

Contents

Part I Supply Chain Disruptions and Resilience

1	Definition and Development of Supply Chain Resilience	3
	Alexander M. Geske and Lydia Novoszel	
2	Supply Chain Resilience: A Decade of Evolvement	25
	Alexandra Anderluh and Michael Herburger	
3	Supply Chain Resilience Framework	33
	Lydia Novoszel	
4	Supply Chain Challenges During the COVID-19 Pandemic	41
	Lydia Novoszel and Tina Wakolbinger	
5	Pandemic-Related Disruptions in the Field of Freight Transportation	51
	Stefan Schönfelder and Manuel Tuscher	
6	Modern Slavery and Working Conditions in the European Trucking Industry: A Growing Threat to Supply Chain Resilience	65
	Ki-Hoon Lee, Wolfram Groschopf, and Andreas Mossyrsch	

Part II Measuring Resilience

7	Enhancing Supply Chain Resilience Through Incorporating Business Continuity Management Systems	77
	Felix Tucek	
8	Measuring and Fostering Supply Chain Resilience in the Humanitarian Context	87
	Jonas Stumpf, Niklas Jaeschke, Maria Besiou, and Lisa Rustemeier	



9	The Value of Artificial Intelligence for More Resilient Supply Chains	103
	Isabell Claus and Matthias Szupories	
10	Applying Blockchain Technologies for Increasing Supply Chain Resilience	109
	Martin Hrušovský, Gerald Reiner, and Alfred Taudes	
Part III Achieving Resilience		
11	Policy Options for Strengthening Resilience to Achieve Strategic Autonomy for Austria in a Disrupted World	121
	Michael Böheim	
12	Managing Supply Chain Resilience for Sustainability in an Uncertain World: Challenges and Solutions	139
	Ki-Hoon Lee	
13	Supply Chain Resilience in the Fourth Industrial Revolution	149
	Muhammad Azmat, Shehzad Ahmed, and Muhammad Shujaat Mubarik	
14	Resilient Supply Chain Network Design: An Overview of Optimization Models	165
	Najmesadat Nazemi and Sophie N. Parragh	
Part IV Resilience in Theory and Practice		
15	Resilient Supply Chains: A Practical Guide for Successful Implementation	183
	Gregor Gluttig	
16	What Really Works: A Practitioner's Critical Review on Supply Chain Resilience Research	191
	Christian Hammer	
17	Delphi Study on Supply Chain Resilience	199
	Lydia Novoszel, Alexander M. Geske, Sebastian Kummer, and Tina Wakolbinger	
Part V Supply Chain Resilience in Different Functional Areas		
18	Commodity Price Risks: Strategies to Increase Supply Chain Resilience	217
	Matthias Zillner	
19	Achieving Supply Chain Resilience Through Additive Manufacturing	233
	Matthias M. Meyer, Andreas H. Glas, and Michael Eßig	



20 Resilience in Warehousing	241
Clemens Schuhmayer	
21 How to Successfully Master a Pandemic in a Global Distribution Network?	257
Roeland Baaijens and Jan Busch	
22 Resilience Strategies for Freight Transportation: An Overview of the Different Transport Modes Responses	263
Eveline Beer, Jasmin Mikl, Hans-Joachim Schramm, and David M. Herold	
23 Thoughts About Individual Resilience Impact to Team and Organization	273
Anna Sparty	
Part VI Supply Chain Resilience in Different Industries	
24 Resilient Supply Chains in the Parcel Shipping Sector	281
Peter Umundum and Constantin Wittek-Saltzberg	
25 Deep Dive on Resilience in the Aviation Industry: Between Resilience for Short-Term Disruptions and Focus on Long-Term Preparedness	287
Mario Danner and Alexander M. Geske	
26 Semiconductor Supply Chain: A 360-Degree View of Supply Chain Risk and Network Resilience Based on GIS and AI	303
Sucharita Gopal, Petra Staufer-Steinnocher, Yingqiang Xu, and Joshua Pitts	
27 Ways to Build Resilient Inbound Transportation Logistics in the Automotive Industry	315
Mirko Hoppe and Werner Podkowik	
28 Overview of the Enablers of Humanitarian Supply Chain Resilience	325
Ioanna Falagara Sigala and Amin Maghsoudi	
29 Resilience and Military Supply Chain Management	337
Gerhard Gürtlich and Stefan Lampl	
30 Concluding Remarks	353
Tina Wakolbinger, Sebastian Kummer, Alexander M. Geske, and Lydia Novoszel	