
Call for Papers
Annals of Operations Research
Special Issue

The *Annals of Operations Research* seeks submissions for a special issue on **Applications of Advances in Operations Research Methods to Achieve Sustainability Goals in a Supply Chain Management Environment**. The deadline for submission is 01 June 2018.

Organizations must rethink and optimize their existing strategies to meet their sustainable business goals, due to the constant depletion of vital resources and the greater demands of societal issues. The increasing population not only has an impact on natural resources, it also results in greater pollution and contributes to greater levels of poverty. With these considerations, on September 25, 2015, some countries adopted a new set of sustainability goals (SGs) to end poverty and to improve prosperity worldwide. Seventeen sustainable goals have been targeted to achieve by 2030 under the new sustainable development agenda (UN.org, 2015). Further, these sustainable goals encompass a range of perspectives and various levels of applications, including supply chain management. In recent years, researchers and practitioners have addressed supply chain management issues because of their significant impacts on organizational developments regardless of the field of applications. Over the years, researchers have proven that an inefficient supply chain can force an organization to fail. Hence, integrating SGs in operations and supply chain management areas is an important topic to explore. Many studies (Govindan, 2017; Rajeev et al., 2017; Wu et al., 2017; Correia et al., 2017) sought to explore sustainability in supply chain management with a wide range of concepts and strategies, including green, lean, and other approaches with a special focus on newly targeted SGs. Research is needed to further analyze and shape the implementation of SGs in supply chain management environments with the help of advanced operations research (OR) methods, including multi-attribute decision making (MADM) and multi-objective decision making (MODM).

The main objective of this Special Issue (SI) is to invite academic practitioners to contribute a better understanding of the scientific basis for decoupling economic growth from resource depletion and environmental degradation while improving human lives with the assistance of advanced OR methods. It is believed that advanced optimization models and algorithms can improve data-driven decision models by either formulating pattern discoveries and knowledge extraction problems or by defining efficient algorithms for implementing SGs in supply chain management at a macro level. Additionally, new algorithms continually make efficiency gains and improve the applicability of older algorithms. Virtually every numerical analysis includes several optimization algorithms that can be applied to design sustainability in supply chain. With these concerns, this SI pertains to sustainable supply chain management (SSCM) by making direct connections between resources, the environment, the economy, and the goal of achieving SGs in different parts of the world through OR methods. Listed below are the themes and objectives of this SI.

- i) Designing and policymaking in SGs through stakeholder support: to provide examples of sustainable policy and design making with multi-stakeholder perspectives and to define how sustainability is considered in framing policies and enumerating success factors and challenges on supply chain management
- ii) Implementing SGs in supply chains through innovative strategies and practices: to identify the sustainable goals, indicators, and practices related to the implementation of sustainable supply chain management and to explore how this knowledge may be used to effectively manage and conserve resources with less environmental and societal impact
- iii) Monitoring supply chain governance and implications with a focus on SGs: to elaborate practices and supporting mechanisms in measuring, monitoring, and reporting progress toward achieving targets, and to further emphasize various challenges related to the implementation of SGs in supply chain management in different applications/context/economies

These themes should incorporate an integrated approach: looking at possibilities of connecting the conservation of resources with sustainable human economic activities (from a supply chain perspective), and monitoring progress towards sustainable indicator strategies with the support of multi stakeholders in predominant inter- and intra-organizational management fields. This SI will comprise a significant body of knowledge about how natural resources are being utilized in various economies and will address the impact of this use on the eco-efficient and socio-economic systems, and suggest pathways of transitioning to a more sustainable future. This perspective includes building on and expounding the significance of resource conservation and efficiency along with a societal focus to improve sustainable development in supply chain management by achieving the proposed SGs.

With a connection to the various themes discussed, contributors are encouraged to heed the focus of this Special Issue by addressing any of the topics below. This list is not exhaustive.

- ✓ designing SGs in SCM
- ✓ SSCM and its implications with SGs perspective
- ✓ interaction between sustainable supply chain and sustainable development with SGs
- ✓ stakeholders' perspective in SSCM
- ✓ quality issues in SSCM
- ✓ qualitative and quantitative frameworks for SGs in SCM
- ✓ investigating sustainable goal-based strategies in supply chain management
- ✓ conservation of resources, energy, green and SSCM
- ✓ SSCM and the barriers/challenges and probable solutions for achieving SGs in supply chain management
- ✓ lean supply chain strategies to adopt SGs
- ✓ waste management and SGs
- ✓ managing ecological, economic, and social issues

- ✓ reverse logistics, closed loop supply chain, and SSCM
- ✓ sustainable consumption and production through SSCM
- ✓ social and behavioral operations research in SSCM
- ✓ risk management, green and SSCM

This SI seeks to be specific regarding the different kinds of sustainable supply chains, because they can affect the policy implications of different sustainable indicators. In addition to these ideas, this SI welcomes authors to contact us to discuss other possible subtopics. To encourage effective methods and thereby motivate the authors to adopt a variety of sustainable supply chain perspectives in approaching this subject, the SI Guest Editors have purposely kept the above list of suggested topics short. However, all submissions must suit within the domain statement of the journal.

References

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2. Govindan, K., 2017. Sustainable consumption and production in the food supply chain: A conceptual framework. *International Journal of Production Economics* (In press).
3. Rajeev, A., Pati, R.K., Padhi, S.S. and Govindan, K., 2017. Evolution of sustainability in supply chain management: A literature review. *Journal of Cleaner Production*.
4. UN.org (2015). United Nations General Assembly: *Transforming Our World: The 2030 Agenda for Sustainable Development. Draft resolution referred to the United Nations summit for the adoption of the post-2015 development agenda by the General Assembly at its sixty-ninth session*. UN Doc. A/70/L.1 of 18 September 2015. http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E [Accessed on 01-06-2017].
5. Wu, K.J., Liao, C.J., Tseng, M.L., Lim, M.K., Hu, J. and Tan, K., 2017. Toward sustainability: using big data to explore the decisive attributes of supply chain risks and uncertainties. *Journal of Cleaner Production*, 142, pp. 663-676.

Instructions for authors can be found at:

<http://www.springer.com/business/operations+research/journal/10479>

Authors should submit a cover letter and a manuscript by **01 June 2018** via the Journal's online submission site. Manuscripts submitted after the deadline may not be considered for the special issue and may be transferred to a regular issue.

Please see the Author Instructions on the web site if you have not yet submitted a paper through Springer's web-based system, *Editorial Manager*. Be sure to note when leaving a comment that your work is intended for the special issue and to select the article type "**S.I.: OR for Sustainability in Supply Chain Management**"

Papers will be subject to a strict review process managed by the Guest Editor and accepted papers will be published online individually, before print publication.

Guest Editor:

Dr. Kannan Govindan

Professor and Centre Head

Centre for Sustainable Supply Chain Engineering

Department of Technology and Innovation

Campusvej 55

DK5230 Odense M

DENMARK

E-mail: kgov@iti.sdu.dk