

Editorial – Emerging digital technologies and their influence on elimination of supply chain vulnerability

The past few years have seen significant disruptions affecting global supply chains, from the COVID-19 pandemic to geopolitical conflicts and climate change. These events have highlighted the vulnerabilities within supply chains, causing widespread delays, capacity limitations, and disrupted deliveries. In response, both the scientific community and industry practitioners have been actively seeking innovative solutions to enhance the resilience and efficiency of supply chains. One of the most promising avenues is the integration of emerging digital technologies.

This issue of E&M Economics and Management aims to expand the understanding of how digital technologies can be leveraged to mitigate supply chain vulnerabilities. The focus is on exploring the role of these technologies in making supply chains more lean, agile, resilient, and environmentally sustainable. The collected articles offer a comprehensive look into various aspects of this dynamic field.

The article "Navigating urban logistics challenges: An optimized approach to parcel distribution in the Prague city center," by Jakub Andar, Kateřina Hušková, and Jakub Dyntar, explores innovative strategies for optimizing parcel distribution in urban environments, focusing on Prague's city center. In "Information and communication technology diffusion, supply chain performance, health care and human development: A case of the South Asian region," Minhas Akbar, Ammar Hussain, Marina Nazir, Petra Poullová, and Jiashun Huang examine the impact of ICT diffusion on supply chain performance and its broader effects on health care and human development in South Asia. "The nexus between logistics competitiveness, logistics carbon emission efficiency, and industrial structure upgrading: Evidence from China," by Guanglan Zhou, Yulian Fei, and Chengkai Feng, investigates the interplay between logistics competitiveness and carbon emission efficiency in China, emphasizing the role of industrial structure upgrading. Luay Jum'a and Dina Alkhodary, in their article "Navigating the Industry 4.0 frontier: Unveiling perceived risk and cost moderators in technology adoption," analyze the challenges and opportunities of adopting Industry 4.0 technologies, focusing on perceived risks and cost factors. The article "Existing and forthcoming obstacles in adopting technological advances in vulnerable supply chains," by Rohit Raj, Vimal Kumar, Jyoti Ranjana, and C. Anirvinna, identifies key indicators that influence the adoption of new technological advancements to enhance supply chain operations using the grey relational analysis (GRA). Finally, "Navigating the human element: Unveiling insights into workforce dynamics in supply chain automation through smart bibliometric analysis," by Melanie Angielski, Lukáš Copuš, Peter Madzík, and Lukáš Falát, provides a comprehensive analysis of workforce dynamics in the context of supply chain automation, using advanced bibliometric methods.

The articles in this issue collectively underscore the transformative potential of digital technologies in addressing supply chain vulnerabilities. They explore various dimensions, from optimizing urban logistics to leveraging ICT for improved supply chain performance and human development. They investigate the dynamic relationship between logistics competitiveness and carbon emission efficiency, analyze the challenges of Industry 4.0 adoption, and delve into workforce dynamics in the context of supply chain automation. These diverse studies offer robust solutions and insights for contemporary supply chain challenges. As the field continues to evolve, further research and practical applications will be essential in fully realizing the benefits of digital transformation in supply chains.

We hope this issue provides valuable insights and stimulates further research and discussion on the role of emerging digital technologies in creating lean, agile, resilient, and green supply chains.

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