

# Chapter 17

## Human Capital Development in the Russian Arctic

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**Abstract** The article presents results of human capital status in the Russian Arctic and proposed measures to improve the situation. The main method for improvement is seen as the popularization of in-demand occupation list through federal web-portal to increase the balance between education system output and the labour market needs. Development of the Russian Arctic human capital is a strategic priority for increasing economy's competitiveness in terms of globalization as well as considering raising interest and attention to this topic. There is an objective contradiction in the Russian Arctic development: it is expensive to explore and develop the Arctic, but the Arctic is a territory full of possibilities and resources. Today's priority is the economic development. This will lead to development of labour market and to social aspects progress. As a result, the severe life conditions in the Arctic and health deterioration of population could be improved.

### 17.1 Introduction

Development of the Russian Arctic human capital is a strategic priority for increasing economy's competitiveness in terms of globalization as well as considering raising interest and attention to this topic. The role of the regions' human capital development also increases the need to pay attention to their territorial characteristics and special features of economic, natural, geographical, social-demographic and other factors, based on regional strategies devoted for self-development (The development strategy of the Russian Arctic and national security for the period until 2020 2008).

The condition of human capital in the Russian Arctic is an important part of the territory's strategic development. The modern society – irrespective of the territorial position – is facing number of challenges like globalization, population ageing, and decrease of labor productivity level. Problems in the society caused these challenges lead to deterioration of the population's social-economic status, marginalization of

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youth, and imbalance of occupational and qualification structure. The described problems should be overcome and it is important to evaluate them and monitor their dynamics. The fore mentioned issues strongly affect the human capital, because life in Northern territories has great impact on health (one of important components of human capital), while for other territories this factor is not crucial (Agenda 21 1992).

Long-term human capacity building in Russian Arctic includes mainly human resource development measures, concentrating on labour market and education system balance.

## 17.2 Russian Arctic: Long-Term Human Capacity Building

At present, the Russian Arctic (Russian Federation Presidential Decree 2014), occupies a central place in its importance, serving strategic national interests in economics, geopolitics and resource base. The Russian Arctic includes the following regions: Arkhangelsk region, Vologda region, Murmansk region, the Republic of Karelia, Komi Republic, Nenets Autonomous region, Yamalo-Nenets Autonomous region, Krasnoyarsk region, Chukotka Autonomous region, The Republic of Sakha (Yakutia). The share of the gross regional product produced in the Russia Arctic zone, in the total gross regional product of the Russia regions in 2014 was 5.2% (The official statistic data about social and economic development Russia Arctic Zone 2017). Arctic territory of the Russian Federation is a large-scale economic zone, including some of the largest economic centers in the field of mining, including fuel and energy, shipbuilding and navigation, as well as fishing.

Arctic is a strategically important – yet challenging – region. Particular attention is being given to building long-term human capacity in the region, but with weak and imbalanced economy it is difficult to carry out complex development. Capacity building is much more than education and training and includes (Agenda 21 1992) human resource development, the process of equipping individuals with the understanding, skills and access to information, knowledge and training that enables them to perform effectively. It also includes organizational development, the elaboration of management structures, processes and procedures, not only within organizations but also the management of relationships between the different organizations and sectors (public, private and community). Another dimension is institutional and legal framework development, making legal and regulatory changes to enable organizations, institutions and agencies at all levels and in all sectors to enhance their capacities. Russian Government at present concentrates mainly on skills development and access to information.

Economists in Russia treat human capital as scope of knowledge, skills, abilities, motivations, which are used to meet the diverse needs of individuals and society as a whole. This scope of characteristics are related to obtaining income resulting from investments in the development of professional skills of its holder, as well as its efficient use during consumption in the human capital reproduction – recurrent processes of re-creation. The efficiency of human capital is the impact and the profit

which the individual brings to society as well as the impact on personal development, and is caused by the relevant occupation and qualification structure (Kekkonen 2013). Consequently, human capital dynamics is considered through revealing demographic structure with the emphasis on labour force status.

The Russian Arctic is home to 2.4 million people that are 1.6% of the total Russian population (The official statistic data about social and economic development Russia Arctic Zone 2017). Table 17.1 presents demographic aspects of the human capital development in the Russian Arctic. The data shows that almost all indices are lower in comparison to Russia as a whole. This means that there is a serious threat to human capital reproduction in Arctic region, which should be kept in mind.

The Arctic is dominated by younger population compared with Russia (Table 17.2). Elderly people leave the Russian Arctic area after retirement, and move to a place with more favorable climatic conditions<sup>1</sup>.

Population structure is characterized by a high proportion of the economically active population – average value in areas of the Arctic region is 71.8% against 69% for Russia as a whole. The employment rate in the Russian Arctic also exceeds the average and amounted to 69.5% in 2014, while all-Russian level counting 65.4% (The official statistic data about social and economic development Russia Arctic Zone 2017). Situation on the labour market in general can be characterized as possibility and strength for the future human capital development.

Analysis of existing interpretations of the ‘human capital’ notion has shown that, historically, education is the main and decisive element in the structure of human capital. Education is the basis for the formation of knowledge and skills – human competencies – for the further implementation of the labor market. Elements such as quality of life, culture and health are considered by researchers as auxiliary elements in the formation of human capital (Kekkonen 2013). Life in Northern territories has great impact on health, while for other territories this factor is not crucial (Belisheva and Petrov 2013).

Structure of the Human Development Index and its main components<sup>2</sup> in the regions of the Russian Arctic shows that the region is below the all-Russian level. The exception is the Education Index which is higher in most regions nationwide. Also the Income Index in rich regions such as the Republic of Sakha (Yakutia) and Chukotka Autonomous region, Komi Republic is significantly higher than the all-Russian level. This is due to the presence of rich natural resources and their exploitation.

Specific features related to life in the Arctic (Belisheva and Petrov 2013) can cause an increase in the incidence of circulatory system, tumors, poisoning, and neurological disorders. In addition to this, statistics show that living in the North increases the number of injuries and accidents at work (The official statistic data

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<sup>1</sup> Retirement age in Russia is 60 years for men and 55 years for women. In Russian Arctic figures are 55 and 50 years respectively.

<sup>2</sup> [https://en.wikipedia.org/wiki/Human\\_Development\\_Index](https://en.wikipedia.org/wiki/Human_Development_Index)

**Table 17.1** Demographic structure of the Russian Arctic population

	Total fertility rate – The number of born per 1000 population	Life expectancy at birth in 2014, total	Life expectancy at birth in 2014, men	Life expectancy at birth in 2014, women	Infant mortality rate – The number of children dying before the age of 1 year per 1000 live births (2014)	The immigration rate per 10,000 population (2014)
Arkhangelsk region	12.5	70.2	64.16	76.32	6.8	–68
Vologda region	13.6	69.74	63.66	75.93	7.6	–7
Murmansk region	11.7	69.97	64.02	75.72	6.4	–65
Republic of Karelia	12.3	69.36	62.99	75.69	6.7	–7
Komi Republic	14.2	69.05	63.05	75.12	5.1	–107
Nenets Autonomous region	16.8	70.65	64.72	76.21	5.5	1
Yamalo-Nenets Autonomous region	16.9	71.92	67.02	76.86	8.4	–112
Krasnoyarsk region	14.4	69.23	63.6	74.83	8.3	3
Chukotka Autonomous region	13.7	62.32	58.84	66.62	23.4	–30
The Republic of Sakha (Yakutia)	17.8	69.81	64.34	75.5	8.0	–70
Russia	13.3	70.93	65.29	76.47	7.4	19

The official statistic data about social and economic development Russia Arctic Zone (2017)

**Table 17.2** Labour force status in the Russian Arctic and Russia on the whole

	Russia Arctic zone	Russia
Distribution of population according to age (Jan.1 2014)		
Below working age	19%	17%
Above working age	17%	24%
In working age	64%	59%

The official statistic data about social and economic development Russia Arctic Zone (2017)

about social and economic development Russia Arctic Zone 2017). As a result, statistics shows that the incidence of a disease rises in all Arctic regions.

Human capacity building is a complex process that should take into account the strengths and weaknesses of the state of the regional human capital, and therefore it is necessary to develop a comprehensive policy in this field. There are some areas that will have a multiplier effect on all the human capital of the region, if properly managed. Thus, the development of financial well-being – namely, success in the labor market – will lead to the improvement of human life in general, and improving the state of the economy in particular. Thus, there is more opportunity to neutralize the effects on the health of both the individual (through better medical and prevention measures) and through the allocation of more funds to national and regional programs to improve the lives and health of the population.

### **17.3 Human Capacity Building Through Labour Market Development**

Human capacity building, economic development and the labor market are closely linked. In this area the Russian Arctic has its own specific features.

Despite the high level of economic activity and employment, there are two serious threats in the development of human resource potential of the territories of the Russian Arctic. These are high-migration and the imbalance of supply and demand of labor in regional and professional sections (both in quantitative and qualitative parameters) (Shabaeva et al. 2016). In this manner, “education, providing of training, retraining and advanced training of specialists for work in arctic conditions, taking into account current and projected needs marine geology, hydrocarbon production and processing, marine biotechnology, ICT and other disciplines” are crucial measures to implement (The development strategy of the Russian Arctic and national security for the period until 2020 2008).

On one hand, the Russian Arctic, despite the harsh climate, has a sufficient labor potential and its performance on specific indicators exceed national average values. On the other hand, the labor market status of the Russian Arctic shows that there are problems of supply and demand balance, i.e. there is a significant reserve for a more efficient use of labor resources. Main characteristics of social tension in the labor market are manifested in the shortage of labor, and at the same time as a high proportion of unemployed people with vocational education and young age (Korchak 2015). The revealing of in-demand jobs for Arctic development priorities is one possible solution to find balance.

Economic development and implementation of strategic projects are impossible without appropriate employee supply. Identifying occupations in demand in the region is the foundation for the implementation of the regional policy of population employment and educational policies in the territories of the Russian Arctic.

Economic specifics of the Russian Arctic stipulates the requirements for the education system and authorities in the field of labor and employment to fill staff shortages and cover staffing needs of the territory.

On the basis of a comparative analysis and the structure of training specialties, vocational training programs, occupations according to the statistics of the Russian Arctic territories, a basic list of in demand occupations was developed (Shabaeva et al. 2016). Designated list of occupations for the Arctic is the basis for adjusting the training structure, the opening of new specialties and areas of training, educational resources in other Russian regions and interregional attraction and foreign migrant workers.

For the implementation of many important development projects in Arctic (The development strategy of the Russian Arctic and national security for the period until 2020 2008), timely and accessible information to support projects is highly important. It is necessary to establish public awareness about the in-demand occupations. For this aim, federal web-portal “Staffing Needs for Russian Arctic Zone Development”<sup>3</sup> was developed and is supported (until now) on the behalf of Ministry of Education and Science of Russian Federation.

The main tool for provision of supply and demand balance in the labour market is the list of most popular occupations of Russian Arctic and their detailed description. This list is available on the web-portal. This is concretizing the proposed and approved solutions in the management of Russian Arctic human capital development (Shabaeva et al. 2016).

## 17.4 Conclusions

Human capacity building includes multiple aspects, and development of human capital is one of them. The Russian Arctic is a complex area for research, development consideration and management. There are both strong and weak sides of the Russian Arctic human capital status. On one hand, there are demographic threats, connected mainly with life conditions and characterized by low development indexes. On the other hand, the economic development of the human capital is a strategic priority for increasing the economy’s competitiveness in terms of globalization and at the same time the region has great potential for that. Balanced labour market and economic development will lead to development of labour market and in turn, to progress in social aspects. As a result, severe life conditions in the Arctic and the health deterioration of its population could be improved.

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<sup>3</sup><http://arctic.labourmarket.ru>

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