

Futurizing the Intellectual Capital Theory

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Abstract: Intellectual capital theory (IC) theory, which asserts that organisational value is for the most part created with intangible, knowledge-based resources, has become a prevalent way to approach the notion of business viability. Most IC research leans on the classical tripod of IC components, laid down by the first-generation researchers in the field. This tripod divides the value-generating knowledge assets into human capital, structural capital and relational capital; or, more simply put the value vested in an organisation's personnel, internal structures and processes, and relationships. Even though this conceptualization has been challenged by some, it still remains the cornerstone of the IC-based view of the firm, and it is astutely followed by most researchers in this field. However, various large-scale technological, socio-political, and institutional changes have fundamentally changed the business environment and worklife in recent years. In this paper we argue that these changes call for a critical examination of the relevance of the classical conceptualizations of IC. It may be necessary to update the understanding concerning not only the most essential knowledge resources, but also the structure of IC and the way in which IC is related with new relevant organisational capabilities and aspects of organisational performance. The aim of this theoretical paper is to provide an overview of some of the most essential recent worklife trends that are likely to impact how IC should be understood: digitalization, remote work, gig work, open innovation, crowdsourcing, strive towards sustainability and resilience. Based on these, the paper puts forth a set of propositions concerning the needed novel perspectives for IC. In addition to constructing a novel theoretical framework and propositions for IC research, the paper functions as an introduction to the mini track on Futurizing the Intellectual Capital Theory and provides a common framework on which mini track participants can base their dialogue.

Keywords: Intellectual capital, Digitalization, Remote work, Sustainability, Resilience, Theory

1. Introduction

Intellectual capital theory (IC) theory, which asserts that organisational value is for the most part created with intangible, knowledge-based resources, has become a prevalent way to approach the notion of business viability. Most IC research leans on the classical tripod of IC components, laid down by the first-generation researchers in the field (e.g. Edvinsson and Malone, 1997; Stewart, 1997; Sveiby, 1997; Roos et al, 1997; Bontis, 2002). This tripod divides the value-generating knowledge assets into human capital, structural capital and relational capital; or, more simply put the value vested in an organisation's personnel, internal structures and processes, and relationships. Even though this conceptualization has been challenged by some (e.g. Inkinen et al, 2017; Cabrilo and Dahms, 2020) it still remains the cornerstone of the IC-based view of the firm, and it is astutely followed by most researchers in this field.

However, various large-scale technological, socio-political, and institutional changes have fundamentally changed the business environment and worklife in recent years (Hitt et al., 2021). In this paper we argue that these changes call for a critical examination of the relevance of the classical conceptualizations of IC. It may be necessary to update the understanding concerning not only the most essential knowledge resources, but also the structure of IC and the way in which IC is related with new relevant organisational capabilities and aspects of organisational performance.

To provide impetus and structure to new ideas and dialogue concerning the way in which the IC theory should and could be developed to better match current realities, this paper examines a set of recent worklife trends that are likely to impact how IC should be understood: digitalization, remote work, gig work, open innovation, crowdsourcing, strive towards sustainability and resilience. Based on these, the paper puts forth a set of propositions concerning the needed novel perspectives for IC and presents a tentative framework for a futurized understanding of IC.

2. Recent Worklife Trends and Changes and Intellectual Capital

Work life is facing many large-scale changes due to ecological, political and economic uncertainties. To remain competitive in the face of digitalization, diversifying work arrangements, and the manner in which innovations are brought about, organisations need new resources and capabilities (Colbert et al., 2016; Habraken and Bondarouk, 2017). In the following, we discuss trends that are likely to have an impact on IC: digitalization,

remote work, gig work, open innovation (OI), and crowdsourcing—and strive toward sustainability through ethical leadership, green IC, and organisational resilience.

2.1 Digitalization

In Industry 4.0, also referred to as Smart Industries, digital technologies have increasingly changed the organisation and nature of work (Colbert et al., 2016; Habraken and Bondarouk, 2017). Technological developments create greater work flexibility and mobility, which can benefit both workers and organisations (Ludivine, 2017). However, at the same time these present challenges, as new technologies are dramatically changing employment and work features across many fields of work (Cooper and Lu, 2019; Felstead and Henseke, 2017). Digital technology enables smaller and more isolated work units, such as virtual teams (Donnelly and Johns, 2021). In a digitized world where work is crowdsourced to freelancers via online platforms, and collaboration occurs across geographical, functional, and hierarchical borders (Lepofsky, 2016), many aspects of IC should be updated. Increasing technologically mediated interaction, robotization and automation require workers to build digital competences and adopt new skill sets needed to work in new jobs created (Habraken and Bondarouk, 2017). Accordingly, a crucial new feature of human capital is that of digital competence. Digital competence encompasses the knowledge, abilities, skills, and attitudes we need for working in the digital age (Murawski and Bick, 2017). It is important for organisations in the digital era not only to cope with disruptive technologies and innovation, but to adapt their business philosophy and business models including mindset (organisational and individual), culture, and competences to digital way of working (Murakowski and Bick, 2017). Creating an open culture that embraces independent and on-demand workers allows organisations to benefit from their ideas and engage them in innovation and value creation (Smith, 2020). Digital organisational culture has been found to support digital capabilities and innovation performance (Zhen et al., 2021). This leads to the first proposition:

Proposition 1: In digitalized worklife, digital skills and an open digital culture are important aspects of IC.

2.2 Remote Work

The term '*remote*' work, sometimes also referred to as telework, locationally distributed work, or virtual work, can be defined as any work that is detached from traditional fixed places of work (Felstead and Henseke, 2017). Remote working is not a product of Covid-19 pandemic, but it has gained its momentum and proved its significance as a result of the Covid-19 crisis' catalytic effect (Liu et al., 2021), becoming a necessity for organisations across the globe (Donnelly and Johns, 2021). Self-leadership (Manz, 1986; Manz and Sims, 1987) is a process through which people influence themselves to achieve the self-direction and self-motivation necessary to behave and perform in desirable ways. Self-leadership theory posits that even though external contexts and activities influence behavior, actions are ultimately controlled internally by the individual, and focus on how people manage and lead themselves (Stewart et al., 2011). It includes self-imposed strategies for managing performance of tasks of low intrinsic motivational potential, and self-influence that capitalizes on the "natural"/intrinsic motivational value of task activity (Manz, 1986). While self-leadership probably is an important skill in many types of jobs, we argue that in remote work arrangements, its role is especially prevalent. Thus, we propose:

Proposition 2: Self leadership is an important aspect of IC in remote work contexts.

2.3 Gig Work

In today's digital economy, the traditional full-time employed labor force seems to be decreasing, and a growing number of workers, especially high-skilled professionals, prefer to work as autonomous and independent self-employed, freelance contractors (Vaiman et al., 2011). *Gig work* is made up of short-term jobs (*gigs*) and presents a type of contingent work that typically falls outside the boundaries of the organisation. In this new economic system workers are not engaged in 'jobs' and have no long-term connections with a company but are hired on demand for 'gigs' under very flexible arrangements as independent contractors, working only for a defined time to complete a particular task and after completion they have no more connection with their 'employer' (Friedman, 2014). As gig workers have no traditional employment relationships with organisations, they have typically been left out of IC accounts. However, an increasing amount of the human intellect working for a firm may come from outside of the realm of its fully employed human resources (McDonnell et al., 2021; Williams et al., 2021). Therefore, we argue that no matter their formal employment status, workers that create value for a company should be counted as its human capital. We propose:

Proposition 3: Gig workers should be acknowledged IC providers.

2.4 Open Innovation

Open innovation (OI), as introduced by Chesbrough (2003), is an innovation practice that strives to provide much richer knowledge flows and make innovation quicker, easier, and more effective through exchanging knowledge and ideas by collaborative and open network environments (Curley and Salmelin, 2018). There is a successive change in the way in which innovation has been viewed through time. The innovation paradigm has shifted from the 'closed innovation' to the 'open innovation' and the 'networked innovation' models and now to participative innovation, which is an integral characteristic of Open innovation 2.0. (Chesbrough, 2003; Curley and Salmelin, 2018). As innovation is the most typical performance variable in IC research (Inkinen et al., 2017), this novel innovation paradigm should also entail changes for the IC field. For IC theory, this means that knowledge-based value creating resources relate not only with intra-firm resources and capabilities, but also with those over and across the organisational boundaries.

Proposition 4: External IC resources are crucial for open innovation.

2.5 Crowdsourcing

Crowdsourcing, with its multidisciplinary nature, is a complex phenomenon (Cricelli et al., 2021). It is consistent with the open innovation paradigm (Bogers and West, 2012), as it basically refers to the use of outside sources for ideation, and crowd wisdom or collective intelligence in value creation (Brabham, 2013). Crowdsourcing indicates the practice to open the process of getting ideas or performing tasks up to the public and ask a body of people (the crowd) to share its knowledge as users in order to improve its own experience (Buettner, 2015).

The adoption of OI strategies asks for reorganisation of how processes are carried out, that need to be linked to a new and more open and entrepreneurial culture, a cooperative behavior, and a collaborative mindset of the people involved (Cricelli et al., 2021).

Proposition 5: Open and entrepreneurial culture is an important facet of structural capital that supports crowdsourcing and use of collective intelligence.

2.6 Sustainability

Sustainability is a crucial issue for the future of the planet and humanity. With growing global concerns regarding the scarcity of natural resources, economic viability, social inequity, poverty and human rights violations, climate change, and rapid environmental degradation, sustainability and knowledge issues have become increasingly relevant in the literature (Reboredo and Sowaity, 2022; Mutuc and Cabrilo, 2022). While there is a shift in factors of production and knowledge-based transformation around the world, at the same time there is a demand for sustainable development among organisations. Therefore, organisations have to balance their economic growth with social and environmental concerns (Jain et al., 2017). The productive force behind companies is what they know, i.e. their IC (Subramaniam and Youndt, 2005) that may change the nature and strength of CSR effects on organisational performance.

Green IC refers to the sum of existing knowledge and skills that are used within a firm in organisational and environment-oriented processes and activities and that give the firm an opportunity to maximize its economic, social, and environmental performance and achieve a sustainable competitive advantage (Chen, 2008; Chang and Chen, 2012; Liu et al., 2021). In the knowledge economy, knowledge-based resources and capabilities are the leading drivers of environmental and social innovations (Chen, 2008). Thus, the process of accumulating green IC is a process of promoting sustainability within organisational operations and business value creation (Liu et al., 2021).

Proposition 6: There is a linkage between (green) IC and sustainability.

2.7 Ethical Leadership

A facet of IC-relevant social sustainability, ethical leadership involves the demonstration of high moral values in personal actions and interpersonal relationships and the promotion of such behavior to followers through open, trustful, and two-way communication as well as encouragement and empowerment in decision-making (Brown et al., 2005; Ullah et al., 2021). Ethical leadership supports moral activities and attitudes toward business and generates trust among internal and external stakeholders. Ethics and trust shape an organisational culture of honesty and ethics and create an ethical climate that boosts open communication with employees, teamwork, knowledge sharing, creativity, and better organisational problem solving, enhancing organisational IC (Maletič et al., 2018). The trust generated by ethical behaviors enables superior relationships, leading to increased relational capital. Ethical leadership and followership attract and retain talents, which can further lead to better

human capital (De Hoogh and Den Hartog, 2008). In summary, ethical capital entails leaders to be liable for humankind in general, not just for their firms, and enables leaders to build an ethical corporate culture and to be accountable for humanity (Ullah et al., 2022).

Proposition 7: Ethical leadership should be acknowledged as an element of IC.

2.8 Organisational Resilience

Organisational resilience, as a relatively new term in the management literature, indicates a much broader concept of resilience as a value driver for an organisation (Pereira et al., 2020). It refers to organisational viability over the long term under varying conditions (Tengblad and Oudhuis, 2018). Resilience enables organisations to harness experience and embrace opportunity in order to prosper in today's dynamic, interconnected and uncertain world (Pereira et al., 2020). Despite its growing importance, the mechanisms through which organisations develop resilient capabilities are still well under-researched (Kossek and Perringino, 2016).

External changes require renewal and reassembly of resources through both adaptation and innovation, and therefore organisational resilience is created through holistic management of resources and capacities. While many tangible traits and processes for resilience have been well researched, it is important to develop new perspectives on resilience and include intangible capabilities and resources in resilience models (Tengblad and Oudhuis, 2018). For example, Pareira et al. (2020) have confirmed that human capital is an extremely important dimension to overcome surprising, uncertain, and unstable situations and become resilient over time. We thus propose that understanding the impact of knowledge resource reservoirs, passageways and crossover provides a framework for further research to promote resilience in organisations.

Proposition 8: IC is the major source of organisational resilience.

3. Conclusion

This paper argued that to remain relevant in the face of the recent large-scale changes in companies' operating environments, such as digitalization, sustainability crisis, as well as the pandemic and related forced move to remote working, the IC theory would benefit from updating. We reviewed a set of recent worklife trends and changes and based on them, put forth the following propositions concerning related modifications to the existing IC models:

Proposition 1: In digitalized worklife, digital skills and an open digital culture are important aspects of IC

Proposition 2: Self leadership is an important aspect of IC in remote work contexts

Proposition 3: Gig workers should be acknowledged IC providers.

Proposition 4: External IC resources are crucial for open innovation.

Proposition 5: Open and entrepreneurial culture is an important facet of structural capital that supports crowdsourcing and use of collective intelligence

Proposition 6: There is a linkage between (green) IC and sustainability

Proposition 7: Ethical leadership should be acknowledged as an element of IC

Proposition 8: IC is the major source of organisational resilience.

We hope that our ideas contribute to the topicality and relevance of IC research by inspiring new thinking and offering ways forward to revise the research models that are developed and tested within this important field of study.

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