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Editorial: Economic and Business Implications of Blockchain Technology

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Editorial on the Research Topic

Economic and Business Implications of Blockchain Technology

CONTRIBUTION

The Special Issue on Economic and Business Implications of Blockchain Technology contributes to current research by showcasing the variety of technologies, approaches, and applications that have emerged since the technology's introduction a little more than a decade ago (Tumasjan, 2021). This Special Issue illustrates that the term "blockchain" has become an umbrella term encompassing different technologies and applications with the potential to fundamentally transform businesses and the economy as a whole.

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EDITORIAL

Blockchain technology is complicated, frequently misunderstood, and heavily criticized by some, but warmly embraced by others. Independent of one's particular standpoint, one thing is for sure: distributed ledgers are here to stay, and their implications on economies and industries will be substantial. In this research topic, numerous researchers from all over the world with varying backgrounds explore the economic and business implications of blockchain technology. They use a wide variety of methodological approaches to uncover how different types of blockchains shape the ways in which organizations operate and economies evolve.

The broad range of papers in this Research Topic gives an intriguing impression of how manifold the potential future implications of blockchain might be. Concurrently, it highlights the importance of clearly specifying what kind of blockchain technology is deployed or analyzed as well as what its main characteristics are (Treiblmaier). Overall, the nine papers cover three overarching topics. In the following paragraphs, we briefly summarize each paper.

Topic 1: Economic Fundamentals

Sun et al. use transaction cost and agency cost perspectives as their theoretical lenses and present the findings from a case study to illustrate the transformation of these costs through blockchain technology. They conclude that blockchain extends the decision boundaries of firms and will lead to more efficient economic entities.

Berg et al. question the electronic markets hypothesis, namely, the prediction frequently made in the late 1980s and early 1990s that information technology was going to dramatically restructure industrial organizations; however, this has not happened so far. They conclude that it can actually be blockchain technology that offers an infrastructure for electronic integration that will subsequently lead to the realization of the electronic markets hypothesis.

Berg et al. question the trustless nature of blockchains, but rather label them as trust machines that enable three-sided bargaining between buyers, sellers, and miners. In brief, blockchains convert energy-intensive computation into economically-valuable trust in a proof-of-work context.

Dimitri provides insights into the economics of proof-of-stake. He finds that the aggregate demand and supply of currency may not typically coincide, which implies that users could hold suboptimal quantities of the currency. Additionally, he discusses how symmetric stationary states of the system could be implausible, which implies that a fair distribution of money in the long run seems unlikely unless appropriate measures are introduced.

Zhang et al. investigate emission markets and model the decentralization of a hypothetical emission quota with the inclusion of households through automated auctions. They provide a preliminary analysis of how the redistribution of emission quotas can impact short-run equilibriums and long-run growths in this market. They also examine the effects of exogenous technological shocks using the Solow growth model in combination with assumptions derived from economic intuitions.

Topic 2: Cryptocurrency and Token Markets

Burnie et al. use social media discussions to discover the causes of shifts in the prices of cryptocurrencies. They find an effect of regulatory bans on Bitcoin, repeated effects of rival innovations on Ether, and the influence of technical traders on both cryptocurrencies. Furthermore, they develop a framework that can be applied to better understand cryptocurrencies' price series given that sufficient social media information exists.

Hashimy and Sandner investigate the impact of financial regulations on the development of token-based Distributed Ledger Technology (DLT) firms. They conduct qualitative interviews with 20 European DLT firms and conclude that the impact of financial regulation can both enable and constrain a firm's development.

Topic 3: Business and Industry Applications

Rejeb et al. investigate how blockchain technologies can potentially benefit businesses' marketing activities, which is a topic that has only received limited attention in the scholarly literature so far. The authors conclude that blockchain fosters disintermediation, aids in combatting click fraud, reinforces trust and transparency, enables enhanced privacy protection, empowers security, and enables creative loyalty programs. They also present six propositions to specifically guide future research in that area.

Bauer et al. explore and explicate the specificities of value creation through blockchain technology in the car ecosystem. Using an exploratory case study approach, they provide evidence that blockchain enables value creation through distributed product innovation, shared operational efficiency, and controlled customer intimacy.

The popularity of this Research Topic in Frontiers in Blockchain reflects the growing interest in the area from academics and practitioners. So what will be next? We are sure that blockchain technologies will continue to evolve, and further scholarly research is needed that explores its applications, potentials, and limitations using academic rigor (Tumasjan, 2021). In light of the increasing diversity of the underlying technologies, we see numerous potentials and recommend that future research on that matter dives deeper into investigating specific use cases that the increasing tokenization of (digital and physical) assets will enable (Sunyaev et al., 2021; Treiblmaier, 2021). In this regard, research is needed that investigates appropriate token designs (Hülsemann & Tumasjan, 2019) and deepens our understanding regarding the economic, social, legal, technological, and philosophical implications of the blockchain (Treiblmaier et al., 2021). The ongoing digital transformation offers an unprecedented potential to create economies and societies that operate effectively, efficiently, and sustainably. In this regard, rigorous academic research can support the industry by clarifying the implications of blockchain technology and helping society to better understand the changes that are to come (Schneck et al., 2020).

AUTHOR CONTRIBUTIONS

HT wrote the first draft which was edited and further developed by AT.

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