

## Time to seize the digital evolution: Adoption of blockchain in operations and supply chain management among Malaysian SMEs

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**Abstract**  
This study aims to investigate the effects of relative advantage, complexity, upper management support, cost, market dynamics, competitive pressure and regulatory support on blockchain adoption for operations and supply chain management among Small-Medium Enterprises (SMEs) in Malaysia. Unlike existing studies that employed linear models with Technology Acceptance Model or United Theory of Acceptance and Use of Technology that ignores the organisational and environmental factors, we adopted the Technology, Organisation and Environment Framework that covers the technological dimensions of relative advantage and complexity, organisational dimensions of upper management support and cost and environmental dimensions of market dynamics, competitive pressure and regulatory support. Empirical data from 194 SMEs were investigated and ranked using a nonlinear non-compensatory PLS-ANN approach. Competitive pressure, complexity, cost and relative have significant effects on behavioural intention. Market dynamics, regulatory support and upper management support were insignificant predictors. SMEs often lack resources for technological investments but faces same requirements for streamlining business processes to optimise returns and blockchain presents a viable option for SMEs' sustainability due to its features of immutability, transparency and security that have the potential to revolutionise businesses. This study contributes new knowledge to the literature on factors that affect blockchain adoption and justifications were discussed accordingly.

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