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BLOCKCHAIN

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Why hasn't blockchain taken off?

Given the massive hype over blockchain, you would imagine applications would be everywhere. There are, however, few real applications of the technology. Recent work done by Ying Zhang, M. Mahdi Tavalaei, Glenn Parry, and Peng Zhou, systematically reviews the key factors influencing blockchain uptake in an effort to understand the slow adoption by organisations. The study identified 880 adoption factors, grouping them into 29 themes. Three critical hurdles are identified to help practice: technical-to-business value gaps, collaboration

complexity, and regulatory challenges. For researchers, findings show that recent literature has focused on elaborating existing themes (involution) rather than introducing new ones (evolution), indicating a saturation point has been reached. Theoretical expansion can come from new contexts and longitudinal studies, explaining what is happening without recourse to dominant frameworks.

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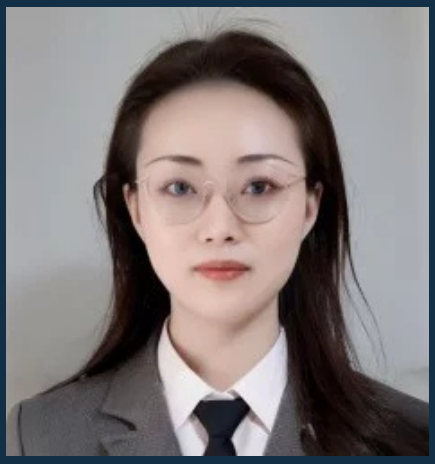

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Ying Zhang is a PhD researcher in blockchain, trust, and privacy research.
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WHEN HYPE BECOMES REALITY? THE HURDLES BLOCKING BLOCKCHAIN ADOPTION IN THE REAL ECONOMY

By Ying Zhang & Glenn Parry

Blockchain technology, known for its role in cryptocurrencies and decentralised finance, has yet to make significant inroads into the real economy. Despite blockchain's promise of security, transparency, and decentralisation, its adoption across industries remains limited. High-profile projects like IBM and Maersk's blockchain-based platform, TradeLens, have faced setbacks, with many discontinued after failing to gain broad industry buy-in. The slow uptake is attributed to three main challenges. First, the gap between blockchain's technical value and its practical business applications raises doubts among businesses. While blockchain can enhance transparency and safety, existing systems often achieve similar outcomes at lower costs. Second, successful blockchain implementation requires extensive collaboration across diverse stakeholders. TradeLens, for example, failed partly due to concerns over data control and governance, highlighting the complexity of cross-industry cooperation. Finally, regulatory hurdles pose significant challenges, particularly with blockchain's immutable nature conflicting with laws like the EU's GDPR, which demands data erasure capabilities.

While one workaround is to use off-chain storage for personal data with blockchain only recording hash references, this undermines key blockchain benefits like security and resilience through redundancy. Overcoming these barriers requires coordinated efforts from businesses, policymakers, and technology providers. Blockchain's full potential will only be realised through comprehensive strategies that address regulatory, collaborative, and technical challenges, enabling broader adoption in the real economy.

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