

Chapter 5

Smart Contract and Collaborative Platforms: Exploring the Impacts of the Computerized Transaction Protocol on the Collaborative Economy

Émilie Boily

 <https://orcid.org/0000-0002-2132-9142>

University of Quebec at Chicoutimi, Canada

ABSTRACT

The collaborative economy (CE) involves an intensification of peer-to-peer commerce either directly or through the presence of an intermediary. Collaborative online exchanges are supported by digital processes that involve increased use of new technologies. As an intrinsically connected economy, the EC is therefore inclined to integrate the most recent technological advances, in particular smart contracts. In a recent article, Ertz and Boily raised that this technology can have important impacts for the development of the CE the intensification of exchanges between peers. This chapter consists of a conceptual review analyzing how the CE connects to smart contract technology by observing in particular the motivations of users on digital sharing platforms. The chapter also presents the organizational and managerial implications associated with the implementation of smart contracts in terms of governance, transaction costs, and user trust on collaborative online platforms. A comparison with conventional contracts is also initiated.

INTRODUCTION

Over the past decades, scientific research on e-commerce and digital platforms has expanded considerably. Within the contemporary economic and technological landscape, e-commerce and collaborative economy (CE) are henceforth associated since both are performed online and relayed on digital platforms (Acquier et al., 2017; Hawlitschek et al., 2018). According to the definition given by David Baum in

DOI: 10.4018/978-1-7998-7545-1.ch005

1999, “e-commerce is a dynamic set of technologies, applications, and business processes that connect between companies, consumers, and specific communities through electronic transactions, trade in goods, services and information made electronically” (Soeryanto Soegoto & Eliana, 2018, p. 1). As for the CE, it can be defined as an economic model generating new forms of consumption, which can be observed in various areas (e.g., food, accommodation, transport, access to goods and services). This set of resource circulation systems is based on peer-to-peer relationships (Belk, 2014; Ertz et al., 2019; Botsman and Rogers, 2010). This combination of e-commerce and the collaborative economy has given rise to the emergence of collaborative platforms defined as extensible databases or a “sociotechnical assemblage” supported by software that provides the basic functionalities (Ertz & Boily, 2019, p. 88).

While collaborative platforms have proliferated in recent years, many research avenues remain on the subject (e.g., user confidence, legal transformation, the role of smart contract applications in business growth). Previous research (i.e., Ertz & Boily, 2019) allowed us to explore the different avenues offered by combining concepts of the CE and technological advances, such as Blockchain and cryptocurrencies. The precedent study also has suggested interesting avenues for future research. One of these avenues concerns network security, which seems to have been enhanced by the emergence of smart contracts (e.g., Beck et al., 2016; Christodoulou et al., 2018; Nærland et al., 2017). The researchers suggested examining the impact of these improvements on internal corporate governance and the management of collaborative platforms. More recently, Shen et al. (2020) examined the ability of Blockchain to assess the quality of the secondhand product in a supply chain associate with an online platform. Varma et al.’s (2022) chapter in this handbook further explores the benefits and challenges of applying Blockchain frameworks for digital marketing.

This chapter focuses more specifically on the ability of a specific subset of the Blockchain, namely smart contracts, and their propensity to facilitate peer-to-peer exchanges in a global market of obtainers and providers (e.g., Alharby & van Moorsel, 2017; Ferrag et al. 2018; Nash, 2019). It also considers the possible impacts of these technological and legal developments on internal corporate governance and the management of collaborative platforms. Since the impacts of smart contract on the development of the CE remains quite unexplored, despite some relevant publications (e.g., Ertz & Boily, 2019; Ghilal & Nach, 2019; Nash, 2019), the present study seeks to fill this theoretical and practical gap in the literature on the subject.

Therefore, the main objective of this study is to enhance research combining the concepts of smart contract and CE and increase the comprehension of the possible impacts of this computerized transaction protocol on the CE. The secondary objective is to provide a better understanding of this combination to the manager of collaborative and digital platforms and the larger managerial sphere who could be interested in the research. The contributions of this exploratory study are twofold. First, the paper provides a literature review that encapsulates the concepts of smart contracts and the CE. Second, the study results in developing a theory-based research agenda to spur future research on the subject.

BACKGROUND

Lack of Innovation in Legal Contracts

Historically, the legal sector has never really entered the era of innovation (Cohen, 2018; Grady, 2017). However, the growing pressure in recent years to reduce the costs of services has prompted legal profes-

22 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/smart-contract-and-collaborative-platforms/288442

Related Content

SMEs in South Africa: Acceptance and Adoption of E-Commerce

Eric Cloete (2003). *The Economic and Social Impacts of E-Commerce* (pp. 121-134).

www.irma-international.org/chapter/smes-south-africa/30319

Internet-Based Customer Collaboration: Dyadic and Community-Based Modes of Co-Production

Ulrike Schultze and Anita D. Bhappu (2008). *Electronic Commerce: Concepts, Methodologies, Tools, and Applications* (pp. 1881-1901).

www.irma-international.org/chapter/internet-based-customer-collaboration/9593

Research on Optimization of Multi-Commodity Supply and Demand Logistics Network Based on Supernetwork

Yongtao Peng, Yaya Li and Meiling He (2018). *Journal of Electronic Commerce in Organizations* (pp. 78-93).

www.irma-international.org/article/research-on-optimization-of-multi-commodity-supply-and-demand-logistics-network-based-on-supernetwork/207301

Extending Apache Axis for Monitoring Web Service Offerings

Vladimir Tomic, Wei Ma, Babak Esfandiari, Bernard Pagurek and Hanan Lutfiyya (2006). *International Journal of Cases on Electronic Commerce* (pp. 53-75).

www.irma-international.org/article/extending-apache-axis-monitoring-web/1501

Service-Oriented Architecture

Kwan-Ming Wan, Pouwan Lei, Chris Chatwin and Rupert Young (2006). *Encyclopedia of E-Commerce, E-Government, and Mobile Commerce* (pp. 998-1002).

www.irma-international.org/chapter/service-oriented-architecture/12664