Editorial

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Biographical notes: Alfredo Bueno-Solano obtained his PhD in Engineering Industrial and Manufacturing (specialty in logistics systems) of the inter-agency program in Science and Technology PICYT-CONACYT and a member of the National System of Researchers in Mexico. He currently serves as a Professor-researcher from the Institute of Technological Institute of Sonora Mexico and currently conducts research in the area of transport, with a focus on modelling of dynamic supply chains and logistics of systems applied to the analysis of performance in complex networks of transport and supply chain. He is the Co-Founder member of the Mexican Association of logistics and supply chain (AML) serving as the Vice President of governmental relationships.

Agustin Bustos Rosales obtained his PhD in Industrial Engineering (specialty in supply chain management) from the Instituto Tecnologico de Monterrey, Mexico. He has published a number of articles in leading international journals and conferences. He has worked in projects related to international intermodal transportation and supply chain topics. Currently, he serves as a researcher from the Instituto Mexicano del Transporte in the area of transport, with focus on modelling of transportation systems.

Supply chain (SC) management is a crucial component for the competitiveness of companies within a globalised environment. It is necessary for companies to generate improvements that offer them a competitive advantage. SC management is emerging as the combination of technology and best business practices around the world. Companies that have improved their internal operations are now working to achieve greater savings and benefits by improving the processes and exchanges of information that occur among business associates.

Logistics encompasses those activities associated with the movement of goods from the supply of raw materials to the final consumer. This includes selection, purchase, production scheduling, order processing, inventory control, storage transportation and customer service. This without forgetting the management of the information systems required to monitor all these activities.

This special issue aims at presenting the latest research and/or application developments of SC management in the manufacturing sector. Therefore, this special issue of the *International Journal of Supply Chain and Operations Resilience*, entitled 'Quantitative tools for logistics competitiveness from the perspective of supply chain management' presents some of the latest developments in the SC arena. It includes extended versions of selected papers presented at the 4th International Conference on Logistics and Supply Chain in Mérida, México, 5–7 October 2016, as well as other contributions from leading researchers and academics. The specific lean SC topics covered in the call for this special issue included:

- SC fluidity

- combinatorial optimisation

- risk assessment applications

- knowledge management in SC systems

- quantitative models for managing multimodal logistics platforms

- analysis of transportation, handling and storage process

- scheduling and planning for logistics and SC

- reverse logistics

- intermodal transportation network design

- real-world applications of numerical methods

- other related topics.

From the submissions of articles made to this special issue, five papers that represent excellence and state-of-the-art research work that spans from a variety of leading edge research in the area of SC management were selected. These papers included:

- 'Selecting the best local/internal logistic service provider in a natural disaster: a game theoretic perspective in relation to flash floods in Sri Lanka'

  In this paper, the authors present a conceptual model to determine an evaluation method to find out the best logistic service provider (LSP) amongst the local/internal players in distributing aid. A game theory-based application model has been designed to select the best player.

- 'Analysis of network attributes: potential implementation to the Red Nacional de Caminos de México'

  In this work, the authors determine the measures, graphical representations and types of analysis to be taken account into an initial study. The aim is to identify the topological characteristics, the form of representation and data that are required for the analysis of a transport network.

- 'Supply chain: an input-output perspective. An example of application in the dairy products industry'

In this paper, the authors show the use of selected information in economic surveys to delineate alternative scenarios at the CS level with the input-output matrix (MIP). For this purpose, technical, scientific and official information on the subject has been considerate, as well as its impact on global economic phenomena.

- 'Genetic model for supply chain inventory optimisation'

  In this paper, the authors develop an efficient approach based on genetic algorithm is proposed in order to reduce the total cost of SC. A numerical example is used to explain the new approach. The results show that the proposed approach gains an insight into the SC models and is applicable for reducing overall SC cost.

- 'Analysis of the impact of the increase of production volume on the material supply system and work in process through simulation scenarios'

  In this paper, the authors present a detailed analysis of the implications that will have when a company needs to increase its production capacity, in particular focuses on the effects of materials supply system since the same flow must be constant to keep the production lines in continuous operation. For this, a computer simulation model is developed for the current situation of the company Kolbenschmidt of México, located in Celaya.

All these articles were peer reviewed according to the usual high standards of *IJSCOR* and Inderscience. Thus, we want to thank to the highly qualified and thorough referees that contributed to the review process of this special issue. They greatly contributed to the high quality standards of the final manuscripts. In our view, the selected papers represent excellent contributions to the area of SC management.

The guest editors and the *IJSCOR* hope that this special issue will make a good reference material and be of great use for engineers, researchers, and academics that wish to improve their distribution operations as a key strategy to overcome the current challenges faced by enterprises in their SCs.