INTELLECTUAL CAPITAL MYTHS: COMMENTS ON LITERATURE REVIEW

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Abstract

The aim and purpose of this paper is to present the authors' viewpoints regarding three misguided beliefs concerning Intellectual Capital (IC); (i) IC definition, (ii) IC categorization and (iii) IC reporting framework. More specifically, due to the fact that general agreement on these aspects of IC does not exist, a review of the literature is provided and new pathways for future research are proposed. All in all, being one of the very few studies that provide an overview about some fuzzy issues, this paper, offers a significant added value to the research field of IC.****

Keywords: Intellectual Capital, Intangible Assets, Myth

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**** *A stimulus for this paper's creation was two previous studies by Brickley and Zimmerman (2010) and Larcker and Tavan (2011).*

1. Introduction

The Intellectual Capital (IC) term was firstly introduced by Kenneth Galbraith in 1969 (Feiwal, 1975; Bontis, 1998: 67) "who believed that IC was more than pure intellect but including intellectual action" (Swart, 2006: 137). And, indeed, he had pointed that "I wonder if you realize how much those of us the world around have owed to intellectual capital you have provided over these last decades" (cited in Hudson, 1993: 1).

Since Galbraith's remarks, researchers have persistently focused their attention on explaining further and expanding the simple concept of IC. The idea of transforming "knowledge and intangible assets into wealth - creating resources, both for companies and countries" (Bradley, 1997: 53).

Admittedly, by "the transition from wealth based on natural resources to wealth based on brainpower" (Stewart, 1998: 56), theoretical and empirical studies on a wide spectrum of disciplines including economics, strategy, finance, accounting, HR and marketing have created a magnitude of definitions, of categorizations and reporting models of IC (Choong, 2008: 609). A magnitude that proves on the one hand the importance of IC awareness (Marr and Chatzkel, 2004: 224) and on the other the embryonic stage of this concept to give answers to some main issues.

For the reasons mentioned above, the specific paper aims through a literature review of IC to highlight three misguided beliefs on IC and in parallel to propose on future research in new pathways.

The rest of the paper is organized as follows. Firstly, in the subsequent section, three common myths about IC are defined and the need for a wider recognition by the academic community is explained. Furthermore, the case of the non general agreement which exists on the: i) IC definition, ii) IC categorization and iii) IC reporting framework, is described. Finally, the inferences of the main findings are drawn and the vital points for further research are provided.

2. Myths and disbeliefs for Intellectual Capital

2.1. Myth 1: General agreement exists on the definition of "intellectual capital"

Despite the numerous efforts to bring about an unbiased and widely accepted definition of IC, there is still some confusion as to how IC should be defined. There is still an abundance of definitions reflecting different perspectives, roles, component parts and viewpoints that justify the IC definition conglomeration (see table I).

Indeed, a search on journal databases reveals the intense efforts of researchers to define the term of IC. However, the reader may face confusion as to which definition is more appropriate. A confusion that has "important implications both on the direction and

interpretation of research" (Brickley and Zimmerman, 2010: 236).

At a starting point we quote two different terms that were used as synonymous by some researchers in order to indicate IC concept. Particularly a variety of terms such as "intangible assets", and "knowledge assets", are used with the same meaning of IC (Choong, 2008: 613; Lev, 2001) [1]. A separation which can easily create confusion to the researchers' on which term to use.

Moreover, many authors wanting to venture into the identification and definition of intellectual capital in a managerial perspective (rather than an economic, accountant, or taxation perspective) prefer the concept of "resource" rather than the concept of "asset," wanting to overcome issues associated to property and ownership (Kostagiolas, 2012: 7).

Furthermore, one more indicative paradigm which enhances the lack of agreement on the definition of IC is the usage of different definitions even by researchers who were based on the same discipline. Particularly, Marr and Moustaghfir (2005) show several examples that demonstrate this paradox. Based on that, they proposed three dimensions (e.g. perspectives, roles and component parts) as a framework in order to facilitate future IC definitions.

In our point of view, although this approach has many advantages, it cannot be a heuristic advice. We believe that the multiplication rule enumeration of this function could generate many combinations or else 147 different definitions which means that this approach suggests very narrow definitions. Our opinion comes in contrast to the above, as we think that a broad definition of IC could be more useful.

To better understand the "definition" of IC, one must look at the sphere of the concept, at those main parts that contribute to the development of this current new scientific field. For this reason, we think it is useful to have in mind the "Rubik's cube" concept in order to solve the puzzle of the IC definition. This means that the IC definition consists of numerous "cubies-elements". However, the solution of this puzzle is to find the main faces that reflect each appropriate component part of IC. This optimal solution could act as a cornerstone for an appropriate and widely accepted definition by everyone who refers to the IC concept.

In accordance with the above, a very broad definition that we propose is the following: "IC is the sum of human, structural/organizational and relational capital that positively influences an organization". According to that, we focus on the main three IC categories that are adopted by the majority of researchers (more details are presented in the next section). The definitions of Sveiby (1997) and Edvinsson and Malone (1997) are moving in the same direction.

All the previous discussed issues obviously mean that there is a malleable concept of IC and therefore confirms Bontis' (2001: 57) opinion who states that the IC definition "is still in its embryonic stage and there is no one willing to give up their own nomenclature" (Andriessen, 2004: 60). We find that the widely accepted definition of IC is a misconception [2] so we recommend that the aim is not a further production of IC definitions but to reach a consensus about a widely accepted one regardless of the discipline and roles of IC.

Table 1. Indicative definitions of intellectual capital

Author(s)	Term	Definition
Hall (1992: 136)	Intangible assets	Assets which are obviously things which one owns, include intellectual property rights of: patents, trademarks, copyright and registered designs; as well as contracts, trade secrets and databases
Brooking (1996: 13)	Intellectual capital	The combined intangible assets, which enable the company to function
Edvinsson and Malone (1997: 44)	Intellectual capital	The possession of the knowledge, applied experience, organizational technology, customer relationships and professional skills that provide a company with a competitive edge in the market
Roos *et al*. (1997: 37)	Intellectual capital	The sum of knowledge of its members and the practical translation if this knowledge into brands, trademarks and processes
Sveiby (1997: 11)	Intangible assets	Invisible assets that include employee competence, internal structure and external structure
Sullivan (1998: 4)	Intellectual capital	The knowledge that can be converted into profits
Gu and Lev (2001)	Intangible assets	Intangibles are defined by their major drivers. Authors name R&D, advertising, IT and human resource practices as drivers
Bontis (2001: 41)	Knowledge assets	knowledge assets are the crux of sustainable competitive advantage, the burgeoning field of intellectual capital is an exciting area for both researchers and practitioners
Peloquin (2001: 6)	Knowledge assets	The knowledge asset is the tangible representation of the corporations "know-how," and is *prima facie* proof of corporate competence
SMR (2008: 3)	Knowledge assets	A knowledge asset is defined as any collected information or knowledge held by the larger enterprise and used by anyone affiliated with the organization to help the organization achieve its goals
Roos *et al*. (2005: 19)	Intellectual capital	All nonmonetary and nonphysical resources that are fully or partly controlled by the organization and that contribute to the organization's value creation

Source: Authors

2.2. Myth 2: General agreement exists on the categorization schemes of "intellectual capital"

The phenomenon of categorization stems from the ancient ages from the time of Aristotle (384-322 BC) who was the father of categorization since he loved making categories on just about everything. A simple definition of the term could be expressed as the act of distributing things (items) into classes or categories of the same type.

But as noted in the previous section, a lack of conceptual clarity regarding IC definitions similarly extends to its categorizations. And this can be supported by the fact that different groups of researchers suggest numerous categorizations of IC (see table II). As characteristically stated by "Rudner (1966), the value of the categorization is associated with its ability to function as a heuristic advice, which is useful for the interpretation of substance" (Choong, 2008: 609).

Consequently, based on the literature, one of the most commonly used categorization is the classification of IC into three broad categories:

- human capital: which includes knowledge, experience, abilities, skills and staff creativity of an organization.
- structural/organizational capital: which includes copyrights, brands, systems, knowledge artifacts, intellectual property, methodologies, and software. As Edvinsson stated "are all those things that remain in the organisation when the employees have left the building but cannot find in the balance sheet" (Roos *et al*., 2005: 19).
- relational capital: which includes all the relationships held by an organisation with its clients, customers, consumers, suppliers, vendors, partners (Stewart, 1995; Edvinsson and Malone, 1997; Roos and Roos, 1997; Bontis, 1996,1998,2002; MERITUM, 2002; Marr and Roos, 2005; White, 2007).

Others adopt the same categorization but renamed the third category as customer capital instead of relational capital, but with the same meaning (Lloyd, 1996; Petrash, 1996; Sveiby, 1997; Stewart, 1997, 2001; Allee, 1999; Bontis *et al*., 2000; Huotari and Iivonen, 2005).

It is worth mentioning that there is a group of researchers who come in conflict with the previous categorizations and adopt two categories:

- human capital and
- structural capital, respectively. Thence, structural capital is classified into two sub-categories that are customer capital and organizational capital, while organizational capital is divided into innovation and process capital (Edvinsson and Sullivan, 1996; Edvinsson, 1997; Zéghal, 2000; Bukh *et al*., 2001; Bontis, 2004).

However, some other IC categorizations are also mentioned, such as:

- human capital,
- organizational capital and
- social capital (Youndt *et al*., 2004).

or

- human capital,
- internal capital and
- external capital (Abeysekera and Guthrie, 2005; Guthrie *et al*., 2004).

or even more

- human capital,
- social capital and
- knowledge management (Rastogi, 2002).

Last but not least, many other IC classifications are suggested that came in contrast to the scope of this paper, which is not to quote all the categorizations but to enhance and confirm the option that there is a myth about the existence of a commonly accepted IC one.

Table 2. An indicative list of the most accepted IC categorizations per researcher

IC Categorization	Researcher(s)
• Human Capital • Structural /Organizational Capital • Relational Capital	Stewart, 1995; Bontis, 1996,1998,2002; Edvinsson and Malone, 1997; Roos and Roos, 1997; Skyrme, 1998; Sánchez *et al*., 2000; Mouritsen *et al*., 2001; MERITUM Project, 2002; Carson *et al*., 2004; Chang and Birkett, 2004; Grasenick and Low, 2004; Leitner, 2004; Gallego and Rodriguez, 2005; Marr and Roos, 2005; Roos *et al*., 2005; Chu *et al*., 2006; Kong, 2007, 2008; White, 2007; Chen *et al*., 2009; Erickson and Rothberg, 2009; Ramírez, 2010; Seleim and Khalil, 2011; Komnenic and Pokajcic, 2012; Kostagiolas, 2012
• Human Capital • Structural/Organizational Capital • Customer Capital	Saint-Onge, 1993; Lloyd, 1996; Petrash, 1996; Roos and Roos, 1997; Stewart, 1997, 2001; Sveiby, 1997; Allee, 1999; Bontis *et al*., 2000; Brennan and Connell, 2000; Leliaert *et al*., 2003; Kannan and Aulbur, 2004; Huotari and Iivonen, 2005
• Human Capital • Structural Capital: i. Customer Capital, ii. Organizational Capital	Edvinsson and Sullivan, 1996; Edvinsson, 1997; Koening, 1997; Lank, 1997; Roos, 1998; Edvinsson and Stenfelt, 1999; Zéghal, 2000; Bukh *et al*., 2001; Zhou and Fink, 2003; Bontis, 2004

• Human Capital	Guthrie *et al*., 2004; Abeysekera and Guthrie, 2005
• Internal Capital	
• External Capital	
• Organizational Capital	Youndt *et al*., 2004
• Human Capital	
• Social Capital	
• Social Capital	Rastogi, 2002
• Human Capital	
• Knowledge Management	
• Human Capital	Marr and Adams, 2004
• Informational Capital	
• Organizational Capital	

Source: Authors

2.3. *Myth 3: A consistent framework for reporting IC exists*

A large theoretical and empirical accounting literature examines the role of the "external reporting for the effective functioning of capital markets" (Healey and Palepu, 2001; Bozzolan *et al*., 2003: 544) and probably not unfairly as a considerable number of reasons have been referred. Particularly, accountants have published a plethora of those informative reasons, providing that IC disclosure (ICD) reduces i) information asymmetry (Lev, 2001; Luu *et al*., 2001; Pike *et al*., 2002), ii) cost of capital (Leadbetter 2000; Lev, 2001; Luu *et al*., 2001), iii) cost of debt (Sengupta, 1998), and iv) the risk of the insider trading (Leadbetter, 2000) (Nerantzidis, 2013).

For this purpose, academics, practitioners and authorities have developed various models of ICD (Roos *et al*., 2005: 292-310):

1. the model proposed by the MERITUM project;
2. the Danish Disclosure initiative;
3. the ARCS intellectual capital report;
4. the Triple Bottom Line (TBL) framework;
5. the Balanced Scorecard model; and
6. the Skandia model.

Even if a common feature that appears in all these models is the use of indicators (may contain those related to: knowledge transfer, research management, customer satisfaction, etc.), there is still not a common framework in their design.

However, there are many exploratory (and parallel complementary) theories of voluntary ICD such as the positive accounting theory, the legitimacy theory and finally the stakeholder theory (Guthrie *et al*., 2004: 283-284; Abeysekera and Guthrie, 2005: 155; Beattie and Thomson, 2006: 2) that strengthen the efforts of researchers for more unified research "working for an overarching framework for IC and value creation" (Ross *et al*., 2005: 319) [3].

Undoubtedly, content analysis appears to be the most refined "instrument in order to quantify and measure comparative positions and trends in reporting" (Guthrie *et al*., 2004: 285). As Krippendorff (1980: 21) mentions, content analysis is a "research technique for making replicable and valid inferences from data according to their context" (Bozzolan *et al*., 2003: 548). And this can be supported by the fact that a considerable number of IC researchers have used that method to examine ICD (Guthrie and Petty, 2000; Brennan, 2001; Abdolmohammadi, 2005; Bozzolan *et al*., 2006; Striukova *et al*., 2008; Brüggen *et al*., 2009; Taliyang and Jusop, 2011; Branswijck and Everaert, 2012).

However, the question that firstly has to be answered is whether we could refer to the existence of a widely accepted model of IC reporting. Definetely not always, and this is propably a consequence that comes from the first myth. A vicious circle that was generated exactly by the shortage of a concensus on IC definition, extended with the second myth, and finally leads to the lack of an established IC reporting framework (Nerantzidis, 2013).

The magnitude of everything mentioned above can be transmitted by the phrase of Henry James (1982: 130) "*The whole situation works in a kind of inevitable rotary way - in what would be called a vicious circle*". Consequently, all these demonstrate the fact that we cannot talk about an "ideal" ICD index (Nerantzidis, 2013).

Precisely, the theoretical background regarding the construction of an ICD index is weak. First of all, there is no theory to guide us neither to the categories [4] that an index can be classified nor to the items [5]. Secondly, there is a lack of a common practice according to i) the unit of analysis and unit of measurement ii) the volume of disclosure (see Beattie and Thomson, 2006: 9, 12) and iii) the type of corporate reports used in order to examine ICDs (see Striukova *et al*., 2008: 302). However, there are some empirical evidences that clarify some "vaguenesses". For instance, the debate between manual and electronic searching for IC information tilts in favor of the first (see Weber, 1990). Beyond these, we believe that the most common practice, the one that uses a unique weighting for both the categories and the items, means no weight at all (see Nerantzidis, 2012: 12; Nerantzidis, 2013).

"Overall, the selection rules applied are admittedly, to some extent, arbitrary. But this is a common concern for all studies" (Florou and Galarniotis, 2007: 983) on ICD (e.g. Marr 2005;

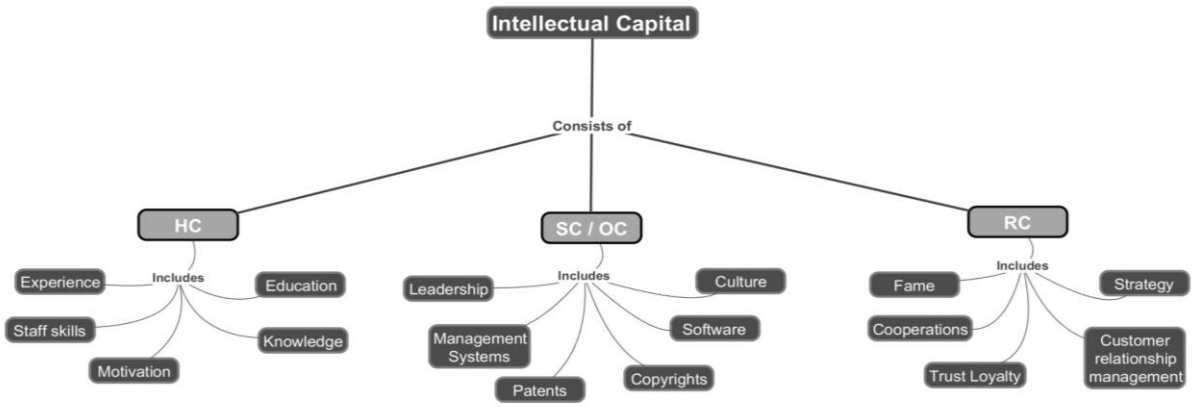
Branswijck and Everaert, 2012). As Beattie and Thomson mentioned (2006: 2) both transparency and share meanings could be the cornerstone for the development of a common accepted model of ICD; a model that can enhance interpretation and comparison of findings across studies (Nerantzidis, 2013).

3. Conclusion(s)

"We need to do anomaly-seeking research, not anomaly-avoiding research" Christensen (2003: 18)

The analysis presented above identified a lack of consensus on some major issues about IC. For this reason, we suggest that a broader definition emanating from the most accepted categorization could act as an explanation of IC puzzle(s). A proof of our suggested concept is presented in the following illustration:

Figure 1. The intellectual capital framework



1) Intellectual capital is the sum of human, structural/organizational and relational capital that positively influences an organization

2) The term of intellectual capital is both its definition and categorization

Source: Authors

Notes

1. Kok (2007: 184) mentions that despite the fact that "many authors use the term "intellectual asset" and "intellectual capital" interchangeably, there are subtle differences between the meanings of two".
2. The same conclusion was reached by Nerantzidis et al. (2012: 2) in the scientific field of corporate governance.
3. A minor debate exists between researchers' opinion about the representative theories that explains the IC disclosure. Especially, Abeysekera and Guthrie (2005: 155) mention the political economy of the accounting theory and the legitimacy theory (Guthrie et al., 2004: 283-284) refer to stakeholder theory and legitimacy theory, while Beattie and Thomson (2006: 2) present the positive accounting theory, the legitimacy theory and the stakeholder theory.
4. For instance, Abeseykera and Guthrie (2005: 156) classified 45 intellectual capital items into three categories (external capital, human capital and internal capital) while Taliyang and Jusop (2011: 117) classified 39 intellectual capital items into four categories (structural capital, human capital, relational capital and general items).
5. It is worth mentioning that a considerable number of researchers classified the intellectual capital items not only in main categories but also in sub-categories with a major variability (see Abeseykera and Guthrie, 2005; Bozzolan et al., 2003).
6. Christensen (2003: 18).

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