Resilience and Digitalization of Supply Chains: Analysis of Digital Maturity, Systemic Risks, and Mitigation Strategies in the Automotive Sector

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Abstract. In the face of successive geopolitical health, and technological challenges, the importance of supply chain resilience has become a key strategic focal point. This research delves into the impact of digital maturity on the ability of automotive supply chains to withstand systemic and interconnected risks. Through an analysis of 90 academic works, a framework is established that integrates digital transformation, risk management, and organizational strategy.
The study reveals three unique digital maturity profiles, a classification of risks, and confirmed hypotheses linking advanced technologies (such as AI, digital twins, and collaborative platforms) to improved resilience. It offers practical suggestions for those involved in automotive supply chains and highlights areas for further research, such as the need for comprehensive evaluation models and a deeper understanding of inter-organizational collaboration. Ultimately, this study contributes to the ongoing conversation on the digitalization of supply chains and emphasizes its critical role in fostering resilience within industrial networks.

Keywords: Digital maturity, supply chain resilience, systemic risk, automotive industry, digital transformation, risk management.