ABSTRACT

The rise of standardization, modular products, and supporting collaboration technology reduced the need for tight control and coordination, and allowed outsourcing to play a bigger role in production and supply networks. As a result, these networks became more global, intertwined and complex. Although operations literature offers many sophisticated dyadic models and case studies to describe inter-organisational risk and coordination, there is a dearth of knowledge on the impact of the extended ecosystem on which firms rely. In this talk we will explore this gap by assembling a large-scale empirical dataset on Toyota’s global production network and examining how the global structure of supply relationships impact network resilience as well as local firm performance. Our results sound a cautionary note, showing that structure has significant impact on robustness, resilience, and firm performance. Beyond demonstrating how these characteristics link to structure, we will debate how the field of supply chain management can advance through the application of interdisciplinary approaches that use tools of analysis from the field of complex networks.