
Introduction

Chin-Shan Lu* and Pei-Chun Lin

Department of Transportation and Communication Management
Science, National Cheng Kung University,
No. 1, University Road, Tainan City 701, Taiwan
E-mail: lucs@mail.ncku.edu.tw
E-mail: peichunl@mail.ncku.edu.tw
*Corresponding author

Biographical notes: Chin-Shan Lu has served on the Faculty of the Department of Transportation and Communication Management Science at the National Cheng Kung University in Taiwan since 1998 where he is currently a Professor of Shipping and Logistics Management. His research focuses on transport logistics, shipping and port operations and management, international logistics and supply chain management, shipping sustainable development, and maritime safety. He is the Chairman of the Chinese Maritime Research Institute, editorial board of the *International Journal of Shipping and Transport Logistics*, Associate Editor of the *Maritime Policy and Management* and Editor-in-Chief for the *Asian Journal of Shipping and Logistics*.

Pei-Chun Lin is an Associate Professor in the Department of Transportation and Telecommunication Management Science at National Cheng Kung University in Taiwan. Her research interests include logistics management and electronic operations. She has published articles in *Transportation Research Part E: Logistics and Transportation Review*, *Transportation Journal*, *Journal of Business Research*, *Computers and Industrial Engineering*, *International Journal of Production Economics*, *Journal of the Operational Research Society*, *Automation in Construction*, and *International Journal of Human-Computer Studies*. She is (off and on) a member of INFORMS; and Decision Science Institute.

The Fourth International Conference of Asian Shipping and Logistics – ICASL 2011 was hosted at the Department of Transportation and Communication Management Science of National Cheng Kung University in Tainan City, Taiwan. ICASL was originally organised by the Korean Association of Shipping and Logistics. Today, ICASL is an annual international event devoted to shipping and logistics, held in a different Asian country. ICASL aims to provide a platform for academics, researchers, policy makers, specialists, and practitioners working in port, shipping, aviation cargo transportation and logistics.

This special issue demonstrates exemplary model-based work in providing solutions for the shipping and transport logistics industry on a broad spectrum of supply chain management so as to increase effectiveness under uncertain financial and nature environments. The six papers in this special issue were selected from several submissions to attend a two-day conference with the theme of toward efficient and sustainable transport logistics on supply chains. We received a total of 74 papers from regions including Asia-Pacific, Europe, and the USA. The academic programme of the conference consisted of presentations followed by discussions of each paper that was

presented. Authors were asked to consider the feedback provided by the panel before they submitted their paper for a second review through the Guest Editors of this special issue of the *International Journal of Shipping and Transport Logistics*. After a two-stage review, 12 papers went through another revision, and six were finally accepted for publication in this special issue. The panel also voted for one outstanding academic work in the scope of this conference to receive a best-paper award, which went to Mei Chi Wong and Tsz Leung Yip for their paper, 'Maritime piracy: an analysis of attacks and violence'.

The Kyoto Protocol came into effect in February 2005. Since then, the sustainable supply chain has been an extremely broad area of study that has identified transport logistics as a key determinant in designing an environmentally conscious supply chain. However, to face today's internationally competitive environment, businesses must work through strategic, integrated global networks designed to deliver efficient and high-quality responses to the demands from anywhere in the world. The first paper by Wong and Yip presents a critical attempt to empirically investigate the effectiveness of the International Ship and Port Facility Security Code regarding piracy attacks. Maritime piracy has become a core subject in maritime security and safety. The authors develop a well-grounded model to consider vessel type, flag, vessel operation, number of pirates, boarding methods, and arms type as the explanatory variables to determine the rate of success and degree of violence in piracy attacks. The results of the study identify three major approaches for pirate attacks, with the different approaches being associated with different levels of violence and arms used and the different targets.

The second paper, by Lee and Lee, presents a carefully reasoned and well-grounded argument showing how freer South-South trade has been recognised as a vital engine for developing countries to reap the maximum economic gains from multilateral trade liberalisation. Their work applies a globally computable general equilibrium model to quantify the impacts of the India, Brazil, and South Africa trade liberalisation on seaborne cargo volumes. The insights provided by this research suggest that removing high tariffs in the South-South trading routes reduces the significance of geographical distance in determining South-South trade patterns and promotes distant trade with faraway countries.

Chen and Wang discuss an extended linehaul-feeder vehicle routing problem with time windows (ELFVRPTW) to minimise the total fixed cost, travel cost, manpower cost and waiting cost for all vehicle routes. The authors develop a well-grounded model to address the ELFVRPTW and propose a two-stage solution algorithm that combines the insertion method and tabu search to solve it. The contributions of the paper to the literature are made both in terms of modelling the ELFVRPTW and in introducing a solution algorithm for the problem, resulting from the limited access of local streets to accommodate large vehicles in urban areas.

Li, Shi, Feng and Li detail the design of reverse channels in a supply chain consisting of a manufacturer and a retailer. Their paper presents a carefully reasoned and well-grounded argument showing how the optimal reverse channel choice is influenced by the pricing difference on new and remanufactured products and by the government policy on extended producer responsibility (EPR). The results of the study suggest that the most effective way to collect used products is through the manufacturer. In addition, the government EPR policy can benefit remanufacturing activities, promote sales of the remanufactured products, and increase supply chain profit.

Tran, Cahoon, and Chen's work is a richly documented and validated exposition of quality management practices for modern-day seaports integrated in supply chains. The authors develop a conceptual framework to determine the level of importance of measures of quality management, based on the ISO and TQM standard. The insights from this research may help the seaport industry to effectively manage the challenges of the dynamic business environment and to face international competition by implementing quality management.

Yang's paper demonstrates the usefulness of structural equation modelling for analysing the effects of environmental management on environmental and firm performance in Taiwanese maritime firms. He derives his model-based understandings of management fads from the business literature in such areas as environmental management practices, environmental management auditing, and environmental management investment. The model presented in the paper is based on explicit theory and empirical data that lead the author to conclude that environmental management had significantly positive effects on environmental and firm performance, but environmental performance was not found to be related to firm performance in this study.

Acknowledgements

We would like to take this opportunity to thank Dr. Y.H. Venus Lun, Dr. Kee-hung Lai, Professor T.C. Edwin Cheng, and Dr. Christina W.Y. Wong, Editors of the *IJSTL* for their kindly support, help, and encouragement. Special thanks are also extended to all contributors and the following reviewers for their valuable time and efforts in the review process.

References

- Chen, H-K. and Wang, H. (2012) 'A two-stage algorithm for the extended linehaul-feeder vehicle routing problem with time windows', *International Journal of Shipping and Transport Logistics*, Vol. 4, No. 4, pp.339–356.
- Lee, T-C. and Lee, P.T.W. (2012) 'South-South trade liberalisation and shipping geography: a case study on India, Brazil, and South Africa', *International Journal of Shipping and Transport Logistics*, Vol. 4, No. 4, pp.323–338.
- Li, S., Shi, L., Feng, X. and Li, K. (2012) 'Reverse channel design: the impacts of differential pricing and extended producer responsibility', *International Journal of Shipping and Transport Logistics*, Vol. 4, No. 4, pp.357–375.
- Tran, H., Cahoon, S. and Chen, S-L. (2012) 'Quality management for seaports integrated in supply chains', *International Journal of Shipping and Transport Logistics*, Vol. 4, No. 4, pp.376–392.
- Wong, M.C. and Yip, T.L. (2012) 'Maritime piracy: an analysis of attacks and violence', *International Journal of Shipping and Transport Logistics*, Vol. 4, No. 4, pp.306–322.
- Yang, C.C. (2012) 'The effect of environmental management on environmental and firm performance in Taiwanese maritime firms', *International Journal of Shipping and Transport Logistics*, Vol. 4, No. 4, pp.393–407.