



GUEST EDITORIAL

Intellectual capital at the crossroads: managing, measuring, and reporting of IC

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Keywords *Intellectual capital, Intangible assets, Performance measures,
Performance management, Performance appraisal*

Abstract *This introductory editorial to the special issue “IC at the crossroads: theory and research” explains the rationale and background to the studies. In addition it outlines reasons why the field of intellectual (IC) capital is at the crossroads. It seems that awareness of the importance of IC has been created. It is now the role of researchers as well as practitioners to move to the next level. This next level involves issues around taxonomies as well as research methodologies. In order to move on, precise definitions of concepts such as IC, better justifications of why organizations need to measure and manage IC, and increased clarity about terms such as measurement, assessment, or valuation are needed. In addition, more rigorous research methods are needed in order to test and validate existing theories in the field.*

1. Background

The background to this special issue was the 2003 PMA Intellectual Capital Symposium, which was held at Cranfield School of Management, UK, between 31 September and 2 October 2003. The Performance Measurement Association (PMA) is a global network for those interested in the theory and practice of performance measurement and management (see www.performanceportal.org). The Intellectual Capital Group of the PMA was established in recognition of the growing interest and importance of measuring and managing intellectual capital (IC). The PMA IC Group is a global and multidisciplinary network of thought-leading academics and practitioners who jointly facilitate and participate in cross-disciplinary knowledge transfer in the area of measuring and managing IC and intangible assets. Its aim is to raise the awareness of knowledge assets as critical value drivers in today's economy and actively engage in high-quality research and global knowledge transfer. Participants in this group come from a wide spectrum of disciplines including strategy, finance, accounting, economics, HR, IT, operations, etc. and engage in a broad range of research projects.

The aims of the 2003 PMA IC Symposium were to provide a forum where leading researchers active in the field of IC performance measurement and management can present their work to their peers and have it discussed. This enabled a dialogue about the boundaries of the field of IC and the forward research agenda. The Symposium was an interactive event which saw presentations of papers in addition to knowledge cafes,



syndicate as well as group discussions. Papers were required to address the important issue of research and theory in IC measurement and management. It was seen that for a concept such as IC, which was initially driven by the business community, it is important to address themes such as the underlying theory in the field of IC measurement, management, and reporting. The following questions were posted to potential contributors to respond to:

- What are underlying theories in the field of IC?
- Is IC a research field in its own right? And if so, what are the implications for the departmentalized management field?
- How do we address the theoretical discussion of IC measurement?
- Is it possible to measure knowledge? And if so how do we define measurement in this context?
- How can we address the tension between high quality research and practitioner relevance?
- Are there any implications for research methodology? And should there be a stronger focus on quantitative research?
- What is the role of epistemology and ontology in this field?
- What are the research themes that need to be addressed in order to take the IC field to the next level?

The symposium saw presentations of papers addressing the above issues with contributors from across the globe. Outlined below are some of the key issues that were discussed at the symposium. In the final section we will then introduce the various contributions to this special issue and how they address some of the issues raised.

2. Why is IC at the crossroads?

In an introduction article to a special issue of the *Journal Controlling*, Baruch Lev (2003), notes that the extensive research work on intellectual assets over the past ten years has succeeded in creating awareness. He then suggests that this was the first phase of the “intangible movement” and that we have to move on and shift the focus of our future work. Neely *et al.* (2003) confirm this and argue that we have to move on from first generation thinking. We believe that many early special issues on the topic in different journals fulfilled the important function of raising awareness that IC and intangible assets are principal value drivers in organisations today. However, since awareness has been achieved below we highlight some issues that arose from the discussions at the symposium and are believed important if we are to reach the next phase or next generation of IC research.

2.1. Taxonomies

Even though organizations and scholars recognize the important contribution of many individual assets such as brand, relationships, culture, and knowledge, they do not necessarily use the term IC. It seems that the concept of IC is not well understood and rarely clearly defined. In their introduction to the special issue on IC in the *Accounting, Auditing, & Accountability Journal*, Guthrie *et al.* (2001) state that the concept of IC is often not or only poorly defined. With participants of the PMA IC Symposium from

diverse backgrounds this issue came up very quickly: What do we mean when we talk about IC? Many attempts have been made to classify IC and many experts in the field made it very clear that they do not believe that we need any more frameworks or classifications. However, what we need is a definition of what we mean by IC when we use the term in articles or at conferences. The cross-disciplinary nature of the field means that different people with diverse backgrounds talk about IC. It often feels as if they are using the same terms but carry completely different meanings. It could happen that when you talk to accountants they refer to intangibles as “non-financial fixed assets that do not have physical substance but are identifiable and controlled by the entity through custody and legal rights” as defined by the Accounting Standards Board. Such a stringent definition excludes many commonly accepted intangibles like customer satisfaction, knowledge and skills of employees, as they cannot be controlled by the firm in an “accounting” sense. If we then went to a HR manager she might refer to intangible assets as skills, knowledge, and attitude of employees. A marketing manager might argue that intangibles such as brand recognition and customer satisfaction are at the heart of business success, whereas the IT manager might view key intangibles as being software applications and network capabilities. We therefore believe that a good definition of concepts in any written work is critical for an improved communication in our field. One way out of this problem would be to avoid using the term IC or intangibles, which would force us to define what we mean by it. As a conclusion we extract the following issue: IC as a concept is often poorly defined, we therefore advise that researchers and practitioners clearly define the term at the outset whenever the term is used.

There are few people who would doubt that IC is critical for most organizations. For that reason many scholars and managers suggest ways and tools to measure IC. Often justified with the old adage “if you cannot measure it, you cannot manage it”. However, before any attempt is made to measure aspects of IC it is critical to clearly understand the reason for measuring it. A systematic review of the literature allowed researchers to identify three main categories of reasons why firms measure their IC (Marr *et al.*, 2003). These main reasons can be brought together under the following broad headings:

- (1) strategy;
- (2) influencing behaviour; and
- (3) external validation.

In addition, measurement can be seen as an output reporting on past realities or as an input for future decision making. The different reasons will have implications on the way we measure performance and therefore different measurement tools or techniques are appropriate to use. It is therefore important that we make the reasons for measurement explicit in order to judge the right tools and techniques.

Directly related to the above point is the next taxonomy issue: what do we mean when we use the term “measure”? Do we refer to it as “indicating” a performance tendency or do we use it from a scientific measurement point of view with all the rules and requirements of measurement theory? Do we try to express our measures in percentage? Or do we try to assign financial value to our IC? Others might argue that measurement can be achieved without putting a single number against components of IC and rather assess the performance in a short narrative. We would like to distinguish

between operational measurement and financial valuation (Marr *et al.*, 2004). Operational measurement approaches are more concerned with understanding the value creation process. They tend to be more internally focused and are used to gain management insights that can help organisations to better run their organisation. From this perspective the word measure – is used as a verb rather than a noun – is concerned with the process of understanding how IC impacts performance. On the other hand, financial valuation approaches are concerned with putting a financial value on an organisation or its IC. These approaches tend to take an external view of the firm and are designed to help analysts or investors calculate financial value. We acknowledge that other scholars might view it the other way around, however, the issue to extract is: When we use words such as measure, value, or assess, it is important to explain what we mean by it. Do we use the terms in their strictest sense or are we using them as loose terms to indicate performance?

2.2. Research methods

The issue of research methods was discussed and the question was: what are the appropriate research methods to further the field of IC measurement and management? There seemed to be some consensus that more empirical research is needed. Much of the work published in the field is of theoretical nature or tries to build theories. This is not surprising for a young and evolving research field. However, in order to move to the next level it is important to empirically test the theories put forward. Some fundamental questions were raised regarding research methodology. Theory testing research projects are classically performed using quantitative and large sample methodologies. It seems important that we produce some of those studies in the field of IC. However, a key question was raised with regard to whether such methods would allow us to really understand some of the idiosyncrasies of IC. It seems that empirical testing should not only be provided by classical large sample, cross-sectional research projects but be complemented by rich, longitudinal case studies that will allow us to understand the specific context which seems to be critical for the analysis of IC. Much of the case studies reported to date do not test theories put forward by other scholars, the issue raised here is: We need to shift our research efforts towards academically rigorously testing of theories. For this purpose we need both large samples as well as longitudinal in-depth case studies.

The multi-disciplinary nature of the field poses various challenges. The first is that academics often research in silos. It is rare that scholars read or publish outside their disciplinary area – e.g. marketing scholars tend to read and publish in marketing journals, go to marketing conferences, and talk to marketing managers. There are two challenges for the IC field: first, to engage a wider audience outside our niche field and second to ensure that a cross-disciplinary view of IC is taken. The issue here is: We need to engage in multidisciplinary and cross-functional knowledge exchange

3. How this special issue addresses the issues raised?

Below we will outline how the various papers selected for this special issue contribute to the issues raised above and help the field to move on.

The paper by Daniel Andriessen addresses taxonomy issues by highlighting the differences between measurement and valuation. Andriessen also extracts the different reasons of why organizations want to measure or value IC. Andriessen then moves on

to map existing models of measuring and valuing IC into different categories distinguishing the different intentions and purposes.

Stephen Pike and Göran Roos pick up on the issue of taxonomies. In their paper they discuss the compliance of IC measurement approaches with measurement theory. Linking into Andriessen's paper it is therefore important to know when we need measurement and how to create a "measurement system" as opposed to a "valuation system".

Whereas Pike and Roos put forward the problems of measurement theory when applied to measuring IC, Jan Mouritsen argues in his paper that the measurement from a conventional reason is not so critical. Mouritsen makes a case that measurement of IC is more about the process of measuring than about a hard number. Overall measuring and reporting of IC allow actions to be performed at a distance. In Mouritsen's view measurement of IC should be seen as an input rather than an output.

In the next paper Karin Grasenick and Jonathan Low pick up the discussion created by Andriessen, Pike, Roos, and Mouritsen. Low and Grasenick's paper is concerned with the valuation of externally reported measures. In their paper the authors look at IC measurement as an output and highlight the problems in comparing different types of valuation approaches.

The paper by James Guthrie, Richard Petty, Kittya Yongvanich, and Federica Ricceri addresses the issue of research mythology. The ever-increasing discussion about external reporting of IC resulted in a growing number of research projects into how much of their IC firms already disclose. Many of those research projects utilize content analysis as the main method for their research. There is a growing need for researchers to justify their research method. The paper by Guthrie *et al.* discusses content analysis as a research method and builds some theoretical foundation for this method.

David O'Donnell joins Guthrie *et al.* in a discussion about research methods and methodology. O'Donnell argues that IC researchers from different disciplinary, social theoretical, and methodological traditions can in fact communicate substantially with each other. A key task for researchers and practitioners is to find a means of communicating with, explaining our approaches to, and understanding each other. For that to happen it seems important to clarify the ontological viewpoint in any dialogue. It is difficult to mix and match tools and ideas developed from opposing philosophical viewpoints but, based on work by Arbnor and Bjerke, the author argues it is possible.

Following the theoretical discussions the next two papers are empirical in nature. The paper by Bernard Marr, Giovanni Schiuma and Andy Neely addresses the dynamic nature of IC. In this paper the authors disentangle the link between IC and value creation. Marr, Schiuma and Neely take a resource-based view and argue that mapping approaches can significantly contribute to clarification and communication of how IC contributes to value generation. However, they also argue that simple causal maps such as the balanced scorecard's strategy maps are not sufficient to reflect the dynamics of IC. The theoretical concept is then tested using an empirical longitudinal case study of how a leading furniture manufacturing firm applied the concept.

Anjali Bakhru also addresses the link between IC and organizational performance. In her paper Bakhru argues that IC is at the roots of organizational capabilities. In order to test the relationship between individual knowledge and its impact on the creation of firm-based routines the authors use case studies from newly formed

e-businesses. The research presented highlights the importance of the role of prior organizational experience in the development of new routines and capabilities.

The closing commentary by Jay Chatzkel discusses the nature of the crossroads that the field has come to and how the symposium contributed to mapping out some next steps in moving towards the next stage of the development of the field. This piece incorporates views of additional symposium participants, as well as, on significant perspective that need to have attention paid to them. The paper includes contributions from Leif Edvinsson, Ahmed Bounfour, and Richard Hall.

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