BLOCKCHAIN CAPABILITY

Behrooz Golshan

Informatics Department, Faculty of Technology, Linnaeus University,
Sweden, bgomsi@lnu.se

ABSTRACT

Blockchain technology provides the means of binding users, communities, and tokens to self-enforcing rules and agreements. This, in turn, eliminates the need for centralized governance of digital platforms, effectively shifting the locus of value and control from platforms to participants. However, current understandings of value delivery on digital platforms are largely shaped from research into centralized platforms that lock-in value and innovation through tight governance of users' data, access, fees, and processes (Schlecht, Schneider, and Buchwald 2021; Tumasjan and Beutel 2019; Chong et al. 2019; Vergne 2020; Business Transformation through Blockchain n.d.). Over the past two decades, the concept of digital capability has gained currency among Strategic Information Systems researchers for highlighting the organizational processes of value delivery in digital platforms. (Golshan 2018; Malchenko et al. 2020). Building on the digital capability framework, this study aimed to investigate organizational antecedents of value delivery on decentralized platforms.

Data gathered for this research is gathered from 11 blockchain projects. The analysis was conducted based on a high-level three step Cross-Case analysis, data reduction, data display, and conclusion drawing and verification (Cruzes et al. 2015).

Three major findings arrived from analysis of the data, namely: dimensions of blockchain value propositions, business model dilemmas, and organizational competencies required for operationalizing blockchain businesses.

First, blockchain value propositions hinge on three interdependent dimensions of value, namely: self-governance, efficiency gains, and higher resilience. Self-governance, which is often associated with disintermediation, reflects on the users' ability to define the scope of their interactions with the platform and its users and resources, as well as their ability to enforce grassroots agreements without the need for arbitrations and central authorities. Efficiency gains reflect on the blockchain's central promise of facilitating trusted archives that allow users to make informed decisions when it comes to interacting with other users or entities. Finally, resilience reflects on the blockchain value propositions living outside of the application, which in turn makes the value more resilient and inclusive.

Second, three major dilemmas of control, scaling, and collaborations are identified to affect decentralized business model configurations. Control dilemma reflects on the need for central control in order to offer basic customer support and efficient value adding services, while at the same time still uphold the spirit of decentralization.

Scaling dilemma reflects on the technological implications of exponential growth on decentralized platforms, which is often associated with inferior user experience. Furthermore, accelerated growth compound issues related to cost structures, which could have existential consequences for the projects. Collaboration dilemma reflects on the degree of interoperability of the system with the wider platform services. While in general higher interoperability is appreciated by the community, it could lead to issues similar to scalability or security breaches.

Finally, organizational competencies required for operationalizing businesses on decentralized platforms are identified as tokenization, and community commitments. Tokenization reflects a deep understanding of a niche context and technological ability to leverage blockchain artifacts to map key entities to tokens in order to offer elegant value propositions. Community commitment reflects on the organizational ability to command the space, by highlighting the project's intentions clearly, upholding community rules, and providing acceptable user experiences.

Components of blockchain emerged from this study are tokenization, engagement and clout. Tokenization is defined as the organizational ability to identify blockchain soutable value propositions, i.e. efficient solutions for niche situations where trust in archived information is vital, and map tokens to entities to offer that value. Engagement, replacing the business model concept, reflects on degrees of central control, cost structures, and strategies of scaling and collaboration. Finally clout, reflects on the continuous effort taken by decentralized platforms to interact with users and participants to command the space that they occupy. Blockchain capability, therefore, can be defined as the organizational ability to sustain decentralized value propositions through tokenization of value, mastering engagement, and maximizing clout. Future research should adopt longitudinal studies in order to gain a deeper understanding of underlying mechanisms that affect blockchain capability.

Keywords: Blockchain Capability, Decentralised platforms, decentralised business models, Blockchain value