EDITORIAL ESSAY

What If Intellectual Capital Is the Missing Link in Sustainable Development?

It is our great pleasure to introduce this editorial for the special issue on Intellectual Capital and the Sustainable Development Goals. Despite the global momentum around the SDGs, the full potential of intellectual capital has yet to be realised. As Editors, we asked ourselves a simple but important question: *what if intellectual capital is the missing link in sustainable development*? This question reflects the purpose of the special issue. Our aim has been to take a broad, multidisciplinary view of how intellectual capital connects with the Sustainable Development Goals. And to offer insights into the organisational and individual processes that support this connection. To direct more research to this area, we aimed to identify the common ground within intellectual capital research, while recognising that scholars bring different perspectives that each contribute meaningfully to the field.

Although many strands of work on intellectual capital have emerged, we acknowledge that the field itself has developed significantly. From its early beginnings, where scholars explored what made intellectual capital relevant to organisational performance, the field has expanded to embrace a wider set of perspectives that reflect the multiple dimensions of the field (see Mouritsen *et al*., 2002; Inkinen, 2015; Duodu and Rowlinson, 2019; Scuotto *et al*., 2019). These developments have brought important insights into the role of human and relational assets in shaping organisational behaviour and long-term value creation (Petty and Guthrie, 2000; Edvinsson, 2002; Edvinsson, 2013). Yet across these perspectives, the story also suggests that intellectual capital alone is not enough. This body of work indicates that for IC to respond effectively to global development challenges, more is required. In essence, this means bringing greater integration and paying closer attention to how organisational systems interact with the people who drive them. This recognition shapes our special issue and provides the motivation for the contributions included here.

It may appear that we believe the SDGs represent an ambitious and interconnected agenda for the future, and in many ways they do. Work to date has shown that addressing them requires the ability to innovate and adapt to changing social, economic and environmental conditions. However, as the contributions in this special issue demonstrate, these abilities are deeply rooted in the intangible assets that make up intellectual capital. Human capital includes skills, knowledge, experience, creativity and values. It helps people make sense of complexity and imagine new solutions. Structural capital refers to the systems, cultures, routines and technologies that support sustainable practices. Relational capital focuses on partnerships, networks and trust. It helps organisations work together across different sectors. Taken together, these forms of intellectual capital create the conditions needed for organisations and societies to pursue the SDGs with purpose and coherence. This special issue aims to promote a more integrated understanding of these relationships rather than a fragmented view of their development.

At the organisational level, it is increasingly recognised that firms face growing pressures to embed environmental, social and governance principles within their reporting frameworks. These expectations sit alongside wider demands to build organisational resilience in response

to technological disruption and shifting societal norms (see Crammond *et al*., 2018; Scuotto et al., 2025). Such challenges cannot be met through financial capital alone. They depend fundamentally on the depth and quality of intellectual capital. This reliance is evident at the individual level as well. Leadership cognition, employee skills, experience, creativity and values shape how people interpret change, respond to uncertainty and contribute to sustainable practice. These individual capabilities interact with organisational culture, systems and relational networks, creating the conditions through which learning, adaptation and innovation can take place.

It is important to recognise that leadership cognition, workforce capabilities, organisational culture and relational infrastructures do not represent a single underlying construct (see Matos and Edvinsson, 2020; Ordonez and Edvinsson, 2020; Mercier-Laurent and Edvinsson, 2021). Each plays a distinct role in shaping both individual behaviour and organisational performance. There is strong evidence that, together, these elements support the learning and sense making capacities required for sustained strategic renewal. It is no exception that the contributions to this special issue reinforce a central point: intellectual capital across individual, organisational and relational domains is a key driver of long term sustainable transformation.

A central feature of this special issue is the attention given to the two levels of intellectual capital, organisational and individual, and the recognition that sustainable development requires contributions from both. Organisational intellectual capital captures the collective capabilities that shape how institutions operate and respond to complex demands. We also suggest that existing scholarship in this area has become somewhat narrow and would benefit from broader theoretical development. Individual intellectual capital, in contrast, resides in people and is expressed through their expertise, values and creative capacities. Across this special issue, we aim to demonstrate that although each level has its own significance, it is the interaction between them that offers the greatest potential for advancing sustainable development. Organisational systems can either support or limit the ability of individuals to contribute meaningfully to the SDGs, while individuals can either reinforce or weaken the cultural and behavioural foundations needed for long term sustainability.

To advance this line of inquiry, we have framed the call for this special issue around the interplay between organisational and individual intellectual capital and the implications of this relationship for sustainable development.

Each of the six articles in this special issue extends current thinking about intellectual capital in new directions and contributes to the conversation we seek to open about individual and organisational pathways for addressing sustainability. In the paper, '*the effect of executive green human capital on green mergers and acquisition*', Shi, Xu and Ding (2025), take important initial steps toward understanding how executive green human capital shapes firms' engagement in green mergers and acquisitions. The authors recognise that the environmental orientation of senior leaders is central to driving credible corporate environmental action, particularly in emerging economies. They skilfully integrate Python based textual analysis with established perspectives on pro environmental behaviour to capture the green capabilities of executives and link these to strategic outcomes.

Consistent with the mechanisms proposed in the literature, the authors show that executives with stronger green expertise and awareness are more likely to steer their firms towards genuine green mergers and acquisitions. For example, they demonstrate that such executives display higher environmental responsibility and less managerial short-term thinking, which strengthens firms' commitment to substantive environmental initiatives. The dynamics they uncover point to meaningful rather than symbolic environmental action, offering valuable insight into the internal drivers of green strategic behaviour.

At the same time, the ideas developed by Colamartino, Toma and Schiuma (2025) in '*Leveraging intellectual capital for sustainable innovation: a spatial analysis of resilience in the olive oil sector'* take important initial steps toward understanding how intellectual capital can support sustainable innovation in the agri-food sector. The authors recognise that rural industries, and the olive oil sector in particular, are increasingly exposed to climate instability and competitive pressures. Taken together, these observations point to the value of combining spatial analysis with intellectual capital perspectives to explore how proximity and consortium membership shape firms' resilience and innovative capacity.

Their nine year analysis of 1,827 Italian olive oil firms reveals clear spatial patterns in the role of Geographical Indication consortia. For example, firms that belong to these consortia and are located close to one another are better placed to share climatic risks and sustain innovation activity during environmental shocks. The dynamics they identify show how the human, structural and relational dimensions of intellectual capital work together to support economic and environmental resilience.

In '*Unveiling the masking effect: the role of R and D human capital in collaborative innovation and sustainability*', Lei, Chen, Wang and Zhou (2025) construct an intriguing analysis in order to address how R and D human capital shapes the relationship between collaborative innovation and sustainable innovation. The authors set out to identify the causal connections between these elements, recognising that much existing work assumes a simple positive link while offering limited evidence on the underlying mechanisms. To address this gap, they draw on data from Chinese A share listed firms from 2009 to 2022 and establish a clear causal pathway from collaborative innovation to sustainable innovation. Their analysis reveals a masking effect in which R and D human capital plays an enabling role but also slightly reduces the overall strength of the collaborative effect. While the ideas that collaboration automatically enhances sustainability play an influential part in the existing literature, the authors show that this relationship is more complex. For example, the effect is stronger in collaborations between firms than in industry university partnerships, and more evident among firms with lower R and D intensity. Their work lays a solid foundation for future research.

Given the evidence emerging across this special issue, we believe that careful attention to the interaction between individual and organisational intellectual capital opens new questions about how firms build sustainability capabilities. With these ideas come questions about how intellectual capital shapes not only internal processes but also the wider performance outcomes associated with environmental, social and governance dimensions. We believe that inquiry of this kind is advanced by the contribution offered by Amitrano, Hani, Troise and Cappa (2025)

in '*Individual and organizational intellectual capital, ESG dimensions and competitive advantage: a focus on Italian SME'.* In this paper, the authors examine how intellectual capital at both the individual and organisational levels influence firms' environmental, social and governance outcomes, and how these, in turn, shape competitive advantage. Drawing on survey data from small and medium sized enterprises in Italy, they develop a multilevel framework that positions human and relational capital at the individual level and structural and organisational capital at the organisational level. They apply this framework through structural equation modelling with a newly validated perceived ESG scale. The authors show that structural capital contributes positively across all three ESG dimensions, and that organisational capital strongly drives environmental performance but may constrain social sustainability in the short term. These insights may be valuable, for example, in investigating how smaller enterprises manage the tension between short term financial constraints and longer-term sustainability goals.

In '*The nexus of green intellectual capital and sustainable performance: leadership commitment and knowledge sharing as influences*', Elnagar and Aljuwaiber (2025) build on the notion that green intellectual capital plays an important role in shaping sustainability outcomes in service organisations. The authors recognise that the hospitality sector in Saudi Arabia poses a wide range of environmental and operational challenges, and they leverage dynamic capabilities theory to investigate how leadership commitment and knowledge sharing influence the relationship between green intellectual capital and sustainable performance. In our view, their paper offers some pertinent insights into how intellectual capital dynamics operate in service settings. In particular, the work highlights the multiple ways in which leadership commitment and knowledge sharing shape sustainability outcomes, and this poses important questions for future research on capability development in the hospitality sector.

Coupled with the above work, the ideas developed by Ahmad, Wu and Sualeh Khattak in '*Linking green intellectual capital to sustainability and sustainable business model innovation in manufacturing SMEs'* suggest that green intellectual capital plays a central role in shaping the sustainability performance of firms operating in emerging economies. Their study examines manufacturing firms in Pakistan and shows how green intellectual capital contributes to economic, social and environmental performance. Further, the paper reminds intellectual capital researchers that there is a need to continue to move beyond narrow conceptions of capability and to examine how different dimensions of green intellectual capital shape multiple aspects of sustainability performance. We certainly agree with this, and the call for this special issue emphasises the importance of such work. Their insightful emphasis prompts us to consider the need for greater attention to the dynamic interaction between innovation processes and capability development, especially in small and medium sized enterprises in emerging contexts.

Conclusion

The contributions in this special issue deepen our understanding of how intellectual capital informs organisational responses to sustainability challenges. Collectively, these papers illustrate that intellectual capital is not a static stock of assets but a dynamic set of capabilities

that shape how organisations interpret their environment and pursue the Sustainable Development Goals. In our view, a key insight emerging from this body of work is the importance of multilevel interactions. Intellectual capital operates simultaneously at the individual, organisational and network levels, and the interplay between these levels appears central to explaining how firms develop and sustain environmentally and socially responsible practices. This emphasis aligns with broader developments within management research, where questions of capability formation, organisational learning and strategic renewal continue to attract sustained attention.

The articles also point to the value of more integrated theoretical approaches. Across the special issue, dynamic capabilities, resource-based reasoning, knowledge-based perspectives and sustainability scholarship intersect in ways that highlight the potential for intellectual capital research to contribute more directly to debates on responsible management and long term value creation. For JIC readers, this is especially relevant, as it underscores the managerial, organisational and societal implications of intellectual capital in contemporary business environments.

Looking ahead, we see significant scope for further theoretical elaboration and empirical extension. Opportunities exist to explore how intellectual capital evolves over time, how it interacts with digital transformation and regulatory change, and how it shapes organisational resilience under conditions of uncertainty. Addressing these opportunities and challenges will require more comparative work across sectors, institutional contexts and cultural settings to enrich our understanding of the contingencies that influence intellectual capital's role in sustainability. We hope this special issue encourages researchers to take forward these lines of inquiry. Our hope is that future research will continue to examine the contribution of intellectual capital to the Sustainable Development Goals with analytical depth and methodological rigour. We thank all authors and reviewers for their thoughtful engagement, and we look forward to the next phase of research that this work will undoubtedly inspire.

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