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BLOCKCHAIN AS A TOOL FOR DIGITALIZATION OF THE ECONOMY

БЛОКЧЕЙН КАК ИНСТРУМЕНТ ЦИФРОВИЗАЦИИ ЭКОНОМИКИ

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ABSTRACT

BLOCKCHAIN, CRYPTOCURRENCY, TOKEN, DIGITALIZATION OF THE ECONOMY

Many scientists tend to place high hopes on digital technologies, believing that their implementation will lead to economic growth. The United States and China, which are considered the informal leaders of the "digital" race, were the first to declare a course towards "digitalization". The EU countries, Australia, Canada and others have adopted the corresponding strategies and programs. The world does not fully understands what the "digital economy" is and what consequences it will lead to. Many people often understand this as new forms of payments and communication with consumers, but not new forms of management and economic relations.

The term "digital economy" has emerged relatively recently but has already become widely used. Fundamental economic theory lags behind practice. There is no common understanding of such a phenomenon as the "digital economy" globally, but there are many definitions.

Blockchain technology was created in 2008 by Satoshi Nakamoto. It was he who came up with the idea to store encrypted data not in one place but in a sequential chain of blocks.

The blockchain system (register of transaction blocks) is built on the basis of specified algorithms in a distributed decentralized information system that uses cryptographic methods to protect information and a sequence of blocks with information about operations performed in such a system. Each of these blocks

stores information about the previous block, and so on down the chain to infinity. All this data does not have a single owner – it is stored on different computers.

The entire global blockchain system is divided into 3 large classes:

1. Classic blockchain and its decentralized payment systems, such as bitcoin and other cryptocurrencies. Everyone can access them, and the entire community is the administrator.

2. The services of the blockchain. The services provide public blockchain services, but they are registered in any jurisdiction and have an account in the local currency.

3. A private blockchain created by organizations to reduce IT costs and speed up transaction registration.

Advantages of the blockchain:

1. Security. In traditional electronic storage systems, all data is processed on a single server – this is the main information center, the brain, and if it is hacked, all information will be available or lost. The whole point of the blockchain is that there is no single center, and each block stores information about the previous one.

2. Immutability. The user can make changes to the same single center when hacking. Data stored in the blockchain cannot be changed or forged. Even if someone hacks and replaces the information in one of the blocks, it will not go further because the other blocks are also encrypted.

3. Openness and transparency. The data is unknown to anyone, but at the same time, everyone can view it if they want.

4. The possibility to send amounts without intermediaries. Using the blockchain, the user can send small transfers without the commission charged by the intermediary. The scheme is simple: rubles or dollars are transferred to cryptocurrency, a percentage is taken, and the recipient transfers them back to conventional money.

5. Speed of operations. The blockchain system automatically performs calculations – creates a request, checks whether there are enough funds in the account, debits money, and more. Accordingly, the time of transactions is reduced, the user does not need to spend resources on documentation, paperwork, etc.

Disadvantages of blockchain:

1. Tokens (digital shares) – a record in the blockchain or other distributed information system that certifies that the token owner has rights to civil rights objects and\or is a cryptocurrency. In most cases, tokens are bought and sold illegally. The legal status of blockchain technology is still being formed.

2. Unlike standard payment systems, the blockchain currently cannot perform the same number of transactions in a short time. If the former process is capable

of about 45 thousand transactions in one second, the capacity of the bitcoin is only about 7 at the same time.

As a result of this work, we can draw the following conclusions:

First, the possibilities of blockchain promise significant changes in the digitalization of the economy.

Secondly, the use of blockchain is just beginning, but even a few successful cases give hope that this technology will be widely used in the near future.

Third, the blockchain will be useful for confirming transactions that occur remotely, verifying the authenticity of transactions, controlling the supply chain, and other actions. Thanks to blockchain technology, processes in this network become transparent.