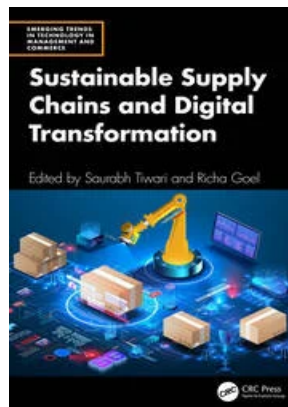




Chapter



Ranking of Barriers to Adoption of Blockchain Technology in Supply Chain

By

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ABSTRACT

Integrating blockchain technology into supply chain management offers a revolutionary approach to enhancing transparency, traceability, and security within the industry. Despite its potential to address inefficiencies and trust issues, widespread adoption faces significant barriers. This chapter uses both qualitative and quantitative data to systematically analyze and rank the challenges to blockchain adoption in supply chains. In this study, utilizing the Fuzzy Making use of the Decision-Making Trial and Evaluation Laboratory (DEMATEL) and the Fuzzy Analytical Hierarchy Process (AHP), key issues are identified with reference to technical integration, regulatory issues, and concerns over scalability, and environmental effects. This research emphasizes the need for understanding technological propositions, regulation assurance, and business practices for adopting blockchain supply chain integration; the influence of the TOE framework is found to be insufficiently explored across different contexts. The chapter adds to the body of academic literature and provides recommendations for blockchain implementation, stressing multistakeholder cooperation to address these issues. Hence, the chapter provides a roadmap for further research in the complex interplays of blockchain in supply chain networks. It provides actionable insights for industry practitioners aiming to harness its transformative potential.

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