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Exploring the Link Between Supply Chain Integration and Resilience

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Abstract

This study explores the relationship between supply chain integration (SCI) and supply chain resilience (SCRES), two critical concepts in supply chain management (SCM) literature. While SCI is widely recognized as a strategy to enhance firm performance and secure competitive advantage, SCRES has emerged as a crucial capability for firms to navigate disruptions in today's interconnected global environment. However, both SCI and SCRES come with costs, such as investments in technology for integration and capability-building for resilience. Moreover, not all firms or situations warrant the pursuit of either integration or resilience, as they may not be suitable or beneficial in every context. Existing research has largely examined the impact of SCI or SCRES on performance individually, with limited attention to the relationship between these two concepts. Our study addresses this gap by investigating how SCI influences SCRES and vice versa. We employ two portfolio models—Kraljic's Purchasing-Matrix and the Risk-Probability-Impact Matrix—to provide a comprehensive understanding of when, where, and with whom to implement integration strategies to achieve resilience. These models offer insights into strategic decision-making, illustrating how collaboration, a fundamental mechanism of SCI, can enhance resilience by facilitating information sharing, knowledge exchange, and joint planning. Our research aims to contribute to SCM literature by presenting a nuanced perspective on the interplay between integration and resilience, helping firms identify optimal integration strategies to build resilient supply chains.

Keywords
Supply Chain Integration, Supply Chain Resilience, Purchasing, Risk.

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Biographies
Melanie Gerschberger (Ph.D. Georgia Southern University) is an Assistant Professor of Supply Chain Management at the University of Applied Sciences Upper Austria. Drawing on her industry experience as a supply chain manager, her research focuses on supply chain risk and resilience, with a special emphasis on understanding how individuals

and organizations cope with supply chain disruptions. Melanie enjoys engaging in industry-based research and has led several national and international empirical research projects. She has developed new courses and taught in the US, Europe, and Asia. Findings from her research have been published in outlets such as Journal of Business Logistics, International Journal of Logistics Management, and Supply Chain Management Review, among others.

Ata Karbasi is an Assistant Professor of Information and Decision Science at Valparaiso University. He earned his Ph.D. in Logistics and Supply Chain Management from Georgia Southern University, where he taught operations and supply chain management as well as logistics and supply chain strategy courses. His research interests include operations strategy, competitive dynamics, airline operations, and big data & analytics. Findings from his research have been published in outlets such as the Business Process Management Journal, and Journal of Management Futures Research, among others. Ata serves as an ad-hoc referee for the Journal of Operations Management and has been a member of the Decision Science Institute (DSI) and Council of Supply Chain Management Professionals (CSCMP).