



# TelSoc

## Telecommunications & the Digital Economy

Published on *TelSoc* (<https://telsoc.org>)

Home > Guest Editorial -- Digital Technologies and Innovation

---

### Guest Editorial -- Digital Technologies and Innovation

[Rim Jallouli](#) <sup>[1]</sup>

ESEN, LIGUE, Univ. Manouba, Tunisia

[Mohamed Anis Bach Tobji](#) <sup>[2]</sup>

ESEN, Univ. Manouba

[Gunnar Piho](#) <sup>[3]</sup>

Tallin University of Technology

[Hamid Mcheick](#) <sup>[4]</sup>

University of Quebec at Chicoutimi

---

## Abstract

This editorial comes in three parts: first, an introduction to the collaboration between the International Conference on Digital Economy (ICDEc) and the Journal of Telecommunication and the Digital Economy; second, the importance of digital technologies and innovation as a growing multidisciplinary research field; third, a brief introduction to the selected papers in this issue.

## Collaboration between ICDEc and the *Journal*

The International Conference on Digital Economy: Emerging Technologies and Business Innovation (ICDEc) is an annual conference that was launched in 2016 by the Tunisian Association of Digital Economy (ATEN) in collaboration with the Higher School of the Digital Economy (ESEN) and the University of Manouba. The ICDEc community has been growing year after year and more partners have joined the project and hosted the conference, namely: Brest Business School in 2018; the International Lebanese University in 2019; Bucharest Business School in 2020 and 2022; and Tallinn University of Technology in 2021. The upcoming conference (the eighth) will be held in the School of Economics and Management, University of Minho, Braga, Portugal, from 2 to 4 May 2023 (<https://icdec.aten.tn> <sup>[8]</sup>).

ICDEc conference aims to debate the theme of the digital economy and targets researchers from a multidisciplinary background. Indeed, the conference covers the fields of computer science, business computing, information systems, artificial intelligence, big data, and knowledge management, as well as business fields such as marketing, finance, human resources and management. In addition to theoretical contributions, the conference welcomes studies with a focus on application contexts like e-commerce, e-business, e-health, e-learning, digital assets and mobile banking. The six previous proceedings were published in the LNBIP Springer books under the name of *Digital Economy: Emerging Technologies and Business Innovation* (Bach Tobji et al., 2018 <sup>[9]</sup>; 2020 <sup>[10]</sup>; Jallouli et al., 2016 <sup>[11]</sup>; 2017 <sup>[12]</sup>; 2019 <sup>[13]</sup>; 2021 <sup>[14]</sup>).

Thanks to Professor Payam Hanafizadeh, who is a member of the ICDEc program committee, the ICDEc steering committee made contact with Dr Leith Campbell, the Managing Editor of the *Journal* to initiate the project of a special issue on Digital Technologies and Innovation. The objective was to produce a set of focused original papers debating the role of emerging technologies in business innovation in different contexts, such as education, tourism, banking, and insurance. The experience lasted nearly one year and the exchanges among the editorial teams (ICDEc and the *Journal*) were rich and intensive, with the aim of providing the reader of this special issue with a bouquet of original, varied and complementary studies in the field of digital technologies and innovation.

## Digital Technologies and Innovation

The digital economy could be represented by three levels: first, a core IT/ICT sector including digital technologies such as IT infrastructures, software and services; second, a set of services and goods derived solely or primarily from the digital technologies, such as collaborative platforms and digital services; third, a broader scope of the digital economy, also called virtual economy or digitalized economy, that concerns the design and implementation of innovative digital business models to produce economic output based on the new paradigm of open innovation, cryptocurrency and shared economy ([Bukht & Heeks, 2018](#) <sup>[15]</sup>). Hence, there is the development of three main domains highly affected by digital transformation: the digital industry, the digital consumer and the digital society.

The pandemic has accelerated the adoption of digital technologies to respond to a new context of unprecedented levels of demand for online consumption, online education, telemedicine services, and the applications of virtual communities. However, the pandemic showed huge digital connectivity gaps based on gender, urban vs rural regions, and in developed vs developing countries ([World Bank, 2022](#) <sup>[16]</sup>). Further research to understand more about the barriers and the scope of the digital economy in developing countries is important to have a global vision of potential international collaboration to reduce such digital gaps.

This special issue aims to provide the reader with studies related to different contexts and countries, illustrating the diversity of challenges that policy makers and businesses face, especially after the pandemic in developing and developed countries. Some of the newest trends of research in the field of digital economy concern public and private policies for digital transformation, digital financial services for social inclusion, greening digital infrastructure and platforms, engagement on social networks and global communities, and, finally, artificial intelligence and related technologies for efficient decision making.

## In This Issue

In line with the trends of research on the digital economy after the pandemic, this special issue presents 12 papers organized into 4 sections. The first section introduces the special issue and debates the topic of digital transformation and global virtual teams. This section consists of two papers focusing on “How to Manage Companies in the Digital Age: Strategic Management Prospects” and “Does National Diversity Impact Conflict in Global Virtual Teams? The Role of Language Factors”.

The second section deals with digital technologies and, more specifically, with artificial intelligence for decision-making. Three papers were selected in this area and are entitled as follows: “Enhancing Decision-Making Consistency in Business Process using a Rule-Based Approach: Case of Business Intelligence Process”; “A Secure Attendance System using Raspberry Pi Face Recognition”; and “Effective Optimization of Billboard Ads Based on CDR Data Leverage”.

Then, the third section targets the topic of social media and the new trends of digital marketing strategies. Four papers were selected for publication in this section, covering both theoretical and empirical studies and a variety of contexts and regions. The first paper presents a systematic literature review on “Social Media Data Analytics for Marketing Strategies: The Path from Data to Value”. The remaining three research papers deal with “Measuring E-Browsing Behaviour and Testing its Impact on Online Immersion”, “Measuring Overall Customer Experience in a Hospitality Collaborative Consumption Context: Evidence from Airbnb Users” and “Does Humour Enhance Facebook Users’ Responses? Study of the Impact of Humour on Customers’ Engagement”.

Finally, the last section outlines the increasing importance of digital assets and mobile banking services as drivers for the digitalized or virtual economy. The first paper presents a literature review and a theoretical framework of the technology-enabled personalization for mobile banking services. Then, the last papers study the following topics: “Volatility Behaviour of Bitcoin as a Digital Asset” applied in the context of the South African stock market; and “Fallen into the Chasm: Exploring Mobile Payment Failed Initiative in Lebanon”.

This issue would not have been possible without the cooperation and the continuous support of Dr Leith Campbell, the Managing Editor of the *Journal*. On behalf of the ICDEc community, the guest editors express their appreciation and gratefulness for the valuable guidance that Dr Campbell provided during the entire process of producing this issue, as well as for his relevant contribution to the last two ICDEc conferences as a guest speaker.

The editorial team encourages the readers of this special issue to consider submitting articles to the *Journal* and to the upcoming editions of the ICDEc conference, and welcomes comments and suggestions on potential collaboration for publication in the field of the Digital Economy.

## References

- Bach Tobji, M. A., Jallouli, R., Koubaa, Y., & Nijholt, A. (2018). Digital Economy. Emerging Technologies and Business Innovation - Third International Conference, ICDEc 2018, Brest France, May 3-5, Proceedings, Lecture Notes in Business Information Processing LNBIP, 325. <https://doi.org/10.1007/978-3-319-97749-2> [17]
- Bach Tobji, M. A., Jallouli, R., Samet, A., Touzani, M., Strat, V. A., & Pocatilu, P. (2020). Digital Economy. Emerging Technologies and Business Innovation: 5th International Conference on Digital Economy, ICDEc 2020, Bucharest, Romania, June 11–13, 2020, Proceedings. Springer LNBIP Series, 395. <https://doi.org/10.1007/978-3-030-64642-4> [18]
- Bukht, R., & Heeks, R. (2018). Defining, Conceptualising and Measuring the Digital Economy. *International Organisations Research Journal*, 13, 143–172. <https://doi.org/10.17323/1996-7845-2018-02-07> [19].
- Jallouli, R., Bach Tobji, M. A., Bélisle, D., Mellouli, S., Abdallah, F., & Osman, I. (2019). Digital Economy. Emerging Technologies and Business Innovation: 4th International Conference, ICDEc 2019, Beirut, Lebanon, April 15–18, 2019, Proceedings. Springer LNBIP Series, 358. <https://doi.org/10.1007/978-3-030-30874-2> [20]
- Jallouli, R., Bach Tobji, M. A., Mcheick, H., & Piho, G. (2021). Digital Economy. Emerging Technologies and Business Innovation: 6<sup>th</sup> International Conference, ICDEc 2021, Tallinn, Estonia, July 15–17, 2021, Proceedings. Springer LNBIP Series, 431. <https://doi.org/10.1007/978-3-030-92909-1> [21]
- Jallouli, R., Nasraoui, O., Bach Tobji, M. A., Srarfi Tabbane, R., & Rhouma, R. (2016). International Conference on Digital Economy, ICDEc 2016, Carthage, Tunisia, April 28-30, 2016. IEEE. ISBN 978-1-5090-2230-4
- Jallouli, R., Zaïane, O., Bach Tobji, M. A., Srarfi Tabbane, R., & Nijholt, A. (2017). Digital Economy. Emerging Technologies and Business Innovation: Second International Conference, ICDEc 2017, Sidi Bou Said, Tunisia, May 4–6, 2017, Proceedings. Lecture Notes in Business Information Processing, 290. Springer. <https://doi.org/10.1007/978-3-319-62737-3> [22]

World Bank Development Committee. (2022). *Digitalization and Development*, April.  
[https://www.devcommittee.org/sites/dc/files/download/Documents/2022-04/Final%20on%20Digitalization\\_DC2022-0002.pdf](https://www.devcommittee.org/sites/dc/files/download/Documents/2022-04/Final%20on%20Digitalization_DC2022-0002.pdf) [23]

#### Article PDF:

590-jallouli-editorial-v10n2pp1-5.pdf [24]

---

#### Copyright notice:

Copyright is held by the Authors subject to the Journal Copyright notice. [25]

#### Cite this article as:

Rim Jallouli, Mohamed Anis Bach Tobji, Gunnar Piho, Hamid Mcheick. 2022. *Guest Editorial -- Digital Technologies and Innovation*. JTDE, Vol 10, No 2, Article 590.  
<http://doi.org/10.18080/JTDE.v10n2.590> [26]. Published by Telecommunications Association Inc. ABN 34 732 327 053. <https://telsoc.org> [27]

---

**Source URL:** <https://telsoc.org/journal/jtde-v10-n2/a590>

#### Links

[1] <https://telsoc.org/journal/author/rim-jallouli> [2] <https://telsoc.org/journal/author/mohamed-anis-bach-tobji> [3] <https://telsoc.org/journal/author/gunnar-piho> [4] <https://telsoc.org/journal/author/hamid-mcheick> [5] <https://telsoc.org/journal/jtde-v10-n2> [6] <https://www.addtoany.com/share?url=https%3A%2F%2Ftelsoc.org%2Fjournal%2Fjtde-v10-n2%2Fa590&title=Guest%20Editorial%20--%20Digital%20Technologies%20and%20Innovation> [7] [https://telsoc.org/printpdf/3591?rate=v\\_s5fm8XMYf3VqlJyrXc\\_n\\_K5Vpw9h6ErUQ3G3DeLI0](https://telsoc.org/printpdf/3591?rate=v_s5fm8XMYf3VqlJyrXc_n_K5Vpw9h6ErUQ3G3DeLI0) [8] <https://icdec.aten.tn/> [9] [https://telsoc.org/journal/jtde-v10-n2/a590#BachTobji\\_etal\\_2018](https://telsoc.org/journal/jtde-v10-n2/a590#BachTobji_etal_2018) [10] [https://telsoc.org/journal/jtde-v10-n2/a590#BachTobji\\_etal\\_2020](https://telsoc.org/journal/jtde-v10-n2/a590#BachTobji_etal_2020) [11] [https://telsoc.org/journal/jtde-v10-n2/a590#Jallouli\\_etal\\_2016](https://telsoc.org/journal/jtde-v10-n2/a590#Jallouli_etal_2016) [12] [https://telsoc.org/journal/jtde-v10-n2/a590#Jallouli\\_etal\\_2017](https://telsoc.org/journal/jtde-v10-n2/a590#Jallouli_etal_2017) [13] [https://telsoc.org/journal/jtde-v10-n2/a590#Jallouli\\_etal\\_2019](https://telsoc.org/journal/jtde-v10-n2/a590#Jallouli_etal_2019) [14] [https://telsoc.org/journal/jtde-v10-n2/a590#Jallouli\\_etal\\_2021](https://telsoc.org/journal/jtde-v10-n2/a590#Jallouli_etal_2021) [15] [https://telsoc.org/journal/jtde-v10-n2/a590#Bukht\\_Heeks\\_2018](https://telsoc.org/journal/jtde-v10-n2/a590#Bukht_Heeks_2018) [16] [https://telsoc.org/journal/jtde-v10-n2/a590#WorldBank\\_2022](https://telsoc.org/journal/jtde-v10-n2/a590#WorldBank_2022) [17] <https://doi.org/10.1007/978-3-319-97749-2> [18] <https://doi.org/10.1007/978-3-030-64642-4> [19] <https://doi.org/10.17323/1996-7845-2018-02-07> [20] <https://doi.org/10.1007/978-3-030-30874-2> [21] <https://doi.org/10.1007/978-3-030-92909-1> [22] <https://doi.org/10.1007/978-3-319-62737-3> [23] [https://www.devcommittee.org/sites/dc/files/download/Documents/2022-04/Final%20on%20Digitalization\\_DC2022-0002.pdf](https://www.devcommittee.org/sites/dc/files/download/Documents/2022-04/Final%20on%20Digitalization_DC2022-0002.pdf) [24] [https://telsoc.org/sites/default/files/journal\\_article/590-jallouli-editorial-v10n2pp1-5.pdf](https://telsoc.org/sites/default/files/journal_article/590-jallouli-editorial-v10n2pp1-5.pdf) [25] <https://telsoc.org/copyright> [26] <http://doi.org/10.18080/jtde.v10n2.590> [27] <https://telsoc.org>