Chapter 23
Blockchain Ecosystems in the Sharing Economy:
An Evaluation for the Health Services Industry

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ABSTRACT

In the 21st century, the free movement of information became quite important with the increase of internet technology. The fact that people can exchange money or data with each other without the need for any intermediary has led to the development of a new economic area under the name of the sharing economy. One of the most important features of the sharing economy is that the parties of the economic transaction establish this relationship through a technological platform. Similarly, allowing peer-to-peer transactions and seeing them as a reliable and public platform has made blockchain technology the focus of attention as a digital business technology in various sectors. In this study, blockchain technology, which is considered as the future technology of the sharing economy, is explained within the framework of a health sector model that deals with the partnership between the sharing economy and blockchain technology.

INTRODUCTION

The rapid development of the internet world has moved far beyond the image, music or knowledge sharing of people with each other and has started to gain economic significance. The transformation of the sharing of resources into an economic relationship among the parties has revealed the concept of "sharing economy". With the sharing economy comes a resource transfer from a person who has a resource and doesn't needed it to a person who needs this resource. As a result of this transfer, revenue is generated from idle sources. Ensuring mutual trust is one of the fundamental obligations of this economic relation-

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ship. Regarding the sharing economy conducted over internet-based platforms, blockchain technology has generally been thought of as a business technology that could cope with this challenge. Blockchain technology secures the processes carried out among peers with its decentralized structure by protecting them with cryptographic passwords. Blockchain technology, which is found to be very secure owing to this feature, has started to be used in many sectors following finance.

Within the scope of this study whether it is possible to use blockchain technology, which is seen as the future technology for the theoretical framework of blockchain technology and the sharing economy, the relationship between sharing economy and blockchain technology in healthcare services, besides the economic value of the blending of these two new concepts are the fundamental hypotheses which are questioned. Pursuant to these fundamental hypotheses, one of the aims of this study is to determine whether the use of blockchain technology in health services can provide added value within the scope of sharing. The second is to present the advantages to be attained with a model of this type for health services. For this purpose, pioneering studies on the use of blockchain technology and the sharing economy in health services have been researched, and studies on the current application samples have been conducted.

Considering the organization of the study, following the introduction in the second section evaluations of the current literature on blockchain technology and sharing economy are preented and both qualitative and quantitative findings are included. In the third part methodologies are outlined, and in the fourth part findings are included. In the fifth part of the study, the advantages and disadvantages that can be obtained within the framework of a health sector model that considers the partnership of the sharing economy and blockchain technology are evaluated. Finally, expectations and recommendations for the future are included.

LITERATURE REVIEW

There are many studies on blockchain technology and the sharing economy. In the studies on the sharing economy, the initiatives that are carried out through online platforms such as Uber and Airbnb are generally examined. Following from hotel and transportation services, the sharing economy has begun to find areas of use in entertainment, finance, and retail (PwC, 2018:9).

The studies carried out within the scope of blockchain technology started with finance, and are further diversified on a sectoral basis. Even in public places blockchain technology finds use. In this study, in addition to the studies that address the relationship between blockchain technology, which is seen as the future technology of the sharing economy, and the sharing economy, the studies and evaluations that address the combination of these two concepts in the health sector are included. It can be said that the studies carried out in relation to health services are much more limited.

Some of the studies on the sharing economy, blockchain technology and the relationship between these two concepts with the health sector are shown in Table 1.

Prior to evaluating works on the sharing economy, it would be useful to define what the sharing economy is. In recent years, start-up companies such as Uber and Airbnb have created a new rental market. These markets have been characterized by their owners as leaseholders, peer-to-peer markets or sharing economy markets (Horton & Zeckhauser, 2016). The sharing economy was born as a new economic structure that dealt with the transfer of various goods, services and value. The specialty of the