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LABOUR AND EDUCATIONAL MIGRATION AND ITS IMPACT ON THE QUALITY OF HIGHER EDUCATION IN THE INNOVATION ECONOMY OF RUSSIA AND OTHER CIS COUNTRIES

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Abstract: *This paper focuses on the issue of quality management in higher education, which is rethought and solved in the special context of migration in Russia and other countries of the CIS. The article aims to determine the relationship between labour and educational migration and the quality of higher education in the innovation economy of Russia and other CIS countries. For this purpose, an econometric model of the impact of labour and educational migration on the quality of higher education in the innovation economy of Russia and other CIS countries has been compiled using regression analysis. Based on the model, it has been proved that labour and educational migration is determined by factors of quality of higher education and the labour market. The advantages of increasing the incoming flow of educational and labour migration for higher education in the innovation economy of Russia and other CIS countries have been substantiated: the increase in fees for the use of intellectual property objects and the number of patent applications. The authors' forecast has shown the prospects for an increase in the quality of higher education in the innovation economy of Russia and other CIS countries through the optimization of labour and educational migration. The main conclusion of the study is that during the Decade of Science and Technology in Russia and other CIS countries, the essence of labour and educational migration has transformed – participants with high human potential seeking to obtain higher education and take knowledge-intensive jobs have become predominant in the structure of the migration flow - and due to this, its influence on higher education has significantly increased in the innovation economy. The practical significance of the article lies in the fact that the proposed set of authors' recommendations will optimize migration flows and, thus, unleash the potential for the development of the quality of higher education in the innovation economy of Russia and other CIS countries in the Decade of Science and Technology.*

Keywords: *quality of higher education, innovation economy, labour migration, educational migration, russia, cis, decade of science and technology, universities, quality management.*

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1. Introduction

The Commonwealth of Independent States (CIS) is a socio-economic system that is unique from the point of view of migration, since three decades ago the movement among the territories of this system of human resources had an interpretation of internal migration. After the collapse of the Soviet Union, the close and strong ties of its former subjects have been preserved.

Good-neighbourly relations and geographical proximity, along with active processes of economic integration, have now led to the formation of the CIS as a macro region of the world economy with favourable conditions and ample opportunities for intraregional migration. This makes the CIS experience valuable and useful for the scientific study of migration processes, as well as requiring special attention to identify and take into account its specifics with scientific and methodological support for the development and implementation of migration policy in the CIS.

At the same time, over the past three decades of market reforms, the nature of migration processes in the CIS has changed. The state regulation is typical for the Soviet space has been replaced by the market free movement of migration flows in the internal space of the CIS in the absence of a general mechanism of supranational regulation at the level of this macroregion. This has opened up opportunities for independent management of migration processes at the level of the CIS states in accordance with their national socio-economic priorities.

In the CIS, labour and educational migration within this macroregion prevails and deserves the most attention from a scientific point of view. The problem lies in the uncertainty of the causal relationships between labour and educational migration from the higher education markets and the labour market in the CIS. This reduces the effectiveness of state regulation of migration

in Russia and other CIS countries. The existing literature does not allow solving the problem, as it reveals only certain aspects of labour and educational migration in Russia and other CIS countries, while a systemic vision of migration processes and their cause-and-effect relationships has not yet been formed, which acts as a gap in the literature.

This problem is the motivation for this study, which seeks to fill the identified gap in the literature and aims to determine the relationship between labour and educational migration and the quality of higher education in the innovation economy of Russia and other CIS countries. To achieve this purpose, the article pursues and consistently solves two tasks. The first task is related to modelling the impact of labour and educational migration on the quality of higher education in the innovation economy of Russia and other CIS countries. The second task is to identify the prospects for an increase in the quality of higher education in the innovation economy of Russia and other CIS countries through the optimization of labour and educational migration.

2. Literature Review

The fundamental basis of this research is the concept of quality management in higher education, the provisions of which are disclosed in the works of Dewi et al. (2021), Dyason (2022), Elayan et al. (2021), Fahrurrozi et al. (2021), Kamberi et al. (2020) and Pasic et al. (2022). The scientific foundations of the concept of labour and educational migration are laid in the works of Arisman and Jaya (2021), Daovisan et al. (2022), De Lima et al. (2020), Malamassam (2022), Semela and Cochrane (2019), Westerveen et al. (2022). The current stage of development of labour and educational migration in Russia and other CIS countries is specific in that it is carried out in the context of the Decade of Science and Technology (2022-2031), announced in Russia (President of the Russian Federation,

2023) and supported by other CIS countries. In the modern context, the priority of Russia and other CIS countries is the development of higher education and an innovation economy (Popkova and Sergi, 2023) with special attention to an increase in education quality. Therefore, it is advisable to regulate migration in Russia and other CIS countries in the current context in accordance with this priority. This raises the following two research questions (RQs).

RQ₁: What factors of the quality of higher education and the labour market determine labour and educational migration in Russia and other CIS countries? The existing literature concludes, based on the experience of the period preceding the Decade of Science and Technology, that the key factor of educational migration is the low cost of higher education (Chuikova et al., 2022; Gonnova et al., 2022; Gonnova and Razuvaeva, 2021; Ozdamli and Cavus, 2021). At the same time, employment opportunities for low-paid jobs with low requirements to the level of qualification are noted as the main factor of labour migration (Amrin et al., 2020; Kaliyeva et al., 2018; Seidu et al., 2022).

RQ₂: What are the implications of educational and labour migration for the quality of higher education in the innovation economy of Russia and other CIS countries? The existing literature states, based on the experience of the period preceding the Decade of Science and Technology, that the decline in the scientific activity of universities due to their reorientation to training and cultural adaptation of migrants acts as a consequence of the higher education market (Dianova et al., 2023; Krupnov et al., 2023; Matkovskaya et al., 2022). As a consequence for the labour market, existing scientific sources indicate a decrease in the innovative activity of business due to the influx of low-skilled personnel into low-paid jobs (Aldieri et al., 2020; Jumambayev et al., 2018; Turginbayeva et al., 2018).

Based on the above, we can state the fact that the individual answers presented in the existing literature are insufficient, and therefore the RQs posed in the article remain open, and the cause-and-effect relationships of labour and educational migration in Russia and other CIS countries are uncertain, which acts as a gap in the literature.

Relying on the works of Chen et al. (2020), Choi and Lim (2015), Kataev et al. (2022), Semela and Cochrane (2019), Zhou and Fang (2023), which note the active involvement of participants with high human potential in the processes of educational and labour migration against the background of the Fourth Industrial Revolution, this article puts forward the hypothesis H₁ that in the Decade of Science and Technology, the incoming migration flow (the number of immigrants) in Russia and other CIS countries increases with the strengthening of the reputation of universities (increase in the average score of top 3 in the THE World University Rankings), the creation of knowledge-intensive jobs (increase in readiness for frontier technologies index) and the reduction of inequality in education

Based on the works of Elahi et al. (2022), Kariuki et al. (2022), Labra et al. (2021), Marouf (2021), Obi et al. (2021), which indicate the benefits of migration for higher education in the innovation economy in the context of the Fourth Industrial Revolution, as well as against the background of the COVID-19 pandemic and crisis and in the post-pandemic period, the H₂ hypothesis is put forward that an increase in the incoming (influx of immigrants) and a restriction of the outgoing (reduction in the number of emigrants) migration flow in Russia and other CIS countries causes positive implications for higher education in the innovation economy associated with an increase in charges for the use of intellectual property, payments and with an increase in the number of patent applications, residents. To fill the gap and test the hypotheses put forward, this article studies in depth the relationship between labour and educational

migration and higher education in the innovation economy of Russia and other CIS countries, taking into account the latest experience of the beginning of the Decade of Science and Technology, and forecasts prospects for the entire period up to its end in 2031.

3. Materials and Method

The first task of this study is to model the impact of labour and educational migration on the quality of higher education in the innovation economy of Russia and other CIS countries. The task is solved using the regression analysis method. To find the answer to RQ₁, a factor analysis of labour and educational migration in Russia and other CIS countries is carried out, in which the impact of potential factors of the quality of higher education and the labour market on the incoming migration flow (immigrants according to the World population review (2023)) is analyzed:

- The Times Higher Education University Rankings: Average

- score of top 3 universities (worst 0-100 best) according to UN (2023);
- Readiness for frontier technologies index, total score according to UNCTAD (2023);
- Inequality in education, % according to UNDP (2023).

To find an answer to RQ₂, the authors conduct a regression analysis of the dependence of potential effects on the quality of education in the innovation economy – charges for the use of intellectual property, payments (BoP, million current US\$, World Bank, 2023a) and patent applications, residents (World Bank, 2023b) on the movement of migration flows in Russia and other CIS countries. The migration indicators are the incoming (immigrants) and outgoing (emigrants) migration flow according to the World population review (2023). The study is conducted according to data for the beginning of 2022 based on statistics from Table 1.

Table 1. Statistics of migration and higher education in the innovation economy of Russia and other CIS countries at the beginning of 2022

Country	Migration flows		Factors of higher education and the labour market in the innovation economy			Implications for the quality of education in the innovation economy	
	Incoming: immigrants, million people	Outgoing: emigrants, million people	THE Universities Ranking: Average score of top 3 universities (worst 0-100 best)	Readiness for frontier technologies index, total score	Inequality in education, %	Charges for the use of intellectual property, payments (BoP, million current US\$)	Patent applications, residents
	IMtm	EMtm	ur	ft	ie	IP	PA
Azerbaijan	0.2522	1.1639	16.45	0.30	3.6	28.18	90
Armenia	0.1903	0.9582	0	0.39	2.9	0.00	63
Belarus	1.0797	1.8971	16.45	0	2.8	248.66	317
Kazakhstan	3.7321	4.2039	16.45	0.50	3.2	231.45	803
Kyrgyzstan	0.1990	0.7744	0	0.25	3.4	6.55	63
Moldova	0.1044	1.1594	0	0.41	2.6	52.14	85
Russia	11.6369	10.7567	52.00	0.75	2.0	7022.91	23759
Tajikistan	0.2760	0.5869	0	0.13	6.0	0.04	1
Turkmenistan	0.1949	0.2426	0	0	2.9	0.00	44
Uzbekistan	1.1620	2.0278	0	0	0.6	79.59	356

* Due to the lack of statistics for 2021, data are given for 2020. n.a. – the data is not available in the source of official statistics.

Source: compiled by the authors based on the materials of UN (2023), UNCTAD (2023), UNDP (2023), World Bank (2023a), World Bank (2023b), World population review (2023).

The reliability of the regression equations is checked using correlation analysis and Fischer’s F-test. Taking into account the designations of the indicators introduced in Table 1, the research model of this article is written as follows:

$$\begin{cases} \text{IMtn} = a_1 + b_1 * \text{ur} + b_2 * \text{ft} + b_3 * \text{ie}, \\ \text{IP} = a_2 + b_4 * \text{IMtn} + b_5 * \text{EMtn}, \\ \text{PA} = a_3 + b_6 * \text{IMtn} + b_7 * \text{EMtn}. \end{cases} \quad (1)$$

According to the research model (1), the H₁ hypothesis is considered proved in the case of positive values of the regression coefficients for the factor variables ur and ft, as well as for a negative value of the regression coefficient for ie (that is, if all three of the following conditions are met simultaneously: b₁>0 and b₂>0 and b₃<0). The H₂ hypothesis is proved in the case of positive values of the regression coefficients for the factor variable IMtn and negative values of the regression coefficients for the factor variable EMtn (that is, if all four of the following conditions are met simultaneously: b₄>0 and b₅<0 and b₆>0 and b₇<0).

The second task of this study is to identify the prospects for the improvement of the quality of higher education in the innovation economy of Russia and other CIS countries through the optimization of labour and educational migration. To solve it, based on the research model (1), the authors’ forecast of the development of higher education and the labour market in the innovation economy is compiled (changes in charges for the use

$$\begin{cases} \text{IMtn} = 0.3908 + 0.1660 * \text{ur} + 2.8835 * \text{ft} - 0.3261 * \text{ie}, \\ \text{IP} = 109.0934 + 1113.8457 * \text{IMtn} - 605.4608 * \text{EMtn}, \\ \text{PA} = 443.1119 + 3906.9406 * \text{IMtn} - 2204.7143 * \text{EMtn}. \end{cases} \quad (2)$$

Model (2) indicates, firstly, that the incoming migration flow (the number of immigrants) in Russia and other CIS countries grows by 0.1660 million people with an increase in the THE University

of intellectual property, payments and patent applications, residents) under the influence of changes in migration through the management of factors of the quality of higher education and the labour market in the innovation economy in the Decade of Science and Technologies. Using the trend analysis method, the increase in the forecast values of indicators for 2031 is estimated compared to their base values in 2022.

4. Results

4.1. The model of the impact of labour and educational migration on the quality of higher education in the innovation economy of Russia and other CIS countries

As part of the solution of the first task of this study, in order to find the answer to RQ₁, a factor analysis of labour and educational migration in Russia and other CIS countries was carried out based on data from Table 1 using the regression analysis method. The analysis has revealed the influence of potential factors of the quality of higher education and the labour market on the incoming migration flow (immigrants). In order to find the answer to RQ₂, a regression analysis of the dependence of potential consequences for the quality of education in the innovation economy on the movement of migration flows in Russia and other CIS countries (immigrants) and (emigrants) was carried out. The obtained results are systematically reflected by the econometric model (2):

Rankings: Average score of top 3 universities by 1 point. The incoming migration flow (the number of immigrants) in Russia and other CIS countries grows by 2.8835 million people with an increase in the

readiness for frontier technologies index by 1 point. The incoming migration flow (the number of immigrants) in Russia and other CIS countries rises by 0.3261 million people with a decrease in inequality in education by 1%.

Since the regression coefficients for the factor variables ur and ft have taken positive values ($b_1=0.1660>0$ and $b_2=2.8835>0$), and the regression coefficient for ie has taken a negative value ($b_3=-0.3261<0$), the H_1 hypothesis has been confirmed. It has been proved that during the Decade of Science and Technology in Russia and other CIS countries, the incoming migration flow (the number of immigrants) increases as the reputation of universities strengthens (the average score of top 3 in the THE University Ranking increases), knowledge-intensive jobs are created (the readiness for frontier technologies index increases) and the inequality in education is reduced. This has provided a scientifically valid answer to RQ_1 .

Secondly, in Russia and other CIS countries, the amount of charges for the use of intellectual property, payments rises by 1113.8457 million current US\$ and the number of patent applications, residents grows by 605.4608 units with an increase in the incoming migration flow (the number of immigrants) by 1 million people. In Russia

and other CIS countries, the amount of charges for the use of intellectual property, payments reduces by 3906.9406 million current US\$, and the number of patent applications, residents reduces by 2204.7143 units with an increase in the outgoing migration flow (number of emigrants) by 1 million people.

Since regression coefficients for the factor variable $IMtn$ have taken positive values ($b_4=1113.8457>0$ and $b_6=3906.9406>0$), and regression coefficients for the factor variable $EMtn$ have taken negative values ($b_5=-605.4608<0$ and $b_7=-2204.7143<0$), hypothesis H_2 has been confirmed.

It has been proved that the increase in the incoming (influx of immigrants) and the restriction of the outgoing (reduction in the number of emigrants) migration flow in Russia and other CIS countries causes positive implications for the quality of higher education in the innovation economy associated with the increase in charges for the use of intellectual property, payments and with the increase in the number of patent applications, residents. This has provided a scientifically valid answer to RQ_2 .

To test the reliability of the system of equations of multiple linear regression (2), we will perform correlation analysis and Fischer's F-test (Table 2).

Table 2. The results of the regression analysis

The element of regression analysis		Function		
		IP=F(IMtn,EMtn)	PA=F(IMtn,EMtn)	IMtn=F(ur,ft,ie)
Regression statistics	Multiple R	0.9659	0.9653	0.9412
	R-Square	0.9331	0.9318	0.8859
	Adjusted R-Square	0.9139	0.9123	0.8289
	Standard Error	2186.6506	651.5698	1.4894
Analysis of variance and Fischer's F-test	Significance F	0.0001	0.0001	0.0031
	Significance level	0.001	0.001	0.005
	F-critical	23.70*	23.70*	12.40**
	F-observed	48.7801	47.8074	15.5333
	F-test	passed	passed	passed

*when $k_1=m=3$, $k_2=n-m-1=10-3-1=6$.

**when $k_1=m=2$, $k_2=n-m-1=10-2-1=7$.

Source: calculated and compiled by the authors.

Results from Table 2 show that the change in the incoming migration flow (the number of immigrants) in the Decade of Science and Technology in Russia and other CIS countries by 94.12% is determined by the influence of factors of the quality of higher education and the labour market: The Times Higher Education University Rankings: Average score of top 3 universities, readiness for frontier technologies index and inequality in education. Fischer's F-test for the function $IM_{tn}=F(ur, ft, ie)$ has been passed at a significance level of 0.001.

The change in the amount of charges for the use of intellectual property, payments in the Decade of Science and Technology in Russia and other CIS countries by 96.59% is determined by the influence of migration factors: the volume of incoming (number of immigrants) and outgoing (number of emigrants) migration flow. Fischer's F-test for the function $IP=F(IM_{tn}, M_{tn})$ has been passed at a significance level of 0.001.

The change in the number of patent applications, residents in the Decade of Science and Technology in Russia and other CIS countries by 96.53% is determined by the influence of migration factors: the volume of incoming (number of immigrants) and outgoing (number of emigrants) migration flow. Fischer's F-test for the function $PA=F(IM_{tn}, M_{tn})$ has been passed at a significance level of 0.005.

Thus, the resulting econometric model (2) is reliable. It has proved the significant impact of labour and educational migration on the quality of higher education in the innovation economy of Russia and other CIS countries in the Decade of Science and Technology.

4.2. Prospects for the improvement of the quality of higher education in the innovation economy of Russia and other CIS countries through the optimization of labour and educational migration

As part of the solution of the second task of this study - to identify the prospects for the

improvement of the quality of higher education in the innovation economy of Russia and other CIS countries through the optimization of labour and educational migration - based on the model (2), the authors' forecast of the improvement of the quality of higher education and the labour market in the innovation economy (changes in charges for the use of intellectual property, payments and patent applications, residents) influenced by changes in migration through the management of factors of higher education and the labour market in the innovation economy in the Decade of Science and Technology.

The forecast assumes an increase in The Times Higher Education University Rankings: Average score of the top 3 universities, an increase in readiness for frontier technologies index and a reduction in inequality in education by 3 times, and therefore it is realistic for the Decade of Science and Technology in Russia and other CIS countries (2022-2031). Using the trend analysis method, the increase in the forecast values of indicators for 2031 compared to their base values in 2022 has been estimated.

The results obtained in Figure 1 indicate that the authors' forecast achieves significant advantages in optimizing labour and educational migration for the quality of higher education in the innovation economy – there is an increase in the volume of charges for the use of intellectual property, payments by 9.12 times (from 0.99 million current US\$ in 2022 to 7.00 million current US\$ in 2031) and an increase in patent applications, residents by 9.54 times (from 2.56 thousand units in 2022 to 24.41 thousand units by 2031).

At the same time, the outgoing migration flow (the number of emigrants) remains unchanged at the level of 2022 (2.38 million people), and the incoming migration flow (the number of immigrants) increases by 3.97 times (from 1.88 million people in 2022 to 7.48 million people by 2031), for which it is recommended to be guided by the

following control (target) values of indicators of the quality of higher education in the innovation economy of Russia and other CIS countries in the Decade of Science and Technology:

- The increase in the Times Higher Education University Rankings: Average score of top 3 universities

from 10.14 points by 2022 to 30.41 points by 2031;

- The increase in readiness for frontier technologies index from 0.27 in 2022 to 0.82 by 2031;

Reduction of inequality in education from 3% in 2022 to 1% by 2031.

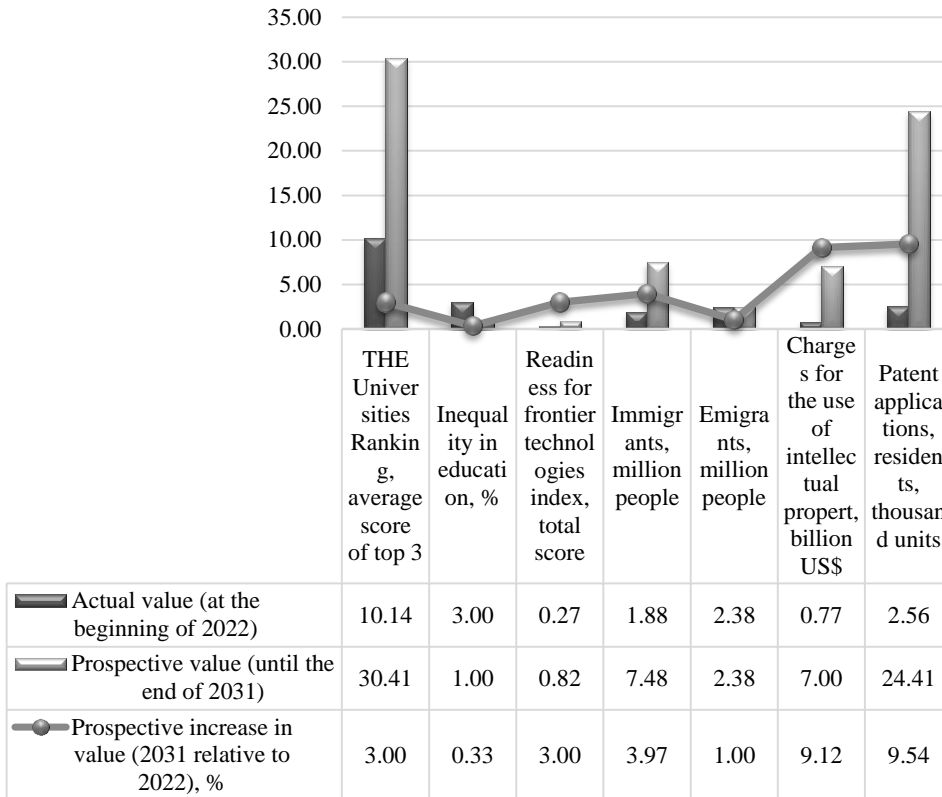


Figure 1. Prospects for the increase in the quality of higher education in the innovation economy of Russia and other CIS countries in the Decade of Science and Technology through the optimization of labour and educational migration

Source: calculated and constructed by the authors.

The obtained forecasting results show a broad perspective for the improvement of the quality of higher education in the innovation economy of Russia and other CIS countries through the optimization of labour and educational migration, and the authors' recommendations support its implementation in practice.

5. Discussion

The paper's contribution to the literature consists in the development of the scientific provisions of the concept of the management of higher education quality through clarification of cause and effect relationships of the quality of higher education and labour

and educational migration in Russia and other countries of the CIS in the new context of the Decade of Science and Technologies.

The answers to the RQs obtained in the result of the study are presented in Table 3 in comparison with the existing literature.

Table 3. Comparison of the received answers to the RQs with the literature

Answers to the research questions	Research question (RQ)	
	RQ ₁ : What factors of the quality of higher education and the labour market determine labour and educational migration in Russia and other CIS countries?	RQ ₂ : What are the implications of educational and labour migration for the quality of higher education in the innovation economy of Russia and other CIS countries?
Answers offered by the existing literature	<p>Factors of price:</p> <ul style="list-style-type: none"> • Low cost of higher education (Chuikova et al., 2022; Gonnova et al., 2022; Gonnova and Razuvaeva, 2021; Ozdamli and Cavus, 2021); • Employment opportunities for low-paid jobs with low requirements to the level of qualification (Amrin et al., 2020; Kaliyeva et al., 2018; Seidu et al., 2022). 	<ul style="list-style-type: none"> • Decrease in the scientific activity of universities due to their reorientation to the training and cultural adaptation of migrants (Dianova et al., 2023; Krupnov et al., 2023; Matkovskaya et al., 2022); • Decrease in the innovative activity of business due to the influx of low-skilled personnel to low-paid jobs (Aldieri et al., 2020; Jumambayev et al., 2018; Turginbayeva et al., 2018).
New (clarified) answers received in the article	<p>Factors of quality:</p> <ul style="list-style-type: none"> • The prestige of universities and gender neutrality of higher education; • Employment opportunities for knowledge-intensive jobs for digital personnel in high-tech industries 	<ul style="list-style-type: none"> • Increase in the scientific activity of universities due to the influx of creative students and scientific personnel; • Increase in the innovative activity of business due to the influx of digital personnel to knowledge-intensive jobs in high-tech industries.

Source: developed by the authors.

As shown in Table 3, this article provides a new answer to RQ₁ and proves that labour and educational migration in Russia and other CIS countries in the Decade of Science and Technology is determined by such factors of the quality of higher education and the labour market as 1) the prestige of universities and gender neutrality of higher education (and not the low cost of higher education – unlike Chuikova et al., 2022; Gonnova et al., 2022; Gonnova and Razuvaeva, 2021; Ozdamli and Cavus, 2021); 2) employment opportunities for knowledge-intensive jobs for digital personnel in high-tech industries (and not for low-paid jobs with low requirements to the level of qualification - unlike Amrin et al., 2020; Kaliyeva et al., 2018; Seidu et al., 2022).

The authors also have received a new answer to RQ₂ and proved that the consequences of educational and labour migration for the quality of higher education in the innovation economy of Russia and other CIS countries in the Decade of Science and Technology are associated with: 1) an increase in the scientific activity of universities due to the influx of creative students and scientific personnel (and not with its decrease due to the reorientation of universities to the training and cultural adaptation of migrants - unlike Dianova et al., 2023; Krupnov et al., 2023; Matkovskaya et al., 2022); 2) an increase in the innovative business activity due to the influx of digital personnel to knowledge-intensive jobs in high-tech industries (and not with its decline due to the influx of low-skilled personnel to low-paid

jobs - unlike Aldieri et al., 2020; Jumambayev et al., 2018; Turginbayeva et al., 2018).

6. Conclusion

Summing up the study, we can conclude that according to its results, its purpose has been achieved and the following results have been obtained. Firstly, an econometric model of the impact of labour and educational migration on the quality of higher education in the innovation economy of Russia and other CIS countries has been compiled based on the practical experience of the beginning of the Decade of Science and Technology (2022).

Based on the compiled model, an answer to RQ₁ has been obtained, which proves that labour and educational migration in Russia and other CIS countries in the Decade of Science and Technology is determined by 94.12% by such factors of the quality of higher education and the labour market as the prestige of universities and gender neutrality of higher education and employment opportunities for knowledge-intensive jobs for digital personnel in high-tech industries.

The answer to RQ₂ has been also received, which substantiates the following implications of educational and labour migration for the quality of higher education in the innovation economy of Russia and other CIS countries in the Decade of Science and Technology – the growth in charges for the use of intellectual property, payments (by 96.59%) and the increase in the number of patent applications, residents (by 96.53%) are associated with an increase in the scientific activity of universities due to the influx of creative students and scientific personnel and with an increase in the innovative activity of businesses due to the influx of digital personnel to knowledge-intensive jobs in high-tech industries.

Secondly, the prospect of an increase in the quality of higher education in the innovation

economy of Russia and other CIS countries has been substantiated through the optimization of labour and educational migration (the number of emigrants remained at the level of 2022: 2.38 million people, and the number of immigrants increased by 3.97 times), associated with an increase in charges for the use of intellectual property, payments by 9.12 and an increase in patent applications, residents by 9.54 times by 2031 compared to the level of 2022.

The theoretical significance of the results of this article is that they have clarified the cause-and-effect relationships of labour and educational migration and the quality of higher education, taking into account the unique experience of Russia and other CIS countries in the new, modern context of the Decade of Science and Technology. The main conclusion of the study is that during the Decade of Science and Technology in Russia and other CIS countries, the essence of labour and educational migration has transformed – participants with high human potential seeking to obtain higher education and take knowledge-intensive jobs have become predominant in the structure of the migration flow - and due to this, its influence on higher education has significantly increased in the innovation economy.

The practical significance of the article lies in the fact that the proposed set of authors' recommendations for improving The Times Higher Education University Rankings: Average score of top 3 universities, increasing readiness for frontier technologies index and reducing inequality in education will optimize migration flows and, and thus, unleash the potential for the improvement of the quality of higher education in the innovation economy of Russia and other CIS countries in the Decade of Science and Technology.

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