

Unravelling Risks and Resonance in Service-Oriented Manufacturing Supply Chains

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Abstract

Purpose – This research examines risk management for service-oriented manufacturing supply chains via two stages, highlighting its differences from manufacturing. Initially, the authors review earlier studies in order to pinpoint the distinctive characteristics of service-oriented manufacturing supply chains and identify prevalent risks. Secondly, an empirical study in the construction field, which was heavily struck by the Covid-19 pandemic, is conducted to thoroughly inspect the resonant effect of these risks on service-oriented manufacturing supply chain performance.

Design/methodology/approach – To validate the resonant effect mechanism, the theoretical model is compared to a newly created comparative model that encompasses the single effects of risks on supply chain performance.

Findings – 63% variance of service-oriented manufacturing supply chain performance was explained by the resonant effect model, compared with 46.3% in the comparative model. Moreover, each risk exerts a more glaringly significant impact on supply chain performance, asserting the mechanism of the resonant influence. Another noteworthy result involves the demand risk possessing a low effect on supply chain performance, thus reinforcing the superiority of service-oriented manufacturing supply chains.

Research limitations/implications – Future studies should discover optimal “resonant” models aiming at anticipating worst-case scenarios and safeguarding their supply chain.

Practical implications – Indubitably, reducing the mechanism of the resonant effect will centre on lowering the coefficient of “ α ,” thereby restricting/eliminating the link among risks. Therefore,

the suggested resonant impact model might thus serve as “a road map”. As a result, it is advisable that supply chain executives employ supply chain management tactics such as avoidance, prediction, and postponement, but only after carefully weighing the costs and benefits of adopting such strategies.

Originality/value – The service-oriented manufacturing supply chain features and advantages have been analysed and explained throughout the article. The data collected during the Covid-19 pandemic is a captivating and topical point of this paper.

Keywords: Risk, risk management, supply chain management, supply chain risk management, service-dominant logic, resonant effect.

Article Classification: Research paper.