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## METHODICAL APPROACHES AND ANALYSIS OF THE REGIONAL MANAGEMENT EFFICIENCY

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**Abstract.** *The purpose of this article is to study the theoretical foundations of, and then develop methodological approaches to, the evaluation of the effectiveness of regional management. These approaches will then be tested on the example region of Transcarpathia.*

*The theoretical approaches to determining the effectiveness of regional management have been considered. The author's approach to determining the effectiveness of regional management was then proposed. Methodical approaches to assessing the effectiveness of regional management that include the main stages, the criteria for assessing, indicators for each criterion, and a mathematical apparatus for their calculation, have been developed. In accordance with the author's approach, a diagnosis of the effectiveness of regional management was conducted on the example of the Transcarpathian region. Measures to improve the efficiency of the functioning of the socio-economic system of Transcarpathia, with a consideration of the specifics of the region's development and its specialization are proposed.*

**Keywords:** *regional management, economic efficiency, productivity of the system, implementation of goals, regional economic system.*

**Reikšminiai žodžiai:** *regioninis valdymas, ekonominis efektyvumas, sistemos našumas, tikslų įgyvendinimas, regioninė ekonomikos sistema.*

## **Introduction**

In the conditions of the intensification of transformational processes in the national economy and the implementation of decentralization reform, accompanied by the deepening of economic and social imbalances, state and regional policies should be aimed primarily at raising the standard of living of the population and achieving sustainable development in the economic system of the region.

The gradual formation of a civil society and the emergence of new challenges, threats, and opportunities faced by regional authorities towards the formation of progressive models of socio-economic development require a new quality of regional management and an appropriate system of its evaluation. In this context, the study of theoretical approaches and the development of methodological bases for assessing the economic efficiency of management of a regional economic complex is an actual theoretical and practical task. The implementation of this will allow the solving of some practical issues of systemic formation in a single economic space in the country, increase the responsibility of the authorities in the regions for the achieved level of social and economic development, and create effective mechanisms for the implementation of economic reforms.

Despite numerous scientific studies, the issue of determining the effectiveness of regional management remains controversial. The multidimensional nature of methodological approaches, indicators, and evaluation algorithms is primarily due to the complex structure (different approaches to the structuring of the economic system) of the region's economy, as well as various evaluation objectives. The absence of a single model for assessing the effectiveness of regional management, which can serve as a convenient and adaptive tool for analyzing the development of the region and the effectiveness of management mechanisms, has determined the relevance of research in this direction.

The purpose of this article is to study the theoretical foundations of, and develop methodological approaches to, the evaluation of the effectiveness of regional management, and implement testing of these approaches on the example of the Transcarpathian region.

## **Literature review**

According to Pysar (2017, 109), the main goals of regional management are: “compliance with economic efficiency of the use of regional resources for complex development of the region; balance of the parameters of economic development and life quality level of the population, a synchronous level of development of the real sector of the economy of the region, escalation of social infrastructure; adequacy of the applied methods and tools of regional management within the paradigm of adaptive and selective control; ensuring the dominance of social components over the desire to catalyze the processes of capital accumulation as the main efficiency criterion of the mechanisms of regional economic system management.”

In today's conditions in Ukraine, characterized by the lack of necessary centralized state support from the regions, there is an issue in the lack of an effective and adequate

regional policy aimed at reforming the economy and attracting investment, and as well as developing and implementing plans for the development of territories that could be based not only on state financial resources, but also using local capacity. In this context, we agree with the opinion of Kuz'mynchuk and Kutsenko (2016, 270), who postulate that to address these problems "there is a need to study and assess, on the one hand, the intraregional interests and needs and on the other hand, to assess their own ability to meet them, based on the use of the existing socio-economic potential of the region and the improvement of its management mechanisms."

Most domestic and foreign scholars, including Sidor (2015, 185), Lapshin and Smolyakova (2017, 215), and Baltacheeva (2012), are proponents of a rating-based approach to assessing the socio-economic situation, attractiveness for investment, human development, and other criteria for interregional comparison of the effectiveness of regional management.

M. Achelashvili and K. Achelashvili (2006) consider the effectiveness of management from the point of view of the region's contribution to the country's final development results. As the main measure of regional governance efficiency, they proposed to use the region's contribution (GRP) to GDP of the country. According to them, this "takes into account both the regional structure of the national economy and regional growth rates, so providing an opportunity to reflect the impact of regional factors on economic growth." However, given the different levels of production and resource potential of different regions, the use of a single indicator cannot fully characterize the effectiveness of regional governance.

A group including Khayatun, Hadi, and Awaluddin (2017) suggest determining the effectiveness of regional governance based on the indicators of the effectiveness of the formation and use of regional budget finances.

An approach to assessing the effectiveness of regional management from the point of view of implementing the principles of sustainable development in the region is relevant. Representatives of this approach, including Roberts (2007), Maltseva (2016), and Lein (2014) argue that the assessment of regional management efficiency should contain a number of balanced indicators that measure the economic efficiency of the region's development and compliance with social standards, and reduce the level of environmental threat.

Xionghe and Yanming (2019) consider the ecological and economic efficiency of the region on the basis of comparing the growth rates of the economic effect (production volumes, profit, value added, tax revenues) to the indices of environmental safety (emissions of pollutants into the air, industrial waste, use of water resources, etc.). An effective indicator of management effectiveness is the level of economic development and environmental sustainability in the region.

Completely upholding the concept of sustainable development, we believe that the right economic approach to management is the basic basis for rational use of the resource potential of the region, creating conditions for human development and ensuring environmental standards. In this context, Guo-rong, Yuan-yuan and Min-na (2011) offer a methodical approach for comparative estimation of the efficiency of the functioning

of regions by indicators of their economic results per capita. The scientists conducted a comparative analysis of the economic efficiency of the regions of China, which made it possible to draw a number of conclusions regarding the improvement of their strategy for further development.

Professor McCann (2019) compared the interregional differences in the economic development of the UK regions, and suggested the 28 relative indicators that indirectly reflect the efficiency of managing economic and social processes in the regions, and the level of use of available resources. These indicators included: productivity, gross regional product per capita, average wage, difference in income, gross output of goods and services per capita, export / import ratio, and unemployment rate, amongst others. The results of the calculation of these indicators can be used for the ranking of economic efficiency of regional development, but do not sufficiently take into account the effectiveness of regional managers in achieving the strategic goals of development.

The methodological approach proposed by the team of Russian scientists (Gumerov et al. 2016, 102-105) is interesting, as they consider the management of the region in the context of the core functions of corporate governance. They propose to evaluate its effectiveness from the point of view of corporate management, using a system of relative indicators that characterize the region's economic performance (profitability, GRP, regional income), social sector development, and infrastructure.

We agree with Podolchak (2010), who notes that the concept of "effectiveness" is often associated with the optimality of actions, methods, mechanisms of implementation, or state of the subject in the presence of alternatives. It is manifested through the relationship between the goal (or goals) and the results obtained, the resources spent, and the circumstances of the environment, as well as time limits.

Based on the theoretical studies conducted we defined the notion that the economic efficiency of regional management is a generalized complex indicator that reflects the effectiveness of the use of regional potential, the impact of economic development on social processes, and the effectiveness of regional authorities in the context of achieving the strategic goals of the region's development and ensuring its competitiveness.

## Methodology

Proceeding from the classical approaches to the management of socio-economic systems, the effectiveness of a management system is determined by three main directions:

1) Economic efficiency determines the ratio of results to costs, and occurs when such a ratio is higher than 1:

$$E = \frac{R}{C} \in > 1 \quad (1.)$$

Where, E = economic efficiency;

R = results (profit, value added, commodity products, etc.);

C = costs (financial, material, time, etc.).

2) Productivity of the system reflects the level of use of available resources from the point of view of their impact on the production of products or services. At the regional level, productivity can be defined as the ratio of volumes of production of goods and services to the volume of expended resources (labor, material resources, and investments):

$$P_n = \frac{V_G}{V_r} \rightarrow \max \quad (2.)$$

Where,  $P_n$  = productivity n-th resource (factor of production);

$V_G$  = volume of produced goods (services) for a specified period;

$V_r$  = the volume (quantity) of resources used or factors of production for a specified period.

3) The implementation of goals in the functioning of the economic system indirectly reflects the effectiveness of making strategic and tactical decisions at all levels of regional administration. In general terms, the implementation of goals is defined as the ratio of actual to target indicators:

$$I_g = \frac{I_A}{I_T} \geq 1 \quad (3.)$$

Where,  $I_g$  = the implementation of goals of the economic system of the region;

$I_A$  = the actual indicator of the implementation of a particular activity;

$I_T$  = the target indicator of the implementation of a particular activity.

The use of these formulas will allow for a comprehensive assessment of the efficiency of management of the economic system in the regions in order to carry out comparative, dynamic, and structural analysis of economic activity at the regional level.

According to the research objectives, the effectiveness of regional management can be presented as an integrated comparative assessment of the economic performance of the region, which determines the balance of economic and social efficiency, productivity of the use of resource potential, and the effectiveness of regional management over a certain period of time. Thus, the proposed methodological approach to assessing the effectiveness of management of the economic system of the region involves the following stages (Fig. 1).

In the first stage, it is necessary to determine the main criteria and indicators for assessing the effectiveness of regional management. Based on the research carried out, we identified that the most generalizing criteria are: economic and social efficiency, productivity in the use of resource potential in the region, and the effectiveness of administrative actions leading to the implementation of regional goals.

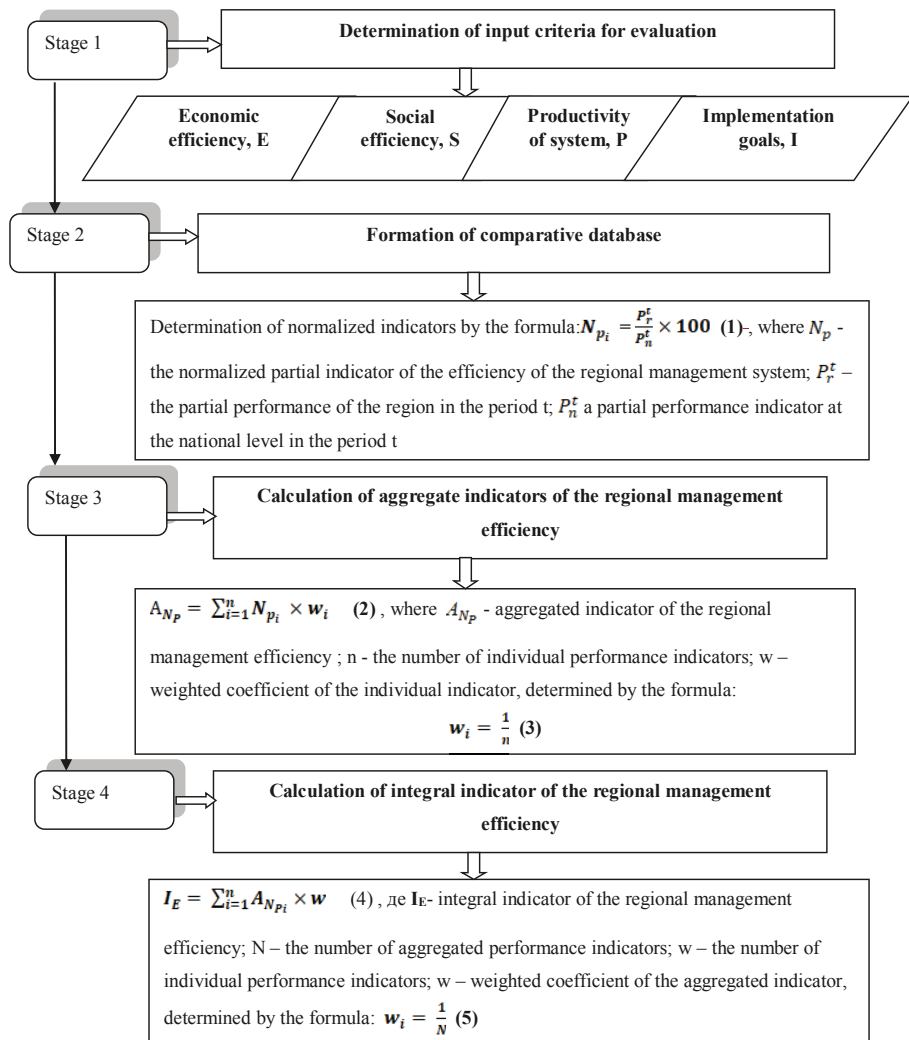


Fig.1. Stages of evaluation of the management efficiency of the regional economic system

Source: developed by authors

Proceeding from the goal of our study and the availability of statistical data on the evaluation of the efficiency of the regions of Ukraine, we proposed a system of indicators, which are shown in Table 1.

**Table 1. Criteria and indicators of regional management efficiency**

| Criteria                  | Indicators  | Formula                           | Denotation   |
|---------------------------|---|-----------------------------------|--|
| Economic efficiency, E    | Total profitability of economic entities, %                   | $e_1 = \frac{P}{C} \times 100$    | <i>P</i> – gross profit of enterprises of the region, thousand UAH.;<br><i>C</i> – gross costs of enterprises of the region, thousand UAH. |
|                           | Return on investment, %                                       | $e_2 = \frac{P}{CI} \times 100$   | <i>CI</i> – capital investment in the development of the region, thousand UAH.   |
|                           | Profitability of products and services,%                      | $e_2 = \frac{P}{V} \times 100$    | <i>V</i> – volume of goods and services sales in the region, thousand UAH.   |
| Social efficiency, S      | Employment rate, %  | $s_1 = \frac{EN}{EAN} \times 100$ | <i>EN</i> – the number of employed, thousand people;<br><i>EAN</i> – the number of economically active population, thousand people         |
|                           | Average salary, UAH   | $s_2$                             | The statistical data   |
|                           | Volume of capital investments per one employee, thousand UAH. | $s_3 = \frac{KI}{NE}$             | <i>NE</i> – number of employees, thousand people.  |
| Productivity of system, P | Labor productivity, thousand UAH.                             | $p_1 = \frac{V}{NE} \times 100$   | <i>V</i> – volume of goods and services sales in the region, thousand UAH;<br><i>NE</i> – number of employees, thousand people             |
|                           | Productivity of asset using, thousand UAH.                    | $p_2 = \frac{GRP}{VA}$            | <i>GRP</i> – gross regional product<br><i>VA</i> – the initial value of fixed assets, thousand UAH   |
|                           | Energy efficiency, thousand UAH/t oil equivalent              | $p_3 = \frac{GRP}{EE}$            | <i>EE</i> – energy expenditure in the region, tons of oil equivalent   |

| Criteria                       | Indicators  | Formula                                | Denotation   |
|--------------------------------|---|--|--|
| <b>Implementation goals, I</b> | Implementation of the plan for economic growth, %   | $r_1 = \frac{GRP_a}{GRP_t} \times 100$ | $GRP_a$ – actual gross regional product per capita, thousand UAH;<br>$GRP_t$ – target gross regional product per capita, thousand UAH                      |
|                                | Implementation of the plan for growth of population income, UAH.                              | $r_2 = \frac{I_a}{I_t} \times 100$     | $I_a$ – actual disposable income per capita, UAH;<br>$I_t$ – target disposable income per capita, UAH;   |
|                                | Implementation of the plan for attraction of foreign investment in the region per capita, USD | $r_3 = \frac{FI_a}{FI_t}$              | $FI_a$ – actual amount of foreign investments per person in the region, USD<br>$FI_t$ – target amount of foreign investments per person in the region, USD |

Source: developed by authors

According to the proposed methodological recommendations, the list and number of indicators may be adapted in accordance with the objectives of the study and supplemented by qualitative indicators of evaluation. The use of the proposed system of indicators will allow for a comprehensive analysis of the effectiveness of the regional system and the identification of the strengths and weaknesses (a regional profile) of regional management in comparison with the country's average.

### **Assessment of the regional management effectiveness in the Transcarpathian region**

The Transcarpathian region is located in the west of Ukraine, bordered by the EU member states of Poland, Slovakia, Hungary and Romania. The Transcarpathian region is one of the smaller regions of Ukraine both in terms of area of 12,777 km<sup>2</sup> (2.1% of the territory of Ukraine) and population size – just 1,257 people as of January 1, 2019 (2.8% of the population of Ukraine). Transcarpathia has considerable natural resources and production potential, and is also an important transport hub for Ukraine-EU communication.

The strategic goal of the development of the Transcarpathian region is “to ensure the high quality and standard of living of present and future generations of population through: human capital development, harmonious combination of the formation of a competitive economy and modern infrastructure with preservation of unique nature and cultural and spiritual traditions, effective use of competitive advantages of the region” (Strategy of social and economic development of Transcarpathian region – 2016, 2020).

In order to determine the effectiveness of regional management, methodological approaches proposed by the author are used (Fig.1.). In the first stage, the calculation of the indicators given in Table 1 was carried out using statistical reporting data for years 2013, 2015, and 2017. The results of these calculations are given in Table 2.



The results of the calculations showed that in the dynamics of 2013-2017 there are general tendencies, typical for Ukraine as a whole and for the Transcarpathian region. Among them are:

1. Increasing the return on investment and operating profitability of enterprises in 2017 compared to 2013, which is a positive trend and shows an increase in the efficiency of economic activity at the micro level and a gradual exit from the crisis situation. At the same time, the given indicators in the Transcarpathian region are lower compared to the total in Ukraine, which is caused by more loss-making enterprises. In addition, the low levels of profitability are due to a significant increase in production costs, in particular the cost of energy resources.
2. In the context of economic efficiency, the growth in the productivity of the main resources using, including labor (above 98% for the period 2013-2017 years), fixed assets (+178%) and energy (+47%) is also a positive trend. The presented indicators characterize the efficiency of regional resource potential use, and are conditioned by several factors: the gradual introduction of resource-saving technologies, the reduction in the number of industrial enterprises in the oblast, the reduction in the number of employees, and the decrease in the volume of procurement of fixed assets.

**Table 2. Comparative indices of the regional management effectiveness in Ukraine and the Transcarpathian region**

| Indicators   | Symbolic designation | Period | Ukraine | Transcarpathian region |
|--|----------------------|--------|---------|------------------------|
| <b>Economic efficiency ( E )</b>                                       |                      |        |         |                        |
| Total profitability of economic entities, %<br>Return on investment, % | $e_1$                | 2013   | 3.9     | 2.8                    |
|  |                      | 2015   | 1       | 1.1                    |
|  |                      | 2017   | 8.8     | 3.2                    |
| Total profitability of economic entities, %<br>Return on investment, % | $e_2$                | 2013   | 84.0    | 37.4                   |
|  |                      | 2015   | 141.9   | 53.0                   |
|  |                      | 2017   | 132.3   | 38.8                   |
| Total profitability of economic entities, %                            | $e_3$                | 2013   | 0.05    | 0.03                   |
|  |                      | 2015   | 0.07    | 0.04                   |
|  |                      | 2017   | 0.07    | 0.03                   |

| Indicators   | Symbolic designation | Period | Ukraine | Transcarpathian region |
|--|----------------------|--------|---------|------------------------|
| <b>Social efficiency (S)</b>   |                      |        |         |                        |
| Employment rate, %<br>Average salary, UAH  | s <sub>1</sub>       | 2013   | 92.8    | 92.2                   |
|  |                      | 2015   | 90.9    | 90.8                   |
|  |                      | 2017   | 90.5    | 89.5                   |
| Employment rate, %<br>Average salary, UAH  | s <sub>2</sub>       | 2013   | 3265    | 2553                   |
|  |                      | 2015   | 5230    | 3381                   |
|  |                      | 2017   | 8777    | 6355                   |
| Employment rate, %   | s <sub>3</sub>       | 2013   | 0.012   | 0.005                  |
|  |                      | 2015   | 0.017   | 0.007                  |
|  |                      | 2017   | 0.028   | 0.011                  |
| <b>Productivity of system (P)</b>  |                      |        |         |                        |
| Labor productivity, thousand UAH.<br>Productivity of asset using, thousand UAH.                                      | P <sub>1</sub>       | 2013   | 0.212   | 0.068                  |
|  |                      | 2015   | 0.348   | 0.101                  |
|  |                      | 2017   | 0.524   | 0.136                  |
| Labor productivity, thousand UAH.<br>Productivity of asset using, thousand UAH.                                      | P <sub>2</sub>       | 2013   | 0.058   | 0.046                  |
|  |                      | 2015   | 0.048   | 0.032                  |
|  |                      | 2017   | 0.080   | 0.068                  |
| Labor productivity, thousand UAH.  | P <sub>3</sub>       | 2013   | 0.15    | 0.10                   |
|  |                      | 2015   | 0.26    | 0.19                   |
|  |                      | 2017   | 0.39    | 0.27                   |
| <b>Implementation goals (I)</b>  |                      |        |         |                        |
| Implementation of the plan for economic growth,%<br>Implementation of the plan for growth of population income, UAH. | i <sub>1</sub>       | 2013   | 96      | 99.3                   |
|  |                      | 2015   | 98      | 95.2                   |
|  |                      | 2017   | 101.2   | 103                    |

| Indicators   | Symbolic designation | Period | Ukraine | Transcarpathian region |
|--|----------------------|--------|---------|------------------------|
| Implementation of the plan for economic growth,%<br>Implementation of the plan for growth of population income, UAH. | i <sub>2</sub>       | 2013   | 98.5    | 98.0                   |
|  |                      | 2015   | 101.5   | 100.2                  |
|  |                      | 2017   | 123.0   | 125.0                  |
| Implementation of the plan for economic growth,%   | i <sub>3</sub>       | 2013   | 78.0    | 79.6                   |
|  |                      | 2015   | 65.0    | 73.0                   |
|  |                      | 2017   | 58.0    | 62.5                   |

**Source:** calculated by the authors according to the data (State Statistics Service of Ukraine; Regions of Ukraine: Statistical publication, 2017; Monitoring of socio-economic development of Ukrainian regions, 2017; Report on implementation of the program of socio-economic and cultural development of the Transcarpathian region, 2017; The Main Department of Statistics in the Transcarpathian Region)

3. Improvement of social efficiency indicators suggests a slight but gradual increase in social standards in the region. Thus, for the period from 2013 to 2017, the increase in average wages, both in Ukraine and in the Transcarpathian region, is quite substantial and exceeds the planned targets for this period by an average of 148%. The growth of capital investment per worker also had a positive effect on the growth of labor productivity during this period. At the same time, the growth of social standards is accompanied by an increase in the unemployment rate in the region, which allows us to draw conclusions regarding the influence of price factors on the development of these processes.
4. Analyzing the effectiveness of the activities of state and regional authorities in the context of the fulfillment of their targets, we see that in 2017 there is an over-execution of plans for the growth of incomes by, on average, 25%, alongside implementation of the plan for economic growth. In particular, the GRP growth in the Transcarpathian region in 2017 was more than 3% higher than planned at the beginning of the year. At the same time, the implementation of plans for the volume of foreign investments per capita, which in 2013-2017 is executed at 79-62.5% and decreases in dynamics, represents a negative trend. This testifies to the existence of significant problems related to the state of the investment climate in Ukraine.

The preliminary analysis of the efficiency indicators of Transcarpathian regional management made it possible to identify the main problematic aspects that require the increased attention of local authorities in developing strategic and tactical decisions regarding the development of the region in the future, namely: increase in unemployment, lower profitability of enterprises and the negative state of the investment climate. These problems are common to all regions of Ukraine at the present stage of transformation, but they have different degrees of manifestation at the level of individual regions. To

solve them, effective strategic decisions are made that seek to overcome them, using both general organizational and economic tools as well as regional mechanisms of influence.

According to the proposed methodological approaches, the next step in assessing the effectiveness of regional management is to compare the performance indexes in the region to the average in Ukraine (the normalization of indexes) and the determination of weighted indicators (Fig. 1, formula 2).

The weighting coefficients were determined according to formulas 3 and 5. Given the equal number of indicators, the weight factor of individual indicators was set at 0.33, and the weight coefficients according to the main evaluation criteria were 0.25. Estimated rates calculated by the author are shown in Table 3.

Normed indicators reflect the degree of compliance of indices with normative value, achieved on average per country in percentage terms, and illustrate the comparative effectiveness of management in terms of economic and social efficiency parameters, productivity of the economic system, and the effectiveness of local government activities. The results of the calculations showed that the Transcarpathian region is significantly behind the average values in Ukraine for a number of indicators.

**Table 3. Weighted normed indicators of the efficiency of regional management in the Transcarpathian region**

| Indicators                       | Period | Normed indicators | Weighted normed indicators |
|----------------------------------|--------|-------------------|----------------------------|
| <b>Economic efficiency ( E )</b> |        |                   |                            |
| $e_1$                            | 2013   | 71.8              | 23.7                       |
|                                  | 2015   | 110.0             | 36.3                       |
|                                  | 2017   | 36.4              | 12.0                       |
| $e_2$                            | 2013   | 44.5              | 14.7                       |
|                                  | 2015   | 37.3              | 12.3                       |
|                                  | 2017   | 29.4              | 9.7                        |
| $e_3$                            | 2013   | 55.2              | 18.2                       |
|                                  | 2015   | 56.5              | 18.6                       |
|                                  | 2017   | 46.2              | 15.3                       |
| <b>Social efficiency ( S )</b>   |        |                   |                            |
| $s_1$                            | 2013   | 92.3              | 30.5                       |
|                                  | 2015   | 98.9              | 32.6                       |
|                                  | 2017   | 90.5              | 29.9                       |

| Indicators                        | Period | Normed indicators | Weighted normed indicators |
|-----------------------------------|--------|-------------------|----------------------------|
| $s_2$                             | 2013   | 78.2              | 25.8                       |
|                                   | 2015   | 64.6              | 21.3                       |
|                                   | 2017   | 72.4              | 23.9                       |
| $s_3$                             | 2013   | 39.9              | 13.2                       |
|                                   | 2015   | 43.8              | 14.5                       |
|                                   | 2017   | 40.8              | 13.5                       |
| <b>Productivity of system (P)</b> |        |                   |                            |
| $p_1$                             | 2013   | 32.2              | 10.6                       |
|                                   | 2015   | 29.0              | 9.6                        |
|                                   | 2017   | 25.9              | 8.6                        |
| $p_2$                             | 2013   | 79.3              | 26.2                       |
|                                   | 2015   | 67.3              | 22.2                       |
|                                   | 2017   | 85.0              | 28.0                       |
| $p_3$                             | 2013   | 66.9              | 22.1                       |
|                                   | 2015   | 73.8              | 24.3                       |
|                                   | 2017   | 70.8              | 23.4                       |
| <b>Implementation goals (I)</b>   |        |                   |                            |
| $i_1$                             | 2013   | 103.4             | 34.1                       |
|                                   | 2015   | 97.1              | 32.1                       |
|                                   | 2017   | 101.8             | 33.6                       |
| $i_2$                             | 2013   | 99.5              | 32.8                       |
|                                   | 2015   | 98.7              | 32.6                       |
|                                   | 2017   | 101.6             | 33.5                       |
| $i_3$                             | 2013   | 102.1             | 33.7                       |
|                                   | 2015   | 112.3             | 37.1                       |
|                                   | 2017   | 107.8             | 35.6                       |

Source: calculated by the authors

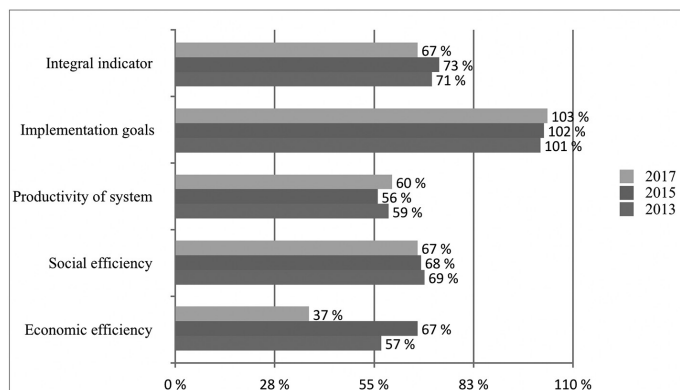
The most problematic indicators of economic efficiency are those of the business sector: the total profitability of enterprises in 2017 was only 36% of the average in Ukraine; the return on investment was 29%, and gross profitability 46.2%.

Indicators of productivity of resource use are also relatively low in the region, namely labor (29.5%), energy (85%) and fixed assets (70.8%), which is associated primarily with a certain decline in business activity due to the outflow of direct foreign investment in the last few years.

With regard to the performance indicators of local authorities, it should be noted that in 2017, indicators of realization of targets for economic growth increased compared with the average values in Ukraine by, on average, 1-7%. This positively characterizes the activities of regional authorities.

The next stage of the study is the calculation of integral indicators of the management efficiency of the Transcarpathian region in terms of the main indicators and the definition of a comprehensive integrated indicator. For this purpose, formulas 2-5 (Fig. 1) are used. The results of these calculations are shown in Fig. 2.

The results of the calculations of the integral indicator show that the effectiveness of regional management in the Transcarpathian region is lower than similar values in Ukraine by, on average, 30%, and decreased in 2017 compared to 2015 by 6%. The main reasons for such a low result are a decline in the economic efficiency of the business sector in 2017, due to a decline in business activity and a decline in direct foreign investment.



**Fig.2. Dynamics of the integral indicator of regional management efficiency in the Transcarpathian region**

Increasing the economic efficiency of entrepreneurship in the region due to the low concentration of industrial production requires the direct action of local authorities, in order to attract investment in the priority areas of the region and stimulate the development of small business, in particular in the field of tourism.

Increasing the efficiency of regional management requires the implementation of a number of economic and administrative reforms. We agree with Belikova N.V.(2015, p.170-171) who notes that: “The organizational component is aimed at the formation of effective administrative tools to promote the acceleration of socio-economic development of the country and its regions”. The organizational component of the mechanism involves the following reforms:

- Local self-government reform;
- Reform of the administrative-territorial system;
- Reform of the system of state regulation of regional development;
- Reform of public administration;
- Anti-corruption reform.

The economic component of the mechanism includes reforms aimed at changing the model of the economy of the country and its individual regions in order to increase the efficiency of its functioning. The economic component of the mechanism involves the implementation of the following reforms:

- Reform of the model of the country’s economy or its separate components;
- Reform of inter-budgetary relations;
- Reform of the taxation system.

The peculiarity of the business sector in the Transcarpathian region is, as compared with other regions of Ukraine, the orientation of large enterprises in cooperative relations with foreign partners. Therefore, in order to restore economic growth in the region, the priorities of regional management are in the creation of a favorable business climate in the region and activating foreign economic activity, particularly in the context of cross-border cooperation. The main directions for improving the efficiency of the regional management of Transcarpathia are:

- Introduction of mechanisms for the effective use of energy and natural resource potential;
- Development of transport and market infrastructure, which will increase the level of business activity of enterprises;
- Development of programs for stimulating innovation activity and the modernization of enterprises;
- Creation of cross-border clusters, which will increase the efficiency of the use of available forest and recreational resources;
- Raising the level of favorable investment climate in the region;
- Creation of conditions for the development of small business.

## Conclusions

1. The theoretical approaches to determining the effectiveness of regional management are considered. In the course of the research, it became apparent that the effectiveness of regional management should be considered as the result of a complex integrated comparison of the final indicators of economic activity in the region, which determines the balance of economic and social efficiency, productivity of the

use of regional resource potential, and the level of achievement of regional growth goals for a certain period of time.

2. The criteria for assessing the effectiveness of regional management (economic, social efficiency of economic activity of the region, productivity of resource use, and efficiency of the management system), a system of assessment indicators for each criterion, and a mathematical apparatus for their calculation are proposed.
3. Methodical approaches to assessing the effectiveness of regional management have been developed which allow us to determine the current level relative to similar indicators achieved within the country, and their tendencies under the influence of regional factors to highlight the strong and weak points of the region.
4. In accordance with the authors' approach, a diagnosis of the effectiveness of regional management was conducted on the example of the Transcarpathian region. Based on the results of the calculations, the strengths and weaknesses of the regional management were identified, and those factors which will increase the rate of economic growth and the standard of living of the population in the strategic perspective are determined. The results of the calculations of the integral indicator show that effectiveness of regional management in the Transcarpathian region is lower than the similar values in Ukraine by 30% on average, and decreased in 2017 compared to 2015 by 6%. The main reasons for such a low result are a decline in the economic efficiency of the business sector in 2017 due to a decline in business activity, and a decline in foreign direct investment.
5. Measures to improve the efficiency of the functioning of the socio-economic system of Transcarpathia with a consideration to the specifics of the region's development and its specialization are proposed. Among them are: the introduction of mechanisms for the effective use of energy and natural resource potential; the development of transport and market infrastructure which will increase the level of business activity of enterprises; the development of programs for stimulating innovation activity and the modernization of enterprises; the creation of cross-border clusters which will increase the efficiency of the use of available forest and recreational resources; and the raising of the level of favorable investment climate in the region, and creation of conditions for the development of small business.
6. Improving the efficiency of regional management at the present stage requires the implementation of a number of economic and organizational reforms. The implementation of reforms should be directed to expand the rights of each region to form their own socio-economic policies and create development strategies and mechanisms for their implementation, taking into account the specifics of the region's strategic potential.



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## **Metodinės priegios ir regioninio valdymo efektyvumo analizė**

Anotacija

Straipsnyje nagrinėjami studijų teoriniai pagrindai, rengiamos metodinės priegios regioninio valdymo efektyvumo vertinimui ir jų išbandymui Transkarpatų regiono pavyzdžiu.

Straipsnyje apsvaistyti teoriniai požiūriai vertinant regioninio valdymo efektyvumą, pristatytas autoriaus šia požiūris šia tema. Parengtos metodinės priegios, kaip įvertinti regioninio valdymo efektyvumą, apimančios pagrindinius etapus, vertinimo kriterijus, kiekvieno kriterijaus rodiklius ir matematinius modelius jų skaičiavimui. Pagal autori-

aus požiūrį Transkarpatijos regiono pavyzdžiu buvo atlikta regioninio valdymo efektyvumo analizė. Siūlomos priemonės, padedančios pagerinti Transkarpatijos socialinės ir ekonominės sistemos veikimo efektyvumą, atsižvelgiant į regiono plėtros specifiką ir specializaciją.

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