

Intellectual capital studies from social construction perspective – the key to what’s in mind behind what’s in sight

Thu Nguyen

Accounting and Finance Department, University of Greenwich

Working Paper (Short version)

1. Intellectual capital and the current issues

Intellectual capital (IC) has been a popular fashion phenomenon, and worldwide, companies have made a lot of attempts to disclose intellectual capital information (Bukh, 2003). Findings from previous studies indicate that the disclosures vary across countries, industries, and firms (Cuzzo et al., 2017; Catasús and Gröjer, 2003). However, in the extant literature, there are no studies that directly question companies about their decisions on intellectual capital disclosing practice, the variables that affect it, or the conditions under which it occurs (Castilla-Polo and Gallardo-Vázquez, 2016). As Abeysekera (2006) claimed, these studies lack a theoretical basis for the exposition and interpretation of their findings. Dumay (2014) suggested a manifesto for transformational intellectual capital research which focuses on explaining why information about intellectual capital is revealed. Aiming at filling that gap, this paper argues that using social construction lens can help to shed some initial light on that unaddressed issue.

2. Social construction and its potential in addressing the issue

Social construction – what is it?

According to Knoblauch and Wilke (2016), the term “social construction” entered the discourse with the publication of the book “The Social Construction of Reality” by Berger and Luckman in 1966. “Social construction” has become a phrase not only used in the social sciences but far beyond (Knoblauch and Wilke, 2016). The core idea of social construction, in its broadest sense, is that things do not emerge by chance, but are all produced from social actions, i.e., actions that we carry out by interacting with other people. In that case, there are many and various things (if not all) that are socially constructed; for instance, emotions, knowledge, behaviours and even perceptions which may have been taken for granted (Knoblauch and Wilke, 2016). Drawing on such a viewpoint, it can be argued that companies have different disclosing practices since they have different understandings about intellectual capital. With that said, to discover the reasoning behind the disclosures, it would be necessary and crucial to explore what the companies really think about intellectual capital, and why so. And indeed, as Marr and Chatzkel (2004) asserted in their introductory editorial to the special issue “IC at the crossroads: theory and research”, one of the issues that need addressing is what we mean when we talk about intellectual capital. This again reinforced the need to investigate how intellectual capital is actually understood by companies in practice, and more importantly, why so. This also aligns with the call for further research on how intellectual capital concept works and evolves in practice (Schaper, 2016) in the hope of reducing the large gap between the perceptions in the literature, and reality itself (Nielsen et al., 2017).

IC scholars have made various attempts to explore how different people think about intellectual capital. However, their approach to collecting the answers from participants seems not to be effective. For example, instead of giving research participants chances to express their actual understanding of intellectual capital freely, researchers have provided them with support. They have also relied on preset intellectual capital frameworks to guide the participants to offer the answers. This has to some extent eclipsed the participants’ knowledge, which in turn has hampered the social construction of the research knowledge. Also, an analysis which only picked up themes did not really address what practitioners

actually meant when they talked about intellectual capital. In other words, the issue of how intellectual capital is understood in practice has not yet been thoroughly addressed. (Benevene et al., 2019; Giuliani and Marasca, 2011; Habersam and Piber, 2003). Secondly, intellectual capital studies have merely discussed the different understandings of intellectual capital among groups of individuals. They have not provided any further explanations of the concern over why this happened. They mostly left this question unanswered, which hampered our knowledge about what's really behind their thoughts and practice relating to intellectual capital. Hence this paper aims at suggesting a solution – the social construction viewpoint.

The use of social construction ideas in accounting

The idea of social construction plays a key role in opening a different horizon in what we know about accounting. It not only reveals the foundations behind what we have usually taken for granted, such as financial terms (e.g. profit, assets, and equity) and compliance with the regulations (see Lukka, 1990; Hines, 1991; Mouck, 2004; Vamosi, 2005; Levant and Zimnovitch, 2017), but it also places the study of accounting within a wider social context for study (Preston, 1986; Nahapiet, 1988; Colignon and Covaleski, 1988). It also helps the accounting audience understand the rationale of accounting behaviours and practices (Bisman and Highfield, 2012). For this reason, it is firmly believed that social construction is the suitable lens to wear to explore the understanding of intellectual capital in practice.

Berger and Luckmann's social construction viewpoint (1966)

“The Social Construction of Reality” by Berger and Luckmann was first published in 1966. However, despite being eclipsed by other versions and theories of social construction for some time, on its 25th anniversary, the book was addressed as “one of the greatest feats of theoretical synthesis in American Sociology”, a “milestone of sociology” (Abels, 1998, p.87), and “one of the monumental statements of social theory in the postwar years” (Seidman, 2004, p.81). All were quoted by Knoblauch and Wilke (2016). Internationally, the book was ranked among the five most seminal texts in sociology by International Sociological Association. Today, without a doubt, it is still said to be one of the most popular bestsellers in sociology on an international level. In their book, the author argued that “man is a social product” (p.79) and there are different types of the world where the “different” individual is produced. These are where he starts his internalisation process, in order to become a member of society.

In primary socialisation, the “individual's first world is constructed” (p. 155). This is where a person first starts the process of becoming a member of society. He is born into an objective social structure within which he encounters the significant others in charge of his socialisation. He, then, will “take over” that world, interpret the actions within the world and acquire the knowledge needed to be a member of the society. The “home world” can exemplify itself as a family setting, a home country where the person is born, a culture where he has “natural” tradition transmitted to him. These are the “home world(s)” that are inevitable for individuals. Therefore, no matter how far one may travel from the “home world”, one's behaviours, beliefs, attitudes, and actions attached to the original world will stay instilled. Understanding what and where the home world could be would be of great help when analysing social construction, because any individual's social construction would start from here. An expatriate can spend most of their life in another country, but the home culture, and love of home will stay with them throughout their life as “sedimentation”.

As they argued, in sub-worlds, secondary socialisation exists due to the labour division. Yes, it might be absent in a society where there is no labour division, but this scenario seems impossible. Therefore, in this discussion, secondary socialisation is considered to be an integral part of society's role(s). In this way, each role opens an entrance into a specific segment of the society's total stock of knowledge. This implies a social distribution of knowledge. A society's stock of knowledge is structured in terms of what is either generally relevant or relevant only to specific roles.

Moreover, Berger and Luckmann also suggested that all these stages of socialisation are facilitated by interactions. A person in isolation will have no possibility of developing as a person, nor can she or he produce a human environment. The human environment is only created when humans stay together. Also, everyday life's reality is on-goingly reaffirmed in the individual's interactions with others. For example, learning language would help to illustrate this clearly. How could a child obtain his first words if he did not hear another saying those? How could he understand what things can be called if no one talked to him and explained that? Obviously, without interaction, the social construction is impossible.

In this paper, it is shown that Berger and Luckmann's arguments can help to answer the questions about how intellectual capital is understood in practice and how such understandings have been constructed.

3. Example of a case study adopting social construction viewpoint and what can be unveiled about intellectual capital

The social construction viewpoint guided the methodology

The ultimate aim of any kind of research is to explore and introduce a quantity of knowledge. In Berger and Luckmann's view, this kind of knowledge is also socially constructed. Typically, there can be considered to be two main approaches to conducting research – with, or without, participants. The figure below illustrates how the research knowledge in these two types can be constructed.

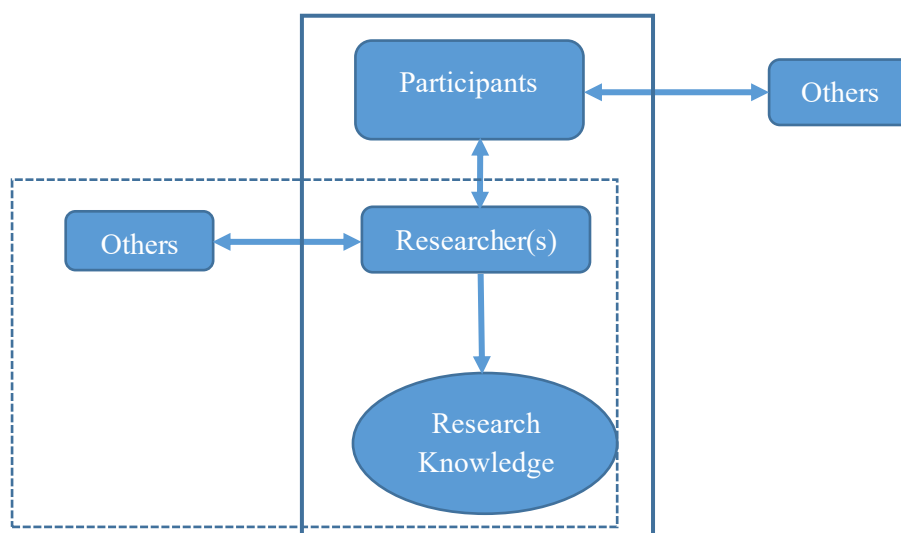


Figure 1: Social construction of research knowledge in a research study

In research that does not engage with participants, researchers play a key role in constructing the research knowledge. According to Berger and Luckmann, this construction would occur in the researchers' home worlds and sub-worlds via interactions with other individuals. Whereas, in the case of researchers inviting participants to participate in the research, the knowledge would be co-constructed by both the researchers and the participants. In the first place, this co-construction also takes place during interactions between the researchers and their participants. However, besides this co-construction, the researchers and participants themselves have also undergone their own construction of knowledge within in their worlds, before sharing their understanding of the interactions.

Drawing on Berger and Luckmann's argument regarding interactions, in this paper, it is believed that without interactions with participants, the researcher would not be able to produce any knowledge. Therefore, the study should engage with participants via face-to-face talks and discussions. These represent the essential platform for the social construction of research knowledge to take place.

With that said, case study was chosen to conduct a study of intellectual capital. There have been many calls for the case and field studies in organisations to examine accounting, in particular, in the contexts in which it operates (Hopwood, 1983; Tomkins and Groves, 1983). Accounting researchers are encouraged to “enter the field and engage in qualitative research grounded in symbolic interactionism and ethnomethodology” (Ritson, 2002, p.9). And so far, “field-based qualitative research methods had to remain the exclusive province of the social constructionist.” (Ritson, 2002, p.10). And indeed, “case studies” is also mentioned by Chua (1986) as one of the methodologies she listed when she laid out the interpretive accounting research tradition. Therefore, case study was chosen with the intention of exploring what people meant when talking about intellectual capital, and the reasoning behind such ideas,

Taking the social construction lens, it was believed that approaching those who share common knowledge and experience would yield more potential interviews. The more common “worlds” (home world and sub-worlds) we share, the easier we could become “friends” from being strangers, and hence the more likely they would provide helpful information and further contacts. Therefore, Vietnamese people in the UK were contacted, and indeed a lot of support from the community was received, since most of the interviews were conducted with them. Since the approach was independent of any preset intellectual capital framework, the semi-structured interviews allowed the respondents to have more chances to talk, and their answers were not eclipsed by academic knowledge. During the interviews, the methodology was also being constructed with attention paid both to the choice of language, and to the constant adjustments of interview skills.

The social construction viewpoint underpinned the analysis

Regarding the participants’ understanding of intellectual capital, the case study revealed some new elements and layers of meaning that the extant intellectual capital literature has not covered yet. “Management style”, “Team spirit/ Harmony”, “Work Ethics” and “Customer feedback” are some newly uncovered items in this case study. The detailed comparison with the literature also indicates that intellectual capital literature has not fully covered how people understand intellectual capital and what people really mean when mentioning some intellectual capital elements.

<i>Items discussed by interviewees</i>	<i>Findings from case study</i>	<i>Similar findings in IC literature</i>
People	<ul style="list-style-type: none"> - More detailed meanings. - No consensus in terms of meanings. 	<ul style="list-style-type: none"> - Mainly referred to as Human Capital with different indicators (Pedro et al., 2018; Ferenhof et al., 2015) - Most similar item found in literature “Geographical diversity” (Corbella et al., 2019)
Brand name	<ul style="list-style-type: none"> - More detailed meanings. - No consensus in terms of meanings. (Some interviewees even showed little knowledge of the term.) 	<ul style="list-style-type: none"> - Mainly placed under different IC dimensions in various frameworks, such as Customers (Lev, 2001; Rudež and Mihalič, 2007), Relational (Sällebrant et al., 2007; Grimaldi et al., 2013), Innovation (Choong, 2008), Organizational (Tai and Chen, 2009); Structural (Rodov and Leliaert, 2002)
Motivation policy	<ul style="list-style-type: none"> - Mainly deemed to be of value in the company (equivalently to structural capital). - No consensus in terms of meanings. 	<ul style="list-style-type: none"> - Mainly placed under human capital dimension (Litschka et al., 2006; Tovstiga and Tulugurova, 2009; Halim, 2010). - Most similar item found in literature: “Training and compensation system” (Lev, 2001)
Management Style	<ul style="list-style-type: none"> - Agreed by all interviewees that this is of great value in 	<ul style="list-style-type: none"> - Not yet discussed thoroughly in the literature. - Most similar items found in literature: “Culture”

	the company.	(Dumay and Roslender, 2013; Benevene et al., 2019), “Organizational culture” (Yi, 2012), “Corporate Culture” (Zarandi et al., 2012; Cricelli et al., 2013) or “Administrative practices” (Pedro et al., 2018), “Culture routines and practices” (Marr et al., 2004), “Culture” and “Management philosophy” (Rudež and Mihalič, 2007), “Leadership/Leadership skills” (Abhayawansa, 2014; Grimaldi et al., 2013; Ousama et al., 2011; Bontis and Fitz-enz, 2002; Mayo, 2000)
Team spirit/ harmony/ support	- Discussed by two out of the three interviewees	- Not yet discussed thoroughly in the literature. - Most similar items found in literature: “Culture/ Management Philosophy” (Rudež and Mihalič, 2007); “Group cohesiveness” (Mura and Longo, 2013), “Team’s social interactions” (Hormiga et al., 2011)
Customer feedback	- Mentioned and clearly discussed by a junior staff.	- Mainly used as a measurement of customers’ satisfaction (Ousama et al., 2011; Guthrie et al., 2006; Bollen et al., 2005) - Most similar items found in literature: “customer feedback systems” (Bozbura, 2004)
Work ethic	- Mentioned and clearly discussed by a junior staff.	- Not yet mentioned in IC literature. - In wider literature, claimed to be connected with different IC elements such as competence (Lou et al., 2019; Wang, 2013; Chung-Herrera et al., 2003); work attitude, work commitment, or work satisfaction (Saks et al., 1996) which are popularly listed as IC elements under Human capital dimension (Ferenhof et al., 2015)

Table 1: Comparisons between what has been found in the case study and what has been revealed in IC literature

In terms of the social construction of such understanding, the study indicated the idea of intellectual capital can be constructed both through the socialisation stages in the home world and also the temporal movements within a sub-world. Using Berger and Luckmann’s framework, it was argued that the cultures, education, the role in the organisation, the experiences and the length of service could lead to different understandings. Although supported by other work in the social science literature, these findings have not been excavated at all in the extant intellectual capital literature, which indicates the role of the social construction lens in this study of intellectual capital.

Besides that, the case study also provides the answers to the question how these social construction processes take place. Relying on Berger and Luckmann’s framework and the data obtained, the study presents some striking findings about the way people interact to socially construct their knowledge which have not been covered in the intellectual capital literature. According to the information gained from the interviewees, the interactions mainly took place via daily communications, observations and daily actions. This seems to be the opposite of what has been revealed in the literature, as scholars have discussed only formal meetings and workshops as the main internal communication channels. In terms of external communications, the participants also claimed that they had direct interactions with customers and other people in order to understand some intellectual capital issues. Meanwhile, only one-way communications, such as reporting or disclosing practices, have been taken into account in the literature.

Main findings from the case study	Similar findings in IC literature
<i>Internal communication channels</i>	
Mainly via daily interactions: communications, actions, observations.	<p><u>Similar findings in literature:</u> Construction of IC disclosure</p> <ul style="list-style-type: none"> • Formal one-to-one meetings, focus groups meetings, Board of Directors meetings and budgeting meetings (Chiucchi, 2013) • Regular meetings and shared databases (Marr, 2004) • Workshops (Shih et al., 2010)
<i>External communication channels</i>	
Brochures, leaflets, events, websites, direct interactions with customers.	<p><u>Similar findings in literature:</u> IC reporting, IC disclosure (one-way communication): annual reports, annual reviews, interim reports, corporate social responsibility reports, information brochures, company websites, specialized publications (Castilla-Polo and Gallardo-Vázquez, 2016)</p>

Table 2: Comparisons between what has been found in the case study and what has been revealed in IC literature in terms of interactions in company sub-world

References:

- Abels, H. (1998). *Einführung in die Soziologie*. Westdeutscher Verlag.
- Abeysekera, I. (2006), “The project of intellectual capital disclosure: researching the research”, *Journal of Intellectual Capital*, 7(1), 61-75.
- Abhayawansa, S. A. (2014). A review of guidelines and frameworks on external reporting of intellectual capital. *Journal of Intellectual Capital*, 15(1), 100–141.
- Benevene, P., Kong, E., De Carlo, A., Lucchesi, M., & Cortini, M. (2019). A qualitative study on the perception of intellectual capital among a group of senior managers of Italian social enterprises. *Knowledge Management Research & Practice*, 17(2), 161–171.
- Berger, P. L., & Luckmann, T. (1966). *The Social Construction of Reality*. Penguin Books.
- Bisman, J. E., & Highfield, C. (2012). The Road Less Travelled: An Overview and Example of Constructivist Research in Accounting. *Australasian Accounting Business & Finance Journal*, 6(65), 3–22.
- Bollen, L., Vergauwen, P., & Schnieders, S. (2005). Linking intellectual capital and intellectual property to company performance. *Management Decision*, 43(9), 1161–1185.
- Bontis, N., & Fitz-enz, J. (2002). Intellectual capital ROI: A causal map of human capital antecedents and consequents. *Journal of Intellectual Capital*, 3(3), 223–247.
- Bozbura, T. F. (2004). Measurement and application of intellectual capital in Turkey. *The Learning Organization*, 11, 357–367.
- Castilla-Polo, F., & Gallardo-Vázquez, D. (2016). The main topics of research on disclosures of intangible assets: a critical review. *Accounting, Auditing and Accountability Journal*, 29(2), 323–356.
- Catasús, B. and Gröjer, J.E. (2003), “Intangibles and credit decisions – results from an experiment”, *European Accounting Review*, 12(2), 327-357.

- Chiucchi, M. S. (2013). Measuring and reporting intellectual capital: Lessons learnt from some interventionist research projects. *Journal of Intellectual Capital*, 14(3), 395–413.
- Choong, K. K. (2008). Intellectual capital: Definitions, categorization and reporting models. *Journal of Intellectual Capital*, 9(4), 609–638.
- Chua, W. F. (1986). Radical Developments in Accounting Thought. *The Accounting Review*, 61(4), 601–632.
- Chung-Herrera, B. G., Enz, C. A., & Lankau, M. J. (2003). Grooming future hospitality leaders: A competencies model. *The Cornell Hotel and Restaurant Administration Quarterly*, 44(3), 17–25.
- Colignon, R., & Covalleski, M. (1988). An examination of managerial accounting practices as a process of mutual adjustment. *Accounting, Organizations and Society*, 13(6), 559–579.
- Corbella, S., Florio, C., Sproviero, A. F., & Stacchezzini, R. (2019). Integrated reporting and the performativity of intellectual capital. *Journal of Management and Governance*, 23(2), 459–483.
- Cricelli, L., Greco, M., & Grimaldi, M. (2013). The assessment of the intellectual capital impact on the value creation process: A decision support framework for top management. *International Journal of Management and Decision Making*, 12(2), 146–164.
- Cuozzo, B., Dumay, J., Palmaccio, M., & Lombardi, R. (2017). Intellectual capital disclosure: a structured literature review. *Journal of Intellectual Capital*, 18(1), 9–28.
- Demartini, M. C., & Beretta, V. (2020). Intellectual capital and SMEs' performance: A structured literature review. *Journal of Small Business Management*, 58(2), 288–332.
- Dumay, J. (2014). Reflections on interdisciplinary accounting research: The state of the art of intellectual capital. *Accounting, Auditing and Accountability Journal*, 27(8), 1257–1264.
- Dumay, J., & Roslender, R. (2013). Utilising narrative to improve the relevance of intellectual capital. *Journal of Accounting & Organizational Change*, 9(3), 248–279.
- Ferenhof, H. A., Durst, S., Bialecki, M. Z., & Selig, P. M. (2015). Intellectual capital dimensions: State of the art in 2014. *Journal of Intellectual Capital*, 16(1), 58–100.
- Giuliani, M., & Marasca, S. (2011). Construction and valuation of intellectual capital: a case study. *Journal of Intellectual Capital*, 12(3), 377–391.
- Grimaldi, M., Cricelli, L., & Rogo, F. (2013). A theoretical framework for assessing managing and indexing the intellectual capital. *Journal of Intellectual Capital*, 14(4), 501–521.
- Guthrie, J., Petty, R., & Johanson, U. (2001). Sunrise in the knowledge economy: Managing, measuring and reporting intellectual capital. *Accounting, Auditing & Accountability Journal*, 14(4), 365–384.
- Guthrie, J., Petty, R., & Ricceri, F. (2006). The voluntary reporting of intellectual capital: Comparing evidence from Hong Kong and Australia. *Journal of Intellectual Capital*, 7(2), 254–271.
- Habersam, M., & Piber, M. (2003). Exploring intellectual capital in hospitals: two qualitative case studies in Italy and Austria. *European Accounting Review*, 12(4), 753–779.
- Halim, S. (2010). Statistical analysis on the intellectual capital statement. *Journal of Intellectual Capital*, 11(1), 61–73.
- Hines, R. D. (1991). The FASB's conceptual framework, financial accounting and the maintenance of the social world. *Accounting, Organizations and Society*, 16(4), 313–331.
- Hopwood, A. G. (1983). On trying to study accounting in the contexts in which it operates'. *Accounting, Organizations and Society*, 8(2–3), 287–305.
- Hormiga, E., Batista-Canino, R. M., & Sánchez-Medina, A. (2011). The role of intellectual capital in the success of new ventures. *International Entrepreneur Management Journal*, 7, 71–92.
- Knoblauch, H., & Wilke, R. (2016). The Common Denominator: The Reception and Impact of Berger and Luckmann's The Social Construction of Reality. *Human Studies*, 39(1), 51–69.
- Lev, B. (2001). *Intangibles – Management, Measurement and Reporting*. Brookings Institution Press.

- Levant, Y., & Zimnovitch, H. (2017). Accounting History. *Accounting History*, 22(4), 450–471.
- Litschka, M., Markom, A., & Schunder, S. (2006). Measuring and analysing intellectual assets: an integrative approach. *Journal of Intellectual Capital*, 7(2), 160–173.
- Lou, N. M., So, A. S. I., & Hsieh, Y. J. (2019). Integrated resort employee competencies: a Macau perspective. *International Journal of Contemporary Hospitality Management*, 31(1), 247–267.
- Lukka, K. (1990). Ontology and accounting: The concept of profit. *Critical Perspectives on Accounting*, 1(3), 239–261.
- Marr, B. (2004). Measuring and benchmarking intellectual capital. *Benchmarking: An International Journal*, 11(6), 559–570.
- Marr, B., & Chatzkel, J. (2004). Intellectual capital at the crossroads: Managing, measuring, and reporting of IC. *Journal of Intellectual Capital*, 5(2), 224–229.
- Mayo, A. (2000). The role of employee development in the growth of intellectual capital. *Personnel Review*, 29(4), 521–533.
- Mouck, T. (2004). Institutional reality, financial reporting and the rules of the game. *Accounting, Organizations and Society*, 29(5–6), 525–541.
- Mura, M., & Longo, M. (2013). Developing a tool for intellectual capital assessment: an individual-level perspective. *Expert Systems*, 30(5), 436–450.
- Nahapiet, J. (1988). The rhetoric and reality of an accounting change: A study of resource allocation. *Accounting, Organizations and Society*, 13(4), 333–358.
- Nielsen, C., Roslender, R., & Schaper, S. (2017). Explaining the demise of the intellectual capital statement in Denmark. *Accounting, Auditing & Accountability Journal*, 30(1), 38–64.
- Nikolaj Bukh, P. (2003). The relevance of intellectual capital disclosure: A paradox? *Accounting, Auditing & Accountability Journal*, 16(1), 49–56. <https://doi.org/10.1108/09513570310464273>
- Ousama, A. A., Fatima, A. H., & Majdi, A. R. H. (2011). Usefulness of intellectual capital information: Preparers' and users' views. *Journal of Intellectual Capital*, 12(3), 430–445.
- Pedro, E., Leitão, J., & Alves, H. (2018). Back to the future of intellectual capital research: a systematic literature review. *Management Decision*, 56(11), 2502–2583.
- Preston, A. (1986). Interactions and arrangements in the process of informing. *Accounting, Organizations and Society*, 11(6), 521–540.
- Ritson, P. A. (2002). Social Constructionism in three Accounting journals: 1977-1998. *9th World Congress of Accounting Historians, 1977–1998*.
- Rodov, I., & Leliaert, P. (2002). FiMIAM: financial method of intangible assets measurement. *Journal of Intellectual Capital*, 3(3), 323–336.
- Rudež, H. N., & Mihalič, T. (2007). Intellectual capital in the hotel industry: A case study from Slovenia. *International Journal of Hospitality Management*, 26(1), 188–199.
- Saks, A. M., Mudrack, P. E., & Ashforth, B. E. (1996). The Relationship Between the Work Ethic, Job Attitudes, Intentions to Quit, and Turnover for Temporary Service Employees. *Canadian Journal of Administrative Sciences*, 13(3), 226–236.
- Sällebrant, T., Hansen, J., Bontis, N., & Hofman-Bang, P. (2007). Managing risk with intellectual capital statements. *Management Decision*, 45(9), 1470–1483.
- Schaper, S. (2016). Contemplating the usefulness of intellectual capital reporting: Reasons behind the demise of IC disclosures in Denmark. *Journal of Intellectual Capital*, 17(1), 52–82.
- Seidman, S. (2004). *Contested knowledge. Social theory today*. Blackwell.
- Shih, K. H., Chang, C. J., & Lin, B. (2010). Assessing knowledge creation and intellectual capital in banking industry. *Journal of Intellectual Capital*, 11(1), 74–89.

- Tai, W. S., & Chen, C. T. (2009). A new evaluation model for intellectual capital based on computing with linguistic variable. *Expert Systems with Applications*, 36(2), 3483–3488.
- Tomkins, C., & Groves, R. (1983). The everyday accountant and researching his reality. *Accounting, Organizations and Society*, 8(4), 361–374.
- Tovstiga, G., & Tulugurova, E. (2009). Intellectual capital practices: a four-region comparative study. *Journal of Intellectual Capital*, 10(1), 70–80.
- Vamosi, T. (2005). Management accounting and accountability in a new reality of everyday life. *British Accounting Review*, 37(4), 443–470.
- Wang, Y. F. (2013). Constructing career competency model of hospitality industry employees for career success. *International Journal of Contemporary Hospitality Management*, 25(7), 994–1016.
- Yi, C. G. (2012). Intellectual capital indicators for the Korean public research institute. *International Journal of Intelligent Enterprise*, 1(3–4), 199–214.
- Zarandi, F. M. H., Mohammadhasan, N., & Bastani, S. (2012). A fuzzy rule-based expert system for evaluating intellectual capital. *Advances in Fuzzy Systems*, 2012, 1–12.