

Human Resources of the Volgograd Region: Status, Quantity and Quality Factors, Region's Provision

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Abstract — The importance of human resources for the region's competitiveness and for the formation of its competitive advantages has increased during the postindustrial economic period and development of innovative activities. Human resources are one of key factors that can influence the region's competitiveness. As a result, the problem of region's human resources evaluation remains relevant, and also the problem of revealing the factors influencing the quantitative and qualitative characteristics of mentioned resources. Nowadays there are no indicators (neither theoretical nor practical ones) letting to evaluate the region's provision with human resources for the future.

The target of this research is the development of theoretical theses and practical recommendations on the regional human resources evaluation. According to the mentioned target of the research, the following tasks were set: to reveal the factors influencing quantitative and qualitative characteristics of the Volgograd region's human resources, to create an accurate forecast of the population's changes in the region, and to develop an indicator which could evaluate the region's provision with human resources for the future. The following methods were used in the research: observation, comparison, survey, table and graphical methods, statistical methods, economical methods and models, methods of economical analysis.

As a result of the research the following conclusions were made. Firstly, according to our accurate forecast, the Volgograd's region population won't stop decreasing and it will count 2432000 people by 2023. Secondly, we identified the factors influencing the quantitative and qualitative characteristics of human resources in the Volgograd region. Thirdly, the special indicator was developed and it is the index of the region's provision with human resources for the future.

Keywords — *region's human resources, factors, provision index, natural population loss, migration population loss, quality of human resources*

I. INTRODUCTION

Human resources are one of the main kinds of resources, necessary for an economic system functioning at any scale: from the global level to the regional or facility level. The

status of region's human resources is characterized by their qualitative and quantitative characteristics. The quantitative characteristic of region's human resources is an evaluation of the region's population, its dynamics, its natural and migration growth (loss). The qualitative characteristic assumes mainly the determination of an education level and physical and spiritual health of the region's population.

Such components of quantitative characteristic of region's human resources as natural and migration population loss make a negative influence on the stable economical region's development. An insufficient level of the population's quality obstructs the innovative development of the region's economy and the endogenous economical growth. All of the mentioned above makes the problem of the region's human resources evaluation and the problem of the identification of the factors influencing the quantitative and qualitative characteristics of these resources very significant. Nowadays there are no indicators (neither theoretical nor practical) allowing to evaluate the region's provision with human resources for the future.

The target of this research is the development of theoretical theses and practical recommendations on the evaluation of region's human resources.

According to the mentioned target of the research, the following tasks were set:

- to create a accurate forecast of the population's changes in the region;
- to reveal the factors influencing quantitative and qualitative characteristics of the Volgograd's region human resources;
- to develop an indicator which could let to evaluate the region's provision with human resources for the future.

This research has a theoretical and practical value for the purposes of the evaluation the Volgograd's region human resources.

The article contains abstract, list of keywords and phrases, introduction, description of research methods, list of results of research, summary of results of research, list of references.

II. MATERIALS AND METHODS (MODEL)

The following methods were used in the research: observation, comparing, survey, table and graphical methods, statistical methods, economical methods and models, methods of economical analysis.

A special indicator was developed for the purpose of the evaluation of the region’s provision with human resources in the future, which is the index of the region’s provision with human resources in the future. This indicator is calculated by the formula (1):

$$I_{\text{provhumres}} = (NP_{\text{underemplage}} + NU + NSt_{\text{fulltime}}) / NPop \quad (1)$$

where $I_{\text{provhumres}}$ – index of region’s provision with human resources in future;

$NP_{\text{underemplage}}$ – population under employable age;

NU – unemployed population in the region;

NSt_{fulltime} – quantity of students at full-time education form;

$NPop$ – total population of the region.

III. RESULTS AND DISCUSSION

According to the data of local department of the Federal Service of State Statistics since 2008 until 2017 (data of the Volgograd's region population dynamics during 2018 is absent) the natural and migration population loss in the region is observed (Fig.1).

In total, the Volgograd’s region population has decreased by 3.9% (Fig. 2).

Using a polynomial model of the trend’s equation as the best model for the observed dynamic of the Volgograd’s region population, we made an accurate forecast of the region’s population changes. According to the results, the number of human resources will continue to decrease and will count 2432000 people by 2023.

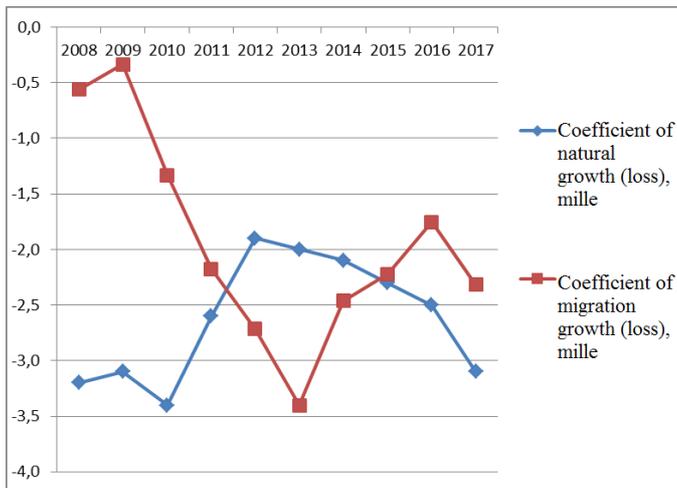


Fig. 1. Dynamic of natural growth (loss) coefficients and migrational growth (loss) of the Volgograd’s region population in 2008-2017.

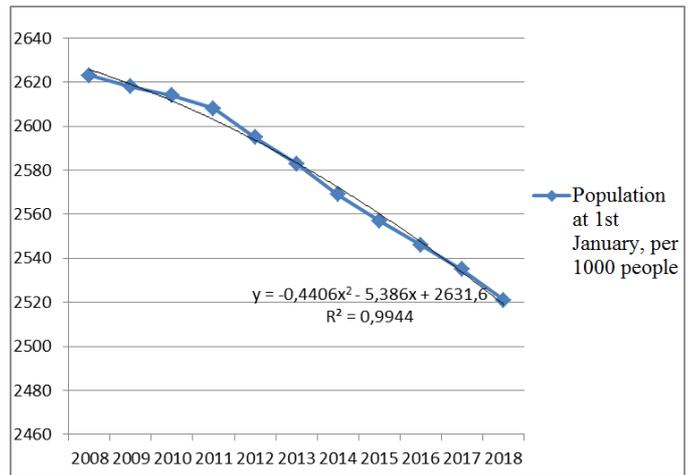


Fig. 2. Dynamics of the Volgograd’s region population number at 1st January (per 1000 people)

Among the results of the research we revealed the factors influencing the birth rate and the death rate in the region, and also the outflow of human resources from the region (TABLE I).

According to the statistical data, the number of newborns in the Volgograd region decreases every year. This tendency is caused by some certain factors. Firstly, «Population with average or below average income prevails in the Volgograd region» [1], the actual disposable incomes decrease constantly. The debt load of the region’s population has reached «49.2 %» at the end of 2018 [2]. The volume of mortgage loans increased by «30%» in 2018 in comparison with year 2017[3]. These facts directly influence the welfare level of the Volgograd’s region population and therefore the region’s birthrate. Secondly, there is a remarkably low percentage in the childbirth and the marriages in Volgograd region among young women under 30 years old [4]. Lots of young women of this age are focused on getting education (and self-education) and making a career. Thirdly, according to the results of the research made by the scientists in Higher School of Economics, the numbers of young people who prefer solitude increases constantly [5].

TABLE I. FACTORS INFLUENCING THE DYNAMICS OF THE VOLGOGRAD’S REGION HUMAN RESOURCES

Factors influencing region’s birthrate	Factors influencing region’s death rate	Factors influencing migration regional outflow
population’s welfare level; population’s level of share with state demographical policy; women’s career ambitions; preferring solitude; level of healthcare development	level of healthcare development; population’s welfare level; population’s harmful habits and neglecting health way of life; pollution level of region’s environment; technogenic accidents; region’s crime rate	region’s economical situation; region’s standard of living; pollution level of region’s environment; region’s crime rate; ethical and religious intolerance

There was an attempt of the region’s authorities to solve the problem of the decreasing birthrate by enhancing an additional single time grant for having a firstborn child up to 50000 rubles and rising the age limit of women pretending to this grant up to 24 years old [6]. This measure is written in the

Social code of the Volgograd region. The efficiency of the mentioned measure is doubtful because of at least two reasons:

- A single time grant of 50000 rubles can barely be considered as a stimulating measure under the region's economic conditions;
- The women's age which is limited by 24 years old is irrational in this particular case because women getting higher education usually graduate by the age of 24 years.

Despite the fact that the death rate in Volgograd region decreases constantly, the natural population loss remains. A dominant reason of death among the region's habitants is cardiovascular system diseases [7]. We would like to note that the Volgograd region had the 10th rank in the rating of Russian regions leading a healthy way of life [8]. There is a complicated ecological situation in the Volgograd region, and as a result, the region ranked in the second dozen of the regions of the Russian Federation by the concentration of industrial facilities [9]. The Volgograd area had the 30th rank in the rating of the grave crimes registered at the end of 2018 [10].

So, there are the factors influencing the migration outflow of population from the Volgograd region, such as: region's economical situation (low level of salaries, chance of getting a job according to the specialty training is quite rare, a worthy job is hard to find by young people), region's standard of living (levels of educational sphere development, healthcare, social infrastructure, culture), level of region's environment pollution, region's crime rate, ethnical and religious intolerance.

The level of healthcare development deserves a special attention as a factor of natural and migration population loss in the region. I.V. Vengerova rightfully noticed: «population health as well as the measures dealing with its restoration, holding and strengthening are considered as one of the most important factors determining the possibilities of economic growth and scale of a country's national wealth» [11]. There is a range of problems preventing the development of healthcare in the Volgograd region nowadays. In particular they are a constant growth of prices for medical goods and services, problems of accessible medical servicing: «insufficient financing of budgetary medical institutions, difficulties to get doctors' appointment, long waiting lists, inappropriate quality of free medical care» [12].

The calculation of the index value of the Volgograd region's provision with human resources in the future is based on the data for 2015-2017 and it showed that this indicator equals 0.24. At the present time it is rather complicated to interpret the index value as neither the index threshold value nor the index value boundaries are not developed yet. Therefore, this index can be valued only in dynamics.

As a result of the research, we have come to the conclusion that the quality of human resources of the Volgograd's region is influenced by the following factors: level of education, popularization of education (long life learning as well) and book reading, availability of libraries, theaters and other cultural facilities in the region, population's mentality and culture, inadequacy observed between training and positions, level of healthcare, promotion of healthy lifestyle, sales limitations of tobacco goods and alcohol drinks, prohibition of

drugs and psychotropic substances distribution, sufficient presence of sport facilities and infrastructure in the region, ability for children to attend sport clubs.

IV. CONCLUSION

We can make the following conclusions based on the results of performed research.

Firstly, the natural and migration population lost is observed in the Volgograd region during the last 10 years. According to our accurate of the population changes, it will continue to decrease and will count 2432000 people by 2023.

Secondly, we have revealed the factors influencing the quantitative characteristics of the human resources of the Volgograd's region, such as the region's birthrate, region's death rate and the outflow of human resources from the region. Also the factors which define quality of these resources were identified.

Thirdly, we have developed a special indicator for the evaluation of the region's provision with human resources in the future and it is the index of the region's provision with human resources in the future.

Thus, the tasks of the research have been fulfilled, the target was achieved. The obtained results are undoubtedly theoretically and practically significant. The identified factors of qualitative and quantitative characteristics of human resources of the Volgograd's region can become the basis for the measure program of the region's authorities to support the birthrate, to decrease the death rate, to provide the migration inflow and a quality of human resources. The developed index of the region's provision will allow not only to forecast the human resources' provision in the future, but also to determine the priority directions of maintaining the region's provision at the optimal for the region's economy level.

The main obstacle during the process of the research was the lack of statistical data on some points.

We see the main directions of the further research as the calculation of the range (limits) of the index value of the region's provision with human resources in the future and determination of the threshold value of this indicator.

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