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Improving migration policy mechanisms using blockchain technologies

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Abstract. The study examines the peculiarities of the impact of migration processes on the socio-economic development of the Russian Federation and current security issues. The authors analyzed contemporary approaches to improvement of the migration policy of the Russian Federation. The authors evaluated the possible advantages of using blockchain technologies in migration regulation mechanisms, including their implementation into the perspective system of a single digital profile of a foreign citizen. The authors conclude that this initiative has the potential to provide significant economic returns, anti-corruption effect and, thus, could increase the level of national security of the country.

Keywords: migration, labor market, labor relations, digital profile

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Совершенствование механизмов миграционной политики путем применения технологий блокчейн

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Аннотация. Рассмотрены особенности влияния миграционных процессов на социально-экономическое развитие Российской Федерации и актуальные проблемы безопасности. Проанализированы современные подходы к совершенствованию миграционной политики РФ. Рассмотрены возможности применения технологий блокчейн в механизмах миграционного регулирования, в т.ч. их внедрение в систему разрабатываемого единого цифрового профиля иностранного гражданина. Авторами сделаны выводы о том, что данная инициатива потенциально способна обеспечить значительную экономическую отдачу, противодействие коррупции и, таким образом, может повысить уровень национальной безопасности страны.

Ключевые слова: миграция, рынок труда, трудовые отношения, цифровой профиль

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Introduction

Currently, the Russian Federation is undergoing a number of significant changes in both domestic and foreign policy. These changes affect different spheres of public relations, having the potential for systemic transformations. Contemporary reality actualizes the issues of further development of the social sphere, including education, the formation of labor relations, and the improvement of the cultural sphere in the current migration situation.

Migration processes have an impact on the economic development of both individual subjects (including “new” regions) and the entire country; they affect the level of security of the population. Therefore, external migration creates an additional burden on the social institutions of the state. In addition, the existing migration legislation does not fully meet the modern needs of the Russian economy and the specifics of its labor market. The current regulation of migration processes

in the Russian Federation is primarily aimed at detecting and preventing violations by foreign specialists involved, without considering the needs of the country's economy and labor market [1–3].

Prospects for blockchain in the migration policy of the Russian Federation

In recent years, there has been an increased formation of migration flows to the territory of the Russian Federation from the countries of the Central Asian region, while their tendency to increase remains. This category of attracted labor is of less interest to potential employers since incoming foreign workers mostly do not meet the required qualifications to work in a particular organization. At the same time, Russian and foreign companies (operating in the Russian Federation) face an acute shortage in their industry of both highly qualified specialists and ordinary representatives of the working class.

Assessing the state of the labor market in the Russian Federation in 2024, it is worth noting the fact that the “labor buyer’s market”, which has existed for many decades, began to turn into a “labor seller’s market”. The acute shortage of workers leads to the fact that the employer’s requirements for candidates starting their career have begun to decrease significantly. In addition, special attention is being paid to already working specialists, since it becomes more profitable for an employer to retrain an employee of middle or even pre-retirement age. The trend when the employer chose the employee is replaced by the trend when the employee chooses the employer.

Noting the difficult demographic situation in the country, the President of the Russian Federation stressed the impact of the situation that developed in the 1990s, when the country had a fertility gap that has not yet been overcome, as the number of births continues to decline. Despite the goal of increasing the birth rate to further break out of the “demographic trap”, the country’s economy and social sphere are already in need of labor resources. In addition, there was a growing need for a large number of labor resources to implement the planned plans for the development of Siberia and the Far East, as well as the “new” regions of the Russian Federation.

When considering ways to resolve the situation, it is worth paying attention to the opinion of the head of the Central Bank of the Russian Federation, E.S. Nabiullina, who believes that the personnel shortage in the Russian labor market can be reduced by attracting qualified workers from abroad. The head of the Central Bank also notes that to increase labor productivity, Russian enterprises are actively investing in production automation and continue to raise salaries for employees¹. On the issue of wage growth, it is emphasized that it should be commensurate with the increase in labor productivity to prevent the risk of increased inflation.

¹ The head of the central bank stood up for migrants. *Krasnaya Vesna*. 14.09.2024. URL: <https://rossaprimavera.ru/news/1653d29f> (accessed: 10.10.2024).

In turn, it is also worth paying attention to the position of law enforcement agencies that consider the migration situation from the point of view of national security, rather than economics. So, at the session of the St. Petersburg International Legal Forum in June 2024, Chairman of the Investigative Committee of the Russian Federation A.I. Bastrykin stressed the need to increase the activity of deputies of the State Duma for the adoption of new laws, pointing to the situation of “social tension”².

The category of foreign workers attracted today covers only a small part of the sectors of the economy in need of labor, creating an additional burden on the social sphere. Foreign workers arriving in the Russian Federation often bring with them family members, including minor children. According to article 78 of the Federal Law “On Education in the Russian Federation”, children of foreign citizens have the same rights as Russian citizens to receive preschool, primary, basic and secondary general education on a free and publicly accessible basis. Despite the high number of socialization factors at all stages, children of foreign citizens often experience difficulties in mastering educational programs in Russian, do not know Russian or do not even want to learn it. The situation that develops in this case often leads to a decrease in the academic performance of all students in the class.

The current processes of external migration require revision, since, partially solving the issues of the economic sector, they create the need to increase state control in other areas, which often turns out to be associated with even greater costs. Existing and rapidly developing modern technologies can become one of the key solutions in the organization of effective migration control.

Thus, by Decree of the Government of the Russian Federation No. 30-r dated January 16, 2024, an action plan was approved for the implementation of the concept of the state migration policy of the Russian Federation in 2024–2025, according to which a significant number of measures involving the introduction of digital innovations into the migration control system are envisaged. One of these events will be the creation of a digital profile of a foreign citizen.

The digital profile being developed will contain information about the legal status of a foreign citizen who has arrived in the Russian Federation, his biometric data, information about his place of residence and work. In addition, it is assumed that foreign citizens using a digital profile will be able to enter employment relationships with employers, confirm their level of education, make tax and other payments.

Due to the wide range of services provided that affect the economic and social development of the country, it is necessary to ensure a high degree of security of the service being developed. To date, blockchain technology has demonstrated the effectiveness and reliability of its application in a digital environment. The peculiarity of this algorithm is that the blockchain is a distributed and decentralized database

² Alexander Bastrykin: Migrants have become one of the factors of social tension in the World and Russia. *Interfax*. 11.04.2023. URL: <https://www.interfax.ru/russia/895287> (accessed: 10.10.2024).

formed by participants, in which it is impossible to falsify data due to chronological recording and public confirmation of transactions by all participants in the network. The main and main feature of the blockchain is the use of mathematical calculation algorithms, and the exclusion of the “human” and the human factor when making decisions by the system [4–10].

As part of the development of a digital profile of a foreign citizen, this technology may be more effective with respect to centralized data storage. The blockchain assumes the possibility of storing files in a P2P network, that is, information is stored by several users at the same time. In existing centralized systems, all data is stored in one place, which creates the risk of loss in case of hacking, technical and other problems. Connecting customs checkpoints to the blockchain system while regulating the digital profile of a foreign citizen will increase the reliability and continuity of the service, as it reduces the risk of data loss. In addition, the technology will allow you to track all the paths that the file goes through, thus combining information about where and when the work was done with the data of the owner of the digital profile.

A single digital profile of a foreign citizen will also involve storing information about the education of its owner. Making incorrect changes to the information will become impossible if:

- securing the possibility of making changes to the data for certain departments;
- the use of blockchain technology in the operation of the service.

Compliance with only two of these factors will increase the level of security of the digital profile since information about all changes will be stored in a decentralized system with a record of information about all previously made adjustments.

The regulation of property relations by blockchain mechanisms can also have a beneficial effect on the work of a foreign citizen’s digital profile being developed. The use of technology will involve combining all transaction data in relation to property objects, which can contribute to further effective resolution of disagreements regarding the object in a short time. In addition, the use of blockchain in this area can further reduce the level of concern of foreign citizens when conducting property transactions, since in the event of unforeseen situations involving proceedings, accessing the blockchain registry (which guarantees transparency and the impossibility of data falsification) will contribute to a legitimate resolution of the issue.

According to Article 10 of the Civil Procedure Code of the Russian Federation No. 138-FZ: “Court decisions are announced publicly, except in cases where such announcement of decisions affects the rights and legitimate interests of minors; contains information constituting a state secret, as well as other cases provided for by federal law”³. In other words, all solutions, if necessary, can be found in the public domain, including on the Internet. The introduction of blockchain technology

³ “Civil Procedure Code of the Russian Federation” dated 14.11.2002 N 138-FZ (as amended on 26.10.2024).

into the registry of information will make it impossible to make incorrect changes, regardless of the statute of limitations of the decision. The use of technology with the introduction of information data into a digital profile on bringing to justice for committing offenses may influence further decisions regarding the presence of a foreigner in a particular country.

Conclusion

It is worth noting that blockchain technology is beginning to be actively used in the economic and financial practice of our country and is becoming the subject of discussion at the level of the State Duma, the Government of the Russian Federation, and the Central Bank of Russia. Blockchain technology has several advantages and prospects for effective application, which can make a significant contribution to the process of introducing digital innovations into the system of not only the financial sector, but also migration control. Thus, blockchain technologies can be included in the regulatory system of the developed unified digital profile of a foreign citizen, which will potentially provide significant economic returns, anti-corruption and, most importantly, can increase the level of national security of the country.

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