

From smart cities to smart clusters: re-thinking regional collaboration and development

Introduction

The increasing velocity of multilateral trade today is followed by a growing complexity of international, inter-regional and inter-continental collaborative arrangements. These unfold in a context defined by spectacular technological advancements, ground-breaking shifts in politics worldwide and an accompanying transformation of our societies. As the perception of time and space evolves, the established patterns of power, authority, affiliation and influence erode gradually, as if in a shift toward a new model of growth and development founded on a new division of power and influence (Visvizi *et al.*, 2019a). These meta-level processes involving states and international organizations, as well as major multinationals, are inherently bound with developments at macro-, mezzo- and micro-levels. In other words, all stakeholders, including businesses, the society and the individuals are involved, and no one is immune to contemporary global transformations. The big question is what drives those transformations and if mechanisms underpinning them can be identified, and how – in this multi-layered context – to promote sustainable inclusive socio-economic growth and development worldwide. The objective of this special issue was to encourage research that would address at least some aspects of this composite question.

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Key topics and questions

Several papers were submitted in response for the call papers published on the website of the *Journal of Science and Technology Policy Management (JSTPM)*. Following an arduous process of binary blind peer-review process, five papers were eventually published in this special issue. The key topics that the contributing authors address include the following:

- knowledge management, research collaboration and innovation promotion in the global context;
- diffusion of technological innovation in the manufacturing sector;
- development and application of smart policies and smart policy-tools for efficient innovation promotion at local, regional and transnational levels; and
- ways of tackling urgent social and economic challenges pertinent to depletion of resources and climate change.

Together the papers included in this special issue offer a comprehensive insight into trends and developments that add to the complex pattern of global transformations specific to the 21st century. These topics are the spearhead of research and policymaking considerations these days (Duan *et al.*, 2019; Melin and Wihlborg, 2018; Bindu *et al.*, 2019), thus confirming the topicality of this collection.

The Guest Editors of this special issue remain grateful to the *JSTPM* Editor-in-Chief, Patricia Ordonez de Pablos for the opportunity to run this special issue. The Guest Editors would also like to thank all contributing authors for sharing their research with the *JSTPM* audience. A warm “thank you” is extended to all reviewers, who devoted their time and expertise to the journal. This special issue would not be possible without the assistance of the entire *JSTPM* editorial team. This invaluable assistance is greatly appreciated.



Bruno Anicet Bittencourt, Aurora Carneiro Zen, Vitor Schmidt and Douglas Wegner offer a captivating insight into the orchestration process and the emergence of clusters of innovation. The authors focus on the problem of requalification of neglected areas in urban areas and examine it through the lens of the promise inherent in smart cities, seen as a policy imperative. In this context, business clusters are presented as the key mechanism that drive innovation not only within specific clusters but also within the broader territory within which they operate. Taking this into account, especially in context of cities/urban space, this paper examines the mechanisms behind the process of fostering and emergence of business innovation clusters.

In a direct conversation with the previous work, Raffif Al-Sayed and Jianhua Yang explore the evolution of the manufacturing industry in China, especially as seen through the lens of the Belt and Road Initiative (BRI). Drawing from empirical research, the authors identify factors that stimulate and/or affect the process of moving toward smart manufacturing ecosystems in China. The findings of the paper suggest that the emergence of competitive, innovation-driven ecosystems in the manufacturing industry requires enabling infrastructure, including both traditional and technology-related resources.

Also in context of the BRI, Krzysztof Kozłowski examines the impact of regional collaboration on innovative capacity of stakeholders involved. By focusing on the digital dimension of BRI, the author explores to what extent the goals and objectives associated with BRI's predecessors have been attained through BRI implementation. The findings of the paper suggest that several obstacles obscure the implementation of more specific objectives of BRI.

The focus of the next paper, by Malgorzata Dziembala, is directed at policies, policy-tools and policy coordination among diverse levels and centers of the decision-making process. By focusing on the case of the European Union (EU) cohesion policy, the author examines ways and mechanisms of promoting competitiveness in the EU regions. The empirical twist in this paper lies in the fact that the author focuses on the region of Central Europe, specifically Poland, the Czech Republic, Hungary, countries collaborating in the framework of the Visegrad Group (V4). Considering the geographical proximity of these countries and their increasing interconnected and value chains connecting them directly with the German economy, the case of V4 addressed in this special issue is worth great attention.

The paper Sa'd Shannak and Malak Alnory addresses the issue of resource depletion and environmental sustainability in context of the need to boost regional and national competitiveness. The authors offer a detailed overview of policy incentives in the field of renewable energy production. Subsequently, the authors investigate options to reduce the total cost of solar production as a result of increasing the number of different goods produced.

Conclusions and value added

Several topics were addressed in this special issue. The papers included in it offer a sound collection of conceptual and empirical insights into processes and developments that shape contemporary global landscape in the inter-linked fields of politics, business and society. Technology-driven innovation serves in this context as the glue that brings stakeholders operating in these diverse fields together. The case of BRI is featured prominently in this special issue, so is nevertheless the EU. Both BRI and the EU, each in its own kind, represent spectacular examples of regional collaboration, while the implications of the BRI – EU nexus is yet to be explored in great detail (Visvizi *et al.*, 2019b). The value added of this special issue is that it succeeded in bringing together scholars representing diverse disciplines of science and diverse research centers. The notion of innovation and technology diffusion was addressed in great detail, thus demonstrating its pivotal role in today's global transformations. Certainly, more research is needed to explore the mechanisms driving

Anna Visvizi and Miltiadis Lytras

*School of Business and Economics, American College of Greece, Athens, Greece and
College of Engineering, Effat University, Jeddah, Saudi Arabia, and*

Ernesto Damiani

*KUSTAR, Khalifa University of Science Technology,
Abu Dhabi, United Arab Emirates*

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Further reading

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