

EDITORIAL PREFACE

The Changing Face of Business Networks Research

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Managing a competitive firm in today's turbulent and volatile business environment is becoming an extremely difficult task as product variety, complexity and quality demands increase, and revenue margins decrease (Dioguardi, 2010). Hence, participating in business networks has become inevitable for any organization that strives to achieve or maintain a competitive advantage (Camarinha-Matos, et al. 2009).

Since traditional views of value creation such as the resource-based view of the firm or transaction costs economics failed to fully explain these new interconnected market structures, a large body of literature has evolved that describe strategic, organizational, or technological exigencies for the conduct of businesses in networks, constituting an interdisciplinary new strand for theoretical and applied research. Most of the central contributions of the past years have examined business networks assuming mostly stable environmental conditions or a hierarchic distribution of power (e.g. automotive industry as frequently used case study). However, not all business networks share this characteristic. Conversely, the great part of today's networks is non-hierarchical and dynamic, implying an intermittent but direct process of peer-to-peer collaboration. Without relying on an administrative "super-structure", dynamic networks are supposed to use the capabilities of the single

firms more effectively (Teich, et al. 2002). But there is also a downside: due to its stringent complexity and volatility, the network is often subject to strong side effects such as increased coordination and setup costs, higher search and evaluation costs, or issues related to product assembly, delivery and exploitation.

In this issue of the *International Journal of Applied Logistics* titled "*The Changing Face of Business Networks Research*" we present articles that study the phenomenon of "business networks" presupposing inherent dynamic or even chaotic market conditions.

The first paper "*IT-Based Classification for Supply Chain Coordination Mechanisms*" by Ghahremani and Tarokh studies the different IT-facilitated and IT-enabled coordination mechanisms that can be applied in light of such dynamic network structures. The authors provide a classification that may help supply chain managers to better understand the different possibilities to leverage and mitigate problems caused by dynamic markets.

The second paper "*Analyzing the Lead Time and Shipping Lot-Size in a Chaotic Supply Network*" by Tarokh and Golar emphasizes the examination of oscillations in stock keeping and production in dynamic networks. Building upon chaos theory, the authors develop a simulation model for estimating variations in

delivery lead-time and shipping lot-sizes across the supply chain, revealing interesting findings with respect to size and occurrence of chaotic behaviors.

Similarly, the relationships among supply-side issues and delivery reliability in specifically non-hierarchical networks are investigated in the third paper titled “*An Empirical Investigation on the use of Buffers and Incentives in Non-Hierarchical Networks*” by Pinto, Pirola, and Mettler. The authors present the results of a large-scale survey on the use of buffers and incentives in the manufacturing industry, substantiating the strong influence of supply uncertainty on delivery reliability to end customers.

Finally, the paper “*Dynamic Formation of Business Networks: A Framework for ‘Quality of Information’-based Discovery of Resources*” by Eurich, Villalonga, and Boutellier (2012) discusses the concept of “business networks” from a more technical perspective. Since “Real World Internet services” are becoming more and more complex, the authors develop an approach facilitating the dynamic formation of business networks to fasten the design and deployment of such new IT-services. By means of a concrete example from logistics and sup-

ply chain management the authors demonstrate the usefulness and practicality of the proposed approach.

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