

# Abstract

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## **A PROACTIVE MEASUREMENT FRAMEWORK FOR SUPPLY CHAIN RESILIENCE (2PM-SCR): A CONCEPTUAL FRAMEWORK**

The main aim of supply chain management is to have control over the whole parties involved in the chain, from suppliers to the end customers, creating the seamless flow of goods, information, and money. Any change in the business environment may cause vulnerabilities to the whole chain. Yet, managers still focus on reducing cost and increasing reward. So it is hard to sell risk management as a competitive advantage. This paper questions this approach and argues that in the light of increasing disruptions a different approach is needed to supply chain. Managing the risk of the uncertain future is a challenge that requires resilience. Academics and industry leaders have seen the need to incorporate the concept of resilience on the traditional risk management techniques with that is better designed to cope with extreme complexities, unpredictable events and adaptive threats. However, supply chain risk management metrics are still largely unrefined although finding the right key performance indicators that ensure resilience would help companies to proactively lead the change. This research aims at providing a blueprint for resilience by identifying and prioritising the main causes of vulnerabilities to supply chains, then investigating the key performance indicators (KPIs) that would improve resilience. Finally, presenting a framework for categorizing the risks in terms of their driver factors in order to assess the overall impact on the performance of the supply chain (2PM-SCR framework) that assists supply chains to proactively anticipate disruptions and prevent failure occurring. Data collection and analysis using the analytic network process (ANP) will propose the inputs to where the most important potential risks are first identified, then mitigation measures are developed for application aiming at improving the supply chain overall performance. Keywords: Supply Chain Performance Measurement Systems, KPIs, Supply Chain Resilience (SCR), Analytic Network Process (ANP), Disruptions, and Vulnerabilities.