

**Caton James Lee (ed) (2022) *The Economics of Blockchain and Cryptocurrency: A Transaction Costs Revolution*. Cheltenham: Edward Elgar Publishing**

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James Lee Caton's edited volume investigates a specific, yet under-explored aspect of blockchain and cryptocurrencies that has the potential to significantly impact our society over the long term. The technology was first introduced in 2008 by the enigmatic Satoshi Nakamoto (2008), as the underlying mechanism of the Bitcoin. Bitcoin is a purely peer-to-peer electronic cash system that operates without the need for a trusted intermediary like a bank. This is because the ledger, called the blockchain, is distributed among all system users. As a result, the blockchain is immutable and open to examination by anyone, ensuring transparency and security in transactions.

These technological characteristics raised expectations among various groups (Borup et al., 2006; Brown and Michael, 2003; Robinson et al., 2021). Introduced in the aftermath of the financial crisis in 2008, Bitcoin has been seen by technology savvy and libertarians as a means to bypass governments and financial institutions (Nabben, 2023). The general public began to recognize the value of cryptocurrencies as alternative investments, which has been reinforced by the Covid-19 pandemic (Corbet et al., 2020). This facet of cryptocurrencies and blockchain development has sparked considerable hype, scrutiny, and market volatility over the past decade. However, attention is increasingly turning to other potential impacts of blockchain, particularly its promise as an institutional tool for reducing the costs of trust-building (Becker and Bodó, 2021). An increasing

body of academic work is shedding light on this blockchain dimension, often referred to as crypto-economics, an area to which this edited book makes a valuable contribution.

In the introduction, contrary to popular belief, Caton contends that the most notable promise of blockchain does not concern its financial aspect, but rather its institutional aspect. Cryptocurrency and blockchain, with their immutable and transparent ledger system, effectively reduce uncertainties stemming from human opportunism and the unpredictable nature of the future, which constitutes "a prime source of transaction costs" (p. xii). Additionally, recently developed features, particularly smart contracts that execute automatically when predefined conditions are met, significantly increase the likelihood of planned outcomes occurring. According to Caton, these factors potentially lead to enhanced prosperity. Thus, Caton states, "The blockchain revolution is a transaction costs revolution" (p. xiii).

This book offers a thorough examination of the 'transaction costs revolution' via the perspectives of cryptocurrency and blockchain technology, structured into three distinct parts. In the first section (Chapters 1-4), the focus is on blockchain's capacity to transform economic coordination mechanisms. The argument here is that the significant innovation of blockchain is not cryptocurrencies per se but its ability to reduce uncertainties linked to human opportunism, thus lessening dependency on conventional institutions such as



firms or governments. This part explores cryptocurrencies' potential as a universal medium of exchange, their sustained value absent inherent commodity worth, and their capacity to rival fiat currencies, particularly where central bank trust is minimal. The second part (Chapters 5-8) is dedicated to empirical analyses of blockchain applications across various sectors. It examines how blockchain can mitigate inflation and transaction costs in African nations, improve traceability and efficiency in the agriculture industry, and be utilized by companies for quicker and more transparent dealings. Additionally, this part delves into the legal dimensions of blockchain, including its code-based law-like properties, smart contracts, and the regulatory examination of Initial Coin Offerings, especially by the US SEC. The final part (Chapters 9-10) discusses the emergence of V-form organizations — decentralized structures that utilize blockchain to foster 'industrialized trust'. This section proposes a move towards transparent global cooperation and competitive advantages over traditional conglomerate methods. It underscores blockchain's ability to manage internal transactions within these entities, circumventing conventional tax and regulatory frameworks, and thereby introducing a novel approach to organizational and economic structures.

Overall, this book serves as a comprehensive gateway to not only the technical aspects of blockchain but also the significant expectation of social transformations that the technology could catalyze. Firstly, this volume can serve as a guide to crypto-economics. Even though the emerging field has gradually pivoted from cryptocurrency to blockchain, transitioning from new investments to new institutional technology, its definition and visibility have not kept up with the attention that the technology itself has attracted. In this sense, the primary value of the book lies in its characterization of the 'transaction costs revolution', which extends debates beyond the simple costs of value exchanges, such as transferring money with reduced fees, to the establishment and main-

tenance of trust. The interplay between the technology and its implementation invites readers to discern emerging organizational patterns. Despite the fact that this topic has been scrutinized by other authors, this volume enriches the literature by offering both theoretical insights and empirical case studies.

Furthermore, this volume may be perceived by STS scholars as a manifestation of technological solutionism, especially amid the escalating popularity of cryptocurrency and blockchain technologies. With public services and financial sectors exhibiting substantial interest in these innovations, there's a call for STS scholars to engage more deeply in nuanced and critical investigations of their implications (Semenzin, 2023). The recognition of crypto-economics as a new field by legal scholars and economists, a process this volume illuminates, further highlights the need for in-depth exploration.

Questions arise: how have these technologies managed to maintain their hype over the past decade, despite experiencing several significant setbacks? What expectations have they generated, and what rhetorical strategies have their proponents utilized to achieve this? Somewhat ironically, the rich discussion within this volume about the promises of blockchain paves the way for critiques of the optimistic narratives surrounding these technologies. For instance, what important societal values are overlooked in the narratives that focus primarily on cost-effectiveness in transforming society? If the concept of global governance or public services is reduced to a sum of transaction costs by the discourses and underpinning technologies, where could social equity stand in this framework? The presence of blockchain technology, and its consequential implications, seem to be an enduring reality. Therefore, it demands rigorous examination. This volume can effectively act as a guide, illuminating both the ideological and technological commitments of blockchain, as well as providing a roadmap to the emerging landscape of crypto-economics.

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