

INTRODUCTION TO THE *SPECIAL TOPIC FORUM* ON GLOBAL SUPPLY CHAIN MANAGEMENT

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Recent news events related to quality in global supply chains have called attention to the need for more research on supply chains that operate in a global context. Indeed, it would be difficult to find a supply chain that does not cut across national boundaries at some point. The presence of global supply chains introduces a number of new management challenges. For example, how can risk be assessed in global supply chains, and what measures are effective in ensuring the security of a global supply chain? As organizations strive to reduce costs by outsourcing, how can they deal with the corresponding risks of outsourcing to low-cost countries? What sort of logistical complexities are introduced when organizations engage in cross-border trade? How should global supply chain strategies be designed so that they are sustainable economically, socially and environmentally? How important are supply chain relationships when supply chains stretch across national borders? In each of these examples, traditional supply chain management practices may be ineffective, due to the unique characteristics of supply chains that span global boundaries. In addition, because of the complexity of supply chains that span national borders, traditional research methodologies may be ineffective. This calls for innovative empirical research approaches.

In this special topic forum, we present several examples of high-quality research on global supply chains that address important issues. Each of these articles addresses compelling topics that deal with issues that are important to organizations that have global supply chains. In addition, this set of articles provides models of innovative approaches to empirical research that allow capturing and understanding the richness and complexity of global supply chains.

We begin with "A Process Analysis of Global Trade Management: An Inductive Approach," which deals with the complexities of global supply chains. Using an inductive approach, it builds on the insights of managers from companies that import and export apparel goods between China and the United States, based on transaction cost economics theory. It develops a complex flowchart that documents 106 steps involved in preexport, transport arrangement and export declaration, transport and import declaration and postimport customs clearance and payment. This flowchart then forms the basis

for data analysis and analytical modeling of the elapsed time for each step, both with and without IT enabling. This is used to demonstrate the benefits of IT enabling on global trade management, honing in on the steps where investments will be the most beneficial, under certain circumstances.

Although there has been a substantial amount of research on the importance and benefits of supply chain integration, research on global supply chain integration is less well studied. In "Angles of Integration: An Empirical Analysis of the Alignment of Internet-Based Information Technology and Global Supply Chain Integration," the author investigates both global supply chain integration and information technology integration, particularly in terms of their alignment. Based on Frohlich and Westbrook's (2001) seminal foundation, they build on the arcs of integration concept, extending it to information technology integration and developing an approach called "angles of integration" to more precisely quantify the direction and extent of integration. Using data gathered in eight countries, they find that most plants do not align IT implementation with their supply chain strategy. In addition to discussing possible reasons for this mismatch, they develop a means for organizations to evaluate the alignment of their IT integration with their global supply chain integration.

As organizations move toward sustainable operations, there are particular challenges for global supply chains. In "Sustainable Global Supplier Management — The Role of Dynamic Capabilities in Achieving Competitive Advantage," the authors define sustainability broadly, building upon the triple bottom line approach, to include both economic and social performance with environmental performance. They use the dynamic capabilities view of the firm to establish the theoretical foundation for the integration of sustainability criteria with global supplier management. Studying four companies in the chemical industry, they use an inductive multiple case study approach to study how to design and configure global supply chain management processes so that they are capable of dynamically responding to changing sustainability resources. They also study how sustainable global supply chain capabilities can be a source of competitive advantage to a buying firm.

"A Four-Filter Model for Outsourcing to Low-Cost Countries" approaches the issues associated with using global outsourcing as a strategy for cost reduction. Although low cost is the top reason cited for global outsourcing, there are many issues associated with outsourcing to low-cost countries. The authors develop an approach for successively filtering a set of potential countries and products, using cluster analysis, in order to help organizations determine the best products to outsource and the best locations for outsourcing. The approach is demonstrated using data from a European transport vehicle manufacturer.

The articles included in this special topic forum are all built on strong theoretical foundations, using theory to shape the development of solutions to important managerial issues. Their methodologies match well with the complexities of global supply chains, which are notoriously difficult to study. They provide an important foundation for future research on important issues related to global supply chain management.

REFERENCES

Frohlich, M.T. & Westbrook. R. "Arcs of integration: an international study of supply chain strategies.

Journal of Operations Management, 19(2), 2001, 185-200.

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