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*Editorial*

# Coping with big: Does big data lead to 'bigger' innovation?

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This Spring Issue will discuss about big data and multiple aspects of its usability and applicability. Many of us have seen blockbuster movies *Back to the future (premiere in 1985)*, *The Terminator (1984)* or *Minority report (2002)*. The unifying element of the above mentioned movies is that manuscripts are introducing a superior competitive advantage factor. The protagonists create an advantage by having either real-time data (sometimes from the future) or all relevant (big and historical) data with enormous computing capacity over competitors. A bit after first two of those movies premiered, NASA scientists Cox and Ellsworth (1997) published an article where term 'big data' appeared first time (Press, 2014).

Intelligence needs to be topped up in a way to create advantage. Data has been there for a long time, in all forms and sizes. It is applied in almost single every business sector and it is getting faster in sense of usability. The data storage capacity has been exponentially increasing over time, but the usability of this wealth of data remains a critical issue.

This Issue aims to deepen our current understanding of the Big Data phenomenon, from multiple perspectives: definitional, conceptual, analytical, and empirical. Drivers, as well as obstacles, to the adoption and diffusion of big data are unearthed, providing grounds for managerial and policy implications. All papers adopt a comprehensive approach to big data, embracing both technological, processual, organizational and human aspects that are inherent to any type of innovation. The potential offered by big data to generate "bigger" novelties, and to create a wider, more sustainable impact from innovation, remains an essential question, to which this Issue partially answers.

In the first Letter of this Issue, Hanna discusses the drivers and barriers of e-commerce, which is portrayed as a techno-managerial innovation. Distinctive national features and peculiarities influence the speed of diffusion and adoption of e-commerce, at multiple levels: across industries and sectors, across firms within a nation, and within the boundaries of firms with differentiated levels of depth and breadth of extent and use. Hanna further elaborates on the role played by national policies aimed at promoting the adoption of e-commerce and highlights the importance of developing e-skills and increasing the general awareness and digital literacy of stakeholders.

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In their Letter from Academia, Maglio and Lim depict how big data analytics can leverage the value offered by services, rendering them smarter. The Scholars further identify four types of smart service systems enabled by big data, namely smart customization and prevention, smart operations management, smart coaching and smart adaptation and risk management. A common feature of these smart service systems stems from the fact that these are the outcome of "embedding human knowledge and capabilities in technologies to serve human purposes for effective value co-creation", as described by the Scholars.

In "Data, Dialogue and Innovation: Opportunities and Challenges for Open Government in Canada", Roy revisits the Canadian experience, as a precursor of open data strategies. The Scholar details the tensions and the need for reforms addressing the various architectural facets of the public sector, embracing technological, administrative, political and social aspects. The paper also caters for avenues for facilitating systemic openness and collective innovation across sectors and government.

In their contribution, Segarra et al. explore how big data can be used as a lever by companies to boost their revenues and create value. The Authors develop and apply a set of tools to strategically analyze bid data capabilities and their potential for value creation, in a sequential manner. The empirical validation of the framework is performed using a single, in-depth case analysis of all operating segments of Amazon.com and how big data analytics contribute to customer satisfaction and sales in the retail industry.

In their literature review, Ylijoki and Porras reveal 17 definitions of big data, discuss the shortcomings of these current definitions and elaborate enhancements to the terminology, unveiling areas of further research.

In the fourth contribution of this Issue, Prescott tackles the critical question of the competitive advantage that firms can gain from big data. Anchored in the resource based view and dynamic capabilities literature stream, and using an interpretive approach, this exploratory research concentrates on the impact of digital data genesis on firm competitive advantage, explored through the lenses of improvements to product and service offerings in a single case study setting.

The final paper of this Issue focuses on the application of big data in the agricultural industry, illustrating how it can simultaneously foster economic and environmental benefits. The paper also highlights the influence of organizational collaboration as well as intellectual property contexts in the way big data can deliver its full potential in agriculture.

We wish you a stimulating journey in your reading of this issue of the Journal of Innovation Management.

Innovatively Yours,

Marko Torkkeli, Anne-Laure Mention, João José Pinto Ferreira
Editors

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