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GUEST EDITORIAL

New frontiers in the use of intellectual capital in the public sector

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Abstract

Purpose – The purpose of this paper is to present an overview of the articles presented in this special issue. The Special Issue is inspired by our recent review of the intellectual capital (IC) literature in Guthrie *et al.* (2012, p. 74), in which the authors found that the public sector is one of the least addressed areas of IC research.

Design/methodology/approach – The paper is based on a literature and published document review, experiential reflections and argument.

Findings – The paper reveals that interest in public sector and IC is alive and well and the major difference between public sector and mainstream IC research is a complete lack of normative research. The papers in this *Journal of Intellectual Capital (JIC)* Special Issue continue that tradition.

Research limitations/implications – The authors call on public sector IC researchers to continue the third stage and fourth stage IC research tradition encouraging them to explore emerging issues alongside the changes in the social, political and economic realities impacting public sector IC in the future. Doing so will ensure that public sector IC research is timely, relevant, impactful and contributes to future practice, research, policy and above all, benefits the citizens who need and consume public services.

Originality/value – The paper presents a précis of current public sector research and encourages public sector researchers to continue developing research into how IC works.

Keywords Public sector, Research, Intellectual capital, Third stage IC research

Paper type Literature review

1. Introduction

This Special Issue is inspired by our recent review of the intellectual capital (IC) literature in Guthrie *et al.* (2012, p. 74) in which we found that the public sector is one of the least addressed areas of IC research. This is surprising considering that the public

The Guest Editors are very grateful to the authors and the referees who contributed to this Special Issue, helping raise important and robust insights into this important research area. The Guest Editors are also very grateful to Rory Chase, who encouraged the Special Issue and dealt with this paper editorially, as well as the two referees of this paper for their valuable insights and comments. Thanks are due to Fiona Crawford and Sara Haddad from the Editorial Collective for their outstanding effort in editing and project management to bring this special issue to fruition. Finally, the authors are deeply indebted to Julz Stevens, Macquarie University and Knowledge Research, for her oversight and research support.



sector contributes a significant proportion of GDP in most economies (Dumay *et al.*, 2010; Guthrie *et al.*, 2014b), and is strongly reliant on the generation and utilisation of capabilities and knowledge in its service delivery (Cuganesan *et al.*, 2012). Broadbent and Guthrie (2008, p. 129) state that the delineation between the private and the public sector is becoming increasingly blurred as “these public services now are significantly managed, delivered and governed by private and third sector organisations”. Thus, there appears to be a disproportionate lack of IC research about the public sector given the significant differences between it and other economic sectors. Thus, it seems that public sector IC research in an area worth exploring.

The accounting literature stresses the importance of measuring, visualising and reporting IC to improve management control and strategic control processes with regard to both private and non-profit organisations (Mouritsen *et al.*, 2001). From the onset public sector organisations have been a part of developing IC, such as those that participated in developing the Danish IC statement guidelines (see Mouritsen *et al.*, 2003, p. 4). Even with this initial interest in developing public sector IC, the use of IC in practice in public sector organisations is scant, especially from a reporting perspective. Also, when Guthrie *et al.* (2012) analysed the focus of the studies, the majority focused on management issues (Chang and Birkett, 2004) and only a few dealt with IC reporting (Catasús *et al.*, 2007). Overall, compared to articles written about publicly listed and private organisations, there are relatively few articles exploring IC in public sector organisations.

Of the articles published, the Guthrie *et al.* (2012) review indicates a wide spread of public organisational types including universities (Cañibano and Sánchez, 2009), local governments (Farneti and Guthrie, 2008), hospitals (Habersam and Piber, 2003), government departments (Dumay and Guthrie, 2007), research organisations (Leitner and O'Donnell, 2007), police departments (Collier, 2001) and regional clusters (Pöyhönen and Smedlund, 2004). Notwithstanding the broad range of organisational sites, the extent to which there is a limited body of in-depth research into particular organisational form means there are still ample research opportunities in this area, especially given evidence that new forms of measuring and accounting for value are required (Cuganesan and Lacey, 2011; Guthrie *et al.*, 2014b).

Furthermore, the public sector will continue to experience change in the way it delivers services, depending on the social, political and economic realities of the day. For example, the recent concern about an increase in terrorism and security highlights the need to understand how the organisations protecting society operate. A failure to utilise knowledge in police, emergency services, hospitals and security in a timely and effective nature could be the difference between life and death (Jones and Mahon, 2012, p. 774). Many of these organisations are operated by private sector organisations. Similarly, our education systems need to become more competitive with the private sector and compete with rival teaching technologies such as Massive Open Online Courses. Already, many universities are experimenting with these new technologies that will make some classrooms redundant. These new technologies will have a significant impact on the cost and effectiveness between online and face to face education, posing significant challenges for academics and administrators (see Guthrie *et al.*, 2014a). Therefore, these two examples show that the blurring between the public and private sector will continue to force public sector change (Broadbent and Guthrie, 2008, p. 129), and we need to understand how knowledge through IC can be involved.

To help understand how IC can be involved in the public sector this *JIC* Special Issue presents a collection of research articles that seeks to conceptualise and/or apply IC

approaches across a wide range of public sector services in a number of countries. The collection of articles in this Special Issue highlight ways forward for research, researchers, practice and policy and focus on a variety of public sector organisations from around the world. This body of work contributes to putting the public sector firmly back onto the IC research agenda.

The following section identifies several issues associated with public sector measurement and IC practices. Section 3 will briefly introduce each of the papers in this *JIC* Special Issue. The last section provides a summary and conclusion to our paper.

2. Public sector measurement and IC practice

Since late last century, the debate on public sector reform has been marked by the emergence of theories, concepts and values around the paradigm of new public management (Broadbent and Guthrie, 1992; Guthrie *et al.*, 1999), network governance and public services (Broadbent and Guthrie, 2008) and public value (Guthrie *et al.*, 2014b). These reforms represent responses to two long-standing questions: what are the best ways to manage public services in order to optimise the relationship between resources, services and citizens?; and how do we account for performance and such relationships appropriately? However, how public sector performance is conceptualised and practised is a key question. Therefore, the contemporary debate has shifted on how the public sector can meet community expectations in regard to issues of fiscal crisis, austerity, sustainability and providing public services (Guthrie *et al.*, 2014b).

Understanding the gap between expectations of citizenship and resources available for public services is an important topic worthy of debate. However, an equally important topic is how the non-financial aspects of public services are identified, managed, measured and reported. This is an important role for IC, as it provides a lens into the inner workings of public services and ways to measure and manage resources to meet citizens' expectations.

There have been a number of calls for more studies of the application of IC in practice. There have been calls for research that is aimed at developing and evaluating new techniques, examining conditions for successful implementation and explicitly developing practical implications and guidelines (Van Helden and Northcott, 2010) and adopting action research (Cuganesan *et al.*, 2014). We will label this as the practice turn. The following articles contribute to this practice turn as many of the contributions explore aspects of IC management and measurement via case studies in public sector organisations.

3. Papers included in this *JIC* Special Issue

This section will briefly introduce each of the papers in this *JIC* Special Issue.

The first paper by Dumay *et al.* (2015) "IC and public sector: a structured literature review" provides an interesting insight into the characteristics of the 15 year period of IC public sector research literature using a structured literature review method (Massaro *et al.*, forthcoming). It adds to a recent review of the IC literature by Guthrie *et al.* (2012, p. 74), who found that the public sector is one of the least addressed areas of IC research. The current paper uses and updates the dataset from Guthrie *et al.* (2012) to include another five plus years of data, including seven articles appearing in this Special Issue. Overall, the analysis finds that the public sector IC has a primary research focus on central government and central government agencies, education (especially universities), Europe (especially Italy and Spain) and empirical research using case studies mainly investigating management control and strategy. It appears public sector IC researchers

are firmly entrenched in the performative third stage of IC research, investigating “how” IC works in organisations rather than offering normative solutions.

The next three papers have only one element in common, that is the Italian public sector, but explored via different organisational forms: cultural networks; a public utilities company; and a university hospital.

The main purpose of the paper by Borin and Donato (2015), “Unlocking the potential of IC in Italian cultural ecosystems”, is to investigate the potential of IC in Italian cultural ecosystems and to formulate hypotheses on how IC potential could be unlocked. Its primary focus is a specific area within northern Italy, the Po Delta region. The authors’ motivation was to explore the nurturing of an ecosystem based on knowledge flow and sharing of IC amongst the different stakeholders. Their research method was qualitative, based on an empirical survey, carried out by using in-depth interviews with important stakeholders.

Borin and Donato (2015) analysis highlights cultural networks in action, especially at the meso level, often envisaged as a means to foster the competitive advantage of the territory and overcome the broad challenges that the cultural sector is facing. For these authors the knowledge flows and IC workings means implementing a logic of cooperation between different public institutions, private institutions, private subjects and various stakeholders of the area that progressively evolves into the creation of cultural ecosystems. Borin and Donato (2015) summarise their research findings by stating that:

[...] our research validated the consistency of a cultural ecosystem framework for the cultural sector and the crucial potential of IC in cultural ecosystems. The analysis also highlighted that the increasing interest into ecosystem frameworks in the cultural sector should be inscribed in a broader rethinking process within governance systems of the cultural field, this had already been undertaken but had been speeded up due to the impact of the financial and economic crisis. This process could evolve into significant societal change based on participatory approaches and multilevel, multi-stakeholder perspectives.

The second paper in this group is by Chiacchi and Dumay (2015) “Unlocking intellectual capital”. They locate their paper within the third stage of IC research and focus on performative aspects. They investigate if it is possible for an organisation initially to implement and “lock-in” to IC accounting and measuring practices and subsequently “un-lock” IC through a more strategic managerial approach. Thus, they ask:

[...] is it possible for an organisation initially to implement and “lock-in” IC accounting practices and subsequently “un-lock” IC through a more strategic managerial approach? [They] also investigate if and how the reverse process can occur, i.e. if and how, after IC has been “un-locked”, can a new IC “locking-in” process occur?

To answer these questions, they present a case investigating implementing IC in an Italian public sector utility company. Using Actor-Network Theory (ANT), they follow the actors as they “lock-in”, “un-lock” and then “lock-in” to an IC accounting framework. The longitudinal analysis untangles the dynamics that are at the basis of “locking-in” and “unlocking” IC.

Their paper contributes to the debate on IC accountingisation (Dumay, 2009; Habersam *et al.*, 2013) by showing that an accounting dominance can have positive or detrimental effects. Additionally, they highlight the academic researcher’s role in developing insights into how IC works inside organisations and the influence a researcher can have when working with organisations to implement solutions.

The third paper in this group, by Vagnoni and Oppi (2015) “Investigating factors of intellectual capital to enhance achievement of strategic goals in a university hospital setting” reports on an empirical study conducted according to an action research approach in a university hospital setting. Their paper has a twofold aim: developing and applying an IC framework to enhance the visualisation of strategic IC; and producing change in a real setting and enhancing the use of IC visualisation for strategic management.

Vagnoni and Oppi (2015) study an Italian university hospital that is an integrated organisation where academic, clinical and research functions are performed. The activity of university hospitals involves patient care, teaching and educational programmes for students and research directed to the development of new diagnostic or therapeutic techniques. They state that, as with other public sector organisations, university hospitals’ managerial reports often lack information about the drivers of their performance, when related to strategic goals. The importance of using IC management and measurement to enhance and sustain the competitive advantage and organisational performance of any organisation (including public sector ones) has been increasingly highlighted by academics, researchers and practitioners. Considering the university hospital setting, Vagnoni and Oppi found that IC was the main driver of performance, although it lacks visibility when discussing organisational performance.

In summary, the paper documents the role of IC visualisation for strategic management purposes, and the ability of IC research to contribute to the success of organisations. Finally, in relation to the dichotomy of a university hospital (it is both a university and a hospital) the paper gives insights on the ability of IC reporting to facilitate the management of the integration between university and hospital dimensions.

Roos and O’Connor (2015) “Government policy implications of intellectual capital: an Australian manufacturing case study” argue that a strong manufacturing sector is necessary for future wealth generation in Australia. As part of public policy, the South Australian Government implemented several industry policy actions to enhance the managerial capabilities in manufacturing firms. One action was the trial by Roos and O’Connor, who worked with nearly 40 sophisticated manufacturing firms. They state that manufacturing, like all economic activities, are in a constant state of flux requiring reactive or proactive adaptation by firms if they are to retain their ability to grow and prosper. Technology developments have reduced the value added that is possible to achieve in the production part of the manufacturing value chain, whilst increasing the value adding potential in the pre- and post-production activities in the manufacturing value chain. This means that a manufacturing firm needs to extend and increase its focus on pre- and post-production activities to keep its value creating potential stable, everything else being equal. Simultaneously other structural shifts are reducing the basis for competing on products alone and this results in many firms pursuing “servitisation” to, as a minimum, maintain their value creating potential and hence one of the key strategy developments in manufacturing firms that was supported by the government was “servitisation”.

This paper reports on how this was achieved by a case involving around 40 manufacturing firms, where the IC lens, and especially the IC Navigator approach was found to be useful for evaluating alternative “servitisation” strategies. In addition, the paper ties this study back to the policy formulation and implementation level where the IC lens has played a major role, as illustrated by other studies in the case region referenced.

Massingham and Tam (2015) in their paper “The relationship between human capital, value creation and employee reward”, aimed to understand, measure and

manage the impact of organisational knowledge loss in a large Australian public sector department. The organisation participating in the study was selected because it was a knowledge-intensive organisation with an ageing workforce. The research project was a large-scale longitudinal study of organisational change. It is rare for researchers to gain access to an organisation over a period of six years.

Massingham and Tam's (2015) conceptualisation of human capital is based on combining conventional views on human capital, with the individual's emotional relationship with their organisation. Psychological contract is the emotional relationship between the individual and employer and measures organisational commitment. This paper contributes to the third wave of IC research by exploring how IC is or can be used. The research focuses on how managers can use human capital to achieve strategic alignment. By introducing psychological contract as "other factors" in the measurement of human capital, Massingham and Tam explain how IC theory can be extended to help managers understand how to align their workforce.

Secundo *et al.* (2015) in "An intellectual capital maturity model (ICMM) to improve strategic management in European universities: a dynamic approach" propose an "IC Maturity Model" for universities, which aims to be a flexible framework for defining and implementing IC measurement and management approaches as part of the whole strategic management approach of the universities. Thus, the ICMM proposes a staged framework derived from a group of experts. Three Mutual Learning Workshops (MLWs) were organised as a means to bring together international experts and practitioners to share their views and experiences on IC reporting and setting up task forces. The MLW took place in Bucharest (Romania) from October 2012 to May 2013 involving 15 experts from across Europe. The authors' research approach was practice-oriented and has been produced under the "Quality Assurance in Higher Education through Habilitation and Auditing" project framework.

Veltri and Silvestri (2015) in "The Free State University integrated reporting: a critical consideration" focus on a specific branch of the public sector, the higher education (HE) sector, following a case study approach. The university chosen for the case study is the Free State University (UFS), a South African public university, which published its first IR in 2012. The aim of the paper was to explore whether the UFS IR follows the International Integrated Reporting Council (IIRC) framework. This implies integrating financial and non-financial (i.e. social, environmental and IC) information into a single report in a format that is concise, consistent and comparable. To address the main aim of this paper the research method was to compare how the UFS IR adheres to the IIRC framework in terms of guiding principles, content elements and business model.

By analysing the IR of a public university, the paper addresses three different claims of IR and the IC literature. First, was to investigate IR in practice. Second, it conforms to the third stage IC research, which promotes a practical, performative IC research instead of a theoretical, ostensive IC research. Finally, it is a study which investigates IR in the public sector, specifically the HE sector, dealing with disclosing IC and non-IC information within a new reporting mode.

4. Summary and conclusion

In summary, of the eight empirical articles appearing in this *JIC* Special Issue, one is a literature review (Dumay *et al.*, 2015), one develops findings from a survey (Massingham and Tam, 2015) and the remaining six articles develop their findings through case study research (Borin and Donato, 2015; Chiucchi and Dumay, 2015; Roos and O'Connor, 2015; Secundo *et al.*, 2015; Vagnoni and Oppi, 2015; Veltri and Silvestri, 2015). All articles take

some form of inspiration or grounding from what Guthrie *et al.* (2012, p. 69) identify as the third stage of IC research “based on a critical and performative analysis of IC practices in action”. Similarly, as Dumay *et al.* (2015) found, of nearly all the public sector IC articles they analysed, the major difference between public sector and mainstream IC research is a complete lack of normative research. The articles in this *JIC* special issue continue that tradition.

Additionally, Dumay *et al.* (2015) posit that future research on IC reporting is potentially significant considering the recent interest in IR, which includes IC and other forms of non-financial capital (International Integrated Reporting Council (IIRC), 2013, p. 2). It will be interesting to see how the public sector responds to the recent establishment of the Public Sector Pioneer Network to encourage public sector entities to participate in IR. Additionally, there will be a renewed focus on the auditing and assurance of IRs (IIRC, 2014a, b) that could provide additional insights into assuring IC disclosures. Last, considering that there is a push for a “apply or explain” approach to IR as already found in South Africa and corporate governance in the Netherlands, and a “comply or explain” approach to similar corporate governance frameworks found “56 countries in the Commonwealth” and “27 states in the EU including the United Kingdom” (Institute of Directors in Southern Africa, 2009, pp. 5-6), this may also spur on the public sector to respond, especially from a policy perspective.

In closing this Special Issue we want to stress how important it is for future public sector IC research to address important and innovative current issues such as the changes in education (Secundo *et al.*, 2015) and in new contexts that are different and which help to develop understanding as to how IC is used. As we noted above, several articles are devoted to developing third stage IC research and even fourth stage IC research based on IC ecosystems (Borin and Donato, 2015). This shows how public sector IC researchers are willing to explore new ground and experiment with IC in practice and even help public sector organisations experiment and implement IC through action and interventionist research (Chiucchi and Dumay, 2015; Vagnoni and Oppi, 2015). Thus, it is encouraging to see the diversity of articles in this special issue developing research on how IC works in the public sector rather than prescribing what should work. We call on public sector IC researchers to continue this tradition and encourage them to explore emerging issues alongside the changes in the social, political and economic realities impacting IC in the future. Doing so will ensure that public sector IC research is timely, relevant impactful and contributes to future practice, research, policy, and above all, benefits the citizens who need and consume public services.

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