

ISL 2016: Sustainable transport and supply chain innovation

Declining natural environment quality presents challenges and opportunities for academics and business executives. Supply chain innovation and sustainable transport are issues that have attracted increasing attention to modern logistics and transport research worldwide. Using the academic search engine, Google Scholar, to search the keywords supply chain innovation and sustainable transport, the results showed 126 and 1,680 literatures in 2007, and 470 and 3,720 literatures in 2016 on these research topics. Innovation is classified into technological innovation, organisational innovation, and market innovation. Technological innovation is particularly important to the service sector in terms of its rapid ICT development (Chapman *et al.*, 2002). Early research on environmental supply chain and innovation in the grocery market found a correlation between environmental management issues and buyer-supplier relations (Hall, 2001). Another early research studied the relationship between the manufacturer support of its suppliers' innovation and its supply cost reduction in a particular supply chain situation (Kim, 2000). Recent research work has investigated the relationship between supply chain innovation and the potential for sustainable development and increased visibility of opportunities acting as a driver for innovation and change (Isaksson *et al.*, 2010; Melville, 2010). More recently, theory development and innovative management practices via analysing big data to exploit information in a supply chain is becoming popular (Kache and Seuring, 2017; Ji *et al.*, 2017).

Over 80 papers were presented at the 2016 International Symposium on Logistics (ISL), and based on the recommendations of the editorial panel, 14 manuscripts were shortlisted. A cluster of seven papers were included in this issue, five of which were developed from articles presented at ISL 2016. The first three papers employ structural equation modelling technique to investigate the impacts of integration and investment on logistics performance quantitatively. The fourth and fifth papers discuss value creation for sustainable logistics operation in both emerging economics and developed economics via a qualitative research methodology. The sixth and seventh papers use mixed research approach to study the application of modern technologies (including GIS tools and IoT) in the logistics industry.

The use of structural equation modelling technique can help researchers look into the tacit elements of the causes and results in the supply chain industry. The first paper by Liu and Lee (2018) investigates the relationship between three types of integration, supply chain resilience, and service performance of third-party logistics service providers. The structural regression research findings indicate internal integration, customer integration, and logistics collaborator integration have mediating effects on service performance. Alshahrani *et al.* (2018) developed a comprehensive conceptual model to measure the impact of hospital-supplier integration on the overall performance of healthcare organisations. They surveyed hospitals in Saudi Arabia by using a structural model and found that hospital-supplier integration in terms of logistics integration, co-ordinated information technology, information sharing, and trust building is positively and significantly associated with better hospital performance. A survey by Park and Park (2018) of 420 logistics professionals in Korea examined the structural relationship between financial investment, public-private partnership (such as AEO), trade facilitation, effectiveness, and efficiency. Their research findings reveal a positive connection between the financial investment of AEO and the effectiveness and efficiency of a logistics system via the public-private partnership.



Value creation is one of the most important issues for logistics professionals. Using a case study, Agarwal *et al.* (2018) interviewed major stakeholders to show how the process of reengineering technique and the ICT systems were deployed in an emerging economy to create value for liquefied petroleum gas customers. It was found that vertical and horizontal collaboration across stakeholders' spans through the supply chain; change management and capability building are the drivers of value creation. In addition, seamless ICT could introduce efficiencies for government, distributors, and customers. Sandberg *et al.* (2018) explored the processes of value creation in a reverse clothing supply chain via an inductive case study approach. The directed content analysis technique is used to analyse the information collected from 14 semi-structured interviews and open-ended questions. In conclusion, they found economic value, environmental value, and environmental image value are created for clothing retailers, charity organisations, commercial recyclers, and specialised sorting companies in the reverse clothing supply chain.

The sixth paper estimated the transportation network impedance to the last-mile delivery by generating a matrix of key transport and planning measures and overlaid them in a geographical information system to compute and visualise the levels of last-mile transportation and delivery network impedance. In this paper, Ewedairo *et al.* (2018) found significant impedance differences existed between the tram route and freight corridors across Maribyrnong in Melbourne City. The last paper investigated the incentives and concerns behind firms' decisions to adopt Internet of Things (IoT) by grounded theory first and then followed by the structural equation modelling with partial least square technique (Tu, 2018). Results from both the qualitative interview and the quantitative questionnaire survey indicate perceived benefits, perceived cost, and external pressure have a significant impact on the IoT adoption intention.

International business has been undergoing a period of rapid transformation. How to generate value and keep sustainability through an innovative way is always a major challenge to logistics executives. This issue of *International Journal of Logistics Management* provides a collection of insightful research papers presented at the ISL 2016 to demonstrate sustainable and innovative topics in relation to transport logistics and supply chains and in turn contribute to management science and industrial practices.

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