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## Migration Attitudes of the Students Enrolled in Arctic-Focused Higher Education Programs\*



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**Abstract.** The article presents the findings of a sociological survey conducted in the regions that are partially or completely included in the Arctic zone of the Russian Federation (hereinafter – the Russian Arctic). The goal of our research is to study migration attitudes of students and determine the factors affecting the readiness of future skilled personnel to leave the territory of the Russian Arctic. The survey was conducted among students enrolled in Arctic-focused higher education programs and trained for the needs of the economy and social sphere of the polar regions of Russia in the cities of Arkhangelsk, Murmansk, Krasnoyarsk and Yakutsk. The study pays considerable attention to information-related and educational factors associated with the subject matter of the Arctic (“Arctic-focused” education; assessment of the extent of Arctic-related specifics of educational programs; awareness of specifics of formation of the Russian Arctic, and others). According to the results of the survey, migration attitudes of students are identified as quite strong. We have confirmed the hypothesis that when students consider their preparation for the future Arctic-focused specialty, they generally reduce the level of their migration attitudes and do not express a strong intention to leave the region. Internal migration is the dominant direction of potential student migration. Migration preferences of students are almost equally divided between capitals and other regions of Russia. Among the capital regions, Saint Petersburg is the most popular one, and the regions of Central and Southern Russia are most popular among the provincial ones. Most potential migrants collected information on living conditions and specifics of moving, both in person and at a distance. Some of them were looking for a job in a new region (country), and only a few were engaged in specific preparation for moving. Migration intentions of students are primarily related to economic factors. Psychological and information-educational factors affect the delay in the planned time of leaving the Arctic macro-region. Using the results of the survey we formulated recommendations for higher education institutions that can positively affect the migration situation in the Russian Arctic. Our recommendations include the development and modernization of Arctic-focused educational programs, comprehensive career guidance work with students, strengthening of interaction with employers and with national and local government, inclusion of graduates working in the territory of the Russian Arctic in the educational process, promotion of innovation and research-to-practice work of students.

**Key words:** Arctic region, migration sentiments, migration intentions, migration factors, student youth.

### Introduction

The Arctic is one of the priorities in the development of Russia. The concept “Arctic zone of the Russian Federation” (hereinafter – the Russian Arctic) is introduced into active regulatory circulation. Its boundaries have been defined, and now approaches and plans for the development of this macroregion are being worked out. The Russian Arctic becomes a full-fledged object of state management.

At the moment, the macroregion under consideration includes the Murmansk Oblast, Nenets Autonomous Okrug, Chukotka

Autonomous Okrug and Yamalo-Nenets Autonomous Okrug. It also includes part of the Arkhangelsk Oblast (cities of Arkhangelsk and Severodvinsk, town of Novodvinsk and four municipal entities), Krasnoyarsk Oblast (city of Norilsk and two districts), Republic of Komi (town of Vorkuta), the Republic of Sakha (Yakutia) (five districts) and three municipal districts within the Republic of Karelia<sup>1</sup>.

<sup>1</sup> Strategy for development of the Arctic zone of the Russian Federation and provision of national security for the period up to 2020. Available at: <http://government.ru/info/18360/> (accessed 27.11.2017).

Human capital is one of the key resources in the development of the Russian Arctic. Without qualified specialists ready to work in difficult climatic conditions, none of the Arctic projects and none of the Arctic territories will be able to successfully operate and develop [1; 2]. However, the range of production and socio-economic problems leads to an intensive migration outflow primarily among skilled specialists and young people. Thus, over the past 15 years the Arctic regions experience population decline due to migration (*Tab. 1*).

The largest outflow of population from the regions that are fully or partially included in the Russian Arctic is observed in Chukotka and Nenets autonomous okrugs and in the Republic of Komi. Migration situation in the Krasnoyarsk Krai is relatively stable.

Migration of graduates of higher education institutions negatively affects the Russian Arctic, especially if their training has an “Arctic” focus [3]. It is for a reason that the strategy for development of the Arctic zone of the Russian Federation and provision of national security for the period up to 2020 highlights that the provision of training, retraining and advanced training of specialists in the system of higher and secondary special education to work in the Arctic conditions and the attraction of qualified personnel

are important tasks of socio-economic development in the macroregion [4].

According to a sociological research conducted at M.V. Lomonosov Northern (Arctic) Federal University in March – April 2016, 30 educational institutions of the country (28 universities and two branches) were engaged in training personnel for the Russian Arctic and Arctic projects. Among them, six higher education institutions (five universities and one branch) are located directly in the macroregion, five – in the regions of the Russian Arctic, and 19 – outside it [5].

At the time of the study, on the territory of the Russian Arctic, a little more than 11 thousand university students were enrolled in the so-called “Arctic-focused” programs containing 225 fields of studies (*Tab. 2*). In the regions of the Russian Arctic (that is, on the territory of municipalities that were not part of the macroregion) there were about 20 thousand students who were trained in 307 Arctic-focused fields of studies.

#### Research methodology and technique

The study of migration attitudes of students was conducted by the staff of M.V. Lomonosov Northern (Arctic) Federal University in the framework of the study of the factors that cause young specialists to leave the Russian Arctic. The object of the study were students enrolled

Table 1. Migration gain per 10,000 population\* (people, value of the indicator for year)

Region	2005	2010	2015	2016
Republic of Karelia	-115.155	-53.853	-11.63	-16.04
Republic of Komi	-162.798	-139.036	-101.53	-81.2
Nenets Autonomous Okrug	-20.52	-49.87	23.16	-72.91
Arkhangelsk Oblast	-71.684	-82.067	-68.02	-56.29
Murmansk Oblast	-169.232	-68.953	-57.37	-57.15
Yamalo-Nenets Autonomous Okrug	-24.129	-87.811	-222.92	-65.24
Krasnoyarsk Krai	-63.855	-14.642	9.62	16.82
Chukotka Autonomous Okrug	72.549	-173.553	-116.98	-103.22
Republic of Sakha (Yakutia)	-28.004	-70.823	-56.21	-43.2

\* Compiled with the use of data from the official website of the Federal State Statistics Service <http://www.gks.ru/dbscripts/cbsd/dbinet.cgi?pl=9400008>.

Table 2. Training of specialists in Arctic-focused programs in the territory and regions of the Arctic zone of the Russian Federation in 2016

RF constituent entity	Name of higher education institution	Number of training programs	Number of students, persons
<b>Territory of the Russian Arctic</b>			
Arkhangelsk Oblast	M.V. Lomonosov Northern (Arctic) Federal University	120	2753
Arkhangelsk Oblast	Northern State Medical University	10	2360
Arkhangelsk Oblast	Severodvinsk branch of M.V. Lomonosov Northern (Arctic) Federal University	16	701
Arkhangelsk Oblast	Institute of Management	9	1330
Murmansk Oblast	Murmansk Arctic State University	24	169
Murmansk Oblast	Murmansk State Technical University	46	3867
<b>TOTAL</b>		<b>225</b>	<b>11880</b>
<b>Regions of the Russian Arctic</b>			
Krasnoyarsk Krai	Siberian Federal University	21	2488
Krasnoyarsk Krai	Siberian State University of Geosystems and Technologies	20	5506
Republic of Komi	Syktuyrvor Forest Institute – branch of St. Petersburg State Forestry University named after S.M. Kirov	7	1039
Republic of Komi	Ukhta State Technical University	8	2722
Republic of Sakha (Yakutia)	M. K. Ammosov North-Eastern Federal University	251	8752
<b>TOTAL</b>		<b>307</b>	<b>20507</b>
Source: Kudryashova E.V. (Ed.). <i>Arctic – National Mega-Project: Staffing and Scientific Support</i> . Arkhangelsk: SAFU, 2016. P. 145-189.			

in Arctic-focused educational programs and trained for the needs of the economy and social sphere of the Russian Arctic in educational institutions located in the Russian Arctic and in the subjects that are part of it. Arctic-focused programs of higher education are those that are implemented with attraction of resources of partner organizations working in the Russian Arctic; such programs also organize internships for students in the territory of the Russian Arctic, and the range of their disciplines includes vocational and special competences and training results, which determine the specifics of professional activity in the region.

The aim of the survey was to study migration attitudes of students, to determine the factors affecting the willingness of future young professionals to leave Russia's Northern territories.

In this regard, the questionnaire contained a section of personal information of an anonymous nature, which included data on the level and field or specialty of education,

professional aspirations, assessment of the socio-economic situation in the region, migration sentiment, and questions to determine the factors that promote or constrain migration aspirations of students.

At the stage of development of the program of sociological research in March – April 2016 we made an inquiry to educational institutions of higher education of the Russian Federation and received information about the current Arctic-focused educational programs and the number of students enrolled in them; the data allowed us to determine the structure of the general population, which amounted to 20,507 students enrolled in bachelor's and master's degree programs and specialist programs.

For the purposes of the survey we selected six higher education institutions and two branches. These included Murmansk Arctic State University (MASU), Murmansk State Technical University (MSTU), M.V. Lomonosov Northern (Arctic) Federal University (NArFU), Severodvinsk Branch of NArFU

(SB NArFU), Northern State Medical University (NSMU). These educational institutions are located on the territory of the Archangelsk (NArFU, NSMU, SB NArFU) and Murmansk (MSTU and MASU) oblasts.

Our sample also covered educational institutions located outside the boundaries of the Russian Arctic, but included in its regions: Siberian Federal University (SibFU), North-Eastern Federal University (NEFU), Chukotka Branch of NEFU (ChB NEFU). These educational institutions are located in Krasnoyarsk Krai (SibFU), in the Republic of Sakha (Yakutia) (NEFU) and in Chukotka Autonomous Okrug (ChB NEFU).

We have chosen these educational organizations because they have a typical range of Arctic-focused educational programs that cover engineering, economics and management, social sciences and the humanities, psychology and pedagogy, natural science, medicine, and information technology, and a great number of students are concentrated in these educational institutions.

In the selection of observation units, a nested sample was used, which included groups of students in the Arctic-focused areas of training, different courses and levels of education. Thus, in each educational organization, with the help of the two-stage method, we selected the courses or groups, within which a continuous survey was conducted. The survey was conducted mainly

in the form of a group online questionnaire survey using the platform <http://survey.narfu.ru> in a computer lab or classroom, using individual devices that have access to the Internet.

The information was collected by means of an online survey in October – November 2016. The survey covered 4,503 students. After the rejection of defective questionnaires, 4,024 questionnaires remained, and their data were processed using the SPSS v.17 computer program for statistical processing. Statistical sampling error does not exceed 3%.

Thus, the study involved students who are enrolled in bachelor's degree programs (1,722 people), specialist's programs (1,842 people) and master's degree programs (460 people). Among all respondents, 1,562 people were final-year students. The distribution of respondents by educational organizations of higher education is presented in the *Table 3*.

The main concepts of the study are “migration sentiments” and “migration intentions”. Migration sentiments can be attributed to the affective level of the personality. Sentiment is an emotional expression of consciousness, it indicates the presence in the mind of a favorable or unfavorable background for certain plans and actions. In our study, this term refers to a generalized desire to leave the current place of residence or stay there.

Migration intentions refer to the cognitive level of the personality. They are more rational and are primarily related to the plans to change

Table 3. Number of students participating in the survey

Higher education institution	Number of students
Murmansk Arctic State University	134
Murmansk State Technical University	141
M.V. Lomonosov Northern (Arctic) Federal University (NArFU)	1022
Severodvinsk branch of NArFU	203
Northern State Medical University	996
North-Eastern Federal University (NEFU)	1096
Siberian Federal University (SibFU)	386
Chukotka Branch of NEFU	46

the place of residence. Intentions, as a rule, immediately precede action. We agree that migration sentiments and migration intentions belong to different levels of people's readiness to change the place of residence [6].

One of the key objectives of our research is to study the attitudes associated with moving away from the region in which students are studying and which is part of the Russian Arctic. At the same time, considerable attention was paid to the impact of Arctic-related information and education factors on migration readiness. For example, the "Arctic" focus of training and assessment of the "Arctic-related" content of educational programs, awareness of the institutionalism of the Arctic zone of the Russian Federation, awareness of the benefits and guarantees for the residents of the Far North, the ideas of shift work in the Northern conditions.

Taking into account the objectives of the study, we differentiated the directions of migration (territories of possible relocation) as follows:

- return migration (native region);
- "capital" migration (Moscow and the Moscow Oblast, St. Petersburg and Leningrad region);
- interregional migration (other regions of Russia);
- external migration (to other countries).

#### **Literature review**

Migration processes are studied by various sciences. In Russia, this topic is disclosed most fundamentally in the writings of L.L. Rybakovsky. The author defines this concept as a set of events leading to changing the place of residence [4]. Professor Rybakovsky divides migration process into three stages: preparatory, main (actual resettlement) and final (adaptation of migrants to the new place) [7, pp. 36-43]. He believes that in order to carry out migration, an individual must receive the

expected increment of the necessary components of living, learning and working conditions, as a rule, in an ideal form, in the form of a certain image, mostly developed on an informative basis.

The preparatory stage plays an important role in migration process. This stage of migration is most actively studied by sociology. Sociologists study primarily the subjective readiness of population and youth to migration – migration sentiments, intentions, and attitudes. At the same time, researchers are interested in the goals, reasons, directions, plans for possible relocation, as well as factors that constrain or promote migration [8; 9; 10].

According to both foreign and domestic scientists, the Northern and Arctic territories are characterized by increased migration mobility of the population, which is due to specific living conditions [1; 6; 11; 12; 13]. At the same time, migration sentiments are particularly strong among young people [14; 15].

Many sociologists study migration attitudes of students. Most often, domestic and foreign works on the subject are devoted to educational migration of students or their emigration intentions and plans [16; 17; 18; 19; 20; 21; 22; 23; 24; 25; 26].

Most Russian studies indicate a high degree of migration and emigration sentiments among students. Socio-economic factors related to living and working conditions are most often identified as factors affecting migration attitudes [3; 17; 22]. Psychological and climatic factors are mentioned less frequently. As for information and educational factors, Sociologists pay attention to them very rarely.

According to many foreign authors, economic well-being of the region has a dominant impact on the migration of graduates of higher education institutions [21; 28; 29].

In the territorial aspect, the majority of works on student migration are devoted to the situation in universities in some regions of Russia. Only some studies cover several regions [30; 31; 32].

### Migration sentiments

Migration sentiments of student youth in the Russian Arctic are quite clear. More than half of respondents in Arkhangelsk and Murmansk expressed a desire to leave the region of education (*Fig. 1*). Migration sentiments of students studying in the regions of the Russian Arctic in the east of Russia (Yakutsk, Krasnoyarsk, Anadyr) are less pronounced. The number of people wishing to leave the region does not exceed 45%.

Let us assume that the high level of migration sentiments among students in the western part of the Russian Arctic has an inertial character. The Arkhangelsk and Murmansk oblasts have been among the regions with a large negative migration balance for the last decades. This is a consequence of decreasing state support in relation to the

territories of the Far North and the Arctic in the 1990s. Both regions have suffered the most from this policy. The eastern regions of the Russian Arctic were less affected by the development of capitalism and market relations.

Migration sentiments are expressed differently in various demographic groups. Young women participating in the survey expressed a more intense desire to leave the regions of the Russian Arctic. This feature is known to demographers and sociologists of many countries. In the northern and near-Arctic territories, the share of men is greater and the migration of women is significantly higher than in the more southern regions [12].

Place of residence before entering the university is an important factor in migration sentiments (see *Fig. 2*). Students who came to study from other districts, regions, republics and countries expressed the strongest desire to leave the region after graduation. At the same time, about one in four nonresident students would like to connect their lives with the Arctic region.

Figure 1. Respondents' answers to the question "Would you like to leave the region after completing your education?", N=4,024

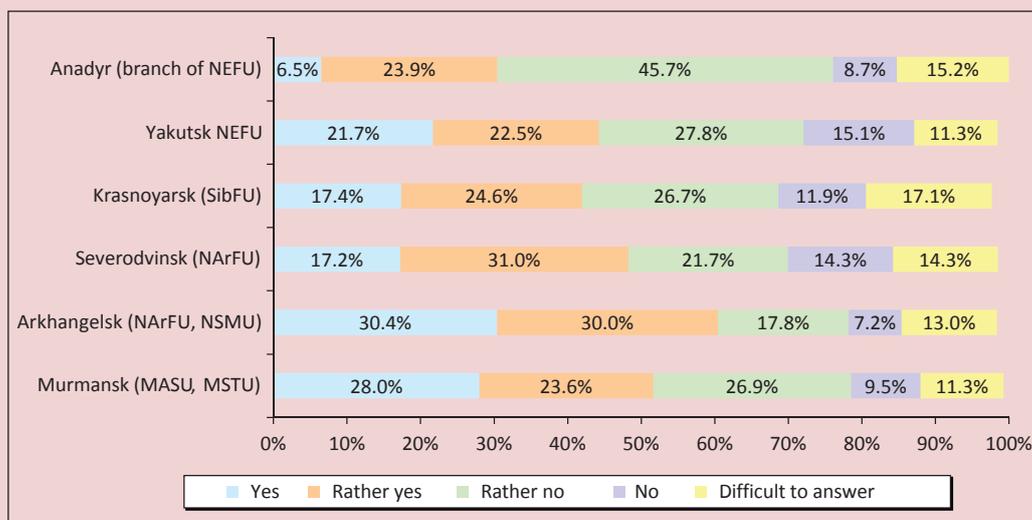
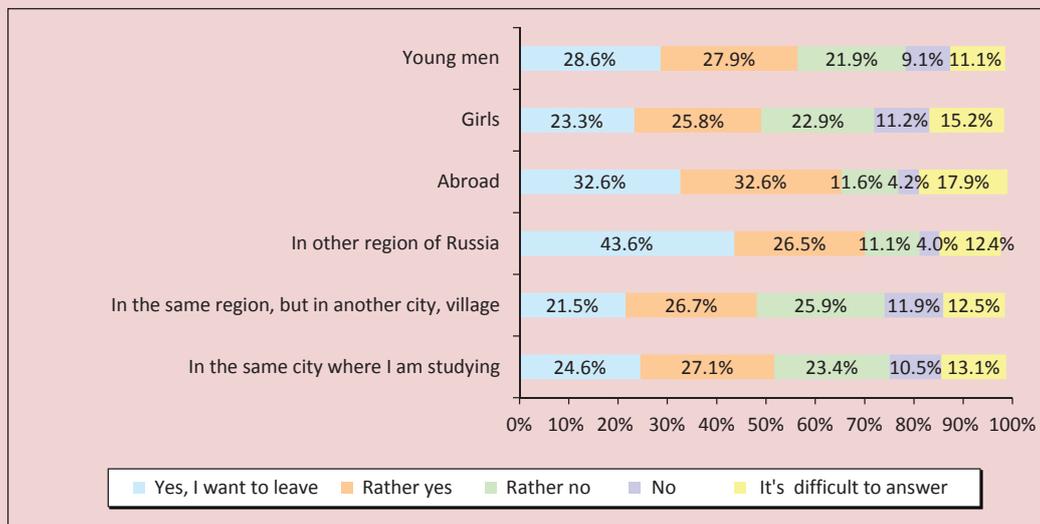


Figure 2. Migration sentiments depending on sex and place of residence before enrolling in higher education programs, N=4,024



Among the inhabitants of the Arctic region, pronounced migration sentiments are observed among students who already lived in the place where their university is located before they were admitted to the university. Almost 55% of them intend to move to another region or country, and only one in ten firmly wants to stay and work in their home area. Given the fact that the majority of educational institutions of higher education are located in the territory of administrative centers of the Northern regions, it can be assumed that the conditions of life in them ceased to meet the increased demands of young residents who are potential young professionals of the “Arctic” orientation.

Migration sentiments of those who came to study from other parts of the region are much weaker. Many of them plan to stay in the city of education after graduation.

At the same time, the level of recognition of their education as having the “Arctic orientation” among the students who are enrolled in educational programs with a focus on regional specifics should be recognized as

low. Only one third of the students surveyed noted that their training has an “Arctic” focus. It can be assumed that it is due to the following reasons:

- superficial or formal nature of the “Arctic” focus of educational programs;
- mismatch between the “Arctic” focus of educational programs and the professional and life orientations of students that are not connected with the North;
- different understanding of the Arctic component of educational programs among students and supervisors of educational programs, and organizers of educational process.

The assessment of the degree of the Arctic orientation of educational programs differs significantly depending on the profile of training and place of birth. Students of social-humanitarian and natural-scientific programs called their educational programs “Arctic-focused” more often. The Arctic focus of their educational program was pointed out to a lesser extent by future economists, managers,

physicians, and IT specialists. Nonresident students (from other regions and countries) identify their training profile as Arctic more often than resident students. Apparently, this is due to the novelty of the perception of the “Arctic” orientation of their training programs by visiting students. Students who have lived in the Northern regions for a long time are less susceptible to the Arctic orientation and therefore are more critical in assessing the specifics of educational programs.

### Migration intentions

The key direction of potential student migration in the Russian Arctic is the internal one. About 70% of potential migrants would like to move to other regions of Russia (*Fig. 3*). The preferences of this group are evenly divided between the capital and non-capital regions. Among the capital regions, the most popular one is Saint Petersburg and its surroundings, and among other territories – the regions of the Central and Southern federal districts of Russia.

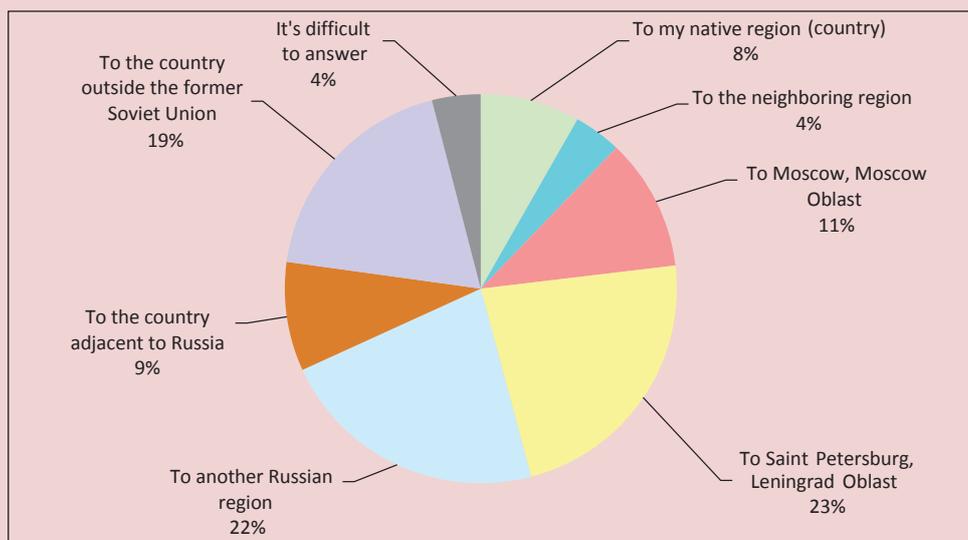
About 30% of respondents express a desire to move to other countries. There are more

potential emigrants in the east of Russia. The most popular destinations of possible departure abroad are countries of Northern Europe and North America. Among the former Soviet republics, the Baltic countries are most in demand. Belarus and Kazakhstan are more often mentioned from other former Soviet countries.

Every tenth potential migrant plans to return to their home area after graduation. At the same time, about 35% of respondents who came to the Russian Arctic from other regions and only 15% of foreign students expressed their desire to return to their native areas after graduating from higher education institutions of the Russian Arctic.

Thus, only a small part of the students who came to study in the Arctic region from other regions or countries have a desire to return after graduation. About 20–25% of nonresident students plan to stay in the region in which they are studying, and the majority wants to move to other regions of Russia. Return migration is quite pronounced among Arkhangelsk

Figure 3. Possible migration directions of those who express a desire to leave the region in which they are studying, N=1,966



students and students from the eastern part of the Russian Arctic (SibFU, NEFU). In these cities, its share varies from 14 to 16% of all migration directions.

Migration sentiments of undergraduate students and master’s degree students are determined by a number of socio-demographic parameters.

Young men living in the region of study more often name other countries as migration destinations, and young women name the capital and other regions of Russia, that is, they consider the domestic direction as a priority for migration (Fig. 4).

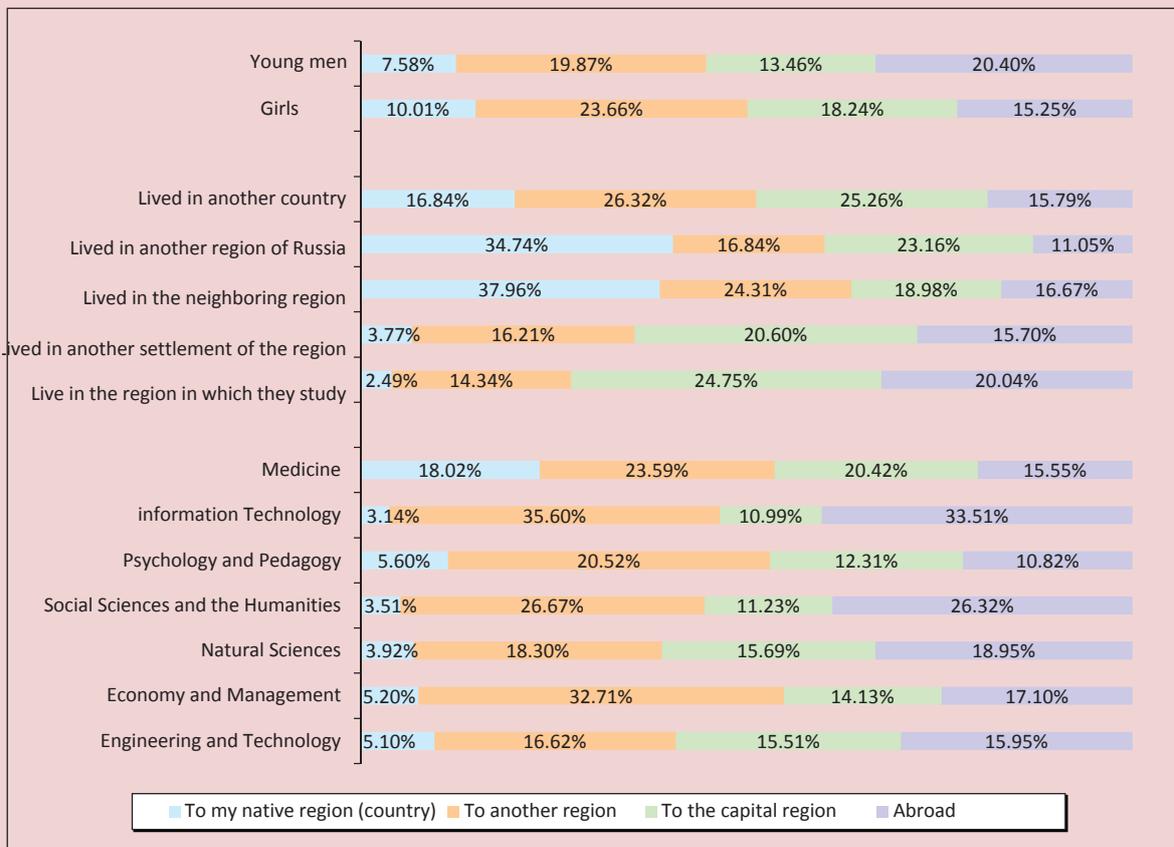
It is noteworthy that, with the exception of the medical specialty, as the time of graduation

approaches, there is a decrease in the proportion of students who want to move to other countries. Most likely, the reason lies in a critical look at the difficulties and consequences of moving to another country; so there is a clear preference for internal migration.

During the period of study, the proportion of those who are going to return to their native region decreases. At the same time, the number of potential return migrants decreases significantly (in 1.5–2 times), especially among future masters and bachelors.

The dynamics of interest in living in the capital region is more complex. Among the bachelor’s and master’s degree students the proportion of those who want to move to one of

Figure 4. Directions of migration depending on sex, education program and place of residence of students before they enroll in higher education institutions (values are given in % of the number of all respondents in this category)



the capital cities somewhat increases; and as for future doctors and engineers, as they reach their final year of training they can lose interest in the idea of moving to the capital region.

Interest in interregional migration is increasing at all levels of higher education. The seriousness of migration intentions is usually determined by the questions concerning the timing of migration and the preparations for moving.

The most serious intentions were demonstrated by potential return migrants. Almost 70% of them are planning to return home immediately after graduation, and 10% are planning to do so in the medium term. Potential migrants who are planning to move to the capitals or to other regions have almost similar temporary and preparatory plans. Approximately 35% of them are planning to move immediately after graduation, and another 25% – in the medium term. Students who are interested in internal migration have demonstrated a high level of activity in preparation for moving to a new place. For example, about 40% of them visited the place of intended residence, and more than 60% collected information and received advisory support concerning the move (*Tab. 4*).

Potential emigrants are much less serious in their plans and actions. Only 30% of them talk about the possibility of their leaving abroad in the near future, and more than 45% have not yet

done anything to prepare for departure. Thus, the probability of realization of migration desire among those who want to go abroad is much lower than among internal migrants (those who intend to move within Russia).

Potential migrants who have considered their intentions most thoroughly study at the universities located in the west of the Russian Arctic (Arkhangelsk, Murmansk). More than 30% of students from this part of the Arctic zone have already taken various actions to prepare for the move, while in educational institutions of the eastern part of the Russian Arctic the share of such students does not exceed 20%.

Most often, active potential migrants were engaged in collecting information about the living conditions and the specifics of moving, both “at a distance” and visiting the place of future residence. One in four potential migrants tried to find a job in a new region (country), and only every fifteenth was engaged in specific preparation for moving (sale of real estate, registration of documents for departure, etc.).

On the basis of cluster analysis, we selected a group of students **with pronounced migration intentions**, who are likely to leave the regions of the Russian Arctic after graduation. The size of this group depending on the region and a particular university varies from 5 to 17% and is about 10% on average. The majority of people within this group are girls who live

Table 4. Answers of respondents to the question: “What actions have you already taken to prepare for moving to another place of residence?”, N=1,966

<i>In % by column</i>	Direction of migration		
	Other regions	Capital region	Abroad
Visited the place of intended residence	33.7%	<b>39.7%</b>	24.4%
Independently collected information about living conditions in the intended place of residence	33.1%	34.6%	<b>40.6%</b>
Consulted on issues related to moving	19.3%	20.1%	23.0%
Tried to find a job in the intended place of residence	11.1%	11.8%	11.0%
Tried to sell / sold property	1.7%	1.8%	1.7%
Prepared documents for moving	1.6%	2.1%	2.9%
Has not taken any steps yet	32.3%	30.7%	<b>36.2%</b>
Found it difficult to answer	7.0%	6.0%	8.9%

in the administrative center of the region, study in the framework of bachelor's degree programs and specialist programs, most often on a commercial basis. Students with social and humanitarian, natural-science or information-technological training specialties are among the most predisposed to pronounced migration actions.

Students who can be included in this group (about half of them) plan to move primarily to the capital regions. Most of the representatives of this group visited the intended place of relocation, collected information and consulted about living conditions there and arrangements for the move. However, only one in four potential migrants was looking for a job in a new place of residence. It is obvious that this group of students is confident about the possibility of finding successful employment in the capital megacities.

Our study did not confirm the hypothesis that **the awareness of the benefits and guarantees provided to the residents of Russia's Northern territories has an impact on migration intentions**<sup>2</sup>. However, the respondents' comments on this issue have led to another hypothesis that needs additional testing. Critical attitude toward the current system of guarantees and benefits for residents of the Far North is a factor that stimulates student migration. A significant part of the students are aware of the Northern benefits and guarantees, but believe that they exist nominally and have no actual impact on the standard of living of

the population of the region, especially young people. This is confirmed by the comments:

- “Northern allowances are valid only for employees of government-financed organizations”;
- “There are benefits, but they are insignificant”;
- “In theory, these benefits exist, but employers are rarely concerned with them”;
- “There are benefits and allowances, but they do not compensate for the unfavorable conditions of life and work”;
- “There exists the so-called Northern allowance, but it doesn't work. The employer understates the basic salary, so the sum together with the Northern allowance makes the same salary”.

The survey has shown that the **students had a weak and fragmentary awareness concerning the establishment of the Arctic zone of Russia** (Tab. 5). Only one third of respondents said that they knew exactly about this fact, while 30% of respondents first learned about it during the survey. In general, the students who study in the west of the Russian Arctic (Arkhangelsk, Murmansk) are more informed on this issue than those who study in the eastern part of the Russian Arctic. Perhaps it is due to the fact that Krasnoyarsk and Yakutsk, unlike other municipalities of the regions, have not been included in the Arctic zone of Russia.

The views of future specialists on the impact that the process of formation of the Arctic zone of Russia will have on the development of the

Table 5. Respondents' answers to the question: “Do you know that the Arctic zone of the Russian Federation is allocated as an independent object of state management in our country?”, N= 4,024

In % by column	Murmansk	Arkhangelsk	Krasnoyarsk	Yakutsk
Yes	<b>41.5%</b>	<b>34.8%</b>	23.5%	23.4%
I hear something about it	32.7%	31.3%	33.6%	37.7%
I don't know	25.8%	33.9%	42.9%	38.9%

<sup>2</sup> About the state guarantees and compensations for the persons working and living in areas of the Far North and the territories equated to them: Law of the Russian Federation of February 19, 1993 No. 4520-1 (as amended December 31, 2014).

region are cautiously optimistic. Slightly less than half of them point out that the population of the region is more likely to benefit from the promotion of the Arctic vector of Russia's state policy.

The analysis did not reveal the direct impact of these results of the sociological survey on migration sentiments, but they are statically related to the indicator of migration intentions "the expected period of migration". In other words, the more the students know about the Arctic zone of the Russian Federation and the more positive they are about the prospects for its development, the less they consider the opportunity to leave the region.

#### Causes and driving forces of migration

The questions concerning respondents' motivation have revealed a set of reasons for potential migrants' intentions to move. In general, there is a wide range of views on this issue.

The most popular reason for leaving the region of study was the following: "I like the region (country) to which I would like to move" (Tab. 6). This answer was noted, generally,

without mentioning the other answers at the same time. This allows us to consider the students who have chosen this option as a special migration group. Representatives of this group are more than others dissatisfied with the terms for education, cultural development and with the provision of housing in the area where they are studying. In addition, they believe the region is "grey and listless" and at the same time "kind and dear". Students who pointed out this motive are interested in a creative, high-paid and career-promising job. They are particularly attracted to science, business, and politics as future professional spheres.

In general, a typical representative of this motivational group can be called a creative person who is looking for "an ideal place of residence". Such people need a bright, energetic and financially stable territorial environment, which should help unlock their potential in the professional, social and personal sphere. Students hope to find such an environment in Saint Petersburg or abroad (especially in Northern Europe, the USA, Canada, and Japan). Only four out of ten such people visited

Table 6. Respondents' answers to the question: "Why do you want to move to another region (country)?", N= 1,966

In % by column	Direction of migration		
	Other regions	Capital region	Abroad
The region where I am going to move is interesting	42.0%	45.0%	<b>49.2%</b>
Low wages in the region	35.7%	39.0%	<b>41.9%</b>
Severe climate	35.0%	35.5%	37.3%
Inability to find a well-paid job	28.9%	<b>33.7%</b>	29.1%
Undeveloped cultural and leisure environment	25.3%	<b>29.2%</b>	23.8%
High prices	24.2%	22.3%	24.6%
Poor environment	23.9%	20.6%	23.7%
Economic instability in the region	20.3%	21.75%	<b>27.8%</b>
Housing issues	18.5%	15.3%	17.5%
I want to start my own business, to run a business	10.1%	12.39%	11.5%
The desire to create a family	<b>8.6%</b>	7.1%	6.7%
Be close to my family/friends	7.8%	7.8%	3.9%
Difficulties concerning the provision of medical services	7.2%	7.1%	11.0%
Other family circumstances	5.7%	6.1%	4.1%
Other	0.7%	0.8%	1.1%
Difficult to answer	3.5%	2.9%	3.3%

the place of possible relocation, so the ideas about the desirable place of residence of the majority of these people are not derived from personal experience.

The socio-economic causes of migration (low wages in the region, inability to find decent work, high prices, economic instability in the region) rank second. The key answers of this set of reasons are related to work. In fact, they show students' disappointment with finding well-paid jobs within their specialty in the region. Such thoughts are especially relevant for students enrolled in information technology, social and humanitarian education programs and partly for future physicians. However, similar feelings are expressed by students who train in the programs with a pronounced "Arctic" orientation (the programs have a reference to it in the title). Most likely, the ambitious salary expectations of this group negatively affect their perception of the regional labor market and contribute to the development of the desire to leave the region.

At the same time, labor-related pessimism of university students is associated with the fact that they know little about the leading enterprises of the industry. Thus, only 20% of the respondents from the number of graduates said that they know a specific organization or a company in which they would like to work. It is significant that the proportion of such students in the first year and final year is similar, in general.

The third place among the causes of migration is occupied by natural and environmental (severe climate, poor environment) factors, and the fourth and fifth places – by socio-psychological factors.

It should be noted that the structure of migration motivation of young men and young women is fundamentally different. The motives of young men are primarily related to the

professional and labor sphere and material problems (salary, work, high prices, economic instability). The motivation of young women is largely shaped by the situation in the family and personal sphere and emotional problems (severe climate, desire to create a family, to be closer to one's relatives/friends).

Among the subjective factors, the influence of which on migration attitudes of students was statistically confirmed, the following can be distinguished:

- readiness to work within one's obtained specialty;
- life plans after graduation;
- preferred types of work;
- level of financial aspirations;
- attitude toward the development of the Arctic zone of Russia.

If the surveyed students already have some plans related to employment after graduation, then they find migration to capital cities and outward emigration not so attractive anymore, and their interest in remaining in the territory of the Russian Arctic increases. But if they are planning to continue education or start their own business, this urges them to move to the capital regions and abroad.

Orientation of students toward innovative (science, entrepreneurship) and management (socio-political activities, public service) activities is one more factor "pushing" them to leave the Russian Arctic. Preferences related to production, practical and pedagogical activities, on the contrary, reduce the likelihood of leaving.

Financial aspirations of the students have complex effects on their migration sentiments. Financial demands are higher among those who want to move to abroad, primarily to North America or Northern Europe. Higher financial expectations are also a factor that increases interest in capital migration for students of

Table 7. Answers of respondents to the question: "What can keep you from leaving your region?", N= 1,966

<i>In % of respondents by column</i>	Young men	Girls
Employment on good terms, in a good organization	56.7%	52.3%
Improvement of the economic situation in the region	<b>34.7%</b>	27.6%
If I start a family, find my loved one	33.1%	<b>37.5%</b>
Family circumstances, the interests of loved ones	31.4%	<b>37.9%</b>
Improving infrastructure in the region	<b>30.4%</b>	22.6%
The emergence of benefits, various forms of support for young people in the region	23.8%	24.0%
Friends, their unwillingness to let me go	<b>11.0%</b>	5.3%
Other	6.0%	3.7%

Arkhangelsk and Murmansk. At the same time, the difference in the expected salary among those who want to stay in the region and those who intend to leave is only 20–30%, depending on the university and the direction of migration. Therefore, the level of financial aspirations cannot be considered a critical factor in migration sentiments.

A good job is the most important reason for the majority of respondents to stay in the Russian Arctic. And the main parameters of successful employment, in their opinion, are high wages and career opportunities. Personal factors and psychological circumstances (love, family, relatives, friends) are important reasons for young women to postpone their leaving the North or to abandon the idea of moving (*Tab. 7*).

### Conclusion

Migration sentiments of student youth in the Russian Arctic are quite strong, especially in the cities of Arkhangelsk and Murmansk; and they are manifested differently in subgroups of young people. For example, girls and students who lived in administrative centers of RF subjects before entering the university expressed a strong desire to leave.

The study confirmed the hypothesis that a more pronounced identification of students with the Arctic orientation of their training reduces the level of migration sentiments.

The dominant direction of potential student migration is the domestic one. However, during the years of study, students show less interest in moving abroad.

Only a small part of students who came to study in the Arctic regions from other Russian regions or from abroad plan to return home after graduation. About a quarter of students who came from other regions want to connect their lives with the Arctic regions, and the majority of students want to live and work in more southern regions of the Russian Federation.

The number of students with pronounced migration intentions, depending on the region and the specific university, varies within the average value, which is about 10%. Such students are more often found among the respondents studying in the west of the Russian Arctic (Arkhangelsk, Murmansk). The majority of potential migrants have already collected information about the conditions of life and about moving, both from personal experience and from other sources. Some of them were looking for a job in a new region (country), and only a few were engaged in specific preparation for the move.

Migration intentions of students are primarily related to economic factors. However, the impact of psychological, information and education factors cannot be underestimated. Thus, the analysis of the survey data revealed that the awareness of the fact that the Arctic zone of the Russian Federation has been established and a positive attitude toward the prospects of its development affect the increase in the planned period of departure from this macroregion.

However, the desire to leave the Russian Arctic is influenced not only by the objective situation, but also by the subjective perception of the situation through the eyes of students, their life and professional ideas and plans. The main factors that can help retain young professionals are associated with the activities of federal and regional government bodies, local authorities, and business structures of the macroregion.

Factors related to the work of higher education institutions play a secondary role in migration processes. However, their importance cannot be underestimated, especially since it is possible to correct them in a shorter time than to change the main factors.

According to the results of the study, a number of areas can be identified in the activities of higher education institutions, the optimization and promotion of which can positively affect migration processes in the Russian Arctic and help address the issues concerning the shortage of personnel for the economy and social sphere of the macroregion.

These areas are as follows:

1. To develop and upgrade Arctic-focused educational programs: to include reference to the Arctic orientation in the name of educational programs; to include Arctic-focused educational modules in the programs for each year of training; to organize network programs that unite personnel and educational resources of educational organizations engaged in Arctic-focused studies; to develop and implement educational modules on the history of the Arctic, the current state and development prospects of the Russian Arctic. It is worth noting that the institution that can perform a coordinating role in the improvement of training is the National Arctic Research and Education Consortium; it was established in June 2016 and brings together more than 40 leading scientific, educational, non-governmental organizations of Russia

involved in staffing and scientific support of Arctic projects.

2. To carry out systematic career guidance work with schoolchildren and students: to support and promote various forms of main and additional educational activities of schoolchildren related to the Arctic direction and topic (subject-oriented classes, clubs, elective courses, expeditions, trips); to work with schools located outside administrative centers of the regions; to inform students about the state of the industry labor market in the region of education and other regions of the Russian Arctic; to create an open access Internet database of enterprises and organizations that can be potential employers in the Russian Arctic industry, to arrange them on an industry and professional principle within the database.

3. To cooperate with employers on the organization of practical training, preparation of graduation papers, and employment of graduates. It is advisable to use the expert potential of employers to assess the prospects of new areas of training, help select the topics of graduation papers, and analyze the content of educational programs. It is necessary to expand the practice of creating basic departments at the enterprises of the region, increasing the number of large, medium and small partner organizations that are willing to provide on-the-job training.

4. To cooperate with public authorities and local self-government on forecasting personnel requirements of municipal entities and the region; to develop and implement measures to support young professionals. The projects of government and municipal programs for providing support to young people and young professionals should be subjected to preliminary discussions at the universities in the regions. It is advisable to inform students about the measures taken and implemented in the region and municipal entities to support young people

through trade union activities and elective educational disciplines.

5. To organize work with graduates, especially with those who successfully work within their specialty at enterprises and organizations in the territory of the Russian Arctic. It is advisable to collect and arrange information about graduates and use their

potential as lecturers, consultants and experts with the help of the association of graduates.

6. To organize research and innovative work of students: to involve them in scientific and applied work; to establish student business incubators and technology parks that would execute orders for the real sector of the economy of the macroregion.

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