Opportunities and challenges in preserving intellectual and human capital: strategies for readiness in a complex socio-economic context

Oportunidades y desafíos en la preservación del capital intelectual y humano: estrategias para la preparación en un contexto socioeconómico complejo

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ABSTRACT

The study aims to develop measures to reduce the outflow (migration) of young people and improve human capital in the face of global complex socio-economic landscape. The paper determines strategic priorities for state regulation of youth migration processes. It is concluded that instruments for regulating youth migration and preserving intellectual and human resource potential should be directed toward reducing the level of positive migration aspirations among student and apprentice youth, ensuring employment and effective remuneration of labor. The system of preventive public policy instruments for managing youth migration includes efforts to increase employment, develop the micro and small business sector, raise the level of readiness of migrant youth to re-emigrate, enhance the competitiveness of the educational sector, and create international projects to develop human capital. Additionally, the study advocates for improving the competitiveness of the educational sector and fostering international projects that contribute to human capital development.

Keywords: Migration Processes; State Policy; State Regulation; State Policy Instruments.

RESUMEN

El estudio tiene como objetivo desarrollar medidas para reducir la salida (migración) de jóvenes y mejorar el capital humano frente al contexto global complejo. El documento determina prioridades estratégicas para la regulación estatal de los procesos migratorios de jóvenes. Se concluye que los instrumentos para regular la migración juvenil y preservar el potencial intelectual y de recursos humanos de Rusia deben estar dirigidos a reducir el nivel de aspiraciones migratorias positivas entre los jóvenes estudiantes y aprendices, asegurando el empleo y la remuneración efectiva del trabajo. El sistema de instrumentos de política pública preventiva para la gestión de la migración juvenil incluye esfuerzos para aumentar el empleo, desarrollar el sector de micro y pequeñas empresas, elevar el nivel de preparación de los jóvenes
migrantes para volver a emigrar, mejorar la competitividad del sector educativo y crear proyectos internacionales. para desarrollar el capital humano.

**Palabras claves:** Procesos Migratorios; Política de Estado; Regulación Estatal; Instrumentos de Política de Estado.

1. **INTRODUCCIÓN**

Migration processes, in particular intellectual, labor, and permanent migration of young people, threaten the sustainable development of the donor country. This not only deepens socio-demographic imbalances (decrease in demographic and labor potential, depopulation of settlements, devaluation of education, disappearance of the middle class) but also threatens state security because of the loss of resources (financial, investment, intellectual, human, innovation, and technology) (The first network educational Russian-Kazakh campus in the field of chemical industry opened in Kazakhstan, 2023).

The globalization of the world economy and the integration processes brought about by it expand prospects for the realization and development of the potential of the economically active population, in particular young people, and provide opportunities for virtual employment, free choice of place of work, and education in almost any region or country in the world. The intensification of spatial mobility of young people, labor migration processes in highly qualified personnel, and intellectual migration are also determined by the arisen global docio-economic problems and challenges (Zharov et al., 2022).

The issue of brain drain is a phenomenon observed in all countries across the globe with varying intensity. Today, however, it is becoming a particularly acute issue for Russia, because the current political situation and legal restrictions imposed cause considerable migration of young people, resulting in the weakening of the intellectual and personnel security of the state (Mindeli et al., 2018). In particular, significant migration of highly qualified personnel entails a deficit in the workforce and thereby creates a staff vacuum and gradual regression of society (Baranenkova, 2020; Erkinbekov et al., 2023). Thus, the migration of highly qualified workers and youth as the most creative stratum of the economically active population affects the country’s innovative and technological development.

Furthermore, the intensification of migration of highly qualified personnel results in the reduction of tax revenues (Maksimova, 2019), a decline in the innovative component of the competitiveness of the Russian economy (Grebeniuk, 2017), the loss of entrepreneurial potential, and the spread of non-economic losses (affecting the demographic and socio-psychological effects on the population and the deflation of values, customs, and cultural and historical heritage) (Makhinova, Kusov, 2016).

The need to activate and perfect the tools of public administration of youth migration comes from the need to preserve and efficiently realize human resources. The formation of an efficient policy for regulating youth migration remains a problem, whose solution is vital to ensure Russia's economic progress and necessitates the substantiation of adequate mechanisms, tools, and measures to manage migration processes.

2. **LITERATURE REVIEW**

In scientific discourse, the problems of creating and implementing state migration policy concerning youth are addressed in studies that indicate that the efficiency of public policy on youth migration is largely defined by the applied system of instruments (Kuzubova et al., 2022; Rybak et al., 2023), the formation of which relies on the latest theoretical and methodological basis of public administration in the analyzed sphere (Vysheslavova et al., 2022). These studies highlight the multifaceted nature of the current socio-
economic context, emphasizing both opportunities and challenges for countries. While instability is one aspect, it is crucial to recognize the broader complexities that require preparedness and strategic measures.

Riazantsev et al. (2017) emphasize that migration risks affect all components of the country’s economic security with subsequent projections onto the parameters of national security. L.Iu. Ivanova (2013) presents a multi-level classification of the dangers of unregulated migration, specifying the levels of the migrant, the country of origin, the country of destination, and the country of transit. In this, the level of the individual is defined as the most important, which is reasonable in the aspect of direct influence of threats to the lives and health of migrants (getting into the system of human trafficking, insecurity of labor and other rights, difficult working conditions (Sekerin et al., 2022), lack of safety regulations, insufficient social and medical care (Sergeeva et al., 2022), xenophobic attitudes of the local native population). N.D. Kochetkova argues (2018) that the rise of migration threats has a destructive impact on internal stability, the state of the economy, and public and internal security (Degtev et al., 2022).

Among threats to the national and economic security of the donor country, studies list the transition of labor (even short- and medium-term) migration into a non-return form (demographic security) and the development of labor shortages (production and macroeconomic security) (Gontmakher, 2013), as well as the decreasing share of highly qualified specialists (production and scientific and technological security) (Beck, 2013). In addition to that, the outflow of human resources affects the development and structural characteristics of the labor market, including changes in the age, professional, educational, and qualification structure of the workforce, increased competition for specialists (Chen, Fang, 2013), increasing territorial dispersion of the places of employment and residence in conditions of low social mobility and its underdeveloped infrastructure, and the accumulation of disproportions between the centers of income and taxes paid (Goschin, 2014).

A study by P. Guha (2014) differentiates between the real and hypothetical dangers of migration in terms of international politics and domestic politics. Concerning the focus of our study, as particularly important internal political consequences for the economic security of the state researchers emphasize social security and the sphere of culture and identity, which primarily relate to the weakening of the labor potential of the donor country, and the loss of the best specialists.

K.S. Imai et al. (2014) note that negative consequences for the country donating human resources are typically more global than a simple reduction of the labor resource, especially when this outflow is associated with the mass-scale departure of young people, young scientific and technical workers with a high level of professional qualification (Stryabkova et al., 2021). These trends cause a decrease in the level of innovative development (Kolganov et al., 2022), demographic gaps (lack of a layer of people of a certain age group in the country), aging of the labor supply, and a lack of specialized professionals (Ravochkin et al., 2022).

Considering this comprehensive body of literature, it becomes evident that addressing the opportunities and challenges of migration in the complex context requires the implementation of strategic policies and measures. By understanding the various dimensions of the issue, countries can better prepare themselves to harness the potential benefits of migration while safeguarding their intellectual and human capital.

The purpose of the present study is to develop measures to reduce the outflow (migration) of youth and develop human capital in the context of global socio-economic problems.

3. METHODS

Due to the novelty of the phenomenon studied and the exploratory nature of the established research goal, the qualitative approach to research is adopted.
The paper attempts to answer the following research questions:

(1) What are the main strategic priorities of state regulation of migration processes in youth?

(2) What are the possible instruments for regulating youth migration to preserve Russia's human resource potential?

To achieve the study goal, we determined an approximate set of theoretical and empirical research methods:

- theoretical generalization in substantiating the advantages of self-education of future specialists in the conditions of additional education;

- structural-logical analysis and synthesis in establishing the structure of students' self-educational competence.

According to the purpose of the study, in the first stage of the research we selected scientific sources via the Russian Scientific Citation Database (RSCI), as well as international databases Web of Science and Scopus, using the keywords "migration", "youth migration", "state regulation of migration processes", "migration", "youth migration", and "migration processes" with the date of publication limited to no more than 10 years ago.

The second stage of the study was an expert survey. E-mails with a request to participate in the survey were forwarded to 49 experts from Russia. The sampling criterion for the pool of experts was the presence of at least three articles on the problem under study published by peer-reviewed journals. A total of 43 people agreed to take part in the survey, after which they were sent emails with the research questions (1-2). The letters also asked for a free-form justification of the answers. All participants in the survey were informed about the purpose of the survey and our intention to publish its results in a summarized form.

After the collection of the experts' responses, a follow-up letter was sent asking them to rank in order of importance the strategic priorities of state regulation of youth migration processes obtained during the study by giving them points on a nominal scale. After this, the rank of each parameter was determined according to the scores assigned by the experts.

For the sake of objective analysis of the data obtained in the expert survey, the consistency of expert opinions was tested using Kendall's concordance coefficient (W). Further, the information obtained in the survey was processed to determine the weights of the strategic priorities and subsequently calculate the arithmetic average of the individual weights for each of the strategic priorities. The final values of the weights determine the importance of a particular strategic priority according to the pool of experts.

4. RESULTS AND DISCUSSION

The findings of the expert survey revealed strategic priorities for state regulation of youth migration processes in the complex socio-economic context. The experts ranked the identified priorities based on their importance, providing valuable insights for policy development. The results indicated four key strategic priorities with varying degrees of significance (Table 1).


Table 1: Strategic priorities of state regulation of migration processes among youth

<table>
<thead>
<tr>
<th>№</th>
<th>Priority areas of state policy</th>
<th>Rank</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Improvement of employment policies and creation of new jobs</td>
<td>1</td>
<td>0.43</td>
</tr>
<tr>
<td>2</td>
<td>Development of the micro and small business sector</td>
<td>2</td>
<td>0.32</td>
</tr>
<tr>
<td>3</td>
<td>Increasing the level of young people's readiness for reverse migration</td>
<td>3</td>
<td>0.18</td>
</tr>
<tr>
<td>4</td>
<td>Improvement of the competitiveness of the educational sphere</td>
<td>4</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Note: compiled based on the expert survey; the value of the concordance coefficient $W = 0.75$ ($p < 0.01$), indicating a strong agreement of expert opinions.

The conducted literature review and expert survey indicate that the key tools to regulate youth migration to preserve Russia’s personnel potential include institutional and organizational instruments (introduction of a system of migration policy programming, improvement of the organizational system for regulating migration processes, monitoring of youth labor migration, intensification of activities for the preparation and implementation of joint interstate educational, research, and business projects) and economic instruments (stimulation of the economic activity of young people, reform of the wage system, balancing of the labor market, creation of high-paying jobs, technological modernization of industry). For a more precise understanding of the expediency of application in practice, we will explain each of the proposed directions in more detail.

In the direction of "Improvement of employment policies and creation of new jobs", the experts list the following economic tools of state policy, which are associated with promoting opportunities for relatively stable and quality employment of young people in Russia:

- creation of conditions for the legalization of sectoral labor markets with a high level of informal employment, which will increase the level of social protection for young people and create the basis for stable employment;

- support of the practices of remote, mobile, part-time, borrowed, and other non-standard forms of official legal employment, as well as the development of the intermediary sector in the labor market to find jobs and provide employment for potential migrants among young people;

- development of the creative industries sector to create new jobs for young people and ensure decent wages for highly skilled personnel, which is consistent with the conclusions of A.V. Ruchin (2014).

For the improvement of state employment policy to curb migration processes among young people, the following organizational tools should be implemented:

- provision of advantages to business entities that participate in, actively support, and develop a system of social dialogue and partnership in the implementation of infrastructure projects in the form of public-private partnerships;

- initiating the practice of developing and implementing local employment programs, establishing a system of monitoring and forecasting trends in the functioning and development of local labor markets, which is consistent with the findings of T.A. Baranenkova (2020);

- implementing measures to engage potential labor migrants regarding the benefits, opportunities, and sources for the formation and use of resources to encourage them to abandon departure in favor of opening their own business and self-employment opportunities as a form of occupational activity.

In the direction of "Development of the micro- and small business sector", the state policy toolkit provides for the elimination of institutional barriers to starting a business and improvement of the support infrastructure and resources for entrepreneurial activity. We agree with other researchers that it is
necessary to develop a program of "turnkey businesses" (identification of sites and premises, preparing a feasibility study, development of business processes map for the implementation of the entrepreneurial project) for their further transfer (on a competitive basis) to potential entrepreneurs from among young people ready to invest their own money in the project. It is worth mentioning the importance of conducting systematic expert surveys of young people about their interests, which corresponds to the results of Zh.S. Toleuov (2020).

We concur with both the experts and other researchers (Kiseleva et al., 2023a; 2023b) that the implementation of programs to improve the availability of financial and credit resources (delayed payment of interest and the loan body, surety, etc.) for micro- and small businesses and the creation of urban venture funds for investing in creative and innovative and technological business projects and micro- and small business startups can be considered optimal measures to stimulate the development of the business environment in Russia.

The introduction of special state grant programs to support entrepreneurship among young people, the development of inclusive and social, as well as academic entrepreneurship and entrepreneurship within educational institutions will have a positive impact on business development in all regions of Russia (Turanin et al., 2022; Obolenskaya et al., 2022), thereby helping to revive the entrepreneurial environment and curb youth migration.

The direction of "Increasing the level of young people's readiness for reverse migration" requires an active state policy in terms of identifying and eliminating the causes and obstacles and building the psychological readiness to return among young labor and educational migrants, which calls for:

1) activation of the efforts of authorities to study the problematic aspects and popularize the practice of return and further implementation of the acquired experience, knowledge, and capital in the home country;

2) organizational and resource support for the work of organizations specializing in maintaining ties with the diaspora, implementing activities related to communication with emigrants, and the dissemination of information, including measures of re-emigration policy;

3) state funding for grant programs by public, educational, and research organizations to study the problematic aspects in the life and work of migrants, dissemination of information about their rights and opportunities, adaptation prospects, as well as return to the home country.

Contemporary conditions raise the value of the means of indirect stimulation of re-emigration among labor and educational migrants. The implementation of these measures will promote a positive image of Russia as a country that cares about its citizens abroad (Borisova, 2019). This work can be carried out by activating the activities of Russian diplomatic missions in the countries with the largest number of migrants from Russia in determining the conditions and issues of their stay, identifying the cases of rights violations, systematizing and generalizing such practices, and implementing measures to protect the rights and interests of Russian citizens abroad.

It is important to emphasize the role of active involvement of public organizations in state grant programs to support the operation of online platforms. These efforts will contribute to the popularization of Russia among Russian migrants and the dissemination of experience in addressing the problems of social and labor discrimination. An influential tool for facilitating the re-emigration of youth is the creation and maintenance of online platforms of regional directorates of Russia's Administration of Federal Migration Service designed to receive appeals from Russian citizens who emigrated to other countries regarding violations of their rights and interests abroad to provide them with professional legal consultation.
In the direction of "Improvement of the competitiveness of the educational sphere", minding the presence of migration trends among students, among the expedient priority instruments of government policy are:

- establishment of supervisory councils (representatives of the administration of educational institutions, employers, the educational sector, and local self-government), especially in institutions of higher technical education, as consultative and advisory bodies for quality control and development of educational institutions;

- monitoring of the quality of education, coordination of educational programs with the needs of the labor market and the efficiency of graduates’ employment, development and introduction of an education quality system;

- activation of work on the accumulation of proposals to form regional orders for the training of specialists in educational institutions (based on analyzing information on the state of the labor market, as well as the development of new industries and forms of employment) through the study of the condition and trends of development of the labor market and the construction of a system for forecasting its structural indicators;

- implementation of measures under the policy of development of educational institutions based on state-public partnership, the participation of universities in the global partnership of qualifications, and attraction of investors for the development of education, particularly technical training.

The target segment of young people who have positive migration intentions but are not yet prepared to implement them can be influenced through a proactive migration regulation policy (for instance, curbing educational emigration) (Mazin, 2018).

Russia needs substantial change in the system of state regulation of migration processes, particularly concerning accounting for the migration aspirations of youth. It is important to introduce a system for programming, monitoring, and controlling migration trends, improve institutional organizational interaction between subjects in the regulation of migration processes, and intensify work on the preparation and implementation of joint international educational, research, and business processes. An example could be the development of network campuses as an international project aimed at training qualified specialists. The first such project was developed in Almaty (Kazakhstan) for national enterprises of the chemical industry. The deployment of such tools will enhance the efficiency of state policy for the preservation of human resources, providing for the efficient training of specialists, on the one hand, and preventing the departure of young people to other countries, on the other, thereby supporting the preservation of Russia’s intellectual and personnel potential.

4. CONCLUSION

At present, Russia is experiencing a critical rise in the migration of youth, which entails the outflow of young people, a rise in the scale of intellectual migration, and a weakening of the state’s personnel security. The conducted empirical study suggests that the tools for regulating youth migration and preserving Russia’s intellectual and personnel potential need to be directed toward reducing the level of positive migration aspirations among student and apprentice youth and ensuring employment and effective remuneration of labor.

To effectively address the challenges in the complex socio-economic context, a range of organizational and economic instruments must be deployed within the system of preventive public policy for managing youth migration. These instruments encompass various key areas: improvement of the sphere of employment (support and development of the system of social dialogue and partnership, development of the intermediary sector in the labor market, creation of conditions for the legalization of sectoral labor
markets with a high level of informal employment, etc.), development of the micro- and small business sector (creation of consulting centers for the creation of business entities, implementation of programs to improve the availability of financial and credit resources for business entities, creation of urban venture funds, development of inclusive, social, and academic entrepreneurship, increasing the knowledge intensity of industry, etc.), increasing the level of young people's readiness for re-emigration (improvement of resource support for programs in developing ties with the diaspora, funding for grant programs to support research projects on improving the quality of life, labor, etc.), and improvement of the competitiveness of the educational sphere (establishment of supervisory councils under educational institutions as consultative and advisory bodies, introduction of education quality monitoring, creation of regional orders for the training of specialists in educational institutions, etc.).

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