difference between the firm's market value and its book value" (e.g., Edvinsson and Malone, 1997; Stewart, 1997; Sveiby, 1997a; Mouritsen et al., 2001).The significant gap between corporate market value and accounting book value has invited wideresearch on the unexplained value or hidden reserve ignored by current financial reporting standards (FRS) and accounting professionals (Amir et al., 2003; Ballow et al., 2004; Daum, 2003; Edvinson and Malone, 1997; Kane and Unal, 1990; Leadbetter, 1999; Lev, 2001; Sullivan and Sullivan, 2000). The readily available measure of enterprise value in a company's accounts, the book value of tangible assets, is typically just a fraction of the company's market value. For companies in the new economy, book value is an even smaller fraction of market value, because these companies rely more on intangible assets than old economy companies do. Hence, the rest of this enterprise value must come from adjusting for the replacement cost of tangible assets and including intangible assets. When price inflation, economic depreciation, and technical progress are modest, the difference between the replacement cost and the book value of tangible assets is relatively small. This means that intangibles account for the remaining difference (Bond and Cummins, 2000)

IV. THE IRONY OF IC REPORTING

Data from U.K. show that when R&D is capitalized, the company's market valuation fully reflects its expected outcomes, whereas lower market values are accorded to companies that expense R&D (Oswald and Zarowin, 2007). The problem is further brought to light by Lev (2012): "The absence of internally generated intangibles from corporate balance sheets and the consequent distorted earnings are bad enough; no less detrimental to transparency and the quality of investors' information is the inconsistent and logic-defying GAAP treatment of intangibles. While the cost of internally generated patents, brands, trade marks or the set-up of internet operations and business processes are immediately expensed, similar intangibles when acquired in M & As or other transactions are capitalized and considered as assets. This inconsistency impedes attempt to compare performance (earnings or ROE) of companies across time or within sectors. A company that switches, for example, from being primarily a developer of drugs to an acquirer, will boost significantly both its earnings and assets values, while performing essentially the same economic activity as before the switch. Furthermore, the absence of any systematic GAAP disclosure on the company's crucial value-creation chain – the progress of developing of new products, services, or processes (Value chain blueprint of Lev, 2001) – denies investors (and often managers) of vital information needed to assess investments and production decisions" (p.157). If such harmful consequences are documented for R&D, an activity whose total outlay is disclosed to investors, imagine the information asymmetries and related uncertainties created by other types of intangible investments tht are totally obscured in financial reports. GAAP efficiencies are by no means restricted to intangibles. The ever-increasing impact on earnings and asset values of managerial estimates (fair value accounting, stock option expense, or pension liabilities) subject to considerable errors and frequent manipulations – diminished too the reliability of accounting data. One cannot rely on GAAP to provide all of investors' information needs. Management has to supplement accounting information. But what exactly are the information needs of investors and what is the best way of providing these needs while minimizing competitive harm and litigation exposure?(Lev,2012, p. 158).

V. THE IC BUSINESS MODEL TO ACHIEVE VALUE IMPACT: A NEW OUTLOOK

The IC field is awash with different terms, concepts and metaphors. Yet that can often be more confusing than enlightening (Marr, 2005). There are numerous intangibles asset models being developed to supplement traditional accounting methods (Shand, 1999; sveiby, 2001; Bontis, 2000; Hurwitz et al., 2002). However, these models service only one organization – usually the one that it was designed for or that designed it (Bontis, 2000). Current intangible asset models tend to focus on one or two classes of intangibles for specific firms (Hurwitiz et al., 2002). There is a business need to view intangible assets within the context of the business enterprise and to value them on a common set of dimensions (stewart, 2001)

The key components of IC are poorly understood, inadequately identified, inefficiently managed and inconsistently reported(Sujan and Abeysekeara, 2007, p.72). But, according to stakeholder theory, the disclosure of financial, social and environmental information (i.e., corporate sustainability disclosure—CSD) is part of the dialogue between a company and its stakeholders and it provides information on a company's activities that legitimise its behaviour, educate and inform, and change perceptions and expectations (Gray et al. 1995; Adams and Larrinaga- Gonza´lez2007). While the effects of corporate governance on financial disclosure have received considerable attention (Klein 2002; Anderson et al. 2004; Beekes et al. 2004), we have much to learn about the impact of governance on voluntary disclosure and especially sustainability disclosure (Haniffa and Cooke 2005). Guthrie and Petty's (2000) analysis of IC disclosure practices suggests that disclosure has been expressed in discursive rather than numerical terms and that little attempt has been made to translate the rhetoric into measures that enable performance of various forms of IC to be evaluated (Bhasin, 2011). The idea of corporate purpose by the Nobel Laureate economist Milton Friedman that "the social responsibility of Business is to increase its profits" fell in the 1980s on the fertile ground of hostile takeovers. Under a raider's siege , managers and their boards quickly go the message that an effective defense against takeover and job loss is to maximize shareholder value…..Shareholder value enhancement regained its footing (Lev,2012, pp. 294-295).

Industry requires a method to develop tools that support the command of and access to effective utilization of business resources and knowledge, which support the capability of business for implementing cost and differentiation advantages. Is a validated framework the answer? Or should we take a few steps back to refine and establish the initial framework? (Green,2006, p.32). In conjuction with this proposition, we collate extant literature for researchers, practitioners and students to appreciate the power of IC in its totality to benefit all stakeholders.

5.1. Inputs

Inputs of capitals and resources as Figure 1 shows involve both financial and non financial (intangibles). Research suggests that investors' ability to use nonfinancial and financial information consistently

across companies and time is impaired by noncomparability in measures or formats. Such noncomparability likely reduces the value of nonfinancial performance measures and may lead investors to focus primarily on financial measures for assessing performance (Maines et al., 2002). How market value is created through the financial domain and intangible domain is given in Figure 1.

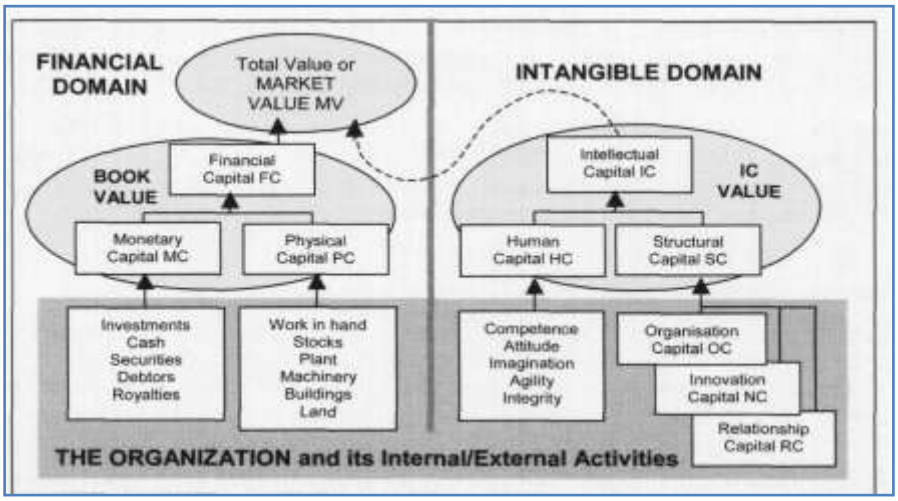

Figure 1: A typical IC framework as given in the literature with financial and nonfinancial (Intangible) domains (M'Pherson, P.K., and Pike, S., (2001, p. 252)

Yet, There is a need for a forward-looking IC Business model to navigate strategic inflection points (SIPs) in today's blue oceans to achieve business profitability(financial) and sustainability (non-financial) by doing the right things, doing things right, using the right things and guiding the right things. In this context, a total appreciation of IC is warranted so that intangible resources (like the tangible ones) could be well comprehended and industry/business could elevate IC to its rightful springboard of economic activity in the contemporary world.

5.1.1. Intangible domain / Intellectual capital (Non-financial) :

Intangible assets are non-financial and require both nonfinancial and financial measures (Sveiby, 1997a, p.162). There is a global trend and demand for more useful and comprehensive non-financial information about theoperating activities of firms (Anderson and Epstein, 1996).Luft and Shields (2002) say that nonfinancial measures often create a focus on the future, as opposed to the historical focus of financial measures. Various individuals and groups have called for greater disclosure of nonfinancial information by corporations (AICPA 1994; Boutlon et al. 2000; Norton 2000; Eccles et al. 2001; Lev 2001). These individuals and groups argue that traditional financial measures have diminished relevance due to changes in business models said to reflect the "new economy". Critics raise concerns about the backward-looking nature of financial measures and suggest that financial measures provide little insight into a company's future performance. The demand for external reporting of nonfinancial performance measures also has been driven by companies' adoption of internal performance evaluation frameworks that incorporate nonfinancial measures, such as the Balanced Scorecard (Kaplan and Norton, 1992). Investors have asked that external reporting include performance evaluation metrics used internally and that these measures be integrated into a discussion of the company's strategy. Frameworks such as Pricewaterhousecoopers' ValueReportingTM model (Eccles et al. 2001) exemplify such an approach.

The IC framework is rooted in Svieby's (1997a) original tripartite categorization of IC, a widely accepted classification and definition of IC categories (Boedker et al, 2005, p.522). Three IC categories: external capital,internal capital and human capital developed by Sveiby (1997a) became a commonframework used by more recent research studies.A study of the top 20 firms (by market capitalization) listed on the Australian Stock exchange in 2004 (Sujan and Abeysekara2007, pp.77-78) uses the tripartite framework.The attributesof the three IC categories are derived from previous research studies (Guthrie and Petty, 2000). Some studies such as Guthrie et al (2004), Whiting and Miller (2008), Whiting and Woodcock (2011) and (Liao, et al., 2013) modified the Sveiby framework by adding more IC attributes to meet the specific purpose of their research (Table I).

An Australian research showed that most of the IC information reported related to external capital (40%) Reporting of human capital and internal capital occurred equally at 30% (Sujan and Abeysekera, 2007,

p.72). Sveiby advocates that enterprises identify appropriate metrics in respect of growth and renewal, efficiency and stability. One of the attributes that distinguishes the Intangible Asset Monitor of Sveiby (1997) from other reporting frameworks is that it explicitly commends the use of a limited narrative to provide further information about the measures that it incorporates. Rather than restrict the account of intangibles (growth) to a range of well chosen metrics, the

Table I; .Description of IC attributes (Liao, et al., 2013)

	Item	Description
1	*Internal capital*	
1.1	IC property	Comprises patents, copyrights, intangible assets, license, franchise and trademarks
1.2	Infrastructure	Comprises management philosophy, leadership, internal communication, corporate strategy, and corporate culture
1.3	Information Technology	Comprises network, computer software, electronic data interchange, information management and telecommunication
1.4	Research and development (R&D)	Comprises innovation, trade secrets, methodologies and therapy
1.5	Subsidiaries	Comprises contribution and effect from subsidiaries
2	*External capital*	
2.1	Goodwill	Comprises rewards, brand, brand recognition and brand development
2.2	Stakeholder Relationship	Comprises social responsibility, government relationship, waste reduction and environment protection
2.3	Customer	Comprises customer satisfaction, customer recognition, customer loyalty, customer retention, and customer support
2.4	Market	Comprises distribution channel market share and market expansion
2.5	Partnership	Comprises partnership and joint venture
3	*Human capital*	
3.1	Employee capital	Comprises intelligence, know-how, education/training, competence, expertise, brain power, specialist, human resource
3.2	Employee satisfaction	Comprises employee support, employee safety, employee retention, work-family balance, employee motivation and employee satisfaction

Intangible Asset Monitor therefore commends a balance of numbers andnarratives, an approach that was successfully embraced by Celemi, a Swedisheducational consultancy, on its website (Roslender, 2009). Sveiby advises that the balance sheet produced by the Intangibles Assets Monitor should not exceed one page. Therefore it is recommended to use one or two indicators in each category (sanchez-Canizares, et al., 2007)

5.1.2. Process: IC for Opertional Excellence of the Value Chain

Organizations need to be more internally focused on their core processes. They need to develop IC management practices that focus on how they can better reengineer their organisations towards bottom-up processes that make clear the possible causal relationships between their people, processes and stakeholders (human, structural and relational capital). A particular not ever reduce all of the ambiguity in relation to what creates value for their firmbut making continued investments in what appears to work by developing internal knowledge is better than gambling on what works in someone else's business (Dumay, 2012, p.12)

The definition of IC by Lev (2001), Daum (2002), Rastogi (2003) and Mouritsenet al.(2004) appears to have two things in common:(1) intangible cannot stand by itself, and hence, it cannot be valued separately fromother assets; and(2) IC is the result of the network effect of utilizing various intellectual, human capital and organizational resources. In this context, value chain creation starts with a review of the business enterprise vision, strategy and the roles for its intangible assets. The value chain bolsters the business by identifying all the ways its intangible could or should bring value to the business (Sullivan , 2000). The value chain:

a) Is a unique combination of activities that together create competitive value-added products or services for a company (McNurlin and Sprague,1998; von krogh et al., 1998)
b) Consists of tasks and activities that are organized into workflow appalications that eliminate waste – unnecessary and redundant tasks and automoation of routine tasks (Alter, 2002)
c) Provides a framework to view how a company can build and sustain a competitive advantage over its competitiors that ensures long-term profitability and survival (Morecroft and Sternman, 2000)

d) Components are interdependent and represent business components that are interdependent (Von Krogh et al., 1998) . But because the true value of intangible assets becomes apparent only within a specific context, the entire enterprise value creation model (figure.2), in which corporate resources and tangible as well as

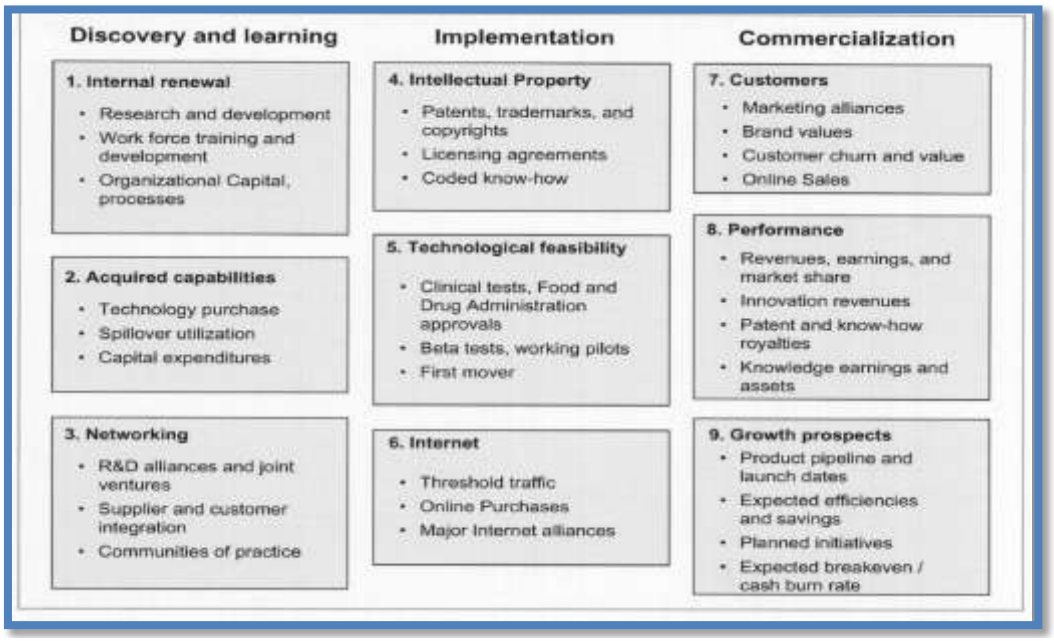

Figure2: Value Creation: Value Chain Scoreboard Model (Lev, 2001, p.111)

intangible assets are created and – in particular – utilized must be taken into account (Lev, 2001), the fundamental economic process of innovation that starts with the discovery of new products, services or processes, proceeds through the development and implementation phase to commercialization of the new produces and services. This innovation process is where much of the economic value is created in today's knowledge based businesses. To measure the performance of this process would represent a step forward both for internal decisionmaking and external reporting. The important information for managers and investors concerns the enterprise's value chain(Lev and Daum, 2004, p.10)

e) Logic enables businesses to deploy their resources to capture potential value (McNair and Vangermeersch, 1998)

f) Is dynamic – it is re-created daily by its components and their relationships (Alter, 2002; Porter, 1980

Added to the value chain process, an important prerequisite for the ability of corporate management to manage for sustainable value creation is the availability of objective information on the status of all relevant value creating activities. Figure 3shows a general model of the systematic development of a holistic enterprise performance measurement system that describes a holistic view for enterprise contol – the Tableau de Board (Epstein and Manzoni, 1997; Gray and Pesqueux, 1993; Daum, 2002). This business scorecard enables the systematic monitoring of performance as well as of emerging opportunities and risk in the company's overall value creation system. It is a cornerstone of the new enterprise management system (Lev and Daum, 2004, p.10). This type of analysis might become an integral part of a company's performance management process in the future to identify in a systematic way optimization opportunities from a total factor productivity perspective (Lev and Daum, 2004, p.16) resulting in enhanced productivity, profit and shareholder value (Lev and Daum, 2004, p.13). This approach could contribute to standardized measurement and reporting of how intangibles drive performance (Lev and Daum, 2004, p.17)**.**

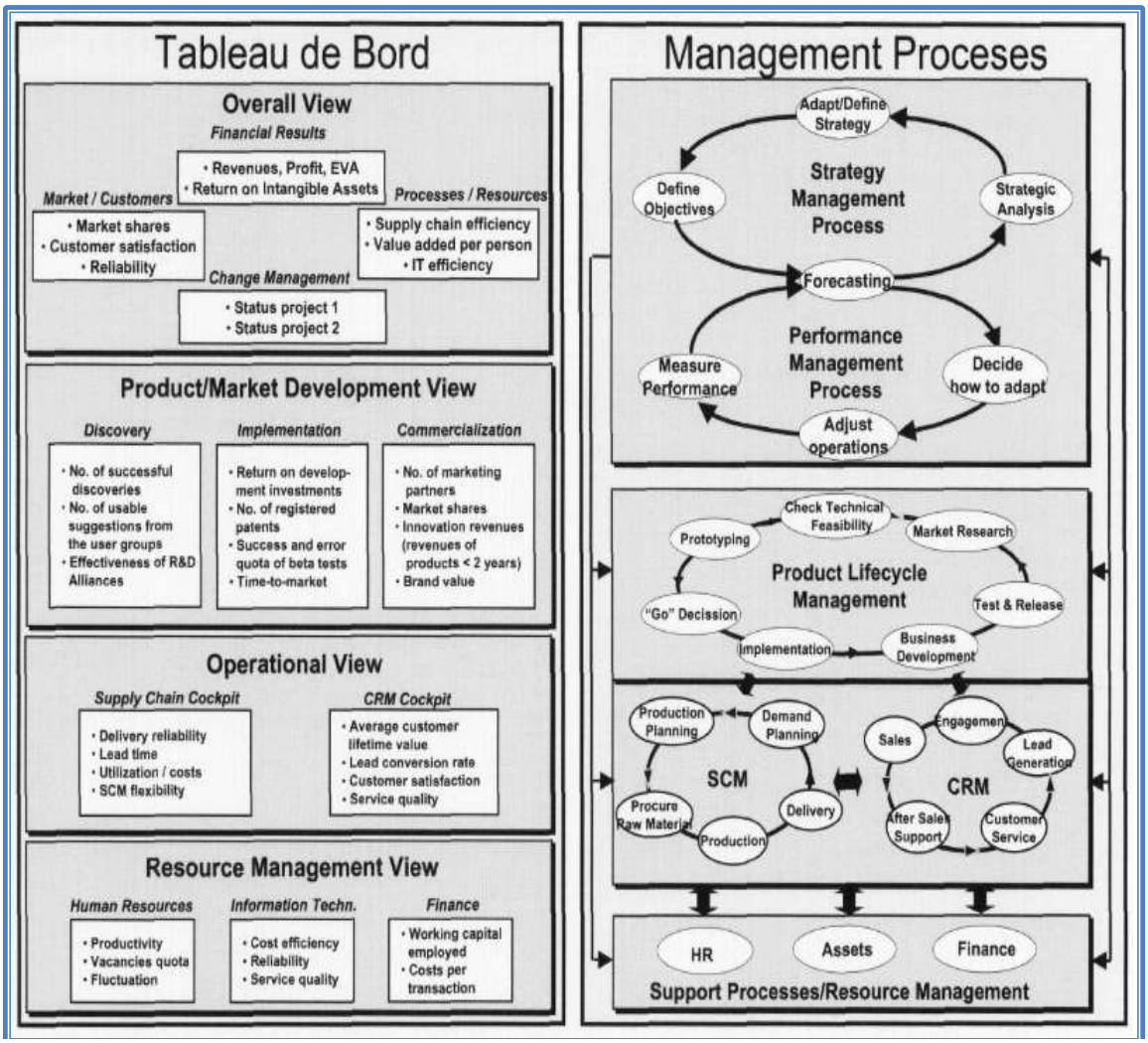

Figure 3: The Management systems (Daum, 2002)

Having said that operational excellence is at the heart of an organisation not by and large adduced by current IC research , we postulate that Sustainability (social and environmental and governance)reporting helps organizations to set goals, measure performance, and manage change in order to make their operations more sustainable. A sustainability report conveys disclosures on an organization's impacts – be they positive or negative – on the environment, society and the economy (Global Reporting Initiative, 2013, p.3). Such Voluntary disclosure of IC items will help firms enhance their legitimacy and survive (Dowling and Pfeffer, 1975; Woodward et al., 2001). But remember, if you do not create economic value from your business, you will not be socially responsible for long (Lev, 2012, p. 215).

5.1.3. Sustainability: Environmental and Social

The concepts of sustainability in shown in Figure 4. Solomon (2010) emphasized the need for strong corporate governance and accountability infrastructure to institutionalize the concept. The figure illustrates three key concepts. First, it shows that earlier conceptualizations of sustainability had environmental connotations and thus presented a narrow view of the concept. Second, the figure highlights that sustainability is frequently discussed in the literature using the terms "triple P" and "TBL". These are essentially two different perspectives on the same concept. Corporate sustainability heavily emphasizes the need to meet key stakeholder requirements in a systematic manner (Figure 4). This in turn provides the organization with legitimacy and a license to continue its business (Asif et al, 2011**)**

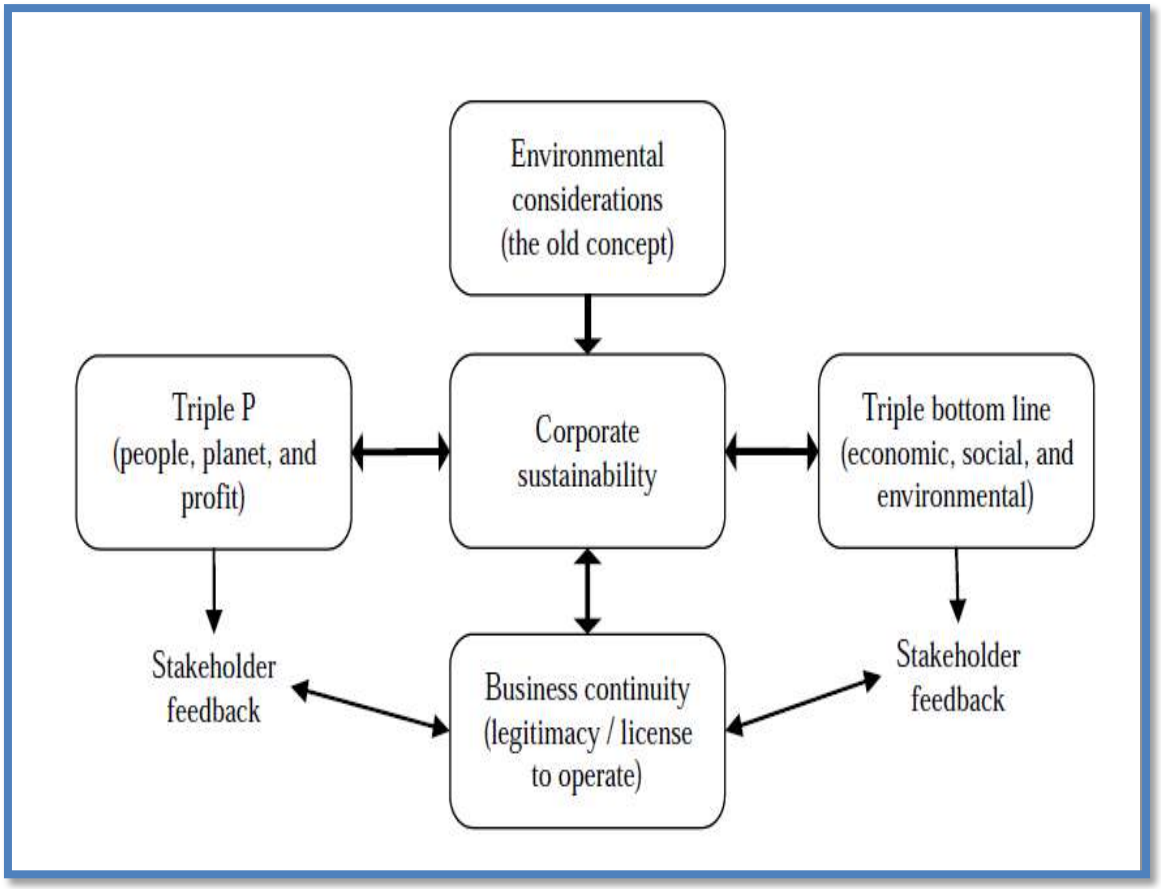

Figure 4: The concept of sustainability (Asif et al, 2011, p. 355,)

Stakeholder theory recognizes that organizations have obligations not only to shareholders, but also to other interest groups such as customers, suppliers, employees and the wider community, amongst many others (Freeman, 1984). Meeting the demands of these stakeholders is necessary for a variety of reasons, including sustaining a continued supply of resources and for legitimation reasons (DiMaggio and Powell, 1983; Suchman, 1995). Any approach to corporate sustainability must, therefore, have an explicit focus on stakeholder requirements. Corporate sustainability is now widely conceptualizedin terms of the "triple bottom line" (TBL) (Elkington, 1999). In short, this means thatorganizations need to explicitly consider the environmental, economic and socialimpacts (positive and negative) of their activities (Edgeman, 1998; EdgemanandHensler, 2001; Hediger, 1999). This concept is also symbolized in literature by "triple P(planet, people, and profit)" which implies that a company creates more value over thelong run and encounters fewer risks if it takes into consideration the environmental(planet), social (people), and financial issues (profit) as compared to a company thatfocuses merely on the profit (Asifet al., 2008; Dyllick and Hockerts, 2002; Holliday, 2001;Salzmann et al., 2005; Shrivastava, 1995).

The Global Reporting Initiative (GRI, 2013) also provides a recommended framework for organizations interested in reporting on their sustainability performance (Table III). Smith and Lenssen (2009) and Searcy et al. (2006) have suggested that the case forsustainability is strong when it is integrated with mainstream business processes. It is suggested that organizations need

Table III. Categories and aspect in the G4 sustainability reporting guidelines of (GRI, 2013, p. 9)

Category	Economic	Environmental		
Aspects[ii]	• Economic Performance • Market Presence • Indirect Economic Impacts • Procurement Practices	• Materials • Energy • Water • Biodiversity • Emissions • Effluents and Waste • Products and Services • Compliance • Transport • Overall • Supplier Environmental Assessment • Environmental Grievance Mechanisms		
Category	**Social**			
Sub-Categories	**Labor Practices and Decent Work**	**Human Rights**	**Society**	**Product Responsibility**
Aspects[ii]	• Employment • Labor/Management Relations • Occupational Health and Safety • Training and Education • Diversity and Equal Opportunity • Equal Remuneration for Women and Men • Supplier Assessment for Labor Practices • Labor Practices Grievance Mechanisms	• Investment • Non-discrimination • Freedom of Association and Collective Bargaining • Child Labor • Forced or Compulsory Labor • Security Practices • Indigenous Rights • Assessment • Supplier Human Rights Assessment • Human Rights Grievance Mechanisms	• Local Communities • Anti-corruption • Public Policy • Anti-competitive Behavior • Compliance • Supplier Assessment for Impacts on Society • Grievance Mechanisms for Impacts on Society	• Customer Health and Safety • Product and Service Labeling • Marketing Communications • Customer Privacy • Compliance

To develop a shared interpretation of knowledgeto effectively deals with emerging problems and to understand their organization andtheir surroundings better (Daft and Weick, 1984; Weick, 1987). Rocha et al. (2007) opines that an integrated management system (IMS) facilitates the integration of sustainabilityinto business processes and, thus, a separate ISO standard is not required for corporatesustainability.

5.1.4. Governance

Corporate governance is a framework of legal, institutional, and cultural factors shaping the patterns of influence that stakeholders exert on managerial decision-making (Weimer and Pape, 1999). Holland(2006a: 147) found that boards of directors are atthe heart of corporate financial communications,having active roles in the disclosure process relatedto: (1) the provision of primary information regardingthe corporate value-creation process, andtheir contribution towards it; (2) the provision ofinformation about themselves in terms of theirskills in managing the business; (3) the manner inwhich they are organised to conduct financialcommunications; (4) their reputation for disclosure honesty; and (5) information about how their own pay and wealth is tied to company fortunes. Gibbins et al. (1990) suggest that the wider expertise and experience of non-executive directors on the board will encourage management to take a disclosure position beyond a ritualistic, uncritical adherence to prescribed norms, to a more proactive position reflecting the value relevance of intellectual capital

to stakeholders. Because, as Cotter and Silvester (2003) argue independent non-executive directors are in a better position to monitor executive management.Beasley (1996) argues that poorly governed firms with powerful insiders and CEOs, are more likely to be associated with higher levels of financial statement fraud. Corporate governance refers to the way in which companies are governed andmanagers are accountable to the stakeholders of the companies (Dahya et al. 1996, Selznick ,1992, p.290) suggests that ‘‘governance takes account of all the intereststhat affect the viability, competence and moral character of an enterprise’’.Moreover, the corporate governance system is the result of a series of interrelatedattributes (Zahra and Pearce 1989), all of which are relevant in order to ensuresound governance.

Does effective governance lead to superior company performance, fewer improprieties and scandals (earnings manipulations, restatements, lawsuits or SEC investigations), or perhaps enlightened and socially responsible corporate behavior?(Lev,2012, p.263).Mainstream perspectives on corporate governance are typified by the OECDprescription. Viz.,(1) Protect shareholders’ rights.(2) Ensure the equitable treatment of all shareholders, including minority andforeign shareholders. All shareholders should have the opportunity to obtainredress for violation of their rights.(3) Recognise the rights of stakeholders as established by law and encourage activeco-operation between corporations and stakeholders in creating wealth, jobs,and the sustainability of financially sound enterprises.(4) Ensure that timely and accurate disclosure is made on all material mattersregarding the corporation, including the financial situation, performance,ownership and governance of the company.(5) Ensure the strategic guidance of the company, the effective monitoring ofmanagement by the board, and the board’s accountability to the company andthe shareholders.(Cartwrightand Craig, 2006, pp.742-743). On flipside, perceived governance weaknesses invite distracting shareholder proposals and proxy contexts to rectify the alleged weaknesses (Lev,2012, p. 264).

A governance Model with six pathyways (Figure 5) is adduced.. First, strong and persuasive leadership may be forthcoming from governments. This effect is complementary rather than central. Second, “ethical” capital marketsalready exist. While the current specification of “ethical” does not necessarily extend asfar as the threshold of sustainability, the group of investors participating in thesemarkets is amenable to change of this kind, and so can be expected to yield opinionleaders as public concerns build.The third pathway – more general shareholder awareness and concern – is crucialto sustainability, because it is the mainstream influence. In practice, this pathway willbe slow, with much reactionary behaviour, although assisted by some “ethical”investor role models. Several of the case studies of applications of The Natural Step (Nattrass and Altomare, 1999) indicate tolerance of shareholders for trade-off ofmarginal financial performance in favour of social and environmental outcomes thatare more favourable. The key attribute of these businesses is that they have highlydifferentiated market positions that yield relatively high gross margins that serve as a“tolerance buffer” for shareholders. Shareholders in businessesoperating in commodity markets offer slim gross margins that could be much lesstolerant.

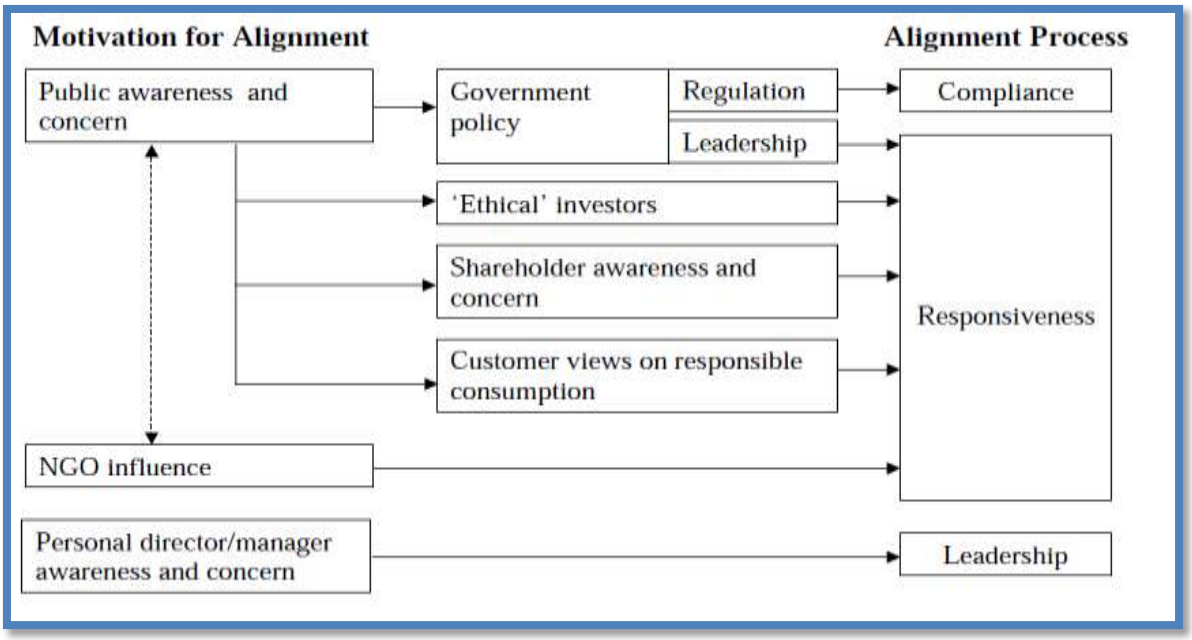

Figure 5: Pathways for aligning corporate governance with global sustainabiity
(Source: Cartwright and Craig, 2006, p.747)

The fourth pathway arises from particular public groups acting in their roles asconsumers, and evincing principles of responsible consumption. This places pressureon governance within the mainstream commercial tradition of meeting consumerneeds, but also alerts directors and managers to the nature of environmental concerns.The sixth pathway recognises that NGOs tend to lead and inform public awarenessand concern, and are also responsive to it. Some of the actions of organisations such asGreenpeace have had a substantial and direct impact on governance thinking, and thispathway appears likely to strengthen. Of course, other NGOs, such as businessroundtables, tend to have the opposite influence.The last pathway shown in Figure 5 is the one that produces governance that ismost committed to global sustainability. In this pathway, the viewpoints of directorsand managers change in the direction of sustainability, but not because they arecompliant or responsive. Rather, the changes arise from personal conviction that achange of stance is the "right thing to do". (Cartwright and Craig, 2006, p.747). Interpreting nonfinancial measures has been a major stumbling block to their use (Sveiby, 1997a, p.162). Improving governance deficiencies and avoiding holding idle cash will make a company less attractive to activists (Lev, 2012, p. 258).

How can governance be improved? The thriving field of corporate governance consultancies and advisory services offers managers a plethora of products – governance scores, ratings, reports, and certifications (Lev,2012, p. 269) because effective corporate governance does contribute to corporate performance (Lev,2012, p. 270). Operational benefits of effective governance are already factored into the share price one pays (Lev,2012, p. 271) enhancing shareholder value, lowering somewhat the cost of funds and improving transparency (Lev,2012, p. 272). If a company does not score high on governance scale, it should definitely search for the reasons (Lev,2012, p.275) as corporate governance mechanisms are about the fundamental fiduciary duties of managers to shareholders,whose hard-earned money they are entrusted with (Lev,2012, p. 280).

6. Financial focus of IC Domain

The IC literature in accounting is varied but mainly addresses external reporting(e.g. Bukhet al., 2001; Guthrie, 2000 and Mouritsenet al., 2001a). External financialstatements offer very limited information on intangibles (Financial AccountingStandards Board, 2001; Wallman, 1995). Traditional accounting performance measurement employs financial techniquessuch as Return on Assets (ROA) and Return on Capital Employed (ROCE). These havebeen criticised for being backward looking, unable to measure intangible resources andnot suitable for assessing performance of investments in new technologies and marketswhich firms require to compete successfully in global markets (Bourne et al., 2000;Amir and Lev, 1996). Lev (2001) advocates the Value ChainScoreboard, to be used by both management and investors, which seeks to report in astructured manner the impact of intangibles on corporate performance and valuation.

Performance measurement systems in knowledge-driven firms lay greater emphasis on value-based measurement approaches. There is also a growing emphasis on a combination of financial and non-financial measures that have yet to be established in scorecard type models that adequately measure the IC contribution. This seems to be a partial confirmation those IC resources are seen as performance drivers of value creation and part of the causal link between skills and relationships, which deliver customer satisfaction, loyalty and ultimately customer value (Tayles et al, 2007).

Pike and Ross (2004) measured the strength of some of IC measurement methods with the associated theories and expressed their faith in reliability of these methods in measurement of IC. However, Andriessen (2004) found that some researchers failed to establish nexus between IC and financial performance in their studies. Chan (2009) identified 34 methods that were then categorised into five generic approaches: (1) market capitalisation approach; (2) direct IC measurement approach; (3) scoreboard approach; (4) economic value-added approach; and (5) VAIC^{TM}methodology (the Austrian approach) (p. 7). The first four approaches are discussed in detail by Chan (2009) in his study. The final approach, i.e. VAIC^{TM}, which is also termed the "Austrian approach", has been used bya number of studies (VAIC^{TM}) (Pulic, 2000a, 2000 b; 2002a; 2004; Chan, 2009). The VAIC^{TM} approach provides a standard and consistent measure ofIC that can be used to conduct comparative analysis at both the local and internationallevels.The economic performance, financial performance and stock market performance model of Zeghal and Maaloul (2010) is one of the financial performance models in IC literataure leveraged by researchers.

Financial reports fail to reflect a wide range of value-creating intangible assets (Lev and Zarowin, 1999), giving rise to increasing information asymmetry between firms and users (Barth et al., 2001), and creating inefficiencies in the resource allocation process within capital markets (Li et al., 2008). Jensen and Meckling (1976) arguethat greater disclosure reduces the uncertaintyfacing investors and thus reduces a firm's

cost ofcapital. Managers should therefore be willing to discloseintellectual capital information in order to enhancethe firm's value by providing investors with abetter assessment of the financial position of thefirm and help reduce the volatility of stock returns.Barth et al. (2001) observe that analyst coverage isgreater for firms investing more heavily in researchand development and advertising, while empiricalstudies suggest a positive share price impact arisesfrom specific intellectual capital indicators suchas research and development (R&D) expenditure(Amir and Lev, 1996), capitalisation of software developmentexpenditure (Aboody and Lev, 1998),and customer satisfaction (Ittner and Larker, 1998).

*IFRS and intangibles:*To help firms to account for the business combination, the appendix to IFRS3(IASB, 2008) incorporates a list of examples of intangible assets which meet therecognition criteria and that are possible to report as intangible assets apart fromgoodwill.IFRS introduced two great innovations, the impact on intangibles of which looks highly relevant. These innovations are: (1) The possibility to value selected strategic resources at fair value, thus takinginto account their ability to create value. Presently, according to IFRSs the mostrelevant area of fair value application is the determination of values of assetsacquired in business combinations; but its application to internally developedassets, although at the moment subject to severe restrictions, must not beignored (Langendijk et al., 2003, Guatri and Bini, 2003b)(2) The regulation of impairment test, i.e. the procedure aimed at identifyingeventual impairment losses of an asset's value. Such a regulation permits theutility of the test itself as a value control system, together or even as a substituteof amortisation, thus eliminating the concept of useful life and introducing theintangible asset with indefinite life (Harper, 2001; Guatri and Bini, 2003a).However, a simple analysis of accounting principles cannot prove IFRS' ability toimprove the quality of accounting information. Such a result, indeed, can only bedemonstrated by observing their practical application (Busacca and Maccarrone, 2007)

VII. TAKING STOCK OF FUTURE IC PRACTICE

If accounting practices want to keep pace with thespeed of changes and if they are to reflect truly and fairly the value and position of acompany in the Knowledge Era and to communicate it in the proper way, accounting should be coherent, objective, and verifiable. Hence, firms should disclose their IC to the market in orderto: a) reduce information asymmetry amongst market actors; and b) attain marketvaluations that better reflect the risk profile of the firm (Curado et al., 2011). Failure to report on IC can have negative consequences for organizations in terms of (a) small shareholders possibly having to have less access to information than larger shareholders (b) managers with inside knowledge of intangibles trying to exploit their positions and engage in insider trading; andfinanciers perceiving the incorrect valuation of firms as leading to higher risk profiles, which could in turn lead to an increased cost of capital. That is the reason why organisations measure and report IC to (a) help organizations with strategy formulation (b) help assess strategy execution (c) assist in strategic development, diversification and expansion decisions (d) communicate with external stakeholders and (e) as a basis for employee compensation. (Marr, 2003).

Literature on IC disclosure has focused on two specific areas: (a) The company annual report (Guthrie and Petty, 2000; Brennan, 2001; April and Bosma, 2003; Bontis, 2003; Bozzolan, 2003; Abeysekera and Guthrie, 2005); and (b) different IC reporting frameworks that have been proliferated over the last two decades (Sveiby, 2004).From the perspective of various IC report frameworks, these appear to suffer the problems of proliferation, the confusion as to which framework should be used to best communicate to stakeholders (Sveiby, 2004), and the lack of analytical tools which can be used by stakeholders to make comparisons between different firms' IC and how IC is developed over time (Mouritsen and Bukh, 2003).

Factors that may discourage management from reporting and disclosing IC information, such as, the need to sustain competitive position; preventing information manipulation; risk enlargement regarding the predictions accuracy and the possible increase in operational cost as the result of bureaucracy (Fijałkowska, 2008). Still, Lev (2001) defends that such distrust is exaggerated and that to repudiate the measurement of IC would be a substantially greater problem for the long-term success. Sveiby (1997b) outlines three reasons why companies do not want to measure intangible assets. They are (a) managers themselves do not understand the importance of it; (b) indicators can give too much information away to the competitors and (c) there is no rigorous theoretical model for such a type of reporting (Abeyesekera, 2003). IC disclosure can and will help organizations to better manage, understand and communicate their knowledge resources and the value creation processes.*The indispensable and imperative need of the hour is a one-page (Sveiby, 1997a), simple, comprehensible, IC-driven business dashboard integrating the following frameworks:*

(a) Balanced scorecard (Kaplan and Norton, 1992) considered to be the advanced performance measurement system (Ittner and Larcker, 1998),
(b) *Intangibe Assets Monitor (Sveiby, 1997a) and the*
(c)Integrated IC Reporting Model (Abeysekera, 2013)

These frameworks need to be anchored in a global regulatory, three-tier corporate transparency (DiPiazza and Eccles, 2002) reportingmodel to facilitate Value reporting (Eccles et al., 2001) and One Report (Eccles and Krzus, 2010). This could bebolstered by the International Integrated Reporting Council (2013), IFRS and country-specific GAAP from the governance, risk and compliance (GRC) process perspective for national governments to comply with.

VIII. CONCLUSION

There is ample anecdotal evidence that some firms disclose nonfinancial performance information on a voluntary basis (Eccles et al. 2001) and Upton (2001). Moreover, financial analysts refer to nonfinancial measures in their company reports (Previts et al, 1994) and maintain that they use these measures to evaluate the long-term performance of a firm (Dempsey et al, 1997). Nonetheless, these results do not provide evidence on the underlying linkages between nonfinancial data, future financial performance, and equity values. Studies takes two approaches to examine these linkages and document the relevance of nonfinancial information: (1) establish a direct link between nonfinancial measures and equity values and (2) demonstrate a link between current nonfinancial measures and future financial information, indicating that nonfinancial information should be useful to investors and creditors. The first category typically is referred to as value relevance tests, while the second category is termed predictive ability tests. By necessity, value relevance and predictive ability studies examine industries in which nonfinancial performance measures are publicy available, which can raise concerns over small sample or self-selection biases

Due to deficient accounting rules mandating the immediate expensing of most investments in growth (R&D, brand creation, employee training), the reported earnings of early-stage, high growth, intangible-intensive companies understate their true profitability and growth potential. Managers should not be penalized for deficient accounting rules. When earnings fail to properly reflect performance, they should be augmented or even replaced by indicators of the company's fundamental value drivers (Lev, 2012, pp. 298-299). Amir and Lev (1996) and Lev and Zarowin (1999) suggest that firms with higher levels of R&D and advertising expenditures perceive GAAP-based accounting reports as being inadequate to present their financial performance and therefore employ alternative disclosure mechanisms.

Having documented the capital resources for business thus far, it must be said that aligning intangible assets with the value chain of a business enterprise provides a first and robuststep to aligning knowledge to its strategy. A network and dynamic model to value and report intangible assetsis througha model called the framework of intangible valuation areas (FIVA) of Green (2004, p.47) is a case in point. This framework leverages the existing balanced scorecard valuation models and business value chain models by extracting their value components and aligning them with performance-based activities to define a common intangible asset taxonomy (IAT) of value drivers of intangible assets (Green, 2006, p.29). A validated framework supports the organizing and monitoring of intangible assets to organize intangible assets measurement and performance indicators (Figure 6)

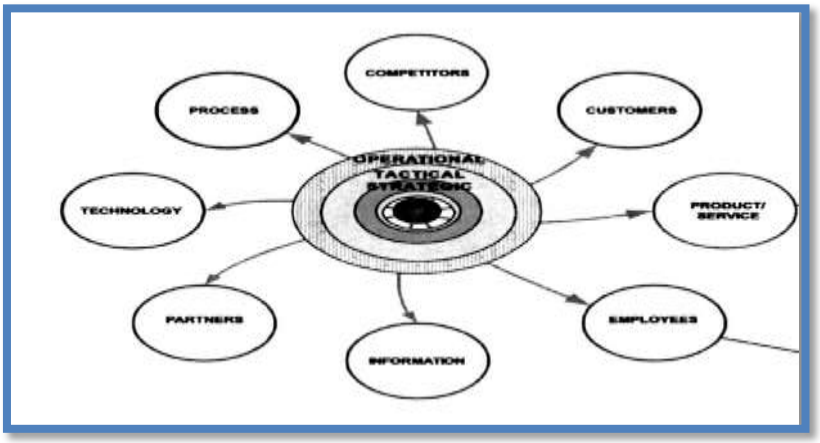

Figure 6 : Intangible Valuation Areas (Green, 2006, p.31)

A validated framework reflects the realities of the business enterprise and is designed to accommodate the explicit functions of the business enterprise. It provides a gateway to construct and integrate enterprise

intangible asset valuation models to the routine and special statistical, financial, forecasting, management science and other quantitative models that provde analysis capabilities for decisionmaking. (Green, 2006, p.31). FIVA provides a view of intangible assets within the context of the business enterprise and supports the valuation of intangible assets based on a common set of business diminesions. This is done by incorporating intangible assets in the value chain a business enterprise providing the first step to align intangible assets to value creation with business strategy. Providing a systematic way to divide a business enterprise into discrete activities of business strategy, it examines the grouping of business activities and to establish boundaries that align with drivers of value both tangible and intangible.(Green, 2006, p.31).

REFERENCES

[1]. Abeyesekera, I., (2003), Intellectual Accounting Scorecard – Measuring and Reporting Intellectual Capital, Journal of American Academy of Business, Cambridge; September; 3, 1/2 pg. 422

[2]. Abeysekera, A., (2013), A template for integratedReporting, Journal of Intellectual Capital, Vol. 14 No. 2, pp. 227-245

[3]. Abeysekera, I. and Guthrie, J. (2005), "An empirical investigation of annual reporting trends ofintellectual

[4]. Aboody, D. and Lev, B. (1998). 'The Value relevance of Intangibles: The Case of Software Capitalization', *Journal of Accounting Research*, 36 (Supplement): 161–191.

[5]. Adams, C. A., & Larrinaga-Gonza´lez, C. (2007). Engaging with organisations in pursuit of improvedsustainability accounting and performance. Accounting, Auditing and Accountability Journal, 20(3),333–355.

[6]. Alter, S. (2002), Information Systems, The Foundations of E-business, 4th ed., Prentice-Hall, Upper Saddle River, NJ.

[7]. Alvesson, M. and Deetz, S. (2000), Doing Critical Management Research, Sage, Thousand Oaks, CA.

[8]. American Institute of Certified public Accountants (AICPA), 1994, Improving Business reporting – A Customer Focus, New York, NY: AICPA

[9]. Amir, E., and Lev, B (1996), Value relevance of nonfinancial information: The wireless communication industry, Journal of Accounting and Economics 22 (August-December): 3-30

[10]. Amir, E., Lev, B. and Sougiannis, T. (2003), "Do financial analysts get intangibles?",EuropeanAccounting Review, Vol. 12 No. 4, pp. 635-59.

[11]. Anderson, R.H., and Epstein, M.J. (1996). The Usefulness of Corporate Annual Reports to Shareholders inAustralia, New Zealand, and the United States: An International Comparison. *Studies in Managerial andFinancial Accounting*, Vol. 4, Elsevier Science, Amsterdam.

[12]. Anderson, R., Mansi, S., &Reeb, D. (2004). Board characteristics, accounting report integrity, and thecost of the debt. Journal of Accounting and Economics, 37(3), 315–342.

[13]. Andriessen, D. and Tissen, R. (2000), Weightless Wealth. Finding Your Real Value in a Future ofIntangible Assets, Financial Times/Prentice Hall, London.

[14]. Andriessen, D. (2004), "IC valuation and measurement: classifying the state of art", Journal ofIntellectual Capital, Vol. 5 No. 2, pp. 230-42.

[15]. April, K. and Bosma, P. (2003), "IC measurement and reporting: establishing a practice in SAmining", Journal of Intellectual Capital, Vol. 4 No. 2, pp. 165-80.

[16]. Asif, M., DeBruijn, E.J., Fisscher, O.A.M. and Steenhuis, H.-J. (2008), "Achieving sustainabilitythree dimensionally", paper presented at the 4th International Conference on Management of Innovation and Technology (2008-ICMIT), Bangkok.

[17]. Asif, M., Searcy, C., Zutshi, A., Ahmad, N.,(2011), An integrated management systems approach to corporate sustainability, European Business Review, Vol. 23 No. 4, pp. 353-367

[18]. Ballow, J., Burgman, R. and Molnar, J. (2004), "Managing for shareholder value: intangibles,future value and investment decision", Journal of Business Strategy, Vol. 25 No. 3,pp. 26-34.

[19]. Barth, M.E., Kasznik, R., and McNichols, M. (2001). 'Analyst Coverage and Intangible Assets', *Journal of Accounting Research*, 39 (1): 1–34.

[20]. Beasley, M. (1996). An empirical analysis of the relation between the board of directors composition andfinancial statement fraud. The Accounting Review, 71(4), 443–465.

[21]. Beekes, W., Pope, P., & Young, S. (2004). The link between earnings timeliness, earnings conservatismand board composition: Evidence from the UK. Corporate Governance: An International Review,12(1), 47–59.

[22]. Bhasin, M.L., (2011), Disclosure of Intellectual Capital in Annual Reports: An Empirical study of the Indian IT corporations, Modern Economy, 2, 455-467

[23]. Blair, M. and Wallman, S. (2000), Unseen Wealth, Brookings Institution, Washington, DC.

[24]. Boedker, C., Guthrie, J., and Cuganesan, S (2005), An integrated framework for visualizing intellectual capital, Journal of Intellectual Capital, vol. 6 No. 4, pp. 510-527

[25]. Bond, S.R., and Cummins, J.G (2000), The Stock Market and Investment in the New Economy: Some Tangible Facts and Intangible Fictions, Brookings Papers on Economic Activity; 2000; 1; pg.61

[26]. Bontis, No. (2000), "Assessing knowledge assets: a review of the models used to measure intellectual models", doctoral dissertation, DeGroote School of Business, McMaster University, Hamilton.

[27]. Bontis, N. (2003), "Intellectual capital disclosures in Canadian corporations", Journal of HumanResource Costing and Accounting, Vol. 7 Nos 1/2, pp. 9-20.

[28]. Boulton, R., Libert, B., and Samek, S., (2000), Cracking the Value code, New York, NY: HaroerBusiness

[29]. Bourne, M., Mills, J., Wilcox, M., Neely, A. and Platts, K. (2000), "Designing, implementing andupdating performance measurement systems", International Journal of Operations &Production Management, Vol. 20 No. 7, pp. 754-71.

[30]. Bozzolan, S. (2003), "Italian annual intellectual capital disclosure: an empirical analysis", Journalof Intellectual Capital, Vol. 4 No. 4, pp. 543-58.

[31]. Brennan, N. (2001), "Reporting intellectual capital in annual reports: evidence from Ireland",Accounting, Auditing & Accountability Journal, Vol. 14 No. 4, pp. 423-36.

[32]. Busacca, G.A., and Maccarrone, P., (2007), IFRSs and accounting for intangible assets: the Telecom Italia case, Journal of Intellectual Capital, Vol. 8 No. 2, pp. 306-328

[33]. Bukh, P.N., Larsen, H.T. and Mouritson, J. (2001), "Constructing intellectual capital statement",Scandinavian Journal of Management, Vol. 17, pp. 87-108.

[34]. Cartwright, W., and Craig, J.L., (2006),Sustainability: aligning corporate governance, strategy andoperations with the planet, Business Process Management, Journal, Vol. 12 No. 6, 2006pp. 741-750
[35]. Chan, K.H. (2009), "Impact of intellectual capital on organisational performance: an empiricalstudy of companies in the Hang Seng Index (Part 1)", The Learning Organization, Vol. 16No. 1, pp. 4-21.
[36]. Chatzkel, J. (2002),"A conversation with Goran Ross", Journal of Intellectual Capital, Vol. 3 No. 2, pp. 96-117
[37]. Cotter, J., and Silvester, M. (2003). 'Board and Monitoring Committee Independence', *Abacus*, 39 (2): 211–232.
[38]. Curado, C., and Henriques, L., and Bontis, N., (2011), Intellectual capital disclosure payback, Management Decision, Vol. 49 No. 7, pp. 1080-1098
[39]. Daft, R.L. and Weick, K.E. (1984), "Towards a model of organizations as interpretation systems",Academy of Management Review, Vol. 9 No. 2, pp. 284-95.
[40]. Dahya, J., Lonie, A. A., & Power, D. M. (1996). The case for separating the roles of chairman and CEO:An analysis of stock market and accounting data. Corporate Governance: An International Review,4(1), 71–77.
[41]. Daum, J.H., (2002), Intangible Assets and Value Creation, Wiley, Chichester, 2002
[42]. Daum, J. (2003), Intangibles Assets and Value Creation, John Wiley & Sons, Bognor Regis.
[43]. Dempsey, S. J., Gatti, J.F., Grinnell, D.J., and Cats-Baril, W.L., (1997), The use of strategic performance variables as leading indicators in financial analysts' forecasts. The Journal of Financial statement Analaysis 2 (4): 61-79
[44]. DiMaggio, P.J. and Powell, W.W. (1983), "The iron cage revisited: institutional isomorphism andcollective rationality in organizational fields", American Sociological Review, Vol. 48, April,pp. 147-60.
[45]. DiPiazzaS.A,Jr., and Eccles, R.G., (2002), BUILDING PUBLIC TRUST : The future of Corporate Reporting, John Wiley & Sons, New York.
[46]. Dowling, J. and Pfeffer, J. (1975), "Organisational legitimacy: societal values and organizational behaviour", Pacific Sociological Review, Vol. 18 No. 1, pp. 122-36.
[47]. Dumay, J.C. (2009b), "Intellectual capital measurement: a critical approach", Journal of Intellectual Capital, Vol. 10 No. 2, pp. 190-210.
[48]. Dumay, J.C. (2009c), "Reflective discourse about intellectual capital: research and practice",Journal of Intellectual Capital, Vol. 10 No. 4, pp. 489-503.
[49]. Dumay, J.C. (2012), Grand theories as barriers to using IC concepts, Journal of Intellectual Capital, Vol. 13 No. 1, pp. 4-15
[50]. Dyllick, T. and Hockerts, K. (2002), "Beyond the business case for corporate sustainability",Business Strategy and the Environment, Vol. 11, pp. 130-41.
[51]. Eccles, R.G., Hers., R.H., Keegan, E.M. and Philllips, D. (2001), The Value Reporting Revolutions: Moving beyond the Earnings Games, John Wiley, New York, NY.
[52]. Eccles, R.G., and Krzus, M.P., (2010), One Report: Integrated Reporting for a Sustainable Strategy, John Wiley & Sons, New Jersey, pp.9-26.
[53]. Edgeman, R.L. (1998), "Principle-centered leadership and core value deployment", The TQMMagazine, Vol. 10 No. 3, pp. 190-3.
[54]. Edgeman, R.L. and Hensler, D.A. (2001), "The AO chronicle: earth@omegaorsustainability@alpha?", The TQM Magazine, Vol. 13 No. 2, pp. 83-90.
[55]. Edvinson, L. and Malone, M.S. (1997), Intellectual Capital: Realizing your Company's True Valueby Finding its Hidden Brainpower, Harper Business, New York, NY.
[56]. Edvinsson, L (2013), 'IC 21 - Reflections fi'om 21 years of IG Practice and Theory', *Journal of* Intellectual Capital, Journal of Intellectual Capital, Vol. 14 No. 1, pp. 163-172
[57]. Elkington, J. (1999), Cannibals with Forks: The Triple Bottom Line of 21st Century Business,Capstone Publishing Ltd, Oxford.
[58]. Epstein, M.J. and Manzoni, J.f. (1997), The Balanced Scorecard and Tableau do bord, vol. 79 No. 2, pp. 28-36
[59]. Fijałkowska, J. (2008), "Review of guidelines for intellectual capital statement – how to manageand communicate the companies' knowledge", Portuguese Journal of Management Studies,Vol. 12 No. 3, pp. 327-39.
[60]. Financial Accounting Standards Board (2001), Business and Financial Reporting: Challengesfrom the New Economy, Steering Committee Report, Financial Accounting StandardsBoard, Norwalk, CT.
[61]. Freeman, R.E. (1984), Strategic Management: A Stakeholder Approach, Pitman, Boston, MA.
[62]. Guatri, L. and Bini, M. (2003a), GliIntangibiliSpecifici, Universita` BocconiEditore, Milano.
[63]. Guatri, L. and Bini, M. (2003b), "Back to the future: l'analisifondamentalenellavalutazionedelleaziende", La ValutazionedelleAziende, Vol. 28, pp. 3-6.
[64]. Gibbins, M., Richardson, A., and Waterhouse, J. (1990).'The Management of Corporate Financial Disclosure:Opportunism, Ritualism, Policies and Processes', *Journalof Accounting Research*, 28 (1): 121–143.
[65]. Global Reporting Initiative (2013), G4 SUSTAINABIITY REPORTING GUIDELINES, REPORTING PRINCIPLES AND STANDARD DISCLOSURES,www.globalreporting.org accessed on 20th December 2013
[66]. Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: A review of theliterature and a longitudinal study of UK disclosure. Accounting, Auditing and Accountability, 8(2),47–77.
[67]. Gray, j. and Pesquex, Y. (1993), Evolutonsactuelles des systems de tableau de bord. Comparison des pratiques de quelques multinationals americanes et francaises, Revue Francaise de comptabilite, Februrary, pp. 61-70
[68]. Green, A (2006), The Transformation of business knowledge into intangible assets, VINE, 36, 1; pg. 27
[69]. Guthrie, J. and Petty, R., (2000), "Intellectual Capital: Australian annual reporting practices", Journal of Intellectual Capital, Vol. 1 No. 3, pp. 241-51
[70]. Guthrie, J., Petty, R., Yongvanich, K. and Ricceri, F. (2004), "Using content analysis as a researchmethod to inquire into intellectual capital reporting", Journal of Intellectual Capital, Vol. 5No. 2, pp. 282-93.
[71]. Guthrie, J., Ricceri, F. and Dumay, J. (2012), "Reflections and projections: a decade of intellectual capital accounting research", British Accounting Review, Vol. 44 No. 2, p. 70.
[72]. Haniffa, R. M., & Cooke, T. E. (2002). Culture, corporate governance and disclosure in Malaysiancorporations. Abacus, 38(3), 317–349.
[73]. Harper, S. (2001), Impairment Test Offers Clearer Picture of Goodwill, California CPA,Sacramento, CA, August.
[74]. Hediger, W. (1999), "Reconciling 'weak' and 'strong' sustainability", International Journal ofSocial Economics, Vol. 26 Nos 7-9, pp. 1120-44.
[75]. Holland, J. (2006a). *A Model of Corporate FinancialCommunication*, Institute of Chartered Accountants ofScotland (ICAS): Edinburgh.
[76]. Holliday, C. (2001), "Sustainable growth, the DuPont way", Harvard Business Review, Vol. 79,pp. 129-34.

[77]. Hurwitz, J., Lines, S., Montgomery, B. and Schmidt, J. (2002), "The linkage between management practices, intangibles performance and stock returns", Journal of Intellectual Capital, Vol. 3, No. 1, pp. 51-61

[78]. International Accounting Standards Board (IASB) (2008), "Electronic international financial reporting standards", International Accounting Standards Board, available at: http://eifrs.iasb.org/eifrs/Menu

[79]. International Integrated Reporting council (IIRC) (2013), CONSULTATION DRAFT OF THE INTERNATIONAL <IR> FRAMEWORK, INTEGRATION REPORTING, www.theiirc.org/consultationdraft

[80]. Ittner, C.D. and Larcker, D.F. (2003), "Coming up short on nonfinancial performance", HarvardBusiness Review, Vol. 81 No. 11, pp. 88-95

[81]. Jensen, M. C., and Meckling, W. H. (1976). 'Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure', *Journal of Financial Economics*, 3: 305–360.

[82]. Kane, E.J. and Unal, H. (1990), "Modeling structural and temporal variation in the market'svaluation of banking firms", The Journal of Finance, Vol. XIV No. 1, pp. 113-36.

[83]. Kaplan, R.S. and Norton, D.P. (1992), "The balanced scorecard – measures that drive

[84]. performance", Harvard Business Review, Vol. 70 No. 1, pp. 71-9.

[85]. Klein, D. (1998), The Strategic Management of Intellectual Capital, Butterworth-Heinemann, Woburn, MA

[86]. Klein, A. (2002). Economic determinants behind variations in audit committee independence. WorkingPaper, The Accounting Review, 77, 435–452.

[87]. Kotler, P (2003), *MARKETING INSIGHTS FROM A TO Z: 80 CONCEPTS EVERY MANAGER NEEDS TO KNOW*, Johy Wiley & Sons, pp.86-87

[88]. Langendijk, H., Swagerman, D. and Verhoog, W. (2003), Is Fair Value Fair?, Wiley, Chichester.

[89]. Leadbetter, C. (1999), "New measures for the new economy", paper presented at InternationalSymposium Measuring Reporting Intellectual Capital: Experiences, Issues and Prospects,OECD, Amsterdam.

[90]. Lev, B. (2001), Intangibles: Management, Measurement and Reporting, Brookings InstitutionPress, Washington, DC.

[91]. Lev and Daum (2004), The dominance of intangible assets: consequences of enterprise management and corporate reporting, Measuring Business Excellence; 8, 1; pg.

[92]. Lev, B., (2012), WINNING INVESTORS OVER: SURPRISING TRUTHS ABOUT HONESTY, EARNINGS GUIDANCE, AND OTHER WAYS TO BOOST YOUR STOCK PRICE, Harvard Business Review Press, Boston, Massachusetts

[93]. Li.J.,Pike, R., and Haniffa., R., (2008), "Intellectual capital disclosure and corporategovernance structure in UK firms", Accounting and Business Research, Vol. 38. No. 2. pp. 137-159.

[94]. Liao, L., Low, M., and Davey, H., (2013), Chinese and English language versions: intellectualcapital disclosure, Journal of Intellectual Capital, Vol. 14 No. 4, pp. 661-686

[95]. Llewelyn, S. (2003), "What counts as theory in qualitative management and accounting research? Introducing five levels of theorizing", Accounting, Auditing & Accountability Journal,Vol. 16 No. 4, pp. 662-708.

[96]. Lev, B., and Zarowin, P. (1999). 'The Boundaries of Financial Reporting and How to Extend Them', *Journal of Accounting Research*, 37 (2): 353–386.

[97]. Luft, J., and Shields, M., (2002), Learning drivers of financial performance: Judgement and decision effects of financial measures, nonfinancial measures, and statistical models. Working paper, Michigan State University

[98]. Maines, L.A., Eli, B., Fairfield, P.M and Eric, H.D., (2002), Recommendations on disclosure of nonfinancial performance measures, Accounting Horizons, Dec; 16, 4; pg. 353

[99]. Marr, B., (2003), "Why do firms measure their intellectual capital", Journal of Intellectual Capital, Vol. 4 No.4, pp. 441-64

[100]. Marr, B. (Ed.) (2005), Perspectives on Intellectual Capital – Interdisciplinary Insights into Management, Measurement and Reporting, Elsevier, Boston, MA.

[101]. Marr, B. and Mustaghfir, K. (2005), 'Defining intellectual capital: a three-dimensionalapproach'. *Management Decision*, Vol. 43, No. 9, pp. 1114-1128

[102]. McNair, C.J. and Vangermeersch, R. 91998), Total Capacity Management: Optimizing at the Operational, Tactical and Strategic Levels, St. Lucie Press, Boca raton, FL.

[103]. McNurlin, B. and Sprague, R. Jr (1998), Information Systems Management in Practice, 4th ed., Prentice Hall, Upper Saddle River, N.J.

[104]. Morecroft, J. and Sternman, J. (2000), Modeling for Learning Organizations, Productivity Press, Portland, OR.

[105]. Mouritsen, J., Bukh, P.N. and Marr, B., (2004), "Reporting on intellectual capital: why, what and how?", Measuring Business Excellence, Vol. 8 No. 1, pp. 46-54.

[106]. Mouritsen, J (2006), Problematising intellectual capital research: ostensive versus performative IC, Accounting, Auditing & Accountability Journal, Vol. 19 No. 6, pp. 820-841

[107]. Mouritsen, J. and Bukh, P.N. (2003), Intellectual Capital Statements – The New Guideline, DanishMinistry of Science Technology and Innovation, Copenhagen

[108]. Mouritsen, J., Larsen, H.T. and Bukh, P.N.D. (2001a), "Intellectual capital and the 'capable firm':narrating, visualising and numbering for managing knowledge", Accounting,Organisation and Society, Vol. 26 Nos 7-8, pp. 735-62.

[109]. Norton, D.P. (2000), Should balanced scorecards be required? Balanced Scorecard Report, July-August: 14-15

[110]. Nattrass, B. and Altomare, M. (1999), The Natural Step for Business: Wealth, Ecology and theEvolutionary Corporation, New Society Publishers, Gabriola Island, BC.

[111]. Nonaka, I. and Takeuchi, H. (1995), The Knowledge-creating Company, Oxford University Press,New York, NY.

[112]. Pike, S. and Ross, G. (2004), "Mathematics and modern business management", paper presentedat the 25th McMaster World Congress Managing Intellectual Capital, Hamilton.

[113]. Oswald, D., and Zarowin, P., (2007), "Capitalization of R&D and the informativeness of stock prices", European Accounting Review, 16, pp.703-726

[114]. Porter, M.E. (1980), Competitive Strategy: Techniques for Analyzing Industries and Competitors, The Free Press, New York, NY.

[115]. Previts, G.J., Bricker, R.J., Robinson, T.R., and Young, S.J., (1994), A content analysis of sell-side financial analyst company reports. Accounting Horizons, June; 55-70

[116]. Prusak, L., (1998), Working Knowledge: How Organizations Manage What They Know, Harvard Business School Press, Cambridge, MA.

[117]. Pulic, A. (2000a), "MVA and VAIC analysis of randomly selected companies from FTSE 250",pp. 1-41, available at: www.vaic-on.net (accessed 12 September 2006).

[118]. Pulic, A. (2000b), "VAIC: an accounting tool for IC management", International Journal ofTechnology Management, Vol. 20 Nos 5-8, pp. 702-14.
[119]. Pulic, A. (2002a), "Do we know if we create or destroy value?", pp. 62-8, available at: www.vaic-on.net/start.htm (accessed 29 March 2006).
[120]. Pulic, A. (2004), "Intellectual capital: does it create or destroy value?", Measuring BusinessExcellence, Vol. 8 No. 1, pp. 62-8.
[121]. Rastogi, P.N. (2003), "The nature and role of IC – rethinking the process of value creation andsustained enterprise growth", Journal of Intellectual Capital, Vol. 4 No. 2, pp. 227-48.
[122]. Rocha, M., Searcy, C. and Karapetrovic, S. (2007), "Integrating sustainable development intoexisting management systems", Total Quality Management and Business Excellence,Vol. 18 Nos 1/2, pp. 83-92.
[123]. Roos, G., Bainbridge, A. and Jacobsen, K. (2001), "Intellectual capital analysis as a strategic tool", Strategy & Leadership, Vol. 29 No. 4, pp. 6-21
[124]. Roos, J., Roos, G., Dragonetti, N.C. and Edvinsson, L. (1997), Intellectual Capital: Navigating the NewBusiness Landscape, Macmillan Press, London.
[125]. Roslender, R., (2009), The prospects for satisfactorily measuring and reportingintangibles: Time to embrace a new model of (ac)counting? Journal of Human Resource Costing & AccountingVol. 13 No. 4, pp. 338-359
[126]. Salzmann, O., Ionescu-Somers, A. and Steger, U. (2005), "The business case for sustainability:literature reviewandresearchoptions",EuropeanManagement Journal,Vol. 23No. 1, pp. 27-36.
[127]. Sa´nchez-Can˜ izares, S.M., AyusoMun˜oz, M.A., and Lo´pez-Guzma´n, T., (2007), Organizational culture and intellectual capital: a new model, Journal of Intellectual CapitalVol. 8 No. 3, pp. 409-430
[128]. Searcy, C., Karapetrovic, S. and McCartney, D. (2006), "Integrating sustainable developmentindicators with existing business infrastructure", International Journal of Innovation andSustainable Development, Vol. 1 No. 4, pp. 389-411.
[129]. Selznick, P. (1992). The moral commonwealth. Berkeley, CA: University of California Press.
[130]. Delaney, Senn (2011), The Human Operating System: An Owner's Manual, Senn Delaney Leadership Consulting Group LLC., www.senndelaney.com
[131]. Shand, D., (1999),"Return on knowledge", Knowledge Management, April, pp. 9-
[132]. Shrivastava, P. (1995), "The role of corporations in achieving ecological sustainability", Academyof Management Review, Vol. 20 No. 4, pp. 936-60.
[133]. Smith, N.C. and Lenssen, G. (2009), "Mainstreaming corporate responsibility: an introduction", in Smith, N.C. and Lenssen,G. (Eds),MainstreamingCorporateResponsibility,Wiley, Chichester.
[134]. Solomon, J. (2010), Corporate Governance and Accountability, Wiley, Chichester.
[135]. Stewart, T.A. (1997), Intellectual Capital, Nicholas Brealey Publishing, London.
[136]. Stewart, T.A. (2001), "Accounting gets radical", Fortune 500, April,pp. 184-94
[137]. Suchman, M.C. (1995), "Managing legitimacy: strategic and institutional approaches", Academyof Management Review, Vol. 20 No. 3, pp. 571-610.
[138]. Sujan and Abeysekear (2007), INTELLECTUAL CAPITAL REPORTING PRACTICES OF THE TOP AUSTRALIAN FIRMS, Australian Accounting Review; Jul 2007; 17, 2; pg. 71
[139]. Sullivan, P. (2000), Value-driven Intellectual Capital: How to Convert Intangible Corproate Assets into Market Value, John Wiley & Sons, New York, NY
[140]. Sullivan, P.H. Jr and Sullivan, P.H. Sr (2000), "Valuing intangible companies: an intellectualcapital approach", Journal of Intellectual Capital, Vol. 1 No. 4, pp. 328-40.
[141]. Sveiby, K. E. (1997a), *The New Organizational Wealth: Managing and Measuring Knowledge-Based Assets*, San Francisco: Barrett-Kohler
[142]. Sveiby, K.E., (1997b), The intangible assets monitor, Journal of Human Reosource Costing and Accounting 2(1), Spring, 73-97
[143]. Sveiby, K. (2001), "Methods for measuring intangible assets", available at www.sveiby.com.au/IntangibleMethods.htm
[144]. Sveiby, K.E. (2004), "Methods for measuring intangible assets", July, available at: www.sveiby.com/articles/IntangibleMethods.htm (accessed April 4, 2005).
[145]. Tayles, M., Pike, R.H., Sofian, S.,(2007), Intellectual capital, management accounting practices and corporate performance: Perceptions of managers, Accounting, Auditing & Accountability Journal Vol. 20 No. 4, pp. 522-548
[146]. Tapscott, D., Ticoll, D. and Lowy, A. (2000), Digital Capital – Harnessing the Power of Business Webs,Harvard Business School Press, Boston, MA.
[147]. Teece, D.T. (2000), Managing Intellectual Capital. Organizational, Strategic, and PolicyDimensions, Oxford University Press, Oxford.
[148]. Upton, W.S., Jr. (2001), Special Report: Business and Financial Reporting, Challenges from the New Economy, Norwalk, CT: FASB
[149]. Von Krogh, G., Roos, J., and Kleine, D.,(1998), Knowing in Firms: Understanding, Managing and Measuring Knowledge, Sage Publications, London
[150]. Waliullah(2010), Financial Liberalization and Stock Market Behaviour in an Emerging Market – A Case Study of Pakistan, *International Journal of Business and Social Science, Vol. 1 No. 3; December*
[151]. Wallman, S. (1995), "The future of accounting and disclosure in an evolving world: the needfor dramatic change", Accounting Horizons, Vol. 9 No. 3, pp. 81-91.
[152]. Weick, K.E. (1987), "Organizational culture and high reliability", California Management Review,Vol. 29 No. 2, pp. 112-27.
[153]. Weimer, J. and Pape, J. (1999). A Taxonomy of Systems ofCorporate Governance, *Corporate Governance: AnInternational Review*, 7 (2): 152–166.
[154]. Woodward, D., Edwards, P. and Birkin, F. (2001), "Some evidence on executives' views ofcorporate social responsibility", British Accounting Review, Vol. 33 No. 2, pp. 357-97.
[155]. Whiting, R.H., and . Miller, J.C (2008),Voluntary disclosureof intellectual capital inNew Zealand annual reportsand the "hidden value", Journal of Human Resource Costing &Accounting, Vol. 12 No. 1, pp. 26-50
[156]. Whiting, R.,H., and Woodcock, J., (2011), "Firm characteristics andintellectual capital disclosureby Australian companies", Journal of Human Resource Costing &
[157]. AccountingVol. 15 No. 2, 2011pp. 102-126
[158]. Zahra, S. A., & Pearce, J. A., I. I. (1989). Boards of directors and corporate financial performance:A review and integrative model. Journal of Management, 15(2), 291–334.
[159]. Ze´ghal, D., and Maaloul, A.,(2010), Analysing value added as an indicator of intellectual capital and its consequences on company performance, of Intellectual Capital, Vol. 11 No. 1, pp. 39-60