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PECULIARITIES OF USAGE DISTRIBUTED LEDGER TECHNOLOGY IN RUSSIA

Abstract*: the article is devoted to the study of the blockchain economy in the modern world, in particular their features of use. The study is based on statistical data from all over the world, and data on Russia are considered separately. The conclusions made in this paper, which reflect the General laws of the functioning of the blockchain, can find practical application in solving the problems of network effects in some sectors of the economy.*

Keywords*: blockchain, digital economy, Russia.*

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ОСОБЕННОСТИ ИСПОЛЬЗОВАНИЯ ТЕХНОЛОГИЙ РАСПРЕДЕЛЁННОГО РЕЕСТРА В РОССИИ

***Аннотация**: статья посвящена изучению блокчейн экономики в современном мире, в частности рассматриваются ее особенности использования. Данное исследование опирается на статистическую базу всего мира, статистические данные России рассматриваются отдельно. Сформулированный в работе вывод, отражающий основные законы функционирования блокчейна, может найти свое применение в решении проблем сетевого эффекта в некоторых областях экономики.*

***Ключевые слова**: блокчейн, цифровая экономика, Россия.*

The main breakthrough of blockchain technology occurred in 2009 and was directly related to the appearance of the bitcoin cryptocurrency. Despite the fact that 11 years have passed since then, it is already becoming clear in the blockchain technology that it will transform economic processes and is the engine of progress, including banking, the financial sector, and public administration.

At the moment the blockchain has a high probability of qualitatively modernizing the financial sector of the economy [2, p. 487]. Today, blockchain technology has a great opportunity to change the financial sector. According to the IBM C-Suite Study, more than 30% of companies that conduct experiments and are able to implement blockchain in are related to the financial field. The use of a decentralized distributed registry in General practice will affect the activities of retail banks, banks servцуing large clients, investment banks, brokerage firms, payment networks, systems, etc.

Distributed Ledger Technology (DLT) leads to a break in the traditional Russian market economy. Great responsibility relies on the state, which must adjust the development vectors in connection with the demands of the network economy. Russia has many achievements in the field of blockchain technologies. In the study of Laboratory blockchain the largest Russian Bank which is called Sberbank, repurchase agreement could automate transactions using smart contracts, electronic signatures, reduce the number of mistakes, increase the speed of accounting, auditing, and data validation. In the field of mortgage – create accounting and movement of electronic mortgage in a decentralized Depository network. In addition, Sberbank managed to create letter of

credit transactions with blockchain coverage and create a decentralized system of electronic Bank guarantees. According to experts, in Russia, blockchain technologies will be in demand in the public sector to prevent corruption and improve management decisions, which is ensured by the impossibility of changing the entered data.

The main barriers to the introduction of technology in Russia can be divided into technological and socio-economic ones [1, p. 1277].

Technological barriers include:

– slow throughput (currently, the blockchain is able to perform up to 7 transactions per second, while the Visa payment system is up to 2000);

– the size of the bandwidth (there is a certain limit on the number of processed transactions, which makes it impossible to process a large amount of data); and others.

The socio-economic barriers to the introduction of technology in Russia include:

– the need to introduce scientific developments in the field of blockchain, which require large financial expenditures, most often spent irrationally due to the abstraction of research;

– the need to train and train new specialists in higher education in this field;

– the possibility of social upheaval due to a radical shift from traditional forms and methods of human economic activity, which may arise due to the widespread introduction of blockchain. According to the Russian authorities, the blockchain is an ideal tool for certifying patents, trademarks, brands, and inventions, as it has a secure encryption Protocol with almost zero probability of hacking.

At the moment there are about 50 companies in Russia where the word «blockchain» is present in the name. According to mass media analysis, about 300 companies are present in the blockchain technology market. The list of services provided by these companies is diverse: from additional education to work in the field of biological technologies.

Most recently, in mid-2017, the Exonum platform became available in Russia. The main goal is to help private and public companies create secure blockchain services. Alfa-Bank and S7 Airlines announced the joint launch of a blockchain platform for faster trading operations, including the sale of air tickets. This system is based on

the Ethereum Protocol. In mid-autumn, MegaFon, one of the mobile operators in Russia, made an announcement about the placement of bonds (securities) for 500 million rubles, the calculations for which were made using blockchain. For Russia, this event has become one of the key ones in exploring new blockchain opportunities. To protect the invention, it is necessary to encode it in a distributed registry with the assignment of a hash with a date and time signature, and not to register a trademark or patent, as it was previously.

Cryptocurrencies based on the blockchain, and the blockchain itself currently does not have a clear legal framework. Currently, users themselves are responsible for financial transactions, and these actions are not regulated by law. It is important to understand what to regulate and how; at the moment this technology has not been fully studied and used. Any regulation restricts the freedom of business activity, which in certain situations can be justified, for example, in preventing monopolies [3, p. 540]. Since cryptocurrencies based on blockchain can displace the national currency issued by the state, the Government tries to prevent such situations in the country's financial system. Excessive legislative regulation of the high-tech industry can lead to such phenomena as cryptanarchism, the use of cryptocurrency for illegal transactions, and «laundering dirty» transactions, as was the case in Silkroad, including anonymity technology. Thus, the scope of application of blockchain technologies in Russia needs to be improved, but at this stage, progress is visible.

References

1. Arner D.W. The evolution of Fintech: A new post-crisis paradigm / D.W. Arner, J. Barberi, R.P. Buckley // SSRN Electronic Journal, 2016. – Vol. 47. – №4. – P. 1271–1319.

2. Benjaafar S. Peer-to-peer product sharing: Implications for ownership, usage, and social welfare in the sharing economy / S. Benjaafar [et al.] // Management Science, 2018. – Vol. 65. – №2. – P. 477–493.

3. Gomber P. Digital Finance and FinTech: current research and future research directions / P. Gomber, J.A. Koch, M. Siering // Journal of Business Economics, 2017. – Vol. 87. – №5. – P. 537–580.