

# THE FORMATION OF A SYSTEM OF INDICATORS TO ASSESS THE SOCIO-ECONOMIC DEVELOPMENT OF INCLUSIVE TOURISM IN THE REGIONS OF UKRAINE

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**Abstract.** The purpose of the article is to determine the procedures for the formation of a modern system of indicators to assess the socio-economic development of inclusive tourism in different regions of Ukraine. This approach will determine the concept of development of the administrative and territorial unit of any country. *Methodology.* Formation of the methodological basis of the article is associated with the author's research and practically-adapted approbation of the results of these studies. *Results.* As a result of the formation of a methodological basis for the development of inclusive tourism in the system of socioeconomic relations at the regional level, a mechanism (model) for using the integral index as an indicator of the economic feasibility of using it in the system of regional management and economic development is proposed. The types of indicators of economic efficiency of the introduction of inclusive tourism and types of effects from the activities of inclusive tourism are defined, the methods of assessment of inclusive tourism as an innovative project, the method of determining the integral indicator of inclusive rehabilitation of people, taking into account the natural resource and recreational and tourist indicators are proposed for consideration. *Practical implications.* Given the relevance of the topic related to inclusive tourism, we see rational to evaluate the development and implementation of this innovative direction in the socio-economic system of regional development of Ukraine, which can serve as a model for adapting it to the administrative and territorial units of other countries. *Value/originality.* The development of the integral indicator of inclusive rehabilitation of people is the author's development, which is being practically tested and in the near future will become a universal methodology in working with people with inclusion and inclusive tourists in particular. For implementation in the socio-economic system of regional development, such innovative direction as inclusive tourism will allow to cover additional population groups (the poor, pensioners, people with disabilities, large families and others) in the provision of a variety of tourist services. Given the multifunctionality of the tourism sector and its economic potential, the introduction of inclusive tourism will help to stabilize or improve the overall economic situation in the regions of Ukraine.

**Key words:** system of indicators, socio-economic development of regions, inclusive tourism, method of determining the integral indicator, integral indicator of inclusive rehabilitation.

**JEL Classification:** O14, P25, R11

## 1. Introduction

Development of tourism industry in Ukraine is one of the most important tasks of economic development. Research, development of a comprehensive methodology of research and problems of development of the national tourist market coincides with the general directions of European integration (Malskaya, Rutinsky, Belous, & Mandyuk, 2014).

Modern methodological approaches to the study of the domestic market of tourist services are based on a combination of methods of sectoral and territorial analysis, which provides the definition and strategy

of national tourism policy, which provides the following:

- 1) assessment of the internal and external state of the Ukrainian market of tourist services, the definition of the state of economic development in tourism and the factors affecting its development;
- 2) assessment of the available tourist and recreational resources as a component of tourism industry development in Ukraine, as part of the application of their capabilities and the prospects for participation in the global and regional tourism process;
- 3) assessment of the intensity of the tourist process in the country;

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4) determination of directions of development of the tourist market and stimulation of market activity (Malskaya, Rutinsky, Belous, & Mandryuk, 2014).

Indicators of the intensity of the tourist process, which depend on the coverage of the country's population by tourism, are of two types (net and gross intensity of tourist flows) and characterize the main logistics flows in tourism.

## 2. Methods for assessing the socio-economic development of inclusive tourism in the regions of Ukraine

The economic component of the tourism industry is represented by enterprises as units of production (travel agencies, restaurants, hotel complexes, health centers, excursion bureaus and others) included in the taxation system (all, without exception), and in some cases funding (boarding houses, rehabilitation centers, health-improving institutions of state or mixed forms of ownership), lending (if the financial capacity of the enterprise), subsidies (according to the social program of support of individual enterprises of the tourism, medical, transport industry), and investment in the form of international and government projects that help introduce innovative technologies in the tourism sector.

With the help of methods of assessment of innovative projects a comparative characteristic of some projects with others is carried out, economic advantages and attractiveness of the project for its participants are revealed. If we consider inclusive tourism as an

innovative project, it is logical to use the following methods of regional assessment of socio-economic development of the territory (Table 1).

The system of indicators (natural and tourist and recreational resources, historical and cultural heritage, availability of material and technical base, developed transport infrastructure, etc.) is an integral part of inclusive tourism, important for methods of comprehensive assessment of economic efficiency of implementation of this direction.

## 3. Performance indicators for the implementation of inclusive tourism in the system of regional development

To understand the overall situation of the effectiveness of the development and implementation of inclusive tourism in the socio-economic system of the regions of Ukraine, it is necessary to take into account the performance indicators (Table 2) and understand what types of effects will be attracted as a result of the practical application of the project (Table 3).

Based on the above, it can be said that to carry out the process of development and implementation of inclusive tourism as a new project in the tourism industry, it is necessary to have a realistic idea of the resource indicators of the regions (and they are different in each region) and the economic efficiency of the results.

The system of indicators to assess the effectiveness of socio-economic development should reflect the most important qualitative characteristics of regional

Table 1

### Methods for assessing inclusive tourism as an innovative project

Method	Characteristics of the method
The method of criterion scoring	The compliance of the project with each of the established criteria is considered, and the project is evaluated according to each criterion. The method allows to identify all the positive and negative aspects of the project and ensures the importance of each criterion. The criteria may differ depending on the area of specialization, organization or enterprise, as well as their specificity and direction. For each individual case, only those criteria are chosen that are most appropriate to characterize the method.
The method of ballot estimation of the project	Used when it is necessary to formalize the results of project analysis, according to a list of criteria. The most important factors affecting the outcome of the project are identified and assigned a relative degree of importance: "very high", "high", "medium", "low", "below average". The overall score for this method is obtained by multiplying the ranks of the criteria by the relative importance of the factors. The obtained data are summed up.
Statistical method	A system of indicators is used to determine the effectiveness of the project. The method is recommended to be used at the initial stage of project expertise and for projects that have a short period of time before implementation. The indicators are: real value, profit index, internal rate of return, accounting rate of return and payback period.

Table 2

### Types of indicators of economic efficiency of the introduction of inclusive tourism

Types of performance indicators	Indicator characteristics
Types of performance indicators	The effectiveness of inclusive tourism in terms of the entire national economy of the country, its regions, industries, organizations
State Commercial (financial)	The ratio of financial costs to the results of the development and implementation of inclusive tourism, providing the necessary rate of earnings
Budget	The excess of budget revenues over expenditures

Table 3  
Types of effects of inclusive tourism activities

Types of effects	Characteristics of the effects	Indicators of effects
Socio-political effect	Contributes to the development of society by meeting its needs. It is evaluated mainly by quality indicators	Living standards and lifestyles, health and longevity, increased human intelligence quotient, development of democracy, development of education, satisfaction of aesthetic needs
Economic effect	The result, which is obtained in the process of management costs (implementation of innovative projects for production), which allows to increase the methods of production. It is evaluated by quantitative indicators and criteria	Project cost, investment in production, marketing, availability of funding at the right time, potential annual profits, total revenue over the life cycle of innovation, absolute and relative effectiveness
Environmental impact	The result of the interaction of innovation with the environment. Evaluated by relative indicators	Environmental damage; integrated use of natural resources based on zero-waste production; reduction of industrial emissions into the atmosphere, water, soil; improved environmental friendliness and ergonomics of goods; increased fines for violations of environmental laws; renewal of nature
Scientific-technical effect	The result of scientific-applied, research and design developments with their subsequent implementation. Evaluated by the actual economic effect	
Ethnic and cultural effect	A byproduct of the post-industrial era, the result of people adapting to rapid change	New technologies shape the culture of future life, its system of values, tastes, norms of behavior, relationships

development and the main types of economic activity, giving in the aggregate a holistic view of the generalized characteristics of regional development.

The current state of socio-economic development is characterized by several dozen macroeconomic indicators. The analysis of the diagnosis of economic and social development of regions shows a heterogeneous number of indicators (from 28 to 81), which complicates the procedures for obtaining and conducting the relevant calculations, as well as limiting their practical use (Bielousova, 2018).

#### 4. Determination of the integral index as an indicator of the economic system of regions

Unlike other indicators, the determination of the integral index as an indicator of the economic system helps to clarify the qualitative (structural) characteristics of regional development.

According to the system approach, the economy of a region (country) is a complex functional system with inherent inputs and base values (Figure 1) (Kholostova, & Dementieva, 2002).

This equation determines the interaction of the functions of aggregate demand QD (P) (nominal GDP) and aggregate supply QS (P) (real GDP) to achieve general economic equilibrium in tourism services.

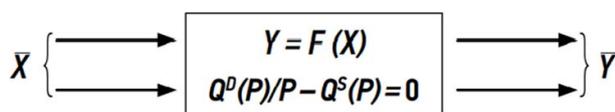


Figure 1. The model of the regional economy as a functional system

The indicator P determines the headline inflation, performing its function in the economic system of the region, and the macrofunction F indicates the quantitative indicators in the system (the number of population, number of enterprises in the tourism industry, the number of resource potential indicators, and others).

To characterize economic development of regions, economic (level of production technology, level of use of potential opportunities, factor of innovation application) and social indicators (level of employment in tourism (officially, unofficially), level of wages) are used (Kholostova, & Dementieva, 2002). They fit the principal component method, whose inputs are time series of individual indicators, which, when calculated over a long period of time, can lead to disfigured estimates of weighting coefficients (formula 2.1) (Melnichenko, & Shvedun, 2017):

$$Ic.t = Iek, t^{a1} Is, t^{a2} . \tag{2.1}$$

The integral index of the effectiveness of socio-economic development, reflecting the qualitative changes in the economic system, taking into account the contribution of each component (the Cobb-Douglas method) is as follows (formula 2.2):

$$Ic.t = I^{0.542248} x Is, t^{0.457752} . \tag{2.2}$$

When considering inclusive tourism as an indicator of innovation, the absolute value of the integral indicator of the effectiveness of socio-economic development of any region (similar to the economic and social components) will determine the level of innovation (the level of popularity and demand), and its relative values, the degree of innovation (modernization) of the material and technical base, the introduction of new technologies).

Thus, it is proposed a methodology for integral assessment of the effectiveness of inclusive tourism in the system of socio-economic development of regions and the degree of its innovation, based on the variables of qualitative characteristics of the economic system, which allows:

- to assess the result of the development and implementation of inclusive tourism in the socio-economic system of the regions;
- to apply the system of integral indices to assess the components of socio-economic development of inclusive tourism;
- to identify the potential for the development of inclusive tourism, taking into account the impact on the structural elements.

The proposed methodology is quite universal and can be applied at the level of regions and main types of economic activity.

Considering the production function of tourism enterprises as a fundamental element of the aggregate supply function model, the following formula can be applied (formula 2.3):

$$\left\{ \begin{array}{l} V_t = e^{\gamma t} L_t^{\alpha_1} K = e^{\gamma t} \left[ \xi_t N^D (P_t) \frac{W_t}{P_t} k_{sn} \right] \\ a_1 [\vartheta (I_t) K_t (K_t - 1, I_t - 1, A_t - 1, P_t - 1)]_t - a \\ Q^S = \sigma_t V_t (P_t) \end{array} \right. \quad (2.3)$$

Where,  $V_t$  is production through tourist services;

$P_t$  is the GDP (gross domestic product) deflator;

$e^{\gamma t}$  is the level of innovation;

$\gamma$  is the rate of implementation of innovative technologies;

$L_t$  is the salary expenses of employees of enterprises in the tourism sector;

$K_{z1}$  is the cost of old money;

$a$  is the elasticity coefficient;

$\xi_t$  statistical occupancy rate (the share of employees in the tourism sector, as well as employees of enterprises engaged in the tourism industry, reduced to the equivalent of employees, in the total number of people employed in the economy);

$N^D$  is the optimal job demand in travel businesses;

$W_t$  is the average annual nominal wage of employees;

$k_{sn}$  is the coefficient of social charge on payroll;

$\vartheta$  is the margin of profit;

It is an investment (if any);

$K_t$  is the cost of capital revalued in the GDP deflator;

$A_{t-1}$  is the consumption of fixed capital in the previous period;

$\sigma_t$  is the coefficient of service technology in the tourism sector enterprise.

Unfortunately, this formula will not determine the real reproductive economic potential of a region, because in this form the formula is incorrect for comparing regions. For a region where the service sector is rapidly

developing, the possibility of producing a higher GRP (compared to the traditional old industrial region) is not considered. In order to calculate the economic feasibility of introducing inclusive tourism correctly, it is necessary to take into account the cost of loaded production capital, which significantly affects the value of GRP (intra-regional product). At the same time, the uniqueness indicator of each region and its production potential (PP) within the framework of tourist activity, which can be defined as (formula 2.4):

$$PP = \xi N^D K_z. \quad (2.4)$$

In this case it is possible to calculate the reproductive capacity of a particular region in relation to other regions (formula 2.5):

$$GRP = \frac{QD(P)}{\xi N^D K_z}. \quad (2.5)$$

It is this indicator that allows to take into account the development of the tourist services sector, where the capital is much smaller than in the old industrial regions. But the rapid development of the services sector is necessarily reflected in the volume of GRP.

Inclusive tourism as a service sector requires a clear methodology in the socio-economic development of the regions of Ukraine, which is offered below.

Using the experience of foreign countries, where inclusive tourism is widely developed and has a high efficiency of implementation, it is proposed priority steps for the real application of the program of development of inclusive tourism in Ukraine in the form of a theoretical and methodological framework (concepts, methodologies, forms and techniques) and practical models to create an "accessible" environment.

## 5. Methodology for calculating the index of inclusive rehabilitation

In this case, an attempt was made to create a methodology for calculating the index of inclusive rehabilitation, which allows to argue the economic feasibility of implementing inclusive tourism for rehabilitation needs, taking into account territorial, natural, historical and cultural features, recreational and tourist potential, the availability of medical and health facilities of the region and other features. For this purpose it is necessary to take into account several basic components, which may reflect the characteristics of recreational and tourist resources that contribute to a harmonious and comprehensive human health improvement.

Assessment of the recreational attractiveness of the territory for inclusive tourists can be presented in the form of a formula that allows to calculate the index of inclusive rehabilitation based on natural-territorial and historical and cultural characteristics (Bielousova, 2018):

$$I_{incl.} = \frac{In.r. + In. - a.r. + I h. - c.h}{Sr}, \quad (2.6)$$

Where,  $I_{incl.}$  is an index of inclusion of rehabilitants.

$I_{n.r.}$  is an integral indicator of the natural resources of a given territory (ha), consisting of indicators of natural resources and calculated for the listed resources. As a sample is taken separately territory with the highest concentration of natural indicators on a 10-point scale in Ukraine, specified in the formula and will serve as a marker for further calculations:

$$I_{n.r.} = \frac{P_w. + P_h. + P_{m.s.} + P_{a.l.} + P_{b.r.} + P_c.}{St}, \quad (2.7)$$

Where,  $P_w.$  is a measure of forest cover (ha, for the total area of the investigated territory);

$P_h.$  is the availability of hydrological objects suitable for recreational and tourist activities (ha);

$P_{m.s.}$  is the availability of mineral springs as a health-improving and therapeutic resource for recreational and tourist rehabilitation (area, ha);

$P_{a.l.}$  is the attractiveness of landscapes that can be used in the rehabilitation process for recreational purposes (ha);

$P_{b.r.}$  is the presence of biological resources in a particular area of the study (points, from 1 to 10 against the marker of the maximum indicators in Ukraine);

$P_c.$  is a climatic indicator of the comfort and recreational capacity of the study area (points, from 1 to 10 in relation to the most favorable areas in Ukraine);

$S_t$  is the area of the investigated territory (ha).

\* All received indicators are converted into a point system from 1 to 10.

Classification of the territory according to recreational, tourist and rehabilitation indicators takes place according to the already existing system:

- not an attractive territory for rehabilitation;
- unattractive;
- attractive;
- as attractive as possible.

And the indicators of the ability to rehabilitate are divided into the following groups:

- low level (from 1 to 3 points);
- average level (from 4 to 7 points);
- high level (from 8 to 10 points).

The same criteria are used to assess the integral index of natural and anthropogenic resources of the territory under study, the integral index of historical and cultural heritage of the territory (points), calculated as the ratio of the number of historical, cultural, archaeological, sacred and monumental structures, museums, etc. These formulas can be adjusted by adding necessary key figures or replacing one key figure with another. The main condition is to reduce the calculations to percentages and then recalculate to a point system from 1 to 10. The territory in which the maximum values of the necessary indicators are found is taken as 100%.

## 6. Practice-testing programs for the introduction of inclusive tourism

In 2017, a new approach was launched to implement the work program of the Center for Inclusive Rehabilitation and Social Tourism, the main actors of which are students with disabilities, who, according to their nosologies, can get education in a certain professional direction and later, by prior arrangement with travel agencies, find employment in their specialty (Bielousova, 2017).

An example of an experiment with immobile or poorly mobile young people with disabilities were students of the Open International University for Human Development «Ukraine», on the basis of which the Center for Medical and Psychological Aid was created using a medical and technical base and the latest rehabilitation technologies (licensed and received permission for use in 2015 year year), as well as the Center for Inclusive Rehabilitation Social Tourism, the purpose of which is to train professional tourism specialists to work in the tourism industry (Bielousova, 2017).

The applied method of complex adaptation of people with disabilities is the first sign of a practical direction in Ukraine, which will help in solving the problems of medical, social, psychological, recreational rehabilitation of young Ukrainians and may become a model for the development of techniques for other categories of inclusive tourists.

## 6. Conclusions

Summarizing the material in this section, the following conclusions can be made:

1. Evaluation of existing scientific and methodological approaches to the potential development of inclusive tourism in the regions of Ukraine allows to identify two main scientific approaches that meet the objectives of the study (an analysis of the development of inclusive tourism as a segment of the economic system, and analysis of the prospects and opportunities for implementation of inclusive tourism).
2. The development of methodological support for the potential analysis of the formation of inclusive tourism in the regions makes it possible to determine quantitative and qualitative indicators of the region's development potential with regard to the formation of an inclusive environment.
3. Generalization of methods of strategic analysis aimed at assessing the degree of development of inclusive tourism allows to form a methodology of capacity analysis, which is based on the characteristics of potential sustainability. Its fundamental difference lies in the possibility of taking into account the ways of development of this direction (development or probability of increasing opportunities, traced in the relationship of resources and profits).

4. To understand the problem as a whole, it is logical to create an organizational model of the methodology with the characteristics of its elements, the scientific significance of which lies in the fact that it takes into account the relations between the subject of analysis (enterprises, organizations, institutions involved in inclusive tourism) and the subjects of decision-making on its results (public authorities of regions), in accordance with the goals and objectives of analysis. The main elements of the methodological model, based on the results of the analysis of the region's potential, make it possible to form qualitative analytical tools in the future.

5. Assessment of the impact of budgetary instruments on the socio-economic development of Ukrainian regions will determine the level of the region's ability to develop and implement new strategies and state programs.

6. A new method is proposed to derive an inclusive rehabilitation index, which will help to take into account all natural, natural-anthropogenic and historical-cultural features of a particular territory in the form of integral indicators and within the framework of socio-economic development of regions. This approach will help to create an overall picture of the suitability of a particular part of Ukraine for use in the tourism and rehabilitation sector.

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