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METHODOLOGICAL ASPECTS OF THE ESTIMATION OF THE LEVEL OF REGIONAL DEVELOPMENT

МЕТОДИЧНІ АСПЕКТИ ОЦІНКИ РІВНЯ РЕГІОНАЛЬНОГО РОЗВИТКУ

ANNOTATION

The article analyzes the existing approaches to assessing the level of socio-economic development of the region. Also, approaches devoted to assessing the potential of the region are analyzed. In particular, the systems of indicators for assessing the level of regional development and the potential of the region are highlighted. The stages of assessing the potential of the region are considered. The main problems and disadvantages of assessing regional development level and potential of the region are revealed.

Keywords: region, region development, regional potential, gross regional product, regional resources.

КІДАТОНА

У статті досліджено наявні підходи до оцінки рівня соціально-економічного розвитку регіону. Проаналізовано підходи, які дають можливість оцінити потенціал регіону. Зокрема, розглянуто системи показників оцінки рівня регіонального розвитку та потенціалу регіону. Наведено етапи оцінки потенціалу регіону. Виявлено основні проблеми та недоліки оцінки рівня регіонального розвитку та потенціалу регіону.

Ключові слова: регіон, розвиток регіону, потенціал регіону, валовий регіональний продукт, ресурси регіону.

РИЗИВНИЕ

В статье исследованы существующие подходы к оценке уровня социально-экономического развития региона. Проанализированы подходы, позволяющие оценить потенциал региона. В частности, рассмотрены системы показателей оценки уровня регионального развития и потенциала региона. Приведены этапы оценки потенциала региона. Выявлены основные проблемы и недостатки оценки уровня регионального развития и потенциала региона.

Ключевые слова: регион, развитие региона, потенциал региона, валовый региональный продукт, ресурсы региона.

Formulation of the problem. The prospects and opportunities of regional development, along with the other, depend on the selection of effective methodologies for evaluating and selecting indicators. Without such prerequisite it is impossible to develop a strategy for the development of the region or to overcome the disproportionality of its socio-economic development.

Analysis of recent research and publications. Problems of the assessment of the level of socio-economic development of the region were studied such scientists as P.Y. Belyenky, Y. I. Boyko, Y.N.Gladkii, B.M. Danilishin, M.I. Dolyshny, S.I. Doroguntsov, M.A. Kazoriz, V.I. Pila, Y.O.Poburko, T.O. Stetsenko, D.M. Stechenko, M.G. Chumachenko and others. Nevertheless, there is no single approach to assess the level of regional development, nor to assess the potential of the region and the effectiveness of its use.

The purpose of the article is to study of existing approaches to the assessment of regional

development and regional potential, their advantages and disadvantages.

Presentation of the main materials of research. According to one of approaches, a generalized indicator of the level of economic development of regions is proposed to be determined by the formula:

 $Pg = \left[\frac{a}{A} + \frac{b}{B} + \frac{c}{C} + \frac{d}{D}\right] : N , \qquad (1)$

where P_{σ} is generalized indicator;

 $a - gross^s$ output of the region's industry per capita;

b – the cost of the basic industrial-production funds of the region per capita;

c - industrial - production personnel per 1000 inhabitants of the region;

d – the gross agricultural output of the region (on average over a number of years) per capita;

A, B, C, D – similar indicators in the region of higher rank or country;

N – number of indicators [1].

It should be noted that this approach allows to take into account only the production component of regional development, and as a result does not allow to comprehensively investigate the causes and consequences of inefficient functioning of the regions.

According to another approach, taking into account the necessity of a comprehensive study of regional development, the main indicators of socio-economic development of the region should be such as:

- average annual population;
- the number of employees employed in the national economy;
 - gross regional product;
 - volume of production of industry;
 - production of consumer goods;
 - gross agricultural output;
- capital investments at the expense of all sources of financing;
 - local budget revenues;
 - local budgets expenditures;
 - cash income of the population;
 - volume of retail turnover;
- volume of sales of paid services to the population;
 - volume of export of goods;
- average prices for the main types of products.

At the same time, the main indicator is the

level of the gross regional product and its structure [2]. In this methodology, the emphasis is on assessing the results of the economic system of the region that reduces the possibility of studying the potential of regional development.

According to the methodology of the assessment of the uniformity of economic development of the region, developed by the staff of the IRI of the NAS of Ukraine and the RI of the State Statistics Committee of Ukraine, it is assumed that the economic state of the region is a combination of economic results obtained by the population and institutions located in the region during a certain period.

In this case the main partial indicators of the economic state of the regions are [3]:

- cash income per capita, UAH;
- the share of the employed population in the total number of population, %;
- production of goods and services per capita, UAH;
 - turnover of retail trade per capita, UAH;
- commissioning of housing stock per capita, square meters of total area;
- investments in housing construction per capita, UAH;
- investments in fixed assets of enterprises per capita, UAH.

Also, the following complex criteria for determining the uniformity of development of districts in the region are proposed:

- the rate of economic growth in each district;
- economic growth in the district relative to the average in the region;
- economic growth of the district relative to the maximum achieved in the region;
 - the uniformity of economic development.

In our opinion, this technique misses the identification of the strengths and weaknesses of the region and its endogenous possibilities.

According to another method it is proposed to carry out an economic assessment of the territorial complex of natural resources of the region as

$$E_{TCNR=max}[(R1 + R2 + R3 + ... + Rn) - E],$$
 (2)

where $\boldsymbol{E}_{\scriptscriptstyle TCNR}$ is economic assessment of the territorial complex of natural resources (TCNR) of the region;

 $R1, R2, R3 \dots Rn$ – economic evaluation (rent) of each type of natural resources of the region taking into account the time factor;

E – integral expenses of nature conservation value.

assessment of a particular type of resources is carried out according to the following formula [4]:

$$R_i = \max \sum_{t=l_0}^{T_i} \frac{(P_t - S_i)Q_t}{(1+E)^{T-t}}; i = 1, m; t = t, T,$$
 (3)

where R_i is rent of i resource;

i – type of resource;

 T_i - period of exploitation of the i resource, starting from the t_0 year;

 P_{it} - cost of production from the unit of *i*- resource calculated in the final costs of *t*-year;

 S_i – one-time and current expenses incurred in year t to process unit of i resource;

 Q_{it} – annual consumption of i resource;

E – discount rate.

Also, there is an approach that estimates the economic potential of the region as the difference between production volumes during the rise and fall. For evaluation it is used such direction of the constituent elements: the goods - the group of goods – the enterprise – the region.

The potential of the region is estimated by stages:

- Estimation of the potential of the enterprise (by volume of production of *j* product):

$$K_{ij} = (1 - \frac{K_{oij}}{K_{bij}}) * 100\%;$$
 (4)

Estimation of the potential of the region for the total volumes of goods production:

$$K_{im} = \frac{\sum_{1}^{m} Kij}{m} (\%);$$
 (5)
Estimation of potential of the region by vol-

ume of production in n-groups:

$$K_{in} = \frac{\sum_{1}^{n} K_{im}}{n} (\%), \tag{6}$$

where i is number of regions (i = 1, 2, ...);

j – the names of the goods (j = 1, 2, ... m);

n – groups of goods (n = 1, 2, ...);

 K_{oij} – the volume of goods j produced in the region in the analyzed period;

 K_{bij} - the volume of goods j produced in the region in the base period.

However, this method makes it possible to assess only the level of production capacity of the region. The disadvantages of the proposed methods are that they determine only the individual components of the potential of regional development.

Maximov V.V. suggests that the criterion for economic assessment of natural resource potential may be rent, investment potential - income on invested capital, labor potential - income from labor, innovation potential - the share of income on invested capital [5].

In particular, Maximov V.V. proposes to assess the economic potential of the region as a whole and its elements on the following system of indicators:

1. Indicator of the effectiveness of using of a potential of the type i:

$$I_{EP_i = \frac{P_i}{EP_i}}$$
, (7)

where P_{i} is annual income from the use of the economic resource of type i;

EP, - economic evaluation of the potential of the type i (annual).

2. Estimation of the total economic potential of the region:

$$EPp = \sum_{i=1}^{n} EP, \qquad (8)$$

where $i = 1, 2 \dots n$ is the number of potentials that are parts of the total economic potential;

 EP_{p} - the total economic potential of the region.

3. Indicator of efficiency of using of economic resources of the region:

$$IE_{EP} = EP_p/ER$$
, (9)

where ER is economic resources available in the region in value form.

4. Indicator of the effectiveness of using of the economic potential of the region:

$$IE_{EP} = BP\Pi/E_{Pr}$$
, (10)

where GRP is the gross regional product obtained in current year;

 EP_{r} – annual value of the economic potential of the region.

There may be three situations:

- 1. $IE_{EP} = 1$ GRP corresponds to realized resources.
- 2. $IE_{\it EP} < 1$ Inefficient use of the economic potential of the region.
- 3. $IE_{EP} > 1$ The economic potential of the region is being used effectively.

Conclusions. Considering the above approaches we note that their use makes it possible to assess the impact of numerous factors on the level of socio-economic development of the region. However, the problem of the impact of exclusively endogenous factors on the growth of the level of development of territories, the rational combination of market conditions of economic activity and local opportunities and peculiarities remains unresolved.

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