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An Evaluation of New Values in Economy and Their Impacts on Future Transformation in Tourism

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Abstract

In this period, when "industrial society" has emerged as an "information society" by experiencing transformation with the effect of a revolution like Industry 4.0, the innovations of digital values in the new economy play an important role. It is inevitable that digital communication networks, bitcoin and blockchain technologies that will change the ways of communication between producer and consumer, will have effects in the transformation of tourism industries as in many industries. The shaping of the elements of change in the economy with the effect of digitalization makes the studies on the relation between economy and technology important in tourism sector as in many other sectors. In this context, a literature study was carried out on the use of blockchain technologies in tourism industries in order to demonstrate the economic policies that can be developed in the direction of transformation in tourism, the place of new technological-economic values in the tourism economy and their use in the field of economics. In this context, a literature study has been carried out on the economic policies that can be developed for the transformation of tourism, the place of new technological-economic values in the tourism economy and the usage of blockchain technologies in tourism industries. This study aims to examine the new values in the economy and the possible effects on the transformation in tourism at the conceptual level and to develop a perspective on the changes in the sector.

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Keywords: Bitcoin, Digitization, New Economy, New Technologies, Transformation in Tourism

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1. Introduction

In the new economy, all the innovations brought by the digital era play an important role. In the new economy, the intermediaries between the producer and the consumer will disappear along with the digital communication networks. Intermediary enterprises will not take on new functions and will lose their validity if they do not assign new values to them.

The Internet is developing and changing rapidly by providing the Internet to search and book travel products online. Many companies, such as Airbnb and Uber, are moving from traditional business models to consumer-to-consumer models. To meet the needs of customers, the tourism industry, by creating new and innovative platforms; it is aiming to create innovative solutions by combining money, technology and knowledge [1].

Shopping on the internet is a new habit. While $ 289 billion was spent on electronic commerce in 2012, it was unimaginable for consumers to buy something from the internet in the early 1990s [2]. The birth of online commerce is based on 1994 with a $ 12.48 Sting album from the Netmarket site of the first safe exchange [3].

However, nowadays, shopping on the internet is becoming quite common and its usage rate is increasing every year. According to TUIK's 2018 Household Information Technology (IT) Usage Survey, the number of people shopping on the internet has increased to 17 million 580 thousand. This means that there is an increase of 2.7 million on the internet. The rate of the previous year's shoppers was 24.9 [4].

Now, businesses to catch the era of Industry 4.0, digitalization, coding and software will increase the importance of such issues. For this reason, the development of these new values will be very important in the consumer-oriented progress of tourism enterprises. The increase in internet shopping gives a new direction to the economy and directs all enterprises to focus on this digitalization process. The aim of this study is to determine the use and effects of new technologies and crypto currencies in tourism sector. In this context, firstly the effects of crypto currencies on the economy, their effects on the economy and the advantages and disadvantages of using them in the tourism sector are presented. A literature study on the use of new technologies and the use of crypto coins in the tourism sector as a means of payment has been carried out. Therefore, it is thought to be an important study in the theoretical and sectoral terms.

2. New Technologies and The Concept of Crypto Money and Digital Money

Crypto currency is the currency that uses cryptography (encryption science) in its structure. It uses cryptography to control transactions and prevent fraud. Therefore, they are called crypto currencies. Once approved, all transactions are stored digitally and recorded in a “block chain” that can be considered as an accounting system. Payments are verified by network nodes. Sometimes, as in bitcoin, powerful, expensive computers are needed for processing [5].

Although the concept of crypto money has been discussed since 1980 or 1990, the concept has matured in 2010 and has been expected to develop some technologies. Among these technologies, the Blockchain infrastructure, that concerns the banking sector, has a significant place. Today, it is important to distinguish between digital currency and crypto currency. Crypto or digital coins; coins These currencies can of course be converted into physical currencies. Today, about 90% of the circulating currencies are digital currencies. Transactions made through Internet banking and mobile applications, payments on banks or credit cards are mainly digital currency transactions. Crypto money is a type of digital currency, but the difference from digital money is itself a currency. The most well-known of crypto coins are Bitcoin, while over 1000 species such as Bitcoin Cash, Litecoin and Ethereum are available. All digital currencies are organized and monitored by specific organizations and organizations. Landmarks are. In other words, the transactions are monitored by the central banks of the countries and other recognized state institutions. They apply worldwide within a legal framework and support. Crypto currencies are the currencies in which there is no decentralized institution and a value-determining institution. The relevant cryptographic community directs these currencies and the support behind them is not legal or central. They also do not apply worldwide. Accepted only in a certain environment [6].

In general, Crypto currencies are classified as a subset of alternative currencies, and in particular, they are classified as a subset of digital currencies. Crypto currencies have the characteristics of decentralizing their control mechanism in a way that is more specific to them and keeping a public account record. In recent years, Crypto, currencies such

as Bitcoin, DogeCoin, AuroraCoin, LiteCoin, PeerCoin and Ripple have emerged, but there has been a leading bitcoin in performance and markets and Bitcoin's price rise from zero in 2009 to $ 1100 by the end of 2013

Unlike central electronic money and banking systems, crypto money is a decentralized structure. This structure is controlled by Blockchain databases [8]. The idea of a banking system and currency, which had long ago been based on intellectual property and no one was connected to the state, emerged after years of work. This concept, which emerged with an article published in 2009 by a person or persons under the name of Satoshi Nakamoto, is one of the pioneers of blockchain technology. Nick Szabo, who was also the creator of the concept of "smart contract", started his presentation of block chain technology by thanking Rand Rand, Tim May and Friedrich Hayek. That is why Bitcoin's intellectual foundations were born this way. In short, Bitcoin is not a virtual currency and it is not just a currency. Bitcoin, which is considered as an alternative to the central banks, can be called a central bank with rules. It is an alternative to the existing banking system. It is an electronic money transfer system that allows transfer of money between two people [9].

3. About Bitcoin's Use

Bitcoin is a crypto currency not controlled by any central bank, government agency or central government. 1 Bitcoin is divided into a maximum of one hundred million subunits and is referred to the non-divisive unit Satoshi by reference to its founder. Bitcoin network was introduced shortly after the publication of its manifesto, whose main principles were explained [10].

Scientists have a variety of reasons for building a currency that is not connected to any state and a monetary system that cannot be obstructed by any power. These include credibility, centralized and distributed systems, cost, privacy and freedom [11]:

Reliability: We need a third unit when transferring money between two people. For example, when carrying out a transfer of money, it is always a bank intermediary and we assume that the bank or this intermediary institution is reliable. However, it is necessary to consider the negative possibilities for transfers to be made with these institutions. For example, accounts can be hacked or stagnated.

Cost: Sending money from one end of the world to another is still a costly process, despite the technological advancements. As long as banks maintain their current monopoly status, these figures are unlikely to fall. As of 2018, bitcoin is a 9-year technology, and as demand increases, the technology to be developed and transfers can be made in lower numbers. Considering the current costs of printing money and the energy consumed, the importance of the concept of cost emerges again. Bitcoin's initial value is calculated in a completely concrete way.

The cost of electricity used to produce a bitcoin is considered the starting value of bitcoin, and this value is calculated to be equal to 1 dollar = 1.309 bitcoin.

Privacy: in the current financial system, the concept of personal privacy is almost negligible and for money transfers, the third party or unit in each case has access to all of the information until you send all your identity details to the status of the money in your account and who you are sending the money to. Bitcoin system offers a completely different privacy model than the traditional system. The names or credentials of the persons in bitcoin are not included and transfers are made publicly available only to the addresses of Bitcoin that appear here. In this respect, it can be considered as the most transparent and confidential money transfer system. Here are the traditional privacy model and new privacy model schemes:

Freedom: the blockchain technology Satoshi Nakamoto finds and the money transfer between two people will not be stored in a single place, but will be stored on all computers and processors involved in the network. The system called "Miner" will provide the functioning of money transfers. The value of Bitcoin is the reason why very low wages are taken from money transfers and there is no embargo on money flows.

The process of creating money is called mining. Mining is the general name of the Bitcoin acquisition process produced as a result of the process of performing mathematical operations using the calculation authority [12].

4. What Is Blockchain? How Does it Work?

The main success behind Bitcoin is the blockchain technology. From the perspective of the discipline of journalism, it is a technology that creates a journal, that is, a platform in which bitcoin transactions are recorded, and each transaction becomes anonymous and secure [13].

Bitcoin solves the problem of technical confidence as a system that is produced and operated in virtual environment. Block Chain Bitcoin network made of all the transfers and transactions, including information and all the users of the network is a system that makes it possible to access all information [14].

In Blockchain technology, the actions of the public key in each block are saved and remain unchanged once saved. Blocks are open to everyone and transparent. The track left by your public key is open to everyone, and if someone tries to take over your identity, you can override the key and stop the process. These technologies require less investment than other traditional units, but investments in information technologies are very important. Simple financial transactions can be easily carried out by smart contracts and lead to an increase in interest by entrepreneurs and the financial sector. New technologies such as behavior analysis and data-driven marketing have emerged from the combination of finance and technology with machine learning and artificial intelligence predictions. With these technologies, applications in the financial sector have increased and the ecosystem has changed in the service sector and many other sectors. Fintech technology is a concept that arises from the convergence of finance and technology, and web-based accounting procedures are among the new projects. The province of Istanbul succeeds to be among the 44 Fintech Hubs of the world and is third in terms of 168 points. The status of Fintech Hub is important in terms of being recognized as an important center of the world in the field of finance and among the items that constitute 168 points for the province of Istanbul, it is among the issues that it is easy to find customers. The medium level is that foreign startups and regulations are between average and good, and state support is a culture of finding experts and innovation. The proximity to Europe, the recent technological developments in the Istanbul stock market are among the advantages [15]:

Crypto money trading platform in Turkey that has been increasing constantly exchanges. In terms of crypto money transactions, it is seen that the weight is 60% bitcoin. crypto currency trading platforms may be made in Turkey listed as follows:

- Paribu.com
- BTCTurk.com
- Koineks.com
- Koinim.com
- Vebitcoin.com
- Bitturk.com
- Digilira.com
- Koinmarketi.com

5. Smart Contracts and Distributed Ledger Technologies in Tourism

Smart contracts are a computer protocol that has been established to facilitate, enforce, and validate the performance of the contract. Smart contracts help to change money, property or anything transparently, without the need for a mediator. Nick Szabo, a crypto money expert, has discovered that blockchain technology allows the use of smart contracts. The best way to identify intelligent contracts is to compare technology with a vending machine. For example, payment is normally made to an attorney or notary, and in the case of smart contracts, a valid crypto currency is placed in the vending machine and the account is credited to your account. The most intelligent contract app is Ethereum block platform. Smart contracts offer features such as trust, backup, speed, and savings. When it comes to the use of intelligent contracts, Jerry Cuomo, Vice President of Block Chain Technologies at IBM believes that smart contracts can be used in many areas, from financial services to health insurance. Smart contracts can be used in many services and areas such as management, supply chains, real estate and health [16] and the main purpose in intelligent contracts is to eliminate the need for trust [17].

Distributed ledger is distributed databases where all transactions or digital events performed among online participants are recorded by public books [18]. Distributed Ledger technology, similar to the concept of intelligent

contracts, has started to emerge in the tourism sector, especially in the financial sector. The rapid development of Internet technology causes radical changes in many areas. Distributed ledger is a technology that has been developing and spreading rapidly in recent years on the basis of internet technology. For example, in the real estate area, using digital notebooks and paying in crypto currency is an example. Keeping personal records in terms of tourism in the service sector, realization of hotel payments and the disappearance of intermediary institutions such as agencies may be among the consequences of using this currency.

6. Impacts of New Values and Technologies on the World Economy and Tourism

The world economy is indexed to gold. The money is printed ten times as much as the number of gold in the world, and banks lend people ten times as much as this money. When bitcoin is considered as a philosophical revolution, it reveals the possibility of seeing the value given below Bitcoin. It can be said that gold is a currency produced as a digital form. In the year 1600, people began to deposit their gold in banks in order not to carry them, and they received the paper in which the amount of gold they had from the banks was written. When it was realized that the trade between the people was made with these papers, they printed more paper than the gold they had in their hands and distributed them to the people and revealed the money we used now. It is a fact that we are doing many works on digital platforms. In this context, bitcoin is a revolution in the trade-money relationship. It is a unit that is not connected to a center such as FED but can be used in online banking. Today, the Republic of Turkey does not accept the digital currency Bitcoin. This means that in case of possible stolen bitcoins, there is no government guarantee and therefore no assistance can be received. Bitcoin users are not formally accepted, but no sanction is imposed on Bitcoin [19].

Travel Technology Entrepreneurs have started to use Blockchain System for Airline Services. For example, the Travel Ledger application is a platform for travel professionals, developed in Ethereum Blockchain smart contract technology. This platform will use intelligent contracts to record transactions in a transparent manner and to manage the flow of information between existing reservation and back office systems. The application can be used by all travel technology companies with an easy to integrate application and can be installed automatically and safely in order to integrate into all business processes. As an example, Singapore Airlines plans to offer members the opportunity to meet this diverse technology with a digital wallet application to develop a loyalty program called KrisFlyer. The application is designed to be used by KrisFlyer workplaces as well as members. At the same time, the miles accumulated in the program members' accounts can be “digitized” and replaced with money in retail establishments that are members of the program [20].

Analyzes of crypto currencies, related technologies and digital technologies for their impacts in tourism can be summarized in the following table:

Item	Possible Positive Impacts on the Tourism Sector	Possible Negative Impacts on the Tourism Sector
Digital Technologies	With the introduction of digital technologies; In the service process, speed increases, cost reduction, profitability, customer satisfaction, standardization and providing large and small businesses have positive effects on the market. In this sense, electronic commerce, the technology of objects, digital developments and positive developments by tourism under the effect of revolutions such as Industry 4.0 provide positive contribution to tourism.	Impacts such as failing to adapt to new technologies, being out of the system in case of not catching high standards, security vulnerabilities and privacy problems can be considered negative for the tourism sector where personal data is very high.

Item	Possible Positive Impacts on the Tourism Sector	Possible Negative Impacts on the Tourism Sector
Crypto Currencies (Bitcoin, etc.)	The advantages of the eco-system that Bitcoin economy, which is growing day by day, has been sustainable and it is easy to reach to the people are among its advantages. Among the advantages that people in different countries can make purchases in the same currency and the payment process is quick and easy when evaluated in terms of international tourism. In this respect, firms operating in different areas of the eco-system and only in a systematic way with each other have emerged. E-wallet applications, mining pools and all kinds of financial processing are among the features of these currencies. These features can be considered as an advantage in terms of transition to digitalization and smart tourism.	The major disadvantages of using these currencies is that it is a new technology and that recognition and validity are not yet widespread. Security problems, legal regulations and lack of information are among the most likely negative effects of using these technologies. In this sense, there may be non-conformities in terms of taxation when prohibitions and security problems arise. The current structure and situation to be experienced in legal arrangements of currencies such as Bitcoin will affect the use of tourism consumers.
Smart Contract /Distributed Ledger	Airline operators, travel agencies and agents can perform real-time transactions using smart contracts. Features such as mileage points, instant billing, and transparency can make these contracts advantageous for consumers, manufacturers and agents. It can be assumed that these technologies, which can take place in the tourism sector in terms of reducing costs and increasing profitability.	Although it provides an innovative approach, new technologies can be introduced to replace smart contracts. In case of restriction or prohibition in digital currencies, their use shall be invalid.

6. Conclusion

It is inevitable that digital communication networks, bitcoin and blockchain technologies, that will change the ways of communication between producer and consumer, will have effects in the transformation of tourism industries as in many industries. Industry 4.0 revolution and technological developments create trends in digitalization in all sectors. Considering the influences of factors such as currencies, systems and payment methods used in these changes, which are also felt in terms of economy and tourism economy, it is important to find the most sustainable model for the sector and the consumer.

Bitcoin, such as crypto currencies and distributed ledger in the industry with the presence of effects in the tourism sector will show the effects. For hotels, airlines, travel agencies and other tourism enterprises operating in the tourism sector, they can take advantage of these innovative applications to improve the quality of products and services, to accelerate their processes and to reduce costs. In terms of tourism enterprises, the service-oriented sector; will be able to provide advantages such as money transfers, speed, 24 hour trading. On the other hand, since these currencies which are not managed by a center directly affect the monetary policy of governments, the legal regulations to be made in these units also concern the enterprises which will prefer or will use these units.

The use of crypto currencies such as Bitcoin in international tourism and addressing the customer profile adopting technology-intensive and innovations will be beneficial for the tourism sector. There are many sub-sectors operating in the tourism sector. When this whole sector is considered, it is a fact that it can affect many areas in the tourism sector. In terms of the financial arrangements and economic policies of the states, crypto currencies may be completely released or stored at the institutional level. It is also a matter of debate whether tourism enterprises currently using standard currencies can adapt to this change.

Considering that international hotels, agencies and airlines involved in the tourism system are using a single currency, these currencies may be advantageous. In this respect, it may take some time for the tourism enterprises included in this system to be included in a single system, and it is not yet clear how the tax policies of the states will be. A tourist traveling abroad must first convert the money of his/her own country into the currency of the destination country and by using a digital currency such as bitcoin, it would be a great advantage to have a common currency in the international and international arena especially in the tourism sector.

Looking at the new models of smart phones, we see that it has started to have bitcoin supported wallets. The use of such a currency can be an advantage when considering mobile applications, digital marketing and smart tourism applications. The purpose of establishing a digital money system in tourism may be to solve problems related to external payments. In this context, as the payment difficulties in the sector are solved, it is discussed, for example, to attract more foreign tourists, as well as how crypto currencies can contribute to the national economy. Credit card commission, ATM, such as withdrawing money from the difficulties of this money system; its use and acceptability in the tourism sector can be examined empirically in subsequent studies. In the academic sense, it is recommended to perform more in-depth and empirical studies on the table that presented in this study. In this sense, different studies can be done in order to reveal the transformation in tourism with new technologies.

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