

International Journal of Logistics Management: Exploitation and Management of Sustainable Technology for Manufacturing and Supply Chains

- Guest editors
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Overview

Sustainability, which may be defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987), is a complex interaction of economic, environmental and societal issues. Technology could, and perhaps should, play a pivotal role in the development of sustainable solutions (Weaver et al, 2000). But what is the exact role of sustainable technologies, what are their interactions with processes and people, and how may they be effectively implemented and managed?

- The role of sustainable technologies is particularly of interest for manufacturing and supply chains, where the implementation of green technologies requires investment. In particular, the relation between the adoption of such technologies and their economic return is a topic of high interest for manufacturers. The fact that green technologies might also yield benefits is well reported in the literature. Direct economic returns, e.g. cost reduction (Porter (1991) and Porter and Vanderlinde (1995)) and indirect returns such as pre-empting costly environmental legislations, or improving corporate image (Porter and Vanderlinde (1995), Corbett and Kleindorfer (2001), Corbett and Klassen (2005), Kleindorfer et al (2005)) are examples. The question of at what extent these investments in sustainable technologies impact profit is, however, only partially answered.
- In the context of supply chains, Barratt (2004, p. 39) remarks: many of the problems related to ... collaboration are due to a lack of understanding ... Seuring (2004, p. 1069) places this notion in the context of environmental issues for supply chains: integrated supply chain management and understanding of interaction between actors in that chain are a prerequisite for achieving sustainability. Zhu & Cote (2004, p. 1033) report a similar finding for their case study of the Guitang Group in China. In addition, Srivastava (2007, p. 70) remarks that a paradigm shift is needed for Green Supply Chain Management. Even though sustainability might be linked to performance improvement, according to Rao and Holt (2005), many have viewed Green Supply Chain Management as a constraint rather than an opportunity or a different modus operandi (Srivastava, 2007, p. 70).
- The calls for a more integrative framework for Supply Chain Management seem to coincide with the rethinking necessary for concepts that address collaborations in the supply chains as networks. Collaboration might constitute that paradigm shift that is needed for sustainable and green supply chains based on integrative supply chain management and interaction between agents in the networks.

Academic Rationale

- All of the above suggests complex interactions between technology, process and relationships, requiring a multi-disciplinary research approach that addresses issues in a holistic manner. As stated by Aronsson and Brodin (2006), there is a need for “theories and models for connecting different [manufacturing and/or supply chain] decisions on different hierarchical decision levels to each other, and to their environmental impact.” By its nature this field requires academe-industrial symbiosis.

Special Issue Rationale

The International Journal of Logistics Management aims to provide a forum by which academics and practitioners may be informed about the latest new thinking on the problems, methodologies and tools in logistics, including manufacturing, transport and whole supply networks.

Researchers and practitioners are invited to submit manuscripts that advance the science and practice of the role of technology management in sustainable manufacturing and supply chain logistics. While papers on sustainable technology management within specific activities or functions will be welcome, the Special Issue Editors are especially interested in those papers dealing holistic, integrative approaches and address the managerial applications of theory and practice. Articles which provide guidelines for framing, interpreting or implementing the sustainable technology management process are of particular interest.

Special Circumstances

This special issue is linked to the 4th European Conference on Technology Management (6-8 Sept. 2009, Glasgow); authors have to attend the conference to defend their paper. During the conference, the submissions to the special issue will be discussed in dedicated workshops chaired by the guest editors, that way exposing the potential publication to a wider academic audience. The audience will be actively involved in the critical review of the contribution of the paper. That way authors will get more intense feedback in addition to the normal review process for the journal. Shortly after the conference the authors of selected papers will be notified and (binding) instructions for modification of papers will be supplied.

Process for reviewing papers

1st Stage – Submission to Conference

- 1st March 2009: Expression of interest and intended title with brief description to guest editors
- 25th March, 2009: Abstracts submission (www.edas.info, Track B12)
- 15th April, 2009: Decisions on abstracts
- 1st June, 2009: Full paper submission
- 26th June, 2009: Review of papers and final acceptance
- 7th July, 2009: Final submission of full papers

2nd Stage – Discussion of Conference Paper

- August 2009: First selection of papers (for workshops), others will be kept in reserve
- 7th - 8th Sept. 2009: Workshop on Special Issue during the conference (workshops will include discussion of paper and review of paper by audience)
- 30th Sept. , 2009: Decision on invitation to Special Issue, dependant on review and revisions
- 30th Nov., 2009: Submission of draft manuscript for journal

3rd Stage – Discussion of Draft Paper Special Issue

- 31st Dec., 2009: Review and final decision about draft manuscript
- 28th Feb., 2010: Submission of final manuscript
- 31st March, 2010: Review of final manuscript
- April, 2010: Final preparation of manuscripts for journal
- Nov. 2010: Publication

Further information

Submission and registration details may be found at the conference web site:

<http://businessuws.turnstilesystems.com/EuroMOT2009.aspx>

References

Aronsson, H., and Brodin, M.H., (2006), "The environmental impact of changing logistics structures", *International Journal of Logistics Management*, Vol. 17 No. 3, pp. 394-415.

Barratt, M., (2004). "Understanding the meaning of collaboration in the supply chain", *Supply Chain Management: An International Journal*, Vol. 9, No. 1, pp. 30-42.

Brundtland, G.H., (1987). "Report of the World Commission on Environment and Development: Our Common Future." Published as Annex to General Assembly document A/42/427.

Corbett, C., and Kleindorfer P., (2001). "Environmental management and operations management: Introduction to part 1 (manufacturing and eco-logistics)". *Production and Operations Management*, Vol 10 No.2 pp. 107-111.

Corbett, C., and Klassen R.D., (2006). Extending the horizons: Environmental excellence as key to improving operations." *Manufacturing & Service Operations Management*, Vol. 8 No. 1 pp 5-22.

Kleindorfer, P. R., Singhal, K., and Van Wassenhove L., (2005). "Sustainable operations management." *Production and Operations Management*, Vol.14 No. 4 pp 482-492.

Porter, M. E., (1991). "*America's green strategy.*" *Scientific American*, (April), 1991.

Porter, M. E., and Vanderlinde, C., (1995). "Green and competitive - ending the stalemate." *Harvard Business Review*, Vol. 73 No. 5 pp 120-134.

Rao, P. and Holt, D. (2005). "Do green supply chains lead to competitiveness and economic performance?" *International Journal of Operations & Production Management*, Vol. 25, No. 9, pp. 898-916.

Seuring, S., (2004). "Integrated chain management and supply chain management comparative analysis and illustrative cases." *Journal of Cleaner Production*, Vol. 12, No. 8-10, pp. 1059-1071.

Srivastava, S.K., (2007). "Green supply-chain management: A state-of-the-art literature review." *International Journal of Management Reviews*, Vol. 9, No. 1, pp. 53-80.

Weaver, P., Jansen, L., van Grootveld, G., van Spiegel, E., and Vergragt, P., (2000). "*Sustainable Technology Development.*" Greenleaf, Sheffield.

Zhu, Q., and Cote, R.P., (2004). "Integrating green supply chain management into an embryonic eco-industrial development: a case study of the Guitang Group." *Journal of Cleaner Production*, Vol. 12, No. 8-10, pp. 1025-1035.

Guest Editors' Biographies

Mohamed Naim is a Professor in Logistics and Operations Management at Cardiff Business School. A Chartered Engineer he is a Member of the Institution of Engineering and Technology and the Chartered Institute of Logistics and Transport. Mohamed is the director of the EPSRC funded Cardiff University Innovative Manufacturing Research Centre (CUIMRC) where he also leads research on Sustainable Logistics. The remit of the CUIMRC is to provide practical technology management solutions, aimed at help UK manufacturing achieve a distinct and sustainable advantage in the development and implementation of emerging and potentially disruptive manufacturing technologies.

Mohamed is a former Editor-in-Chief, and current editor, of the *International Journal of Logistics* and is on the advisory team of the *International Journal of Logistics Management*. He has published widely including publications in *International Journal of Physical Distribution and Logistics Management*, *OMEGA: International Journal of Management Science*, *International Journal of Production Economics* and *Journal of Manufacturing Technology Management*.

João Quariguasi Frota Neto is a lecturer in Operations Management at the Bradford Business School. His research interests include closed-loop and sustainable supply chains, and he has published in a number of journals, including *The Journal of the Operational Research Society*, *The International Journal of Production Economics* and the *European Journal of Operational Research*.

Rob Dekkers has joined the University of Paisley in 2006, after being a Senior Lecturer in Industrial Organisation and Management at Delft University of Technology since 1992; before that, he worked in industry as internal consultant, production manager and senior project manager. The research interests include: innovation and technology management, changes and transitions in companies, manufacturing strategy, outsourcing models, manufacturing networks, systems theories, complex systems and evolutionary models. On these topics, he has authored about 70 publications, like in the *Asia-Pacific Business Review*, *International Journal of Production Research*, *Journal of Materials and Processing Technology*, *Journal of Manufacturing Technology Management*. He serves on several review panels and committees, e.g. the Review Panels for EPSRC's Innovative Manufacturing Programme, the International Foundation for Production Research and is the co-chair of the 4th European Conference on Technology Management.