

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Methods Of Assessing The State Of The Labor Potential Of The Region.

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ABSTRACT

The article discusses the main approaches to the definition of concepts and methods for assessing the labor potential of the region. A method of measuring labor potential based on the application of the index method is proposed, the structure of labor potential at the regional level is described, allowing to take into account its specific features of formation and development. On the basis of one of the presented methods, an assessment of the labor potential for the regions of the North Caucasus Federal District was conducted, and a rating of its regions was compiled by the level of development of labor potential.

Keywords: labor potential, labor potential development index, labor potential structure, labor potential assessment.

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INTRODUCTION

The successful development of the economy of any region depends on many factors, among which one of the main factors is the human factor, expressed in terms of the labor potential of the region. Achieving competitiveness and sustainable development of the national economy can only be achieved by building labor potential. Moreover, there is a direct relationship between economic growth and the level of accumulated and realized labor potential: progressive socio-economic dynamics provide a set of conditions for the formation and realization of labor potential. Otherwise, there is a high degree of social tension in the society, deterioration of the population’s health indicators, a high level of migration, a decrease in the birth rate and an increase in the death rate, while the labor potential of the population itself is a source of socio-economic development.

Labor potential is formed sequentially and gradually, under the influence of economic development, changes in labor relations, requirements for an employee, in the forms of managerial influence. Labor potential is an integrated qualitative characteristic that is formed under the influence of the emergence and environmental effects, which forms the individuality of the labor potentials of different regions in different periods of its formation and functioning. This problem is relevant in the conditions of high differentiation of regions and in terms of personnel security [1].

In its most general form, labor potential is the aggregate social ability to work, i.e. potential labor capacity of the society, its labor resources. The labor potential of a country and its regions is the corresponding labor resources, considered in terms of the unity of their qualitative and quantitative aspects. It can be said that these are labor resources in a qualitative dimension [2].

As a working definition of the level of development of labor potential it seems appropriate to use the following. The level of development of the labor potential is a certain quantitative indicator of the degree of compliance of the qualitative characteristics of the labor potential with the needs of the modern economy.

MATERIALS AND METHODS

The labor potential of the region, as well as the country, is one of the most important indicators of economic development, the calculation of its main characteristics in practice is a complex task. In practice, various approaches and methods for evaluating labor potential have been developed. As a result of studying the methods for assessing the labor potential of various levels described in the literature, it is possible to structure and group them. The matrix of the known methods for assessing the labor potential of the region is presented in Table 1.

Table 1: Matrix of methods for assessing the labor potential of a region

Method name	Characteristic method
scoring method	each component of labor potential is differentiated by quantitative values within certain limits.
cluster analysis method	assessment is carried out using standards, ranked ball scores, with the definition of high, medium and low level values
index method	allows you to translate and evaluate quality indicators into quantitative values, by correlating actual values with normalized values
integral method	allows you to get a result in the form of a single indicator, which combines quantitative and qualitative assessments of the structural components of a complex phenomenon

In the earliest studies, natural evaluations of the labor potential prevailed, for example, A.F. Davletbaeva and K.N. Yusupov offered an assessment of the labor potential of the region on the basis of the ratio of indicators positively characterizing the labor potential (employed, birth rate, population with higher education, life expectancy, migration increase, production) and negative indicators (unemployment, mortality, injuries, migration outflow), these indicators considered in dynamics [3].

Later, cost estimates of labor potential appeared; an example of the implementation of this approach is the study of S.M. Bukhonova and M.A. Doroshenko, who offered to evaluate the labor potential based on the valuation of all expenses of an individual to reproduce the labor potential for all years of the period of their implementation, to bring the current prices into a comparable type through the inflation index or consumer price index for the relevant types of goods and services [4].

In recent years, some authors (T. Yu. Kryshchaleva [5], G. V. Leonidova, A. M. Panov, [6], L. A. Migranova, M. S. Toksanbaeva, [7], L. A. Popova, M. A. Terentyeva [8]) develop and describe the use of relative estimates of the labor potential, in particular the index approach. This approach is particularly relevant in the study of labor potential at the regional level, since it allows comparing and comparing different regions and territories in terms of the level of development of labor potential. [9, 10, 11]

For interregional comparisons of labor potential, the most convenient is the method of system analysis of the composition and structure of labor potential, based on the index method [12, 13], developed in the Bashkir State University (G. V. Yakshibaeva and others).

Despite numerous studies, there is no uniform methodology for assessing the quantitative and qualitative characteristics of the labor potential. In this method, it was decided to use an index (relative) method of estimations in combination with estimates of natural and value indicators. Such an approach allows one to take into account rational elements of potential estimates in known methodologies. At the same time, the integral estimates provide for a conjugation of indices and values of indicators. The technique widely uses the dynamic series of the parameters studied with a fairly representative research horizon (10-15 years), which made it possible to obtain the relevant values of the labor potential indices.

RESULTS AND DISCUSSION

Based on the analysis of existing methodologies for assessing labor potential, a system of performance indicators and a calculation algorithm were obtained. Based on the works of researchers and expert opinions, the following are suggested as basic indicators of the development of labor potential (Fig. 1):

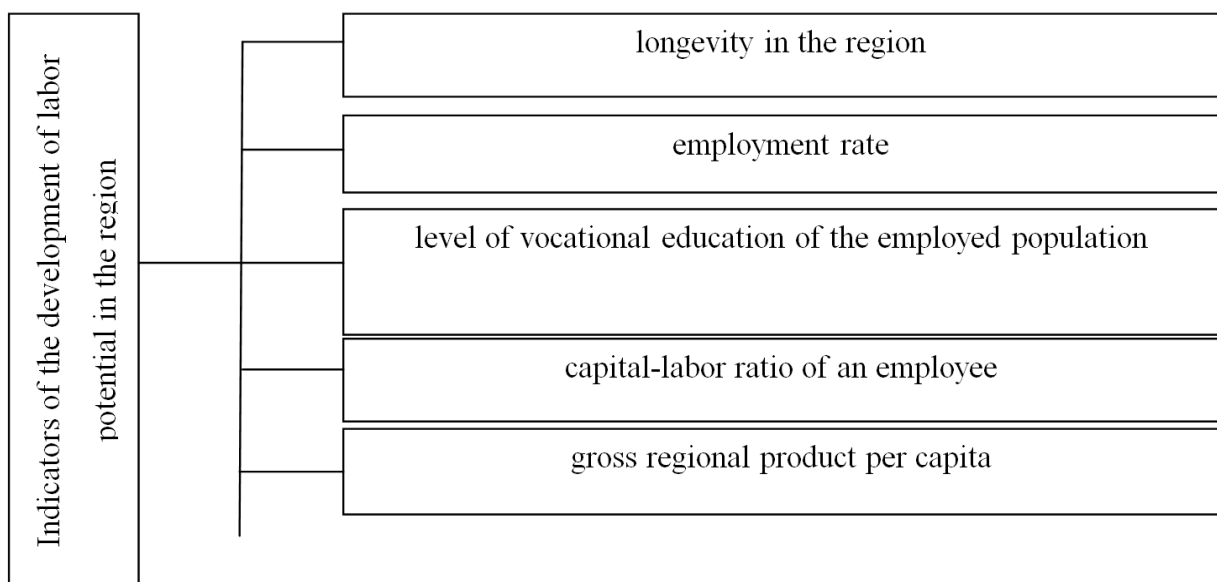


Figure 1: Indicators of the development of labor potential in the region

For all five basic indicators, single indices are calculated using a single formula.

$$K_{in} = \frac{I_j^{fact} - I_j^{min}}{I_j^{max} - I_j^{min}} \tag{1}$$

where I_j^{fact} , I_j^{min} , I_j^{max} – respectively, the actual, minimum and maximum values of the j-th indicator in the labor potential.

The integral index of the development of labor potential is a synthesis of private indices.

$$ITP = \frac{\sum_{i=1}^n K_{in}}{n} \tag{2}$$

The values of all components of the labor potential development index, as well as the integral index, vary from “0” to “1”. This range allows you to assess the path traveled by the region in the direction of achieving the highest possible level of the index in question.

This approach seems to be the most correct, since the index method allows you to bring various characteristics of the labor potential in a comparable form and use official statistics in the assessment. It is particularly relevant in the study of labor potential at the regional level, since it allows comparing and comparing different regions and territories in terms of the level of development of labor potential.

During the study of the regions of the North Caucasus Federal District of Russia in the 2000s, the basic principles of this methodology were used to assess the dynamics of labor potential, which was modified in relation to the composition of the basic indicators, according to which particular indices were calculated and the principles of choice in the indexes of maximum and minimum bases comparisons. For all indicators, private indices were calculated for the subjects of the North Caucasus Federal District.

Table 2 presents the dynamics of the integral index of the development of labor potential (IDL) of the Russian Federation and the North Caucasus Federal District and its subjects for the period 2005-2015.

Table 2: Dynamics of the integral index of the development of labor potential in the regions of the North Caucasus Federal District in 2005-2015*

Regions	Index value			Growth rates, %	
	2005	2010	2015	2005-2010	2005-2015
Russian Federation	0,425	0,447	0,534	5,2	25,6
North Caucasus Federal District	0,397	0,412	0,457	3,8	15,1
Republic of Dagestan	0,400	0,405	0,447	1,3	11,8
Republic of Ingushetia	0,351	0,384	0,444	9,4	26,5
Kabardino-Balkaria Republic	0,372	0,389	0,478	4,6	28,5
Karachay-Cherkess Republic	0,385	0,427	0,490	10,9	27,3
Republic of North Ossetia - Alania	0,419	0,460	0,518	9,8	23,6
Chechen Republic	-	0,327	0,380	-	16,2
Stavropol region	0,399	0,429	0,495	7,5	24,1

*Calculated by the authors based on Rosstat data: 14, 15, 16

In general, for the years 2005-2015 the integral index of the development of labor potential in Russia increased by 25.6% (from 0.425 to 0.534). For all regions of the North Caucasus Federal District, without exception, the period 2005-2015 also characterized by an increase in the integral index of the development of labor potential. The most significant integral index of the development of labor potential increased in 2005-2015 in the Kabardino-Balkarian Republic (by 28.5%). As a result, the Kabardino-Balkar Republic in the ranked number of regions of the Caucasian Federal District moved from fifth position to fourth place, displacing

Dagestan to fifth place, which is characterized by a rather low growth rate of IDLP for 2005-2010. (1,3). The growth rate of IDLP in the Republic of Ingushetia (26.5%) and the Karachay-Cherkess Republic (27.3%) is also higher than in Russia as a whole. In the Republic of North Ossetia-Alania and the Stavropol Territory, the increase in IDLP for 2005-2015 corresponds to the average Russian level. In the ranked number of regions of the North Caucasus Federal District, the republic and the region consistently occupy the first and second place. The Chechen Republic and the Republic of Dagestan are characterized by the growth rate of the integral index of the development of labor potential below the national average (16.2% and 11.8%, respectively), which contributed either to a deterioration of their place among the regions of the Caucasus Federal District or to the conservation of outsider positions. The Chechen Republic and the Republic of Ingushetia retained the last place among the regions of the Caucasian Federal District.

Thus, in most regions of the Caucasus Federal District, the growth rate of the integral index of the development of labor potential in 2005-2015 lower than in the whole country. If in the years 2005-2010 IDLP growth was higher than the average Russian level in four of seven regions, then in 2010-2015 - in three. All regions of the North Caucasus Federal District have a level of development of labor potential below the national average.

The assessment of the degree of influence of private indices on the level and dynamics of the integral index of the development of labor potential showed that the index of the length of working life of the population makes the greatest contribution to the overall level of IDLP, since in most regions of the North Caucasus Federal District the life expectancy is traditionally higher than the national average which was a decrease in life expectancy in 2005-2010, due to the hostilities on its territory. In most regions of the North Caucasus Federal District, the employment index of the population and the index of the level of vocational education of the employed population are below the average for Russia, as well as in a number of regions for 2005-2015 there was a decrease in the employment index. The contribution of the other two partial indices — the index of the capital-labor ratio and the GRP index per capita — to the level of the integral index of the development of labor potential is extremely insignificant.

CONCLUSION

Analysis of various approaches and methods for the assessment of labor potential has shown that there is no clearly developed and generally accepted methodology and system of indicators, which confirms the relevance of studying this problem. Modern management of labor potential is a strategic concept based primarily on its assessment based on modern approaches and methods and, as a result, affects the effectiveness of the development of labor potential.

The proposed method allows to obtain sufficiently complete information about the actual state of labor potential at the regional level, it is open, flexible and, if necessary, can be supplemented with other indicators. The calculation of the level of labor potential of a region is universal and can be applied for a comparative assessment of the labor potential of regions, urban and rural areas. The results of the assessment of labor potential are, above all, an information base that can be used in the activities of regional authorities in the formation of priority goals and objectives for the future management of the development of the labor potential of a territory. Thus, the proposed methodology for assessing labor potential is an effective element of the mechanism for making strategic and operational decisions on labor potential management at the regional level, based on real conditions for the reproduction of labor resources.

ACKNOWLEDGEMENT

This article was prepared with the support of the Russian Foundation for Basic Research, project #18-010-00732 A.

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