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PUBLIC MANAGEMENT OF INTELLECTUAL MIGRATION IN UKRAINE

ПУБЛІЧНЕ УПРАВЛІННЯ ІНТЕЛЕКТУАЛЬНОЮ МІГРАЦІЄЮ В УКРАЇНІ

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Ніколиук О.В., Савенко І.І., Седікова І.О., Ткач К.І. Публічне управління інтелектуальною міграцією в Україні. Оглядова стаття.

Встановлено, що особливу загрозу соціально-економічному розвитку України та сталому розвитку суспільства становить саме інтелектуальна міграція, оскільки формування висококваліфікованих наукових кадрів, зростання науково-технічного потенціалу України є одним із важливих факторів економічного і соціального прогресу. Складний економічний стан освіти, низька заробітна плата, умови праці, проблеми самореалізації є вагомими факторами до активізації міграційних потоків серед науковців. Доведено, що недосконалість організаційних форм, які б забезпечували достатньо тісний зв'язок між наукою та вищою освітою, ускладнює як підтримання освіти на рівні, що відповідає вимогам сучасності, так і розв'язання у повному обсязі проблеми відтворення наукових кадрів. Систематизовано фактори, які впливають на відтік кадрів з освітньої та наукової сфер в інші країни (інтелектуальна еміграція) та в інші сфери діяльності (зміна професії).

Ключові слова: публічне управління, вища освіта, міграція, еміграція, знання, інтелектуальний капітал, розвиток, науковці, стратегія, політика

Nikoliuk O.V., Savenko I.I., Sedikova I.O., Tkach K.I. Public management of intellectual migration in Ukraine. Review article.

It is established that intellectual migration is a special threat to the socio-economic development of Ukraine and sustainable development of society, as the formation of highly qualified scientific personnel, growth of scientific and technical potential of Ukraine is one of the important factors of economic and social progress. The difficult economic situation of education, low wages, working conditions, problems of self-realization are important factors in intensifying migration flows among scientists. It is proved that the imperfection of organizational forms, which would provide a close connection between science and higher education, makes it difficult to maintain education at a level that meets modern requirements, and to fully solve the problem of reproduction of scientific personnel. The factors that influence the outflow of personnel from the educational and scientific spheres to other countries (intellectual emigration) and to other spheres of activity (change of profession) are systematized.

Keywords: public administration, higher education, migration, emigration, knowledge, intellectual capital, development, scientists, strategy, policy

In today's decent local community in the world community can be developed a country that not only declares but also actually uses economic efficiency and, most importantly, the spiritual value of intellectual work, and its results are reflected as the main product of production and one of the most important components of society.

Therefore, today the world leaders are those countries where such a field of intellectual work as education has become a priority area of national development. Among the first steps to implement the priority development of education in these countries was the implementation of public policy, which allowed to ensure the reproduction of the scientific elite and create a strong human potential in the field of education. Ukraine also declares at the state level the need for priority development of education as a source of reproduction and increase of intellectual, spiritual and economic potential of society, as the main supplier of skilled workers, including scientists. It is believed that Ukraine's path from industrial economy to knowledge economy, to successful competition with other countries in the post-industrial world lies through "a system of innovation, research and technological development, and most importantly – the creative potential of scientists and engineers" [1]. Thus, there is an awareness that, in the end, the historical fate of the country in its transition to post-industrial civilization is decided by people of intellectual labor, in particular scientists, representatives of the scientific elite.

Analysis of recent research and publications

An important contribution to the development of theoretical and applied research of intellectual migration and problems of public management was made by such well-known representatives of science as A. Vlasyuk, P. Haidutsky, Y. Makogon, O. Malinovskaya, O. Melnichenko, V. Moiseenko, O. Rindzak, U. Sadova, E. Khomra, S. Chekhovych, N. Shulga and others.

Unsolved aspects of the problem

However, the complexity of migration processes in the intellectual sphere of the modern world necessitates further multifaceted research of public administration in the field of intellectual migration.

The aim of the article is a theoretical substantiation and empirical analysis of directions of improvement of the system of public management of intellectual migration in Ukraine.

The main part

Ukraine is one of the countries where science has suffered and continues to suffer during social transformations. The state's neglect of science has various negative social, spiritual and economic manifestations: unsatisfactory scientific and information support of scientists' activities; residual funding of the scientific field; lack of interest in using socially significant scientific achievements; insecurity of property rights to products of intellectual labor; reduction of the social status of scientists and the prestige of scientific activity; low wages and social unrest of scientists; curtailment of basic and applied research; partial or complete destruction of scientific schools, as a consequence – the difficulty of reproduction of scientific personnel, including the scientific elite, the general weakening of the scientific potential of Ukraine as a result of intensification of migration processes [2-3].

The purpose and objectives of the article are to study the features of intellectual migration in Ukraine as an urgent problem of higher education and to develop strategic guidelines for preserving the intellectual potential of Ukraine. The theoretical and practical significance of the article and its novelty are as follows: 1) substantiation of the role of higher education institutions in the context of regulating migration processes in Ukraine in order to ensure sustainable economic development; 2) determining the features of intellectual migration in Ukraine; 3) identification of problems of higher education in Ukraine in relation to the support of intellectual capital; 4) conducting a comprehensive sociological study of the socio-economic status of intellectual capital in Ukraine; 5) development of recommendations to the authorities on the development of the economy of education in the context of solving the problems of intellectual migration [4-5].

The analyzed literature and our own observations allow us to state that there are problems in the functioning of higher education: 1) the outflow of personnel (brain drain); 2) insufficient innovative cooperation between education, science and business;

3) insufficient popularization of science and low prestige of the profession of scientist. The existence of these problems is due not only to insufficient funding for education and science, although, of course, the economic factor is one of the main ones. Imperfect legislation (primarily regarding the mobility of scientists, requirements for the defense of dissertations, import of reagents and equipment, etc.), lack of research infrastructure, lack of career opportunities, poor interaction with business, lack of public policy to support promotion science and a number of other factors lead to the fact that scientists are forced to either go abroad to work or leave science altogether [3, 6].

Correcting the situation in the education system requires a systematic approach and is closely linked to solving common problems of development in the field of education, science, technology and innovation in Ukraine. This requires the active participation of the state, the leadership of the National and branch academies of sciences, universities, as well as the involvement of business, interested public organizations and associations.

Since Ukraine does not keep complete statistics on the departure of scientists abroad, our study conducted a sociological survey on the problems of education in Ukraine in the context of intellectual emigration. The survey of researchers was conducted in the leading institutions of higher education in Ukraine (Kyiv, Kharkiv, Dnipropetrovsk and Odessa regions) by distributing electronic questionnaires for anonymous respondents, which allowed to assess the socio-economic status of intellectual capital. A total of 457 scientists were interviewed. With a 95% confidence interval, the representativeness error was 5.8%.

During the questionnaire, both closed and open types of questions were used: assessment of the quality of education in Ukraine; intentions to go abroad; connection of financial needs of respondents with migration intentions; factors influencing migration intentions; the level of socio-economic security of respondents; the level of employment of scientists in educational institutions; respondents' interest in the world.

The respondents of this questionnaire were the following categories: 1) candidates of sciences (30%); 2) doctors of sciences (10%); 3) researchers (30%); 4) postgraduate and doctoral students (20%); 5) management positions (10%).

We will begin the review of the socio-economic condition of Ukraine's intellectual capital with an important change. Low, relative to the subsistence level, salaries of young scientists who do not have work experience (or have only – minimum experience), scientific degree, do not hold a scientific position and the difficult economic situation is one of the key factors. According to the results of the survey in 2018, 51.2% of respondents have already announced their intentions to go abroad, of which 15.7% want to leave Ukraine forever, and 35.1% would like to work and return (Fig. 1).

Due to insufficient state funding of educational institutions and institutions of NASU – often scientists, including young people are transferred to part-time work, which further reduces their salaries. Many higher education institutions in recent years

have stopped working for the winter months in order to "save money on heating", and research and teaching staff and researchers are forced to go on vacation at their own expense.

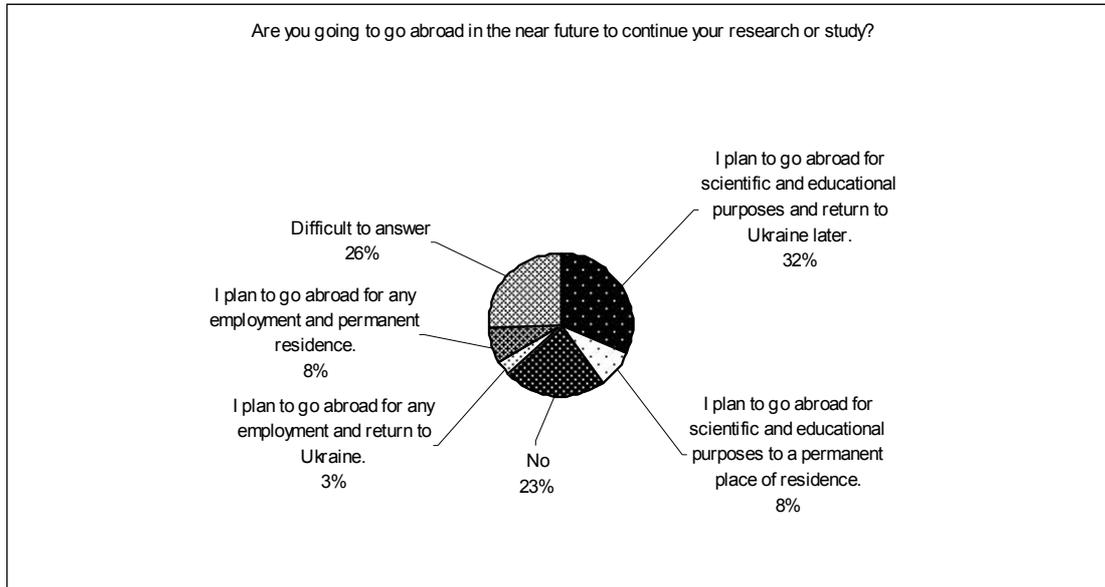


Figure 1. Distribution of respondents' answers to questions about migration abroad
 Source: authors' own development

The survey showed a strong link between the financial needs of the respondents and migration intentions (Fig. 2).

Thus, respondents who did not wish to leave indicated the least needs. The views of scientists in higher education institutions on the reasons for

leaving can be divided into the following categories of reasons: 1) the minimum wage and poor financial and economic condition of science (90%); 2) unfavorable working conditions (majority 60%); 3) difficulties of professional realization (about 20-30%). Family reasons only 15%.

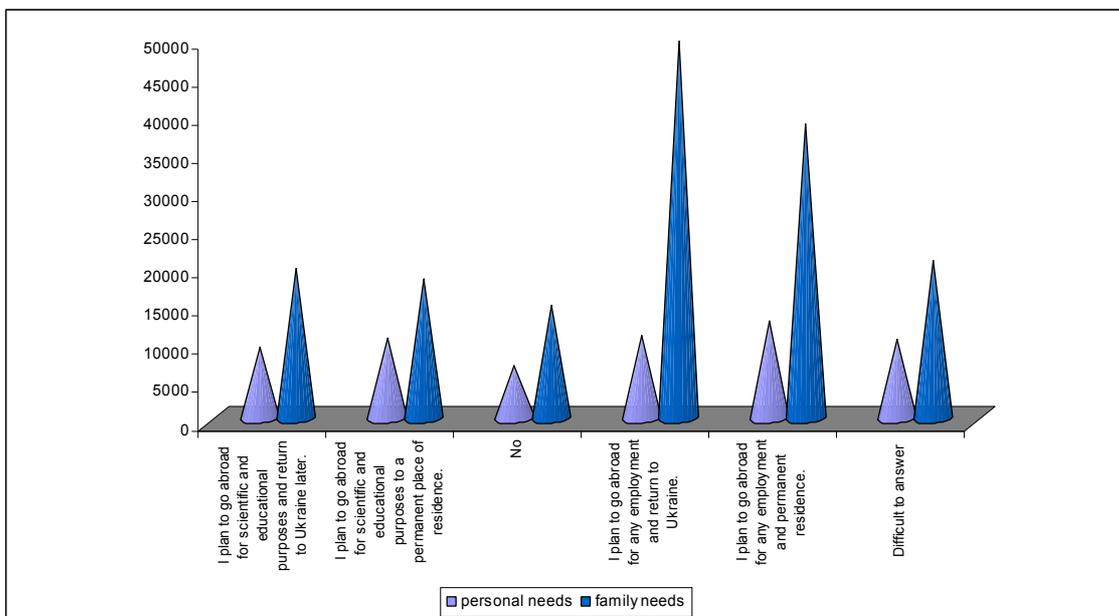


Figure 2. Relationship between respondents' financial needs and migration intentions in 2019
 Source: authors' own development

One of the consequences of underfunding is the need for young scientists to seek additional sources of income. Young scientists who find decent pay for their work outside the scientific field become "marginal" scientists, ready to leave science forever. A partial solution to the problem could be a system of grants (national, regional, departmental) for research for young scientists. But even here there are numerous bureaucratic obstacles and even legislative discrimination. Another significant problem for young scientists, which leads to the outflow of personnel, is that they are one of the least socially protected categories of scientists. Lack of scientific experience,

children, positions, which is typical in most cases for scientific youth, leads to the fact that young scientists often become the first candidates for dismissal in the event of layoffs.

Thus, respondents who did not wish to leave indicated the least needs. The views of scientists in higher education institutions on the reasons for leaving can be divided into the following groups of reasons: 1) low wages and poor financial and economic condition of science (about 90%); 2) unfavorable working conditions (majority 60%); 3) difficulties of professional realization (about 20-30%). Family reasons only 15%. (Fig. 3).

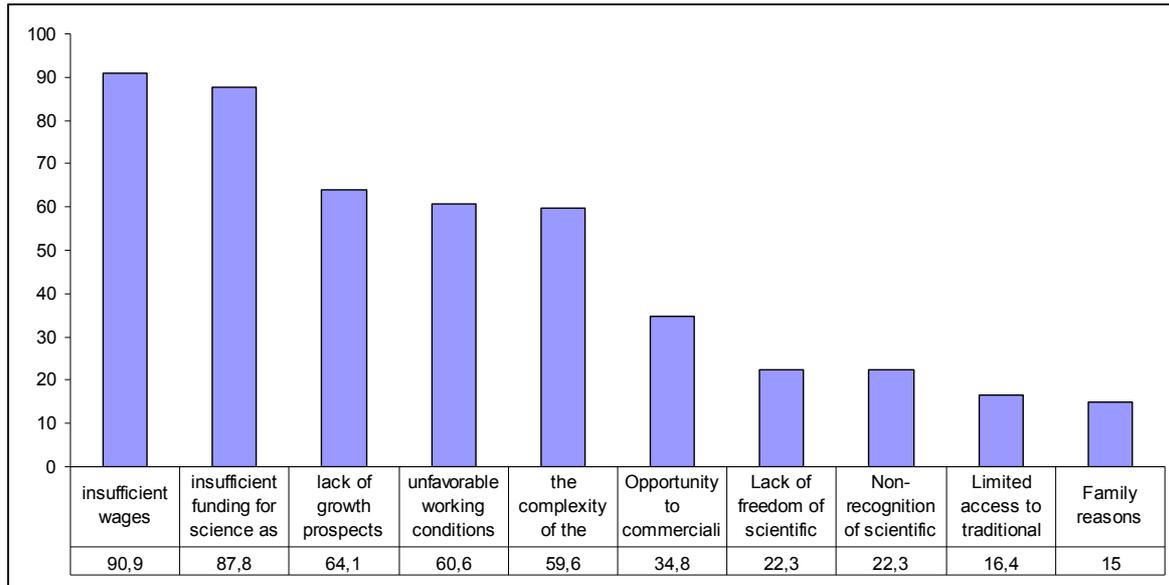


Figure 3. Respondents' answers to the question: "In your opinion, what factors influence the departure of your colleagues abroad?" (multiple answers possible)

Source: authors' own development

The low level of funding for Ukrainian science affects not only the salaries of scientists, but also the infrastructure and resources for research. The required research infrastructure is either missing or outdated. There is a lack of reagents for experiments. Complicated procedures for customs clearance and import of scientific equipment from abroad, which leads to the fact that in Ukraine it is several times more expensive than in importing countries. The results of the survey show that not only low wages or social insecurity push young scientists out of science (abroad or in other fields of activity), unsatisfactory working conditions and inability to fully engage in scientific activities play a significant role [7-8].

In today's globalized world, national borders are gradually disappearing, while science remains international. In order to ensure the development of scientific research, scientific and cultural exchange becomes relevant. A survey of respondents in 2019 made it possible to assess the importance of the impact of scientific mobility on the results of the study at almost 3.58 points on a scale of 5 points. Academic mobility of scientists and teachers has already gained importance as a relevant strategic

factor for Ukraine's integration into the international educational and scientific space. In the first place are Western European countries, the United States and Canada, primarily due to powerful economies and a high level of scientific progress. Thus, China, India, Japan are interesting for more than a quarter of respondents, despite their cultural differences [9].

As a result of the study, the factors influencing the outflow of personnel from the educational and scientific spheres to other countries (intellectual migration) and to other spheres of activity (change of profession) are systematized, namely: push factors and attracting factors. pull factors) (table1).

It can be argued that the first group of factors (pushing) are more labile and belong to the competencies of the country's leadership, government agencies and departments, which are responsible for the level of development of the overall research and innovation system in the country. Thus, the danger to Ukraine's full scientific potential is obvious. That is, the more the migration of Ukrainian scientists increases and their socio-economic situation in the country deteriorates, the faster highly qualified personnel will move to more favorable conditions.

Thus, for an individual specialist, scientific (or general) migration instead of the instability of the economic situation in Ukrainian science is more understandable in terms of self-realization and solving global integration scientific problems. It is in

developed countries, where science occupies a prominent place, there is academic mobility (then scientific migration is absent), which has a very positive effect on the sustainability of the scientific community.

Table 1. Factors influencing intellectual migration

Push factors	Pull factors
<ol style="list-style-type: none"> 1. Financial and social insecurity. 2. Deterioration of living standards. 3. Economic instability. 4. Uncertainty about the future. 5. Political instability. 6. Poor conditions for research. 7. Low prestige of science. 8. Lack of opportunities to work on interesting topics. 9. Growth of the shadow sector. 10. Structural changes in the economy. 11. Inconsistency of qualifications of graduates of educational institutions with the needs of the market. 12. Lack of "social elevators", opportunities for career growth 	<ol style="list-style-type: none"> 1. High wages. 2. The best conditions for research. 3. Access to the international community. 4. The best information base. 5. Higher consumer choice. 6. Better living conditions. 7. Development of the small and medium enterprises sector (employment itself, as an alternative to employment)

Source: authors' own development

In turn, for less developed countries, to achieve such a goal, it is necessary to calculate targeted measures – to develop a balanced public science policy.

Conclusions

The modern world is presented today as a rather complex polysystem formation, which is developing dynamically. The process of globalization has led to the intensification of various forms of international cooperation, and, above all, brought to a new level such a form as intellectual migration, which is an important issue in the education system, which

provides the reproduction of intellectual potential. Every year the level of intellectual migration increases. In turn, the problem is, first of all, that it is in Ukraine that the actual number of Ukrainian citizens working outside the country, let alone scientists, is not monitored. A sociological survey conducted within the framework of this study showed the unsatisfactory socio-economic condition of the intellectual capital of Ukraine. Economic reasons are the main factors limiting the academic mobility of scientists, the impact of which they consider to be quite significant.

Abstract

It is established that intellectual migration is a special threat to the socio-economic development of Ukraine and sustainable development of society, as the formation of highly qualified scientific personnel, growth of scientific and technical potential of Ukraine is one of the important factors of economic and social progress. Based on the theoretical analysis of the problems of higher education in relation to the migration of scientists, a questionnaire method was used to determine the socio-economic status of intellectual capital in Ukraine. A poll in 2019 showed an unsatisfactory socio-economic condition of intellectual capital in Ukraine. The difficult economic situation of education, low wages, working conditions, problems of self-realization are important factors in intensifying migration flows among scientists. It is proved that the imperfection of organizational forms, which would provide a close connection between science and higher education, makes it difficult to maintain education at a level that meets modern requirements, and to fully solve the problem of reproduction of scientific personnel. The factors that influence the outflow of personnel from the educational and scientific spheres to other countries (intellectual emigration) and to other spheres of activity (change of profession) are systematized. Ukrainian education policy needs a strategy to transform the migration intentions of scientists into mobility and establish cooperation with the scientific and real sectors. As a result of the study, the factors influencing the outflow of personnel from the educational and scientific spheres to other countries (intellectual migration) and to other spheres of activity (change of profession) are systematized, namely: push factors and attracting factors. pull factors).

The modern world appears today as a complex polysystemic formation that is developing dynamically. Globalization has led to the intensification of all forms of international cooperation, and, in particular, has put on a new level such a form as intellectual migration, which is an important issue in the education system, which ensures the reproduction of intellectual potential. Every year the level of intellectual migration increases. However, the problem is that Ukraine does not keep statistics on the actual number of Ukrainian citizens working abroad, especially scientists. This distorts the picture of migration processes in Ukraine, makes it impossible to effectively regulate them and requires more attention of the authorities to this problem, which determines the prospects for further research. A sociological survey conducted within the framework of this

study showed the unsatisfactory socio-economic condition of the intellectual capital of Ukraine. Economic reasons are one of the main factors limiting the academic mobility of scientists, the impact on the study of which they recognize as quite significant.

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