



Factors of Human Health Capital Development in the Arctic

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ABSTRACT

Aims The purpose of the study is to study the theoretical aspects of human capital development, analyse the development of human health capital in the Arctic and develop recommendations aimed at the development of human health capital and increase the share of attracting young professionals to this region.

Information & Methods Methods of synthesis, comparison, economic and statistical analysis, and graphical representation of the results were used.

Findings The results of the study made it possible to conclude how high a level of human capital development and potential the Arctic Zone of the Russian Federation has. Based on the analysis, recommendations have been developed that will increase human capital by attracting young specialists to the region and preserve the number of labour resources that are already concentrated among residents in the Arctic.

Conclusion It is necessary to provide high-quality training in universities, which are obliged to take into account the specifics of the development of the Arctic, its harsh natural and climatic conditions, as well as the specifics of the organization of infrastructure and much more. The proposed recommendations can be included in the development of a new strategy for the development of the Arctic Zone of the Russian Federation, as well as a program for attracting young specialists.

Keywords Professional Competence; Workforce; Social Problems; Arctic Regions

CITATION LINKS

[1] Theoretical foundations of human capital education in economic ... [2] Information model for improving accounting and analytical support ... [3] Salary optimisation in Ukraine in the context of the economy ... [4] The long-run impact of human capital on ... [5] Inclusive development of the world countries under conditions ... [6] Factors generating social problems of the Russian arctics ... [7] Analysis of the socio-economic development of the regions of the Russian Federation based ... [8] The factors determining the creativity of the human capital ... [9] Migration of human capital as a factor of sustainable development ... [10] Human capital sustainability leadership to promote sustainable ... [11] The impact of strategic human resource ... [12] Knowledge and human capital as sustainable competitive advantage in human ... [13] Labour protection as an effective ... [14] Demographic change and labour market challenges in regions with largescale resource-based ... [15] Human capital and imbalances in the labor markets of the Arctic ... [16] Towards a smart, inclusive and sustainable ... [17] Innovation in Circumpolar regions ... [18] Socio-economic indicators, 2020: statistical ... [19] Human capital: Its role in the socio-economic ... [20] Evaluating the effectiveness of investment ... [21] Transparency, social responsibility and corporate ... [22] Human capital of the Arctic: Problems ... [23] Personnel problems in the development of the ... [24] Exploring the Arctic's "other economies": knowledge ... [25] The importance of human capital in sustainable ... [26] Personnel safety of agricultural enterprises ... [27] Protection of labour rights by trade ... [28] The influence of leadership style ...

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Introduction

Human capital is a factor of increasing the level of income of the population a high level of development, which should be aimed at increasing the competitive ability of organisations, the region and the country, and consequently, increasing the level of national welfare. Human capital can be formed by combining many factors and in various directions, as well as be realised in all possible forms and flow throughout all stages of a human's life cycle, which they go through throughout their life. The structure and quality of human capital can contribute to economic growth improve the economic and social well-being of people [1-3]. As a result, it is necessary to develop and implement the most progressive approaches to human capital management that can take into account its structure, factors aimed at ensuring the formation of human capital from a qualitative point of view, the mutual impact of the development processes and the use of human capital on each other. Analytical information on the basic factors influencing the formation of human capital is important [4, 5].

The economy of many countries is undergoing accelerated technological changes, and therefore the appearance of many economic processes is changing, which, in turn, leads to the transformation of human capital into one of the fundamental foundations of maximum effective economic development. It follows that the determining factor of the progress of human capital is the creative potential of the employee. The labour competencies of a creative worker are becoming one of the key factors of national competitiveness and a condition for the intensive expanded reproduction of the economy, which means sustainable development of states and improving the well-being of their population [6, 7]. Since the Russian economy, which is faced with the tasks of transition to an innovative path of development, overcomes dependence on raw materials and is aimed at the effective use of the existing intellectual potential of our country, the progress of human capital, the creative potential of the employee is of great significance [8].

The study of the labour potential of the population at the regional level seems relevant because there is a serious problem of differentiation of the regions of Russia in terms of socio-economic development due to differences in the placement of productive forces. This problem is significantly aggravated in the regions of the Russian North, where there has been a significant outflow of labour over the past 20 years. At the same time, in the northern regions, as well as in Russia as a whole, there is an increase in the educational level of both the population as a whole and those employed in the economy. As a result, there should be an increase in employment and life expectancy, but these regions, on the contrary, are characterised by an increase in the shortage of

labour, since the issue of securing qualified personnel, general improvement in the quality of the labour potential of the population is acute [9, 10].

It seems possible to solve the problem based on the assessment of the labour potential of the population, which makes it possible to identify problem areas in the reproductive process, taking into account the northern specifics (the predominance of extractive industries over processing industries, the mono-profile specialisation of most settlements) in order to develop human capital. Inter-regional analyses should be developed to identify regional specificities in the reproduction of labour potential and human capital accumulation in the Arctic zone [11]. The development of methods of interregional analysis is necessary so that its results can be more accurately taken into account in a multi-level system of labour market regulation. This fully applies to the northern regions, for which the relevance of this kind of research is determined not only by the need to implement tasks to improve the balance of supply and demand in the labour market but also by the fact that these regions belong to strategically important territories [12, 13].

The purpose of this article was to develop recommendations aimed at the development of human capital and to increase the share of attracting young professionals to the Arctic region.

Information and Methods

The following methods were used in the research process: analysis, synthesis, comparison, economic and statistical analysis. This study is based on data from the official website of Rosstat, as well as data from scientific articles by researchers. The study was conducted in three stages:

1. A theoretical analysis of existing approaches in determining human capital and its indicators was carried out first. Different approaches of Russian, European and American scientists were considered in determining the formulation of "human capital", as well as highlighting the main indicators that allow it to be determined.
2. At the second stage, the analysis of indicators was carried out, which are the main factors for determining human potential and the accumulation of its capital. Indicators related to groups of indicators were analysed: population, labour, education, the standard of living of the population. In particular, the following indicators were analysed: demographic load coefficient, population change, total fertility and mortality rates, infant mortality rate, life expectancy, distribution of the number of arrivals/departures by direction of movement, the level of participation in the workforce, the level of participation in the workforce of the population by gender and type of settlement, the number of employed by type of economic

activity, the composition of the employed population by age groups, the composition of the employed population by level of education, the composition of the unemployed by gender and type of settlement, the composition of the unemployed population by level of education, the monetary income of the population calculated on average for 1 person, the size of the assigned pensions calculated as an average value, the value of the subsistence minimum, the number of people with monetary incomes whose value is lower than the established value of the subsistence minimum, the level of consumer spending calculated on average for 1 person, the structure of household consumer spending for consumption purposes, etc. Based on the analysis, weaknesses were identified in the formation and development of human potential, which means the accumulation of its capital.

3. At the third stage, recommendations were proposed aimed at the formation and development of human capital in the Arctic Zone of the Russian Federation. These recommendations will allow accumulating human capital and developing labour potential in the Arctic, which will ensure the competitiveness of the Arctic Zone of the Russian Federation and become more attractive for young, highly qualified personnel. These proposals can be taken as a basis for the formation of human potential and the development of its capital by the heads of any region of the Russian Federation.

Findings

Definition of human capital and its indicators

The analysis of all definitions of the term "human capital" makes it possible to draw the following conclusions. European, American and Russian researchers use excessively narrow and very broad interpretations related to the disclosure of this term. So, some of them are limited only to the educational component, others also include cultural and moral principles, health in this concept, third experts in this matter limit the definition of the totality of productive qualities of an employee and motivation as constituent elements, fourth emphasise investing in a person and their development, other researchers do not include them in the content of this concept. The authors of the article propose their own definition of the term "human capital": "... is a part of the capital of an individual, enterprise,

territory, which appears as an integral part of the total reserves of society, as well as the result of investments in a person (education capital, health capital, culture capital, etc.), including the stock of knowledge, skills and abilities of an individual, providing income through implementation in economic activity"

When defining the concept of "human capital", the authors of the article suggest taking into account the specifics of the industry (region) in which it is used. The fact is that this type of capital in different spheres and types of activities has different specifics even in the context of one region. In modern conditions, "human capital" appears not just as a certain set of knowledge, abilities that a person possesses, but also the possibility of using them to extract income and increment other types of capital. At present, human capital in Russia is characterised, in the author's opinion, by:

- an education system that focuses on differentiation in narrow-profile, socio-cultural and general training;
- insufficient participation of the state in the reproduction of human capital (its formation, preparation, distribution, redistribution and use);
- absence of career guidance subsystems at the levels of schools, vocational schools, universities;
- introduction of the bachelor's and master's degree system;
- the lack of legal and state guarantees for the use of human capabilities;
- passive participation or lack of participation of people in the formation and development of public institutions of civil society and industries.

The authors of the article propose to consider the basic components of human capital in Figure 1. It is worth noting that certain characteristics of an employee can be changed under the purposeful managerial influence of the employer. Since human capital can experience all kinds of direct and indirect, purposeful and accidental, internal and external influences, in this case, the ability of an enterprise to manage factors, both external and internal, is used as a traditional criterion for classifying factors that affect human capital.

Figure 2 shows the external and internal factors that are inherent in human capital ^[8].

Consider the region as a source of human capital. The chain of formation of regional human capital is shown in Figure 3 ^[14].



Figure 1) Basic components of human capital

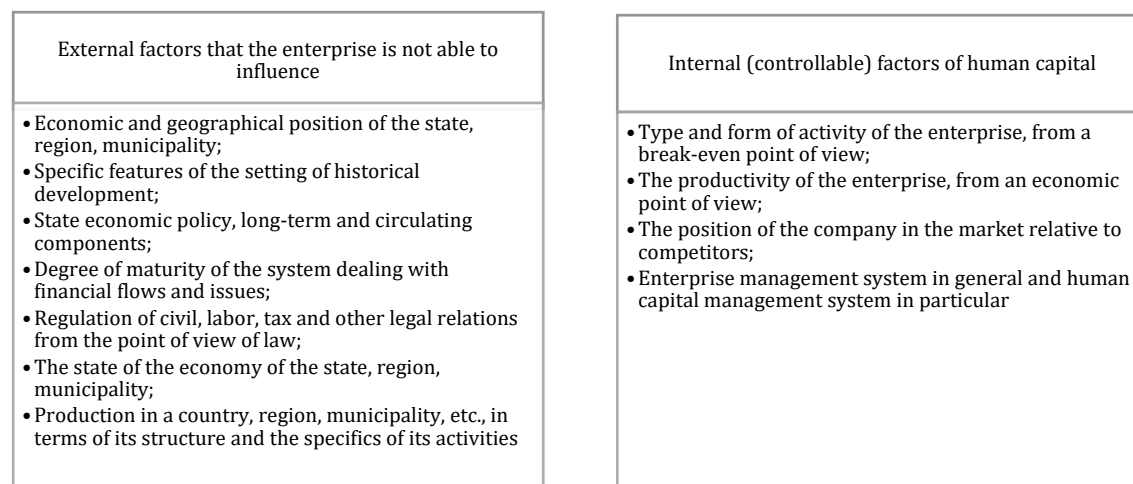


Figure 2) External and internal factors affecting the improvement of human capital

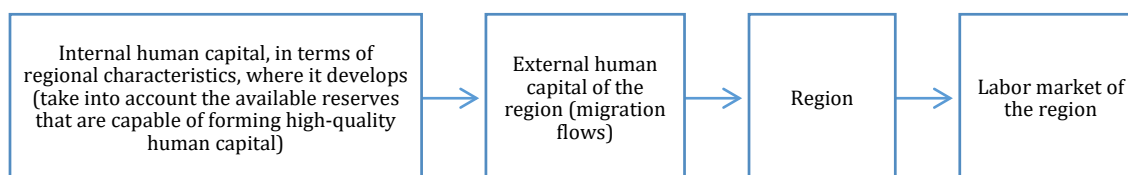


Figure 3) The chain of formation of regional human capital

The region has internal human capital, i.e. reserve and external human capital. Both types are implemented in the labour market of the region. The task of regional policy is to create a step-by-step mechanism for managing reserve and migration flows of human capital. Let's focus on the reserve aspect ^[11, 15]. The authors of the article, having studied many works of European, American, and Russian experts, came to the conclusion that the size of the human capital reserve creates prerequisites for the development of the country, the region as a whole, carrying out various kinds of borrowing innovations or creating them. To analyse the human capital of the region, it is necessary to assess the reserve potential of the region, its equipment with a separate types of resources. There are different methods for calculating the reserve or reserve of human capital ^[16]. H. Badinger and G. Tondl, in their studies, note that the stock of human capital is associated with the number of people employed in the economy with a certain level of education, and the total factor productivity, which depends on the amount of human capital employed in the R&D field ^[17].

Analysis of human capital stock in the Arctic

The authors of the article analysed the main factors that affect its accumulation in the Arctic. The analysis was carried out according to Rosstat data for 2017-2019, since not all Arctic regions have yet provided complete data on all indicators for 2020. According to the "Regions of Russia. Socio-economic indicators" ^[18] demographic load coefficients are unstable in all analysed regions of the Arctic zone of the Russian Federation (AZRF) for the analysed period of time. The demographic load factor is the highest in the Republic of Karelia and the Arkhangelsk Region without Autonomous Okrug (AO). In the Republic of Karelia in 2019, the value of the indicator was 823, which is 3.7% lower than the value of 2018 and 1.6% lower than the value of 2017. In Arkhangelsk region without AO in 2019, the value of the indicator was 819, which is 4.1% lower than the value of 2018 and 1.9% lower than the value of 2017. The lowest indicators of demographic load in Yamalo-Nenets AO. In 2019, the value of the indicator was at the level of 2017 – 555, and in comparison, with 2018, there was a decrease in the indicator by 3%. All other regions have an average value for this indicator.

Analysing the indicator "population change" in the regions of the Russian Arctic for 2017-2019, the authors concluded that the greatest negative dynamics of the indicator is observed in the Komi Republic, since in 2017 the indicator value was -1.1%, in 2018 – -1.3%, and in 2019 – -1.2%, which is a negative factor for the development of the region's potential. The greatest positive dynamics relative to population growth is observed in the Chukotka AO in 2018-2019 accordingly, in 2018 – 0.6%, and in 2019 – 1.2%.

The highest value of the total fertility rate was noted in the Nenets AO. Among the regions where relatively low values of this indicator are observed, the following are noted: Arkhangelsk region without AO; Republic of Karelia; Murmansk region. The lowest mortality rate throughout the analysed period of time within the regions belonging to the Russian Arctic was noted in the Yamalo-Nenets AO. The highest value of the total mortality rate was noted in the Republic of Karelia. According to the indicator "infant mortality rate", the Chukotka AO is the leader. The lowest infant mortality rates among the regions of the Russian Arctic and the average for the Russian Federation were recorded in the Nenets AO. In the process of analysing the "life expectancy at birth" indicator, the authors of the article came to the conclusion that long-livers according to the forecasts of expert analysts as of 2019 should be the next regions: Yamalo-Nenets AO – 74.18 years; Nenets AO – 73.19 years; The Republic of Sakha (Yakutia) – 73 years; The lowest indicator of life expectancy is predicted in the Chukotka AO.

Analysing the indicator of "distribution of the number of arrivals by directions of movement", the authors concluded that the highest value was recorded in 2017-2018 in the Republic of Sakha (Yakutia), but in 2019, the highest value was recorded in the Arkhangelsk region without the AO. The least people migrate within their region in the Chukotka Autonomous Region. According to the indicator of the distribution of the number of arrivals from other regions of the Russian Federation, the highest value was recorded in 2017-2019 in the Chukotka AO. Analyzing the indicator of visitors from outside Russia, the authors concluded that the Chukotka AO was least attractive for relocation in 2017-2018 – 2.0% and 2.3%, respectively. However, in 2019, the least attractive region of the Russian Arctic was the Arkhangelsk Region, excluding the Nenets AO – 4.4%. As of 2019, the most attractive regions for relocation from other countries are the following regions of the Russian Arctic: Yamalo-Nenets AO – 17.6%, Chukotka AO – 15.1%, the Republic of Sakha (Yakutia) – 14.9%. According to the indicator of the distribution of the number of arrivals from other regions of the Russian Federation, the highest value was recorded in the Chukotka AO. The least number of people tend to move to the Krasnoyarsk Krai. According to the indicator "distribution of the number of departures by direction of movement" to other regions of the Russian Federation, most people tend to move to other regions from Chukotka AO. However, within the analysed period, the indicator has a positive trend towards reduction. The least people tend to move to other regions from the Krasnoyarsk Krai. According to the indicator "distribution of the number of departures by direction of movement" outside of the Russian Federation, most people tend to move to other countries from Krasnoyarsk Krai.

and Yamalo-Nenets AO. The least number of Russians willing to move out of the country are from the Chukotka AO and the Arkhangelsk Region, excluding the Nenets AO.

Analyzing the indicator "level of participation in the labour force", the authors came to the conclusion that the Chukotka AO has the highest value. The lowest value of this indicator was registered in the Arkhangelsk Region, excluding the Nenets AO. The authors of the article, analysing the level of participation in the workforce of the population by gender and type of settlement in 2019, concluded Chukotka AO had the highest number of men – 84.8%, and Yamalo-Nenets AO – 79.3%. The largest number of women in this indicator was recorded in the Chukotka AO – 76%, as well as in the Yamalo-Nenets AO – 72.6%. The least number of men on this indicator is recorded in the Arkhangelsk region, excluding the Nenets AO – 66.3%. The lowest values of the indicator among women were registered in the Arkhangelsk region, excluding the Nenets AO – 52%, as well as in the Republic of Karelia – 52.5%. According to the indicator "the number of employed by type of economic activity, calculated on average per year" for 2019, the authors made the following conclusions:

- Agriculture, forestry, hunting, fishing and fish farming. The leader in this type of activity is the Krasnoyarsk Krai – 102.3 thousand people and the outsider is the Nenets AO – 1.4 thousand.
- Mining. The Yamalo-Nenets AO – 90.3 thousand people, the Arkhangelsk Region, excluding the Nenets AO – 3.2 thousand people.
- Manufacturing industries. The Krasnoyarsk Krai – 194.3 thousand people, Chukotka AO – 0.5 thousand people.
- Provision of electric energy, gas and steam; air conditioning. The Krasnoyarsk Krai – 47.1 thousand people, Nenets AO – 2 thousand people.
- Water supply, sanitation, organization of waste collection and disposal, pollution elimination activities. The Krasnoyarsk Territory – 12.6 thousand people, Chukotka AO – 1.8 thousand people.
- Construction. The Krasnoyarsk Territory – 111.2 thousand people, Chukotka AO – 0.04 thousand people.
- Wholesale and retail trade, repair work for motor vehicles and motorcycles. The Krasnoyarsk Krai – 222 thousand people, Nenets AO – 1.5 thousand people.
- Provision of transportation and storage services. The Krasnoyarsk Krai – 112.8 thousand people, Chukotka AO – 2.6 thousand people.
- Activities of hotels and catering establishments. The Krasnoyarsk Territory – 25.4 thousand people, Nenets AO – 0.5 thousand people.

- Information and communication activities. The Krasnoyarsk Territory – 23 thousand people, Chukotka AO – 0.5 thousand people.
- Activities on transactions related to real estate. The Krasnoyarsk Territory – 35.6 thousand people, Nenets AO – 0.4 thousand people.
- Education. The Krasnoyarsk Territory – 127.9 thousand people, Chukotka AO – 3 thousand people.
- Implementation of activities related to the field of health care and the provision of social services. The Krasnoyarsk Territory – 103.1 thousand people, Nenets AO – 1.8 thousand people.
- Other activities. The Krasnoyarsk Territory – 257.6 thousand people, Nenets AO – 4.8 thousand people.

Thus, the Krasnoyarsk Krai is the leader in almost all types of economic activity, and among the outsider regions are Nenets and Chukotka AO.

Analysing the indicator "composition of the employed population by age groups" for 2019, the authors of the article concluded that the greatest contribution to the development of human capital in the Russian Arctic is made by people who are at the average age of 30-60 years. Residents of the Russian Arctic aged 15-19 years, as well as 70 years and older invest the least in the development of human capital.

Further, an analysis of the composition of the employed population was carried out. The highest employment rate as of 2019 is recorded at 74.4% and 77.4% in Yamalo-Nenets and Chukotka AO respectively. In turn, the unemployment rate in these regions in 2019 was 1.9% and 3.8% in Yamalo-Nenets and Chukotka AO, respectively. The lowest employment rates were recorded in the Republic of Karelia – 55.0% and the Arkhangelsk Region, excluding the Nenets AO – 54.9%. And the unemployment rate in these regions for 2019 was 7.4% in the Republic of Karelia and the Arkhangelsk Region, excluding the Nenets AO – 6.2%.

If we analyse the indicator "employment rate by gender and type of settlement" for 2019, the following results can be obtained: most men are employed in the Chukotka AO – 80.7%, Yamalo-Nenets AO – 77.8%. The least number of men are employed in the Arkhangelsk region, excluding the Nenets AO – 61.8%. Most women are employed in Chukotka AO – 74.1%. The least number of women are employed in the Republic of Karelia – 48.9%.

Analysing the indicator "the composition of the unemployed by gender and type of settlement" for 2019, the authors concluded: the most unemployed among men are recorded in the Nenets and Chukotka AO – 67.8% and 68.4%, respectively. The least number of unemployed men was recorded in the Murmansk region – 44.7%. The largest number of unemployed women is recorded in the Murmansk

region – 55.3%. The Chukotka AO has the lowest number of unemployed women – 31.6%. The author, analysing the composition of the unemployed by age group for 2019, made conclusions:

- The number of unemployed aged 15-19 years is highest in the regions of the Russian Arctic. The least number of unemployed in this age group is observed in the Chukotka AO.
- The number of unemployed aged 20-29 years is highest in Yamalo-Nenets AO – 52.2%. The least number of unemployed in this age group is observed in the Arkhangelsk region, excluding the Nenets AO – 22.1%.
- The number of unemployed aged 30-39 years is highest in Chukotka AO – 32.2% and the least number is observed in the Republic of Karelia – 23%.
- The number of unemployed aged 40-49 is the highest in the Arkhangelsk Region, excluding the Nenets AO – 24.8%. The least number of unemployed in this age group is observed in Yamalo-Nenets AO – 5.9%.
- The number of unemployed aged 50-59 years is the highest in the Republic of Karelia – 20.5%. The least number of unemployed in this age group is observed in the Chukotka AO – 4.8%.
- The number of unemployed aged 60-69 years is highest in the Murmansk region – 7.0%. The least number of unemployed in this age group is observed in the Republic of Sakha (Yakutia) – 2.9%.
- The number of unemployed aged 70 years and older is highest in the Republic of Sakha (Yakutia) – 0.6%. The least number of unemployed in this age group is observed in the Republic of Karelia – 0.1%.

Having analysed the "Population" and "Labour" blocks, in order to determine what potential there is for the development of human capital in the Arctic Zone of the Russian Federation, the authors of the article also analysed important indicators related to the group of indicators "Standard of living of the population". Analysing the indicator "per capita monetary income of the population" for 2018-2019, the authors made the following conclusions. The level of monetary income is growing annually. The leader in terms of income is Chukotka AO – 83.385 RUB in 2019, which is 4.573 RUB higher than in 2018. The lowest level of income of the population among the regions of the Russian Arctic is recorded in the Republic of Karelia. In 2019, the income level of the population was 30.854 RUB, which is 1.704 RUB higher than the income level in 2018.

According to the indicator "the average size of assigned pensions for 2018-2020", the author concluded that the first place among the regions of both the Arctic Zone and the regions of the Russian Federation as a whole is the Chukotka AO. The lowest level of assigned pension among the regions

of the Arctic Zone was recorded in the Krasnoyarsk Krai.

In the process of analysing the structure of monetary incomes of the population, the authors made the following conclusions:

- Income from entrepreneurial activity. The leader among the regions of the Arctic Zone is the Republic of Sakha (Yakutia) – 7.1%. The lowest value of income is recorded at 1.2% in Chukotka AO.
- Remuneration. The largest share of income from receiving wages in the total income structure was recorded in Yamalo-Nenets AO. The Republic of Karelia receives the least income from wages.
- Social benefits. Most of the income from social benefits is received in the Republic of Karelia, the Arkhangelsk Region, excluding Nenets AO, the Komi Republic.
- Income from the property. The largest income from property in the total income structure among the regions of the Arctic Zone is received in the Murmansk region. Residents of the Nenets AO have the smallest share of income from property among the regions of the Arctic Zone.
- Other monetary receipts. The largest share of income from other monetary receipts in the total income structure is observed in the Republic of Karelia. The smallest share of income from other monetary receipts in the total income structure is observed in the Komi Republic and Yamalo-Nenets AO.

Analysing the indicator of "distribution of the population by the amount of per capita monetary income for 2019", the author drew conclusions that the Krasnoyarsk Krai is in the lead while the lowest value of this indicator was recorded in Chukotka AO. Further, the authors analysed the level of consumer spending on average per capita for 2017-2019. In all regions of the Arctic Zone, it was noted that there is an annual increase in consumer spending. The next indicator that affects the development of both the potential of the region and the accumulation of human capital is "housing stock, million m²" for 2017-2019. Throughout the analysed period, 2 regions were distinguished by the availability of housing stock in the city: the Krasnoyarsk Krai and the Arkhangelsk Region. The lowest indicators of the housing stock were observed in the Nenets and Chukotka AO. The next indicator that is of interest for assessing the human potential and the accumulation of its capital in the future in the regions of the Arctic zone is "coverage of preschool education". The gross enrollment ratio in preschool education, calculated as a percentage of the number of children aged 1-6 years, shows that the leaders in this indicator in terms of the regions of the Arctic Zone as of 2019 are: the Komi Republic, Chukotka A

AO, Murmansk Region. The lowest value of this indicator was recorded in the Krasnoyarsk Krai.

The provision of preschool-age children with places in organizations engaged in the implementation of educational activities for educational programmes of preschool education, supervision and childcare, accounts for places per 1000 children, shows that the leaders in this indicator in the context of the regions of the Arctic Zone as of December 2019 are Chukotka AO, Komi Republic, Nenets AO. The lowest value of this indicator was recorded in the Krasnoyarsk Krai. The number of graduate students at the highest level is recorded in the Krasnoyarsk Krai – 1510 people, and the lowest number of graduate students is registered in the Republic of Karelia – 105 people.

Recommendations for the formation of development system of human potential

Having identified weaknesses in the process of analysis for the formation and development of human potential and the accumulation of its capital, the authors of the article propose to develop recommendations for the formation of a management system for its development. In particular, it is possible to consider such priorities for the development of human capital in the context of increasing the effectiveness of the implementation of the socio-economic potential of the region as:

- individualisation of educational and professional activities, the foundations of which should be laid in the system of general education;
- creating conditions for the formation of a transparent, highly competitive labour market that encourages employees to self-development, increase the level of knowledge and qualifications;
- development of an institutional framework for the formation and implementation of human capital, integrated into the existing system of education and employment promotion;
- determination of an effective format of cooperation between key labour market participants, creation of conditions for the development of a mechanism of public-private partnership in the system of financing personnel training by creating incentives to attract the entrepreneurial sector;
- formation of the institute of certification of professional qualifications in the regions, as well as the development of interregional and intraregional labour mobility as a mechanism for the development of conditions for the subsequent realisation of human capital;
- giving the system of personnel training and professional orientation a spatial dimension by improving the infrastructure for supporting vocational education.

In order to create conditions for the development of human capital in the Arctic Zone, the author of the article suggests considering joint activities to develop professional standards that will make it possible to provide a space for interaction between employers and educational institutions in the process of determining qualification requirements and creating regional catalogues of qualifications for priority economic activities for the region. Large enterprises, locomotives of regional growth, both independently and within the framework of professional standards development activities, should take a direct part in the process of formation and use of human capital. The Regional Agency for the Development of Human Capital should serve as a guide for both the regional and municipal segments of the employment system.

In order to develop the labour potential, it is necessary first to organize high-quality training of future specialists at the stage when the future employee first enters university to gain knowledge and skills that after graduation will allow them to emerge as a professional. Many higher educational institutions, in the current conditions of the development of the higher education system, cannot produce a competitive product at 100%, because they do not pass certification according to international standards and for many specialties and professions in our country there are practically no professional standards that meet international requirements. The low quality of training, in particular, of bachelors, already leads to the fact that many enterprises are experiencing a personnel shortage in young specialists, because it is necessary to update personnel due to the development of high technologies and sometimes older colleagues have difficulty adapting to new technologies and new types of production, etc.

In order to form a new human capital, in many areas and fields of activity, many universities should revise their training programmes so that there is not just theory, but practice in real organizations, where students will be able to practice their skills and understand how the theory works on practice. But in order to do this, the authorities of the region should help universities to find sites (enterprises/organizations) that would conclude contractual relations with universities and cooperate on mutually beneficial terms in order to further obtain a ready-made specialist who will have the necessary potential for this industry/enterprise. However, the organizations themselves should also be interested in helping future specialists develop their potential by giving them some projects in order to understand in which issue/direction the future specialist is strong, or maybe to discover abilities, about which the future specialist did not even know. For the development of human capital in the Arctic, it is possible to propose the implementation of the

following measures:

- 1) to develop a comprehensive strategy for the introduction of WorldSkills standards in educational practice and the preparation of both students and already qualified specialists to participate in WorldSkills standards championships;
- 2) Universities should conclude agreements with enterprises, leaders among attractive employers for the organization internships for students as well as their further employment;
- 3) leading specialists and experts in a particular field should hold round tables and seminars where they can address subjects, that are unavailable in many sources of information;
- 4) to increase the number of grants for young scientists, including schoolchildren and students, as well as persons under the age of 35;
- 5) it is necessary to encourage enterprises to increase the number of young specialists in the formation of human resources, introduce quotas for their number;
- 6) the system of educational crediting, insurance of private investments in vocational training requires an improvement;
- 7) it is necessary to develop the organization of forums, seminars of graduates with employers for mutually beneficial communication;
- 8) to create labour exchanges that will focus only on the problems of youth employment and unemployment;
- 9) to provide financial assistance to those who find themselves in a difficult situation and find it difficult to gain employment again;
- 10) to improve the quality of training that would meet both the requirements of the market and the requirements of potential employers;
- 11) to ensure timely retraining of personnel (advanced training), i.e. to teach ahead of time what is in demand not today, but will be in demand in the future;
- 12) to assist the development of small entrepreneurship, the creation of their own business by young people;
- 13) to build a lot of new housing that would meet all standards and requirements taking into account climatic conditions;
- 14) to create all the necessary infrastructure (hospitals, schools, kindergartens, cultural centres, etc.);
- 15) to build quality roads;
- 16) to purchase all the necessary equipment that is required to work in low temperature conditions;
- 17) to conduct annual medical examination;
- 18) to provide the able-bodied population with additional social guarantees/benefits, only at the level of their region, or within the Arctic

Zone, developed by local authorities.

For the development of human capital, since the emphasis is on youth and minimizing the number of young unemployed, it is possible to develop measures of state support for young entrepreneurs who, having just finished school training, could engage in entrepreneurial activity by organizing their business, which means they could solve a number of tasks:

1. A significant increase in vacancies.
2. The increase of new enterprises in new fields of activity, filling vacant niches in the market, will only strengthen the state of Russia in the international arena.
3. Development of a stable, economically healthy segment of the population interested in the stability of society.
4. Support for talented youth, youth startups and initiatives, which will attract talented youth to science and art, to business, and will allow them to develop such qualities as: independence and initiative, self-realization of youth, motivation for innovation.
5. Monitoring and adaptation of the curriculum to the realities of business based on the advice of business experts.
6. Implementation of financial support for young professionals working with young people, for example, preferential mortgage lending, subsidies for the purchase of housing, etc.

In order for young people in the market to be in demand and meet the market requirements for competencies, the Russian education system needs to be modernized. But in order to carry it out, there are a number of challenges that need to be addressed:

- lack of financial resources to build an entrepreneurial infrastructure;
- annual decrease in student enrollment in the context of demographic decline and a decrease in income of the population;
- demotivation of students and teachers in active participation in various kinds of actions;
- the lack of high activity of stakeholders to share new ideas, resulting in low levels of student knowledge and a lack of ingenuity and innovation;
- the decrease in student mobility due to the lack of internships where they could gain experience, both at local enterprises and in foreign organizations.

To summarise, it can be concluded that all the areas under consideration have goals that are aimed at the development of human capital in the Arctic. Education, healthcare, culture, and social services are considered primarily as factors or conditions for the formation and accumulation of human capital. The accumulated human capital of the Arctic can also be provided by high level of quality of life of the

Discussion

In the modern knowledge economy, human capital appears as a key advantage over competitors. It allows the implementation of innovations, to carry out measures to adapt to the conditions of globalization of the world economy, to achieve high competitiveness and strengthening its position relative to competitors. Based on this, the formation and development of high-quality human capital is considered as one of the most important conditions for the socio-economic development of the country, ultimately determining its level ^[15].

Human capital can also be considered as a set of acquired knowledge, skills, motivation and energy that a person is endowed with, and is also able to exert their strength for a certain period of time in order to carry out production activities, in order to produce goods and services ^[19, 20]. Under human capital, it is customary to understand the totality of the characteristics of an individual, their individual characteristics: physical abilities, communicative component, professional training, level of education, experience, creative abilities, etc. ^[12]. Human capital is also considered as a form of capital that can serve as a source of future earnings or future satisfaction, or both ^[11].

To understand the phenomenon of human capital in the region, not only its quantitative value is important, but also the socio-economic conditions under which it is formed and implemented. For the society, the benefit of using human capital is that an additional increase in production will be provided. Special human capital represents only those skills that are of interest to any one firm, any one type of activity, given their specifics ^[21]. Human capital, just like physical capital, has the ability not only to increase, but also to lose its value, that is, to wear out morally and materially. That is, the skills, abilities, and knowledge of a person become capital on the grounds that they have the property of accumulating through the investment process and provide income to both their owner (employee) in the form of wages and to the employer in the form of increased economic benefits.

The formation of human capital is influenced by a whole range of factors: demographic, socio-economic, environmental, economic, institutional. It is worth noting that an employee who acts as the owner of human capital awakens interest in obtaining a higher level of income than before, thanks to the practical application of those competencies (knowledge, professional skills, experience and skills) that they have developed at this point in time and forming human capital. At the same time, an organization acting as a consumer of human capital is interested in obtaining more income, but by using human capital as economically

as possible, i.e. the organization should spend less of its own funds to attract new employees, and this is possible in the case of low qualifications of employees and/or low wages of qualified workers ^[12]. There is a close connection between the income that an employee receives and their accumulated human capital. With an increase in income, there are more opportunities for the development of human capital: health promotion, professional development, etc. With a decrease in income, motivation to achieve high professionalism decreases, opportunities for obtaining high-quality educational services are reduced, and the expectations for obtaining more income that an individual could both use for their own development and invest in the development of their relatives, i.e. participate in the formation of human capital, are not fulfilled ^[12, 22-24].

Human capital acts as one of the determining factors for the productive development of the economy and achieving advantages over existing competitors. Most modern researchers believe that the transformation in technology, scientific breakthroughs, on which economic growth depends, occur as a result of the accumulation and development of human capital. In terms of knowledge intensity, Russia is comparable to innovative and dynamically developing countries ^[25-28]. It is worth noting that the development of human capital is closely interrelated with the innovative dynamism of enterprises, in terms of the use and implementation of various kinds of innovations, which, in turn, is determined by the dependence on the level of expenditures on the development of scientific research and on the results of the activities of highly competent scientists, engineers, technicians.

Within the framework of this study, the development of human capital is considered in relation to the regional aspect. The authors of the article believe that human capital, as a relatively new form, a way of realizing the human potential accumulated by an individual in the process of social and public life in the region, by investing in the development of professional qualities of an individual, is considered as the most necessary resource than all other types of resources available to an enterprise located in a particular region. The human capital of the region has a broader and multifaceted concept ^[24].

Conclusion

The most important area of application of human capital is the labour market, since it is in the course of professional activity that a person can receive income, which is the realisation of human capital. Effective implementation of a person in this area brings the greatest benefit to the region – an increase in the domestic regional product. Thus, it is

necessary to stimulate the level of income and employment mainly through increasing the level of employment in the received speciality. Using and taking into account medium- and long-term forecasts of the economy's need for qualified personnel will make it possible to form a reasonable social order for the education system, which will meet the demands of the labour market in all areas of economic activity in the region, taking into account the factors of migration, depopulation, globalization and other aspects of the modern economy. A balanced career guidance system, harmoniously integrated into educational institutions and the labour market, will make it possible to obtain long-term positive economic effects.

In the context of the formation of a new knowledge economy, it is important to pay attention to the issues of expanded reproduction of human capital at the regional level. Only with the help of the development of the human capital of the region can success be achieved in the formation of a new economy – on the one hand, self-sufficient, on the other hand, integrated into the economic space of the macroregion, the state and international economic relations. Effective functioning of the educational system at all stages can contribute to this. The qualitative characteristic of such a system is the choice of a profession taking into account the requirements of the economy, employment in the acquired speciality and the improvement of professional skills at all stages of career development.

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