

Special issue proposal

Industry 4.0 and digital transformation in the Balkan countries.

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The current economic scenario is being characterized by the dawn of innovative and powerful technologies that are transforming every aspect of our life. The application of advanced digital technologies, such as the Internet of Things, Big Data, Business Analytics, Advanced Manufacturing, Industry 4.0/5.0, Cloud and Cyber-solutions and Artificial Intelligence represents a disruptive innovation that paves the way toward radical changes in all activities, offering new innovative opportunities and solutions for thriving in the new competitive scenario. Therefore, a new paradigm has emerged, named “Digital Transformation”, to highlight the sweeping changes that firms, organizations and society in general are undertaking to respond to digitization (Nambisan, 2017; Mariani and Fosso Wamba, 2020; Schwab, 2017; Sjödin et al., 2020).

Digital technologies are disrupting organizations (both public and private) by enabling automation of data processing, timely and effective decision-making processes, as well as innovative ways to create value. There has been a growing attention by academics and practitioners to analyze and understand the different and multifaceted dimensions, perspectives, sectors and dynamics intrinsic to Digital Transformation (Ndou et al, 2021; Messeni Petruzzelli et al., 2021; Nambisan et al., 2019).

Extensive studies, up to the current date, report the unsettled impacts of Digital Transformation for business models and value creation (Ratten, 2014; Urbinati et al., 2018), for business practices and processes (Guenzi and Habel, 2020; Klein et al., 2020; Ndou and Centobelli, 2020), product and service innovation, new customers or markets (Ferreira, Ratten and Dana, 2017), capabilities and competencies to improve customer experience involvement in the innovation process (Nambisan et al., 2019) and business performance outcomes (Millán et al., 2019). Digital transformation is triggering a new competitive scenario and a global race for innovation, skills, competencies, investment, knowledge and research (OECD, 2020).

In addition, the Covid-19 pandemic has caused an acceleration of digital technology adoption on a wider scale, due to the pressures that all of us were asked to face in these difficult times. The pandemic situation has forced companies, customers, and society to make massive use of the technology, thus accelerating the uptake of the technology for performing different activities. As a result, digital transformation is no longer simply an option but is a competitive and innovative factor critical for public and private organizations, as well as for countries and regions. Also, the new post-pandemic recovery strategies consider digital transition as an essential component for speeding up the transformation of economies (for e.g. Next Generation EU, Recovery plan for Europe, EU 2020).

While developed and industrialized countries are heavily investing in and paying particular attention to digital transformation, developing countries are yet struggling due to specific political, social, economic and infrastructural issues. The different reports and observations elaborated by international institutions highlight the digital divide that still persists between developed and developing countries, in terms of digital literacy, digital infrastructure, skills and competencies,

advanced technologies, business readiness, online services. The digital divide has become especially apparent in the pandemic situation (OECD, 2020), where many developing countries found themselves unprepared for smart working, online education, digital payments, online services, and cybersecurity.

We have planned this special issue with the aim of contributing by providing empirical and conceptual research regarding the digital transformation of Balkan countries.

This focus of this special issue is of particular interest considering that the Balkans are an integral part of Europe, a geostrategic priority for the European Union (EU Commission, 2020), and a relevant market for products and services. In addition, some Balkan countries are now part of the EU, while others are working toward their accession. Therefore, they are all committed to implement fundamental reforms for economic development and integration, as well as to be coherent with EU strategic plans for post Covid recovery and progress (EU Commission, 2020). Among these reforms, the EU's digital strategy is one of the most relevant ones that aims to accelerate the digitalization of businesses, universities, governments, in a manner consistent with the EU's values and legal framework (EU Commission, 2020).

Therefore, understanding the state of the art of digital transformation in this area is of particular importance for grasping challenges and opportunities of the adoption of digital technologies and the progress and developments done at private and public sector. Additionally, the special issue aims to contribute to the identification and discussion of the influence of the digital technology revolution on innovation capability, competitiveness and in the achievement of sustainable development goals in the Balkan countries (Albania, Bosnia & Hercegovina, Bulgaria, Croatia, Montenegro, North Macedonia, Romania, Serbia, Slovenia). The following questions could be explored in this special issue:

- How does digital transformation impact innovation and competitiveness?
- What are the emerging issues and impacts of new digital technologies at private sector (tourism, agri-food, health, etc.)?
- What are the emerging issues and impacts of new digital technologies in the public sector?
- How can private and public organizations take advantage of new digital technologies?
- What is the role of digital technologies for research and education?
- How are customer relations changing due to the digital technology revolution?
- How are working conditions and approaches changing due to the digital technology revolution?
- How can digital transformation contribute to environmental and sustainable objectives?
- What are the emerging issues around digital transformation?

Key research themes include, but are not limited to:

- Critical perspectives on digital transformation and their impact in the Balkan countries;
- State of the art of digital transformation among Balkan countries;
- Digital transformation to manage and mitigate the COVID-19 pandemic;
- Industry 4.0 applications (AI, blockchain, IoT, big data, 3D) developed and adopted by business and organizations;
- FinTechs and financial inclusion in Balkan countries;

- Implications of advanced technologies in the Balkan context;
- Digital Technologies, innovation and competitiveness;
- Policies, strategies and approaches for catching up digital economy;
- Human capital and Digital Transformation;
- Sustainable Development Goals and Digital Transformation;
- Sustainability, Digital Transformation and New Business Models;
- Digital Transformation for research and education;
- Digital Transformation of the tourism sector;
- Digital Transformation of the public sector;
- Digital Transformation and the future of work.

Theoretical and empirical studies adopting qualitative, quantitative or mixed methods are encouraged.

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We invite interested authors to send extended abstracts (by email) by December 23, 2021. Extended abstracts should be shorter than 500 words (with max 1 figure/diagram) and provide sufficient details on research questions, methods, data, (anticipated) findings for the co-editors to evaluate suitability.

Feedback on the suitability of abstracts will be returned to authors by January 31, 2022.

Full paper submission is expected by April 30, 2022. All submissions of full papers must be made to the EJISDC website: <http://mc.manuscriptcentral.com/ejisdc>, and authors should select the “Industry 4.0 and digital transformation in the Balkan countries” special issue.

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