

2008

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Recommended Citation

Abhayawansa, S. and Abeysekera, Indra: An explanation of human capital disclosure from the resource based perspective 2008.
<https://ro.uow.edu.au/commpapers/546>

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Abstract

Though the importance of human capital (HC) in firm value creation is firmly established in the literature the level of emphasis placed on human capital disclosure (HCD) by preparers of financial statements and sell-side analysts is minimal. The purpose of this paper is to address this dilemma by critically analysing the conceptualisation of human capital in disclosure literature and introduce a more germane explanation.

Keywords

emotional assets, emotional liabilities, emotional capital, intellectual assets, intellectual liabilities, accounting assets, accounting liabilities, core values, intangible assets, intangible liabilities

Disciplines

Accounting | Business | Social and Behavioral Sciences

Publication Details

This article was originally published as Abhayawansa, S and Abeysekera, I, An explanation of human capital disclosure from the resource based perspective, Journal of Human Resource Costing and Accounting, 12(1), 2008, 51-64.

Abhayawansa, S. and Abeysekera, I. 2008, forthcoming 'An explanation of human capital disclosure from the resource based perspective', *Journal of Human Resource Costing and Accounting*, Vol. 12, No. 1, pp. 51-64.

An explanation of human capital disclosure from the resource based perspective

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Abstract

Purpose – Though the importance of human capital (HC) in firm value creation is firmly established in the literature the level of emphasis placed on human capital disclosure (HCD) by preparers of financial statements and sell-side analysts is minimal. The purpose of this paper is to address this dilemma by critically analysing the conceptualisation of human capital in disclosure literature and introduce a more germane explanation.

Design/Methodology/approach - The paper begins by reviewing the literature on intellectual capital disclosure (ICD) to examine the level of HC disclosure in various company media and use of such information by the capital market. It then critically analyse the conceptualisation of HC in those studies with a view to form an opinion about the adequacy of that conceptualisation. Then resource based view is justified as providing a more appropriate conceptualisation of HC to meet demands of the capital market.

Findings – Substantial ICD literature conceptualise HC using human capital theory as a collection of knowledge and competences possessed by employees individually and collectively in firms. This has resulted in HC disclosure scores being considerably low compared to external and internal capital disclosure and does not portray HC in a way that is useful to the capital market. Resource based perspective enable HC to be depicted in a way that closely resembles the value creation potential of firms' employees.

Practical implications – Guidance is provided for future HCD and ICD studies to operationalise HC to reflect its value creation potential by encompassing not only the firm specific stock of knowledge and capabilities of employees but also the strategic human resource management practices, enabling corporate culture and the idiosyncratic systems and practices of the firm in place to reap the benefits of these.

Originality/value – ICD literature portrays human capital as the least important intellectual capital (IC) subcategory. However, anecdotal evidence suggest otherwise. This study is the first attempt to clarify and provide an explanation to this dilemma.

Paper type – Conceptual

Keywords – Human capital, human capital disclosure, intellectual capital disclosure, resource based view

Introduction

With the advent of the new economy, organisational value drivers shifted from tangible assets to intangibles. The accounting literature identifies these intangible value drivers as intellectual capital (IC). HC is an important element of IC, driving value creation in the new economy and especially in knowledge intensive companies. O'Regan, O'Donnell & Heffernan (2001) and O'Donnell & Berkery (2003) found that top management is cognisant of HC as a primary driver of firm value. Empirical studies on the impact of HC stock (such as skills, personality traits, attributes and competencies of employees) on firm performance or market value are, however, limited. The few published studies in this domain concentrate on top management HC. Pena (2002) found that the HC of the entrepreneur, namely, the entrepreneur's level of education, experience and motivation, was positively related to new venture performance. Dedman and Lin (2002) concluded that news of a CEO's departure was associated with negative market reactions. Others have matched personal characteristics or behaviour of top management with business strategy (Ashton, 2005).

Researchers have endeavoured to understand the level of HC disclosed by companies and the use of this information by financial analysts. A plethora of ICD studies have been conducted in many parts of the world examining disclosure of HC in company annual reports (Abeysekera & Guthrie, 2005; April, Bosma & Deglon, 2003; Arvidsson, 2003; Bergamini & Zambon, 2002; Bozzolan, Favotto & Ricceri, 2003; Brennan, 2001; Carnaghan, 1999; Firer & Williams, 2005; Flöstrand & Ström, 2006; Goh & Lim, 2004; Guthrie, Petty, Ferrier & Wells, 1999; Olsson, 2001; Petty & Cuganesan, 2005; Vandemaele, Vergauwen & Smits, 2005; Williams, 2001), IPO prospectuses (Bukh, Nielsen, Gormsen & Mouritsen, 2005; Nielsen et al., 2005), presentations to analysts (García-Meca & Martínez, 2005; García-Meca, Parra, Larrán & Martínez, 2005) and sell-side analysts reports (Arvidsson, 2003; Flöstrand, 2006; Flöstrand & Ström, 2006; García-Meca, 2005; Nielsen, 2004). In addition to HCD studies (Hedlin & Adolphson, 2000; Olsson, 2004; Subbarao & Zeghal, 1997), research on ICD in company annual reports and IPO prospectuses have evaluated the level of emphasis placed on HC disclosures by preparers of financial statements. Synthesis of the findings in these studies provides mixed results. More HC information is disclosed in some countries than in others. However, the relative

importance placed on HC by companies is generally less than that of other types of IC, namely, structural capital and relational capital.

These findings contradict the old adage that people are the most important asset in a firm. They also contradict the findings of Mouritsen, Bukh & Marr (2004) and Bukh, Larsen & Mouritsen (2001) that the main motivation of companies in preparing IC statements is to show that their human resources are valued. On the other hand, providers of information to capital market participants, namely financial analysts and fund managers, seem not yet ready to incorporate HC information into their valuation processes. Disclosure of HC information in sell-side analyst reports is considerably less.

The conceptualisation of HC in most ICD studies can explain the relatively low level of HC disclosure. Using a resource based view we argue in this paper that the value of employees is greatest when they are a perceived resource of that firm and when human resource management (HRM) practices and organisational systems are in place to leverage their value. It is suggested that future HC disclosure studies need to conceptualise HC not only as the stock of knowledge at the individual level but also to take into account the specificity of that knowledge to the firm, and any idiosyncratic HRM practices and the social fabric embedded in the organisation.

The paper proceeds as follows. The following section synthesises findings on human capital disclosure (HCD) in the ICD literature. The next section discusses how HC is conceptualised and in turn operationalised in the ICD literature. A resource based view of the firm is then presented as an alternative theory for conceptualising HC.

Human capital disclosure literature

As early as the 1960s, academic debate on human resource accounting and utility analysis attempted to bring HC into the balance sheet (Brummet, Flamholtz & Pyle, 1968; Elias, 1972; Heckmian & Jones, 1967; Johanson, Mårtensson & Skoog, 2001), providing evidence of the importance of HC information in the valuation of companies. Difficulty in measuring the monetary value of HC was the weakness of the human resource accounting movement. Though human resource accounting failed

to obtain acceptance within the traditional financial reporting models, Bontis (2003) argues that it had an effect on current intellectual capital disclosure (ICD) literature.

External disclosure of HC and IC has been on the agenda of academics and practitioners since late 1980s (see Petty & Guthrie, 2000), as evident by early works of Sveiby (1989). Concerns held by the accounting profession and academics as to the limitations of accounting information drove the ICD agenda forward. Recent emphasis on ICD can be attributed partly to the increased interest on enhancing voluntary corporate disclosure of non-financial information (see AICPA1994; Bjurström, Catasus & Johanson, 2003; CICA, 1995; DMSTI, 2003a; DMSTI, 2003b; FASB, 2001; IASB, 2000; Meritum, 2002; Wallman, 1995; Wallman, 1996). Some companies, particularly in Europe, now produce a separate IC statement as a supplement to their annual report or as a separate report. Other companies use their annual report to disclose non-financial information about IC, including HC that is considered important. Commensurate with these developments the last decade has seen considerable research interest in many parts of the world on reporting of HC by companies.

Most of the ICD literature has used Sveiby's (1997) tripartite IC classification framework or a variant of it to investigate ICD in annual reports (see Abeysekera & Guthrie, 2005; April et al., 2003; Bozzolan et al., 2003; Brennan, 2001; Citron, Holden, Selim & Oehlcke, 2005; Flöstrand, 2006; Goh & Lim, 2004; Guthrie & Petty, 2000; Oliveira, Rodrigues & Craig, 2006; Oliveras & Kasperskaya, 2005; Petty & Cuganesan, 2005; Vandemaele et al., 2005). Sveiby classified IC as comprised of employee competence, internal structure (structural/internal capital) and external structure (relational/external capital). Findings from the studies that report IC disclosure by these categories show a remarkable similarity. With the exception of Steenkamp (2007), there is unanimity in the conclusion that external capital is the most reported IC category in annual reports. In most studies, internal capital is second in terms of frequency of disclosure. HCD was equal in frequency with internal capital disclosure in Guthrie et al. (1999), Brennan (2001), and Vandamaele et al. (2005). Abeysekera and Guthrie (2005) reported higher HC disclosure than internal capital disclosure in Sri Lanka while Steenkamp (2007) found HC as the mostly disclosed category in New Zealand.

HC is the least reported IC sub-category in Spain (Oliveras & Kasperskaya, 2005), Italy (Bozzolan et al., 2003) and Malaysia (Goh & Lim, 2004). The low level of HCD is at odds with the widely held notion that employees are the most important asset in an organisation. Except for Sri Lanka (Abeysekera & Guthrie, 2005) and New Zealand (Steenkamp, 2007), in all other cases the level of HCD has either been less than or on a par with internal capital disclosure. With regard to the Sri Lankan study it can be argued that the significantly large number of IC attributes (25 compared to 6 in other studies) included in the HC sub-category, which addresses a broader set of HC issues, resulted in the relatively higher disclosure score in that category. The New Zealand study considered board of directors as human capital and also analysed visuals presented in annual reports - a possible explanation for the dominance of HCD reported. Table I shows the frequency of disclosure in the three IC categories by various studies.

Table I
IC categories by frequency of reporting

Study	Country	External Capital	Internal Capital	Human Capital
Abeysekera and Guthrie (2005)	Sri Lanka	44%	20%	36%
April et al. (2003)	South Africa	40%	30%	30%
Bozzolan et al. (2003)	Italy	49%	30%	21%
Brennan (2001)	Ireland	40%	30%	30%
Goh and Lim (2004)	Malaysia	41%	37%	22%
Guthrie et al. (1999)	Australia	40%	30%	30%
Oliveira et al. (2006)	Portugal	48%	25%	27%
Oliveras and Kasperskaya (2005)	Spain	51%	28%	21%
Steenkamp (2007)	New Zealand	36%	11%	53%
Sujan and Abeysekera (2007)	Australia	48%	31%	21%
Vandamaele et al. (2005)	Netherlands, Sweden & UK	40%	30%	30%

The literature on ICD in IPO prospectuses and company presentations to financial analysts also reveals relatively little emphasis on HC information. Bukh et al. (2005) content analysed Danish IPO prospectuses using a disclosure index with six IC categories: employees, customers, IT, processes, R&D and innovation, and strategy. Nielsen et al. (2005) replicated that study procedure in Japan and found similarities

between the two countries. Both studies found that information on strategy, customers and R&D and innovation was relatively more important. García-Meca and Martínez (2005), using a similar disclosure index to that developed by Bukh et al. (2005), found that managers presented more information on customers, strategy and technology to analysts. Employees were the least disclosed category in these studies.

ICD studies of sell-side analyst reports have been conducted with a view to understanding the relative importance placed by financial analysts on different IC categories and items. The findings of these studies compare roughly with the literature on ICD by companies, which shows low interest in HC information. García-Meca (2005) revealed that analysts prefer to disclose the same types of IC information (i.e. strategy, customers and processes) in their reports as those presented to them by company management. Similar findings were reported by Arvidsson (2003), who compared information in annual reports against sell-side analysts' reports using five IC subcategories (R&D, organisational capital, relational capital, HC and enviro/social capital). It was found that both management teams and financial analysts disclosed the least amount of information in HC and enviro/social subcategories. Flöstrand (2006) investigated ICD in fundamental analysts' reports using an index of 76 IC indicators categorised into HC, structural capital and relational capital. The study revealed that only 10.5% of disclosure related to HC indicators. Flöstrand also found that annual reports presented relatively less relational capital material and more HC material than analysts' reports. The ICD literature demonstrates that HC is the least disclosed IC category by preparers of corporate information as well as users of this information.

Conceptualisation of HC in the disclosure literature

The relatively low importance placed on HC information by preparers and users of business reports can be attributed to the way HC is conceptualised and subsequently operationalised in ICD studies.

Sveiby (1997, p.10), whose tripartite framework has achieved widespread acceptance in ICD studies, explained employee competence as “involving the capacity to act in a wide variety of situations to create both tangible and intangible assets”. Employee competence, which includes explicit knowledge, skill, experience, value judgements

and social networks, explains the stock of knowledge and capabilities possessed by a firm. Many studies of IC have conceptualised HC as a stock of knowledge and capabilities. Pena (2002) investigated the IC determinants of new venture survival and success. He defined HC as the accumulation of personal attributes (i.e. knowledge, abilities, personality, health etc) that allow human beings to function and used only three indicators to capture HC: entrepreneur's level of education, experience and self-motivation. IC literature is biased towards the conceptualisation of HC as a combination of factors (e.g. knowledge, skills, abilities and personality characteristics) possessed by employees individually as well as collectively in firms (Abeysekera & Guthrie, 2004).

Sveiby's conceptualisation of employee competence as the stock of knowledge embodied in the organisation's people has strong links with human capital theory. According to HC theory, an individual's skills, experience and knowledge generate economic value (Coff, 1997) to the firm, and individuals enhance their HC through education and training. HC is the foundation for the wealth-creating capacity of a firm or nation and should therefore be invested in by companies (Becker, 1964). The term 'human capital' used in the context of HC theory refers broadly to employee competence as defined by Sveiby. Flamholtz and Lacey (1981) applied HC theory with a focus on skills of the employees and McKelvey (1983) interpreted HC theory by considering the knowledge, skills and abilities of employees. Mincer (1989), drawing on HC theory, considered that HC plays a dual role: first, as a stock of skills produced by education and training, it works in conjunction with other factors of production such as physical capital and unskilled labour; second, it is a stock of knowledge generating growth through innovation.

In their study of ICD in Australian annual reports, Guthrie and Petty (2000) used the term *employee competence* interchangeably with *human capital*, drawing the meaning for HC from HC theory. This study conceptualised HC as a stock of knowledge or competences, using a disclosure index that operationalised HC as including know-how, education, vocational qualification, work-related knowledge, work-related competencies and entrepreneurial spirit. Several other ICD studies which replicated that of Guthrie and Petty in different jurisdictions have taken a similar approach in operationalising HC (April et al., 2003; Bozzolan et al., 2003; Brennan, 2001; Goh &

Lim, 2004; Vandemaele et al., 2005). Some proponents in the fields of IC and HRM define HC more broadly to encompass the HR practices and systems implemented within organisations, organisational culture and social networks which motivate and leverage these knowledge resources.

Abeysekera and Guthrie (2004; 2005) in their studies of ICD and HCD in Sri Lankan annual reports used a disclosure index comprising 25 items to capture HC reporting by companies. This broader set of HC attributes included training and development, entrepreneurial skills, equity issues, employee satisfaction, employee relations, and employee welfare (including performance based compensation). A few studies have also included work environment in assessing the HCD of companies (Oliveras & Kasperskaya, 2005). Oliveira et al. (2006) investigated disclosure relating to employee initiative, motivation, dedication, teamwork capacity, spirit, flexibility and occupational health and safety, in addition to common measures of knowledge and competences, when attempting to understand the level of HCD in annual reports of Portuguese firms. Similarly, Firer and Williams (2005) concentrated on a range of indicators representing employee characteristics, training and development programs run by the firm, employee satisfaction, turnover and employee value added. Bukh et al. (2005) showed the most comprehensive operationalisation of HC when they examined the ICD in Danish IPO prospectuses. It encompassed indicators of staff composition by demographic characteristics, HRM activities such as education, training, health and safety, job rotation, remuneration, pensions, incentives schemes, and career progression, HRM policies, staff turnover and absence, HRM departmental structure and employee output measures as well as employee knowledge, education and experience. However, this study did not use the term ‘human capital’; rather it categorised all indicators under ‘employees’. Nielsen et al. (2005) subsequently replicated the operationalisation used by Bukh et al (2005), when comparing ICD in Japanese IPO prospectuses with that of Denmark. García-Meca (2005) and García-Meca et al. (2005) used the term ‘human capital’ to refer to disclosures pertaining, broadly, to what Bukh et al (2005) studied, when analysing ICD in financial analysts’ reports and company presentations to financial analysts. The evidence suggests that the ICD literature operationalises HC by invoking not only the stock of knowledge, competences and experience embodied in individuals but also how such knowledge is enhanced, safeguarded and leveraged. However, this important aspect pertaining to

HC has been inadequately addressed in many studies as reflected by the HC items included in the disclosure indices of these studies.

Edvinsson and Malone (1996) defined IC as the stock of knowledge and the organisation's ability to leverage that knowledge to create value. Organisational knowledge exists at both organisational and individual levels. Meer-Kooistra and Zijlstra (2001) stated that individual level IC includes knowledge, skills and aptitudes, whereas organisational level IC includes client specific databases, technology, routines, methods, procedures and organisational culture. Individual level IC comprises the stock of knowledge where as organisational level IC depicts the enablers or levers of the knowledge commonly found in structural and relational capital categories of IC.

Competent and capable employees are more efficient and effective than employees with relatively low levels of such attributes as noted by Meer-Kooistra and Zijlstra (2001). Hence, firm value is partly associated with the stock of knowledge embodied in its humans. Both management and motivation of employees and an enabling organisational and social infrastructure are necessary to reap the benefits of a capable work force. Without such systems in place even the most capable employees in the firm would not be able to generate value. The pool or stock of human capabilities does not create value alone but HRM practices, facilitative organisational systems and a supportive culture should be in place to leverage the potential of individuals. In this context HC is a broader concept than the employee competence which was proposed by Sveiby (1997). A firm's level of investment in the stock of HC is less important than the flow of HC, and utilisation of the HC stock in achieving management objectives (Collier, 2001). Thus IC literature can benefit immensely from theory that explains HC from resource based view, focusing on resource creation and deployment (Tseng & Goo, 2005).

Resource based view

The resource based view of firms is used widely in the HRM literature to explain the strategic importance of human resources. According to the resource based view, a firm is "a collection of productive resources" (Penrose, 1959, p.24). Rubin (1973, p.937) defined a resource as "a fixed input which enable a firm to perform a particular

task”. Accordingly, employees who have firm-specific skills are categorised as fixed input. Employees who do not possess such skills are variable inputs (Rubin, 1973) and do not constitute a resource. The underlying premise of this interpretation of the resource based view is that a resource cannot be separated from the firm (i.e. resources are “particular” to the firm).

A distinction can be made between employees as a resource in a firm and HC. The value of IC, as partly determined by its workforce, lies in the extent to which employees’ know-how, capabilities, skills, expertise and competencies are a resource. HC should therefore be defined in the context of the resource based view to include only the *particular* aspect of employee attributes. The variable input of human resources is common to all organisations and does not generate economic rent. Human resource is not synonymous with HC. Human resources have the potential of being converted to HC by being properly managed.

Theorists of the resource based view maintain that a resource may become a sustainable competitive advantage if it is inimitable, heterogeneous (i.e. differing across firms), immobile (i.e. a firm cannot obtain the HC of another firm), irreplaceable (i.e. not replaceable by another resource) and adds value to the firm (see Olalla, 1999; Rubin, 1973; 1984; Wright & McMahan, 1992; Wright, McMahan & McWilliams, 1994). Using a resource based view, Wright and McMahan (1992, p.301) argued that a human resource can be a source of sustainable competitive advantage by satisfying four criteria: (a) employees must add positive value to the firm; (b) skills and competencies possessed by employees should be unique or rare among current and potential competitors; (c) the human resource represented by the firm’s employees must be imperfectly imitable; and (d), a firm’s human resource cannot be substituted by another source (e.g. technology) by competing firms.

A general assumption underpinning strategic HRM literature is that employees per se are not a source of sustainable competitive advantage. Effective HRM practices need to be in place to transform the human resources in a firm to HC that generates long-lasting value to the firm (see Coff, 1997). The accounting literature on HC measurement and disclosure in the context of IC has not taken this stance. IC researchers have largely considered employees as stock of knowledge or an asset,

without trying to distinguish between firm-specific and general skills, or marrying employee competences and capabilities with enabling infrastructure and HRM strategies.

According to Wright, McMahan and McWilliams (1994), when firms have jobs that require different types of skills and when individuals differ in their skills and level of skills, proper recruitment and selection processes can ensure that the firm's value can be enhanced by matching the necessary skills with the right individuals who possess those skills. Wright et al. (1994) drew on the normal distribution of individuals' abilities to explain that few individuals fall to far left of the normal curve, indicating that high skill levels are scarce. Through a combination of valid selection programs and attractive reward systems, a firm can obtain these rare skills (Wright & McMahan, 1992). Investments in firm-specific HR practices such as training in firm-specific skills, on-the-job experience, coaching and mentoring can qualitatively differentiate a firm's employees from those of other firms and can make HC less imitable (Huselid, 1995). The rationale here is that effective HRM practices make the human resource a source of sustainable competitive advantage.

Coff (1997) drew on the resource based view to argue why human assets alone are not a source of sustainable competitive advantage; it is the idiosyncratic systems and practices of the firm that deal with human assets which are the true source of sustainable competitive advantage. Coff (1997) argued that asset specificity, causal ambiguity and social complexity makes a resource difficult to imitate. In the context of HC, asset specificity refers to knowledge and expertise of employees which is valuable only for the firm and is not transferable across firms. HC is causally ambiguous because it is difficult to understand the nexus between human attributes and human performance. Human potential is embedded in the organisational culture and external and internal networks, making employees a socially complex resource. These attributes create management dilemmas which can be described as adverse selection, moral hazard and bounded rationality (Coff, 1997). Although employees possess these attributes, unless they are properly dealt with, sustainable competitive advantage will not flow to the firm. Effective HRM practices can be utilised to cope with these management dilemmas associated with employees. For example, although a firms' employees may be highly skilled, capable and motivated, there is nothing

stopping them from moving to another organisation. Individuals move across organisations for various reasons, including dissatisfaction with their current job or other social influences. This unpredictability can be managed to a certain extent by high performance HRM practices. Coff (1997) proposed strategies to retain employees, such as compensating relative to the market, performance based compensation systems, changing organisational structure and culture to align individual goals with organisational goals, and reducing information asymmetry within the firm. Coff (1997) argued that human resource practices and systems, as a bundle that addresses management challenges, are idiosyncratic to the firm; they thus constitute an inimitable capability which can be a source of sustainable competitive advantage.

The HRM literature firmly establishes that the human resource in an organisation is a valuable resource and a source of competitive advantage. Employees are no longer considered as a cost to be minimised (the view taken in the industrial era) but are seen as a resource to be nurtured and optimised. Abeysekera (2006) notes that firm value creation results from treating employees as an asset, whereas considering employees as a cost by trying to make profits through exploitation of labour results in value extraction. The resource based view supports the view taken by some IC literature which acknowledges the value creation potential of the human resource.

HRM practices should help a firm to unleash the potential of its human resource by (a) effective recruitment and selection procedures that ensure the firm obtains the necessary skills, (b) employee motivational programs that maintain workforce contribution to the firm's value creation, and (c) developing organisational structures and culture that encourage employee participation and development. Skoog (2003) found that the structure of management control systems facilitated the creation of HC in a large Swedish bank. HRM practices can effect and enhance the social performance (e.g. lower employee turnover and absenteeism, and higher job satisfaction) and organisational performance (e.g. productivity, quality and innovation) of a firm. The net effect on firm value creation and financial performance will be determined by the extent to which the benefits of HC are greater than the costs of implementing superior HRM practices (Huselid, 1995). Firm value creation by HC

depends on its alignment with management practices and the interrelationships and interplay between these two aspects.

Scholars active in the IC domain tends to agree that IC is a stock of organised knowledge that is at the disposal of firms (Edvinsson & Sullivan, 1996). However, few recognise the ability of companies to leverage this knowledge stock to generate value. Edvinsson and Sullivan (1996, p.357) acknowledged the value of organisational mechanisms that leverage human capital stock by stating,

“the existence of a stock of knowledge (intellectual capital) is not enough to account for the high value the marketplace puts on many knowledge companies. Indeed, it is the ability of companies to *leverage* their intellectual capital that is perhaps a greater key to profitability”.

Ashton (2005) recognised the importance of HR practices in leveraging knowledge when he stated that “human resources per se do not create value unless they are manifested through particular behaviours, and ... the role of HR practices is to motivate, facilitate and align such behaviours with the firm strategy”. Collier (2001, p.441) explained this further: “What is important about intellectual capital is the implicit importance, not of the investment in the stock of intellectual capital, but of the flow – the utilisation of that stock in pursuing the purposes of management”. This calls for a transformation in perspectives of looking at HC from a stock concept to a stock and flow concept. This insight would contribute to understanding and critique of contemporary HC reporting within an IC context and would address the valuation dilemma faced by financial analysts.

The apparent lack of interest of companies to disclose HC information and the similar lack of interest by sell-side analysts to use that information can be attributed to the way HC is conceptualised and operationalised in the ICD literature. Important insights regarding firm valuation can be derived from information on HC when HC is operationalised in the context of a resource based view. According to the tripartite categorisation of IC, many items that relate to, enhance and leverage HC, such as HRM systems, strategies, practices, policies, organisational design, structure and culture of the firm have been classified under internal capital (structural/organisational capital). That treatment may inflate the importance of internal capital while understating the importance of HC. Employee competence is transformed into HC through HRM practices and policies that are categorised under

structural capital in the ICD literature (Edvinsson & Sullivan, 1996). Therefore, what is represented as HC in the ICD literature is not truly representative of HC which is informed by the resource based view.

Another drawback in the existing conceptualisation of HC is that it does not differentiate between employee knowledge and competencies that are unique to the firm (fixed input), which form a basis for competitive advantage, and general employee capabilities (variable input). An analogy can be drawn to the use of physical capital to represent the importance of unique firm-specific resources. Plant and machinery that are used in day-to-day operations of a firm may not contribute to a unique value creation potential as will state of the art automated manufacturing technology that is specific to the firm. The lethargy of financial analysts in processing HC information can arguably be attributed to lack of availability of information to distinguish between fixed and variable human capital.

Concluding remarks

Growth in the new economy characterised by information and knowledge rests substantially on HC, giving it a strong position over other resources. However, the ICD literature demonstrates that HC is the least disclosed IC category in corporate annual reports, IPO prospectus, company presentations to financial analysts and sell-side analysts' reports. A dilemma is created when comparing findings in ICD studies with anecdotal evidence which suggests that HC is an important element in firm value creation and has been recognised by internal management as underpinning the necessity for IC statements. This paper proposes an explanation for this dilemma, arguing that HC has not been sufficiently conceptualised and operationalised in the ICD literature. ICD studies largely use Sveiby's tripartite IC framework which is based on HC theory. HC theory treats employee knowledge, capabilities and skills as an output rather than an input for economic value creation. However, HC theory is inadequate in explaining how HC contributes to achieving sustainable competitive advantage in firms. The resource based view is better placed to theorise HC in the new economy. Accordingly, HC is not merely a stock of knowledge; it is both a stock and a flow which include HRM practices, policies and procedures, and organisational structure, systems and culture that leverage this knowledge to create value. These latter attributes are either typically found under the definition of structural or internal

capital in the disclosure indices used by ICD studies or are simply omitted. It is further argued that HC which is unique to the organisation and forms the basis of a sustainable competitive advantage should be of the greatest interest to financial analysts and investors. In a similar manner, ICD research should distinguish between tactical and strategic HRM practices and fixed and variable HC, as the potential for competitive advantage lies in fixed inputs and strategic HRM practices, whereas variable inputs and tactical HRM practices are necessary elements for maintaining the status quo. The idiosyncrasies of individuals' knowledge, skills and capabilities, HRM practices and organisational culture are inimitable constituents of HC, which convey information to the capital market.

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