

# “Development of evaluation principles of regional economy operation efficiency”

<b>AUTHORS</b>	Yana Knysh
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Yana Knysh (Ukraine)

## Development of evaluation principles of regional economy operation efficiency

### Abstract

The article reveals the content of the category of “principle”. The analysis of researchers’ opinions is conducted in relation to the development of principles that should be involved into the process of efficiency evaluation. In the paper evaluation principles of regional economy operation efficiency are substantiated.

**Keywords:** analysis, efficiency, complexity, principles, system.

**JEL Classification:** O11, R11.

### Introduction

The process of evaluation of regional economy operation efficiency is based on the consideration of fundamental principles that define the interaction between outcomes and operating costs. Special attention is paid to the evaluation of production efficiency, but not to the efficiency of operation of region’s economical activity as a whole. Thus, the evaluation principles of regional economy operation efficiency are violated.

Significant contribution to the development of principles which should be used in the process of efficiency evaluation was made by V. Kachuryn, E. Kuzkin, E. Merzlykyna, K. Okseniuk, T. Yakymchuk.

Modern ideas of foreign authors are stated in the works by A. Biswas, J. Pirot, P. Meynell, J. Elder, C. Turner, S. Georgiou, R. Brouwer etc. [12, 13, 14].

Taking into account the large number of studies devoted to the investigation of efficiency evaluation principles, the issue of the development of evaluation principles of regional economy operation efficiency still remains uninvestigated.

The aim of the research is to analyze the experience related to the development of principles that should be put into the process of efficiency evaluation and to substantiate the evaluation principles of regional economy operation efficiency through resource and hang-the-expense approaches.

The subject of the research is the evaluation principles of regional economy operation efficiency.

### 1. Literature review

Successful development and stability of economy operation depends on the arrangement of analytical work that allows to create realistic and comprehensive evaluation of the results achieved, to determine the optimal solutions to the emergent

problems. Principles are the fundamentals of this process (Simenko, 2008).

Principle is the basement, the main idea, the fundamental maxim. In the logical value principle is the central concept, the basis of the system, which is a generalization and dissemination of any provision for all phenomena in the area from which this principle is abstracted (Frolov, 1981).

While developing the principle of general evaluation of regional economy operation efficiency the author relied on the works of various researchers.

Evaluation of regional economy efficient operation is based on the principles of economic analysis. The following principles should be considered: state approach, scientific character, complexity, providing of systematic approach, accurate and objective analysis, operative analysis, regularity, immediacy, democracy, efficiency (Salyga, 2005).

Modeling the system of economic agents efficiency indexes it is necessary to adhere to the following principles: possibility of using efficiency indexes in operating various sections of production; performance of stimulating function in identification and usage of reserves of increase efficiency production; interrelation between the goals and the final result of the activity; providing organic interconnection between the criterion and the system of certain indexes of production efficiency; the efficiency of resources usage applied in the production process; availability of multiple optimality criteria deployment [7].

According to Kuzkin it is important not only to create a single totality of economic indices which characterize the development of the industry, but also to interconnect the indices, unite them into a system. That will give the possibility to identify the factors and their impact on the indices which should be evaluated. Therefore, the system of indices should be formed based on the following principles: systematic approach, according to which the development of each region should be considered as

a result of economic, social and demographic interaction; assurance of unity of key indices formation methodology and their collation with the similar ones in other sectors; assurance of the integrated approach to the evaluation of socio-economic development of the industry, i.e. covering all essential components and factors of regional development; assurance of indices correspondence to the real state of the object being studied; availability of the indices on the regional level; unambiguous treatment of indices in economic and social development; i.e. the possibility of an unambiguous positive or negative evaluation of the indices dynamics; transparency of the indices system and its convenience for practical usage, laconism i.e. focus on the set of the most important primary indices (Kuzkin, 2006).

In order to analyze and evaluate the strategic potential Okseniuk suggests taking into account principles of consistency, complexity, development, scientific and systematic approach. We expand their content as follows:

1. Principle of consistency provides a possibility to consider the strategic potential as a system in which a number of components can be singled out. Therefore, the research should be carried out in an integrated manner, considering every component, and basing on the results of their state one should form an overview of the region's strategic potential.
2. Principle of complexity implies that the evaluation of the strategic potential of the region is performed by taking into account external and internal factors.
3. Principle of development requires the study to be conducted in three directions: retrospective, modern and long-range, because in order to understand the essence of the strategic potential of the region one should know the background conditions of its formation and on this basis predict its future state.
4. Scientific principle implies that the analysis and evaluation of the strategic potential of the region should be conducted using scientific methods.
5. Systematic approach involves consideration of the strategic potential as a complex system that is influenced by external and internal factors [Okseniuk, 2010].

Implementation of systematic approach in the research process involves a combination and interaction of its main aspects: systematic historical (changes in the structure of the strategic potential of the region, their qualitative and quantitative manifestation); systematic targeted

(structure of the strategic potential, focus on achieving the goals of the region); systematic integrative (factors assuring the integrity of functioning of the strategic potential of the region); systematic managemental (particularities of management control of the region's strategic potential) (Kovalska, 2007).

In foreign practice certain principles of economic evaluation are widely used that are characteristic of European countries, i.e. the principle of economic efficiency and cost-benefit analysis; the principle of functional diversity maintaining; the principle of long-term planning and preventive actions; the principle of overrunning. The principles enumerated above contribute to more efficient problems detection and finding consensual solutions to the problems that arise (Turner R. Kerry, Georgiou Stavros, Clark Rebecca, Brouwer Roy, Burke Jacob, 2004).

According to Merzlykyna the concept of evaluation and efficiency analysis should be based on the following principles: application of systematic approach to the efficiency investigation; the choice of success criteria in terms of goal sets; reasoning the choice of indices for efficiency evaluation in organizational system and individual subsystems; solution to the problem of indices quantitative measurement for efficiency evaluation; the choice and development of planning and analytical tools for efficiency evaluation and monitoring their level; setting-up and maintenance in working condition the information space, which has a necessary information to evaluate the efficiency evaluation (Merzlykyna, 2004).

In order to evaluate economic efficiency of the final result Blagodietielieva-Vovk suggests using the following principles:

- ◆ Degree of expenditure in order to attain to positive results (positive or negative effectiveness).
- ◆ Economic reality. This principle requires careful studying of benefits in total, cooperation, consideration of reciprocal influence while defining the operation profit (Blagodietielieva-Vovk).

Yakymchuk in building efficiency indices relies on the following methodological principles: providing a correlation between the criterion and the system of specific indices of activity efficiency; displaying efficiency and interrelation of all elements of the resource potential; the possibility of efficiency indices application in order to control individual units of the production process (Yakymchuk, 2011).

Kachuryn offers to use the principles of: functional interrelation of economy branches; mobility of production; optimal specialization; integrated development of the regional economy management; social efficiency; combination of scientific-technical and scientific-social policy of the region to evaluate management efficiency of regional economy (Kachuryn).

## 2. Results of the study

Expanding the authors' suggestions, we have developed the principles of generalized evaluation of regional economy operation efficiency. The content of these principles is presented below.

*Principle of multiple stage evaluation.* The essence of the principle involves the possibility of a stepwise analysis and evaluation of regional economy operation efficiency, the definition of correlation processes taking place in economy.

*Principle of alternatives.* Due to this principle it is possible to detect the direction of economic processes and their correlation in economic activity. Thus, using different approaches to efficiency evaluation makes it possible to evaluate the development level of the region, to compare social and economic development, to build a concept of the processes that are taking place and to determine future directions for the development and improvement of efficiency of economic activities in the region.

*Principle of a multiplier.* This principle is based on the interconnection of economic sectors, i.e. the multiplier, which shows dependence of the principal branch on the supporting industries. This improvement in the principal branch will lead to improvement in supporting industries.

*Principle of consistency.* The results and the costs are combined in a single entire system that reflects their interaction.

*Principle of interrelation between partial indices of regional economy operation efficiency, that is to say, the interrelation between the results and the costs.* At the regional level the result is considered as the index of production volume and the costs are considered as expenses of living and materialized labor.

*Principle of criteria selection for regional economy operation efficiency.* Criterion is an essential difference, measurement, a condition on basis of which the efficiency evaluation is carried out, comparison of alternatives, which provide an opportunity to take the most advantageous solution. This means that with the proper selection

of criteria the result should at least equal the costs, and at the utmost – exceed the costs.

*Principle of correspondence between the results and the costs.* That means that the costs should be the reason, and the results should be the consequence of the costs which were used in the production process.

*Principle of selection of indexes for regional economy operation efficiency.* Evaluation of regional economy operation efficiency should be based on a set of indices which will provide an objective overview of the opportunities of the region and the prospects for its development.

*Principle of firmness of purpose.* The essence of the principle involves defining partial and generalizing efficiency indices that will determine further development of regional economy efficient operation.

*Principle of proportionality.* With the introduction of innovative technologies a certain part of living labour decreases. Therefore, using partial indices of regional economy operation efficiency, it is necessary to pay attention to proportionality, the change of values of some indices should influence the other ones.

*Principle of adaptation,* i.e. the system of indices of regional economy efficiency evaluation should be adapted to the capabilities of the existing statistical accountancy.

*Principle of informativity.* There should be a permanent free access to information and its update is also required.

*Principle of indexes quantitative measurement.* The results and the costs should be reduced to a single measuring system.

*Principle of selection of tools for regional economy efficiency evaluation.* This principle provides a possibility to analyze the state and dynamics of efficiency. With the proper choice of tools a sustained competitive state can be achieved and special conditions are created for achieving new goals related to the improvement of regional economy operation efficiency.

*Principle of efficiency level control.* Analysis and evaluation of efficiency indices should be conducted in the dynamics in order to be able to react in time to the negative tendencies which take place in the region.

## Conclusions

In this article the critical analysis of researchers' ideas is completed, certain propositions are

analyzed related to the development of principles that should be put in the basis of generalizing efficiency indices of regional economy operation efficiency through resource and hang-the-expense approaches.

To construct mathematical models of evaluation of regional economy operation efficiency we offer to use the following principles: principle of multiple stage evaluation, complexity, selection of indices for regional economy operation efficiency, informativity, indices quantitative measurement, selection of tools for regional economy efficiency evaluation.

In addition to the mentioned principles above we also suggest considering the following ones: principle of alternatives, the multiplier, interrelation between partial indices of regional economy operation efficiency, principle of criteria selection for

region economy operation efficiency, correspondence between the results and the costs, firmness of purpose, proportionality, adaptation, efficiency level control.

A critical analysis of existing propositions and implementation of the mentioned principles allows: to improve the methods for determining the economic efficiency of regional economy operation, namely to offer a system of partial and generalizing indices to determine the economic efficiency of regional economy; to offer a system of indices for general and comparative efficiency of added value created by regional economy, which unlike existing, takes into account the interaction between the results and costs of the region activity.

Considering the formulated principles in the development of economic efficiency indices will give a possibility to increase the reliability of evaluation of regional economy economic efficiency.

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