

Editorial

Large-Scale Systems: Sustainable Economy and Transport in the Modern World

Sergio Useche ^{1,*}, Jaehyung An ², Irina Makarova ³ and Polina Buyvol ^{3,*}

¹ Research Institute on Traffic and Road Safety (INTRAS), University of Valencia, 46022 Valencia, Spain

² College of Business, Hankuk University of Foreign Studies, Seoul 02450, Republic of Korea; jaehyung.an@hufs.ac.kr

³ Naberezhnye Chelny Institute, Kazan Federal University, 423822 Naberezhnye Chelny, Russia; kamivm@mail.ru

* Correspondence: sergio.useche@uv.es (S.U.); skyeyes@mail.ru (P.B.)

Key large-scale global changes have marked the last decades. The geographical division and globalization of production processes have led to the growth, expansion, and consolidation of economic systems, in addition to the creation of global transport corridors and supply chains [1]. Transport, as it actively integrates the efforts of several stakeholders from different fields, countries, and regions, has been claimed to play a formative role in this ecosystem.

At the same time, linked to the growth of intersectoral and interregional interactions [2], transport contributions to both economic and social development issues are more evident given the latest global events, including pandemic, geopolitical, and supply chain-related crises [3]. These experiences have left us with great takeaways; among them, the contribution of transport exceeds merely logistical aspects. Rather, it acquires an important coordinating role in ensuring the sustainable functioning of large-scale economic systems. This has been possible thanks to the achieved level of engineering and technology developments, allowing us to reach an impressive scale of system improvements, process intellectualization, and digitalization, which continue to accelerate.

At a practical level, we implement the sustainable functioning of industrial systems and urban space as constituent elements of national, international, and even supranational economic systems based on the Smart City principles [4] and Industry 4.0 [5] paradigms. This becomes possible by transforming traditional industries into smart factories, the traditional economy into a digital one, and the transport industry into digitalized logistics systems, intelligent transport systems, and uncrewed vehicles [6].

Nevertheless, the abovementioned achievements have been somewhat overshadowed by both emerging and typical—but unresolved—issues, which have become relevant challenges for the scientific community. For instance, some have argued that constraints such as climate and environmental impairments, the depletion of natural resources, and the increasing cost of “sustainable lifestyles” [7] threaten the life quality of modern societies and their future generations.

Consequently, the recent literature has increasingly stressed the need for implementing innovations in the search for resource-saving, environmentally efficient, and sustainable-friendly methods for developing large-scale systems. Otherwise, a sustainable functioning of industry and transport might be a vital supporter of the safety and wellbeing of the population. Ultimately, it is necessary to focus on complex strategic projects that use modern digital and green technologies to ensure stable economic growth, transport mobility, and environmental conservation, involving stakeholders from different fields, including policymaking and transport planning.

Accordingly, this Special Issue is attached to the 11th Sustainable Development Goal (SDG), Sustainable Cities and Communities, designed to “make cities and communities inclusive, safe, resilient and sustainable”. We put particular emphasis on sub-goal



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11.2 Affordable and sustainable transport systems, which targets “by 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons” [8].

Given these considerations, we aim to offer a suitable outlet for interdisciplinary research that contributes to the search for valuable methods and evidence to further develop sustainable transport systems and involve the world population in this agenda.

Among various topics (although not exclusively), we welcome research in fields such as technology, digitalization, impacts, and stability of large-scale systems in transport inside and outside cities. The papers in this Special Issue can facilitate further discussions and research into intelligent transport systems, smart cities, and their social impacts, socio-environmental burdens, risks, dynamics, workforces, and opportunities for transport.

We also welcome other studies addressing affairs compatible with the growth of mobility-related environmental friendliness, energetic efficiency/decarbonization, active transport, social involvement and inclusiveness, and (of course) safety.

Conflicts of Interest: The authors declare no conflict of interest.

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