

Four Scenarios of How Blockchain Impacts Inter-organizational Trust: Case Studies in Food And Banking Supply Chains

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Abstract

Due to the inherent trustworthiness of blockchain features, its implementation is expected to substantially enhance trust in supply chain relationships. While the topic of blockchain and trust has recently garnered attention from supply chain scholars, consensus in the current literature is lacking, and empirical studies remain limited. This study aims to address these gaps by exploring the impact of blockchain on inter-organizational trust through case studies of blockchain usage. Through 22 interviews with blockchain practitioners in the food and banking industries, the findings reveal four scenarios illustrating how blockchain implementation can differently impact inter-organizational trust in supply chains. First, blockchain can facilitate trustless transactions, similar to cryptocurrency trading, where trust in blockchain replaces the need for trust between supply chain partners. This scenario is likely to happen in transactional relationships or spot trading. Second, in scenarios where blockchain use is mandatory, its implementation can strengthen inter-organizational trust in established partnership relationships. Third, in scenarios where blockchain use is voluntary, the technology can be used as a signaling tool in early-stage relationships. Suppliers, for instance, can utilize blockchain to communicate trustworthiness signals to potential and new buyers, thereby initiating and developing their inter-organization trust. Fourth, in certain scenarios where blockchain is implemented among unfamiliar supply chain parties with limited trust, blockchain can establish swift trust in itself, which can subsequently be transferred to increased inter-organizational trust between these parties. The study contributes to blockchain literature by providing comprehensive views of different scenarios in which blockchain can impact trust in supply chains.

Keywords

Blockchain technology, Inter-organizational trust, Supply chains, Supply chain relationships

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Biography

Kongmanas Yavaprabhas (Dean) is a PhD Candidate in the Department of Management and Marketing, The University of Melbourne, Australia. Dean received a Master of Commerce (Management) (First-Class Honours) and a Master of Engineering Management (First-Class Honours) from the University of Melbourne, as well as a Bachelor of Engineering (Industrial Engineering) from Chulalongkorn University, Thailand. Dean's academic achievements include his first journal publication in the *Annals of Operations Research*, along with several conference papers. His

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