Editorial

Wen-Chyuan Chiang*

College of Business Administration, The University of Tulsa, Tulsa, Oklahoma 74104-3189, USA E-mail: wen-chiang@utulsa.edu *Corresponding author

Jennifer Shang

The Katz Graduate School of Business, University of Pittsburgh, Pittsburgh, PA 15260, USA E-mail: shang@katz.pitt.edu

Jason C.H. Chen

Graduate School of Business, Gonzaga University, Spokane, Washington 99258-0102, USA E-mail: chen@jepson.gonzaga.edu

Biographical notes: Wen-Chyuan Chiang is a Professor of Operations Management at the College of Business Administration, The University of Tulsa. He received a PhD in Operations Management from the University of Texas at Austin. His research appears in some of the premiere journals such as *Management Science, IIE Transactions, European Journal of Operational Research* and *INFORMS Journal on Computing*, among others. He is the Editor of *International Journal of Revenue Management* and a senior editor of *Production and Operations management*.

Jennifer Shang received a PhD in Operations Management from the University of Texas at Austin. She teaches OM, simulation, statistics and Process and Quality Improvement courses. Her main research interests include multicriteria decision making and its application to the design, planning, scheduling, control and evaluation of production and service operational systems. She has published in various journals, including *Management Science*, *European Journal of Operational Research*, *IEEE Transactions on Engineering Management* and *International Journal of Production Research*. She has won the 2005 EMBA Distinguished Teaching Award and several Excellence in Teaching Awards at Katz Business School.

Jason Chen is a Professor at Gonzaga University. He received a PhD from the University of Texas at Austin. He designed and implemented an MIS system for a Chinese Government agency to a World Bank project in 1992–1994 and also taught the Beijing International MBA program at Peking University, China. His research interests include revenue management and mobile learning. He serves on many editorial boards and is the Editor-in-chief for two journals.

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He has published numerous papers in such journals as *Management Science*, *Decision Support Systems*, *ACM Transaction on Mathematical Software* and *International of Technology Management*.

1 Introduction

This Special Issue of the International Journal of Manufacturing Technology and Management develops an understanding of value chain management. Value chain management deals with how firms obtain materials/components as input, add value to them through a range of processes and market finished products to customers. Major activities in a value chain include inbound logistics, operations, outbound logistics, marketing and sales, as well as service, aided by supporting functions such as procurement, technology, human resource management and infrastructure of the firms. The objective is to deliver maximum value to customers at the least possible total cost. An effective value chain is capable of efficiently managing material, information and cash flow between suppliers and customers in order to enhance quality, minimise inventories, reduce time to market and meet or surpass customer expectations. Traditional command-and-control management style centring within an organisation is ineffective. Today's companies must manage the entire value chain. Consequently, firms should focus on integrated value chain that extends across and beyond the enterprise boundary.

This Special Issue seeks to align the latest practice, development and case studies with academic frameworks and theories for the role of value chain management. In particular, this Special Issue includes activities directly involving goods/service creation and delivery, as well as those indirectly involving operational processes but enhancing effectiveness and efficiency.

2 Inside this issue

The first paper, 'The effect of margin guarantees on pricing and production' by Urban, focuses on a specific type of supply contract, a 'guarantee of margins', which can ensure a certain profit margin for the retailer even if markdowns are required to move the product. The author develops a single-period, two-echelon pricing/inventory model to analyse profit margin guarantees and proves that the guarantees can improve the expected channel profit and benefit customers as long as the margin is not set at too high a level.

The second paper, 'The constraints of the valuation distribution for solving a class of games by using a best response algorithm' by Cai, Zhong and Wuman, analyses the utilisation of the best response algorithm in solving infinite games with incomplete information. They prove that the constraints of the valuation distributions define the conditions of convergence. The convergence conditions can be used to compute the exact Nash equilibria without discretising the strategy space when the best response algorithm converges.

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In the third paper, 'The impact of ERP implementation on business performance – an integrated investigation model', Huang, Lin, Wong and Tsai propose an integrated theoretical model based on a DEA approach to explore ERP implementation's impact on business performance. They find that ERP implementation can positively affect process capital of the intellectual capital, process capital can positively affect customer capital and customer capital can affect business performance.

The fourth paper, 'Development of an internet retail value chain model for electronic business' by Wei et al., proposes an internet retail value chain model to show IT adoptions in each activity of the value chain. The results of their research suggest that the e-business solutions can be categorised as basic and specific solutions. The basic solutions can be used by every company in the industry while the specific solutions can only be used by companies operating in specific market segments.

In the last paper, 'A three-stage field service management model for effective post-sales service supply chain management', Shih presents a three-stage service management model integrated with advanced optimisation techniques and intelligent information technology capabilities for effective post-sales e-service supply chain management. This model provides the foundation for introducing post-sales service logistics optimisation in the overall supply chain.

Acknowledgements

The editors would like to express their sincere gratitude to the contributing authors and to all diligent reviewers for agreeing to examine the papers for this special issue. We would like to take this opportunity to thank Dr. Mohammed A. Dorgham for giving us the opportunity to edit this journal. Finally, to our readers around the world, we thank you very much for using this journal as your source of information and hope you find it helpful in your research endeavours.