Editorial

Advancing Sustainability and Efficiency in Supply Chains: Insights from the Special Issue on Sustainable Supply Chain and Lean Manufacturing

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Supply chains play a pivotal role in our global economy, connecting producers to consumers and influencing the environmental and social impacts of the products we consume. As we navigate the challenges of the 21st century, the need to transform supply chains into more sustainable, efficient, and transparent systems has never been more pressing. The Special Issue on Sustainable Supply Chain and Lean Manufacturing sought to address these pressing issues and provide valuable insights into how Industry 4.0 (I4.0) and lean methodologies can lead the way.

The drive towards sustainability in supply chains stems from multiple sources. Firstly, the Fourth Industrial Revolution, characterized by cutting-edge technologies, such as blockchain, IoT, and artificial intelligence, offers immense potential for enhancing efficiency and reducing waste. Secondly, consumer demands for transparency and ethical practices have pushed supply chain actors to adopt new technologies and methodologies. Lastly, global efforts, such as the United Nations' Sustainable Development Goals, have provided a clear roadmap for industries to align with global sustainability targets.

Out of the 14 papers received for this Special Issue, only 6 were selected for publication. Each of these papers addresses critical aspects of sustainable supply chains and lean manufacturing, contributing valuable insights to the ongoing discourse in this field.

1. Consumer Acceptance of Alternative Proteins: In a world facing environmental and health challenges linked to conventional meat consumption, a systematic review by Siddiqui et al. [1] delves into the acceptance of alternative protein sources. Their findings highlight the importance of understanding consumer preferences and the various drivers influencing acceptance.
2. Blockchain in Sustainable Food Supply Chains: Saha et al. [2] explore the transformative potential of blockchain technology in food supply chains. Their systematic literature review emphasizes the benefits, challenges, and applications of blockchain in achieving a triple bottom line, ultimately contributing to the pursuit of net-zero goals.
3. Adoption of Industry 4.0 in Agriculture: Jain et al. [3] tackle the critical issue of technology adoption in agriculture to ensure food security and sustainability. Their research methodically selects a suitable technology acceptance model, highlighting the importance of making informed choices in technology adoption.
4. IoT in Medical Waste Management: Mohamed et al. [4] investigate the use of the Internet of Things (IoT) in medical waste management, demonstrating how digitalization can enhance waste monitoring and contribute to net-zero goals in healthcare settings.

5. Sustainable Performance Assessment in the Dairy Industry: Kumar and Choubey [5] present a comprehensive methodology for assessing sustainable performance in the Indian dairy industry. Their study offers valuable insights into how dairy companies can align their operations with sustainable development goals.

6. Barriers to Lean Accounting Implementation: Stronczek [6] addresses the challenges faced by manufacturing units in implementing lean accounting. Through a DEMATEL approach, the study uncovers the interconnectedness of these barriers and provides guidance on overcoming them.

The research presented in this Special Issue underscores the importance of technology adoption, transparency, and sustainable practices in today's supply chains. As industries continue to grapple with complex challenges, these insights provide a roadmap for creating more resilient, efficient, and sustainable supply chains that can thrive in the face of global uncertainties.

We extend our heartfelt thanks to all the authors, reviewers, and contributors who made this Special Issue possible. We hope that the knowledge shared here will inspire further research and action towards a future where supply chains are not only leaner but also greener and more socially responsible.

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