Methods and criteria for assessing the effectiveness of cruise tourism development

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Abstract. The paper considers cruise tourism as one of the most profitable segments of the tourism market, the effectiveness criterion of which is a set of effects, the most significant of which are economic, social, environmental, resource, and scientific and technical effects. Criteria for assessing the results of the development of cruise tourism are presented, as well as the scope and types of economic efficiency of its functioning. It is proved that one of the most important manifestations of the effectiveness of cruise tourism is a significant social effect, which is expressed in the formation of three fundamental social systems: effective employment system, system to ensure the necessary standard of living and incomes of the population, and a system that provides favourable conditions for work and leisure. Quantitative and qualitative indicators characterizing the social efficiency of cruise tourism are presented.

1. Introduction

In the scientific economic literature, when assessing the results of economic management, special attention is paid to the problem of tourism efficiency as an integral element of the overall efficiency of social labor, expressed by certain criteria and indicators. Moreover, in the theory and practice of tourism, the concepts of “social tourism” and “economic tourism” are distinguished. Accordingly, the criteria for assessing the effectiveness of tourism based on the rational balanced use of available resources and optimizing results and costs are also excellent.

2. Results

Cruise tourism as a global socio-economic phenomenon is one of the most profitable segments of the tourism market, the effectiveness criterion of which is a set of effects, which meets the theory of the optimal functioning of the economy, in which efficiency in a separate “section” is considered from the perspective of the overall effect, i.e. private efficiency criteria correspond to the global criterion and, as it were, “flow” from it [1]. As a result, the whole complex of the system of criteria for the effectiveness of cruise tourism depends on the overall activity of the system, breaking up into particular goals of the activity of individual subsystems, which are interconnected with each other, and the effects that form the cumulative result (Figure 1).
Foreign authors, considering the effectiveness of cruise tourism, imply the presence of three types of effect that ensure its effectiveness: economic, social, and environmental [2-7]. Scientists also establish the factors of direct and indirect impact of cruise tourism on the economic growth of the country, while ignoring its impact on increasing the scientific, technical, and innovative potential of enterprises, as well as the investment attractiveness of the territory in which cruise tourism develops.

At the same time, the multidimensional nature of the cruise industry implies the need to highlight certain types of effects obtained as a result of the development of the cruise business, and the possibility of taking them into account on the basis of an appropriate assessment, the most significant of which are [8]:

1. The economic effect, which involves the consideration of the results and expenses of all participants in the cruise business, the initial data for which are: the market demand for the cruise

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**Figure 1.** Criteria for assessing the results of the development of cruise tourism.

| Criteria for evaluation of the results in cruise tourism |
|----------------------------------------------------------|
| **RELEVANCE** provides for the compliance of the development of cruise tourism with the goals of socio-economic, scientific and technical development of the country, region, enterprise. Goals are determined on the basis of economic, social, environmental, scientific and technical priorities established by the management entity, which can reflect global development trends and determine the development strategy of a country, region, individual enterprise. |
| **MULTI-ASPECT** takes into account the impact of cruise tourism development processes on different aspects of the activities of cruise market participants, obtaining different types of effect |
| **SIGNIFICANCE** determined from the standpoint of state, regional, sectoral levels of government and from the standpoint of business entities |

The economic effect involves the consideration of the results and expenses of all participants in the cruise business, the initial data for which are: the market demand for the cruise...
tourist product, its forecast price (taking into account expenses, inflation, borrowed interest, profitability) and the value of real cash flows. The economic effect of the development of the cruise industry is expressed, first of all, by the indicators of income and profits received by enterprises as a result of the production of a cruise tourist product and the provision of related services.

2. The social effect is achieved due to a significant increase in the employment of the population, which is due to the dynamic growth of the cruise business, which predetermines the constant need for labor resources not only in the field of cruise tourism, but also in the service sectors, enterprises and tourist infrastructure facilities focused on meeting the needs of cruise tourists.

3. The environmental effect, expressed in the ability to preserve natural wealth and reduce emissions into the environment, ensure non-waste production, approaching to a biosphere-compatible type of technology, which is especially important when implementing projects in the tourism sector. The environmental efficiency of the cruise industry as a whole, as well as of the sectors and enterprises included in it, is determined by the ratio of the growth rate of income derived from the sale of the cruise tourism product to the growth rate of environmental protection costs and the cost of using and creating biocompatible environmentally friendly technologies.

4. The resource effect consists in the optimal formation and distribution of all types of resources and overcoming the problem of their limited nature, which contributes to the most efficient use of the production, personnel, investment, innovative, economic, and financial potential of enterprises involved in the cruise industry. The significance of the resource effect can be judged by the statement of P. Samuelson, who, characterizing the effective functioning of economic systems, noted: “efficiency means the following: the resources of the economy are used as efficiently as possible to satisfy the needs and desires of people” [9], which allows us to state about the inextricable communication of economic and resource effects.

Consequently, resource efficiency is a reflection of the performance of individual areas of activity of enterprises involved in the development of cruise tourism, and is characterized by the growth of indicators such as: the efficiency of using the labor potential of employees, resource productivity, including capital productivity, material output, return on labor costs, capital turnover and etc. [10]

5. The scientific and technical (innovative) effect is caused by the constant updating and improving the quality of cruise tourism products, improving the technical and technological base of seaports and enterprises of the shipbuilding industry, expanding the range and creating new types of tourist products and services; improving the safety and comfort level of passengers while reducing negative environmental impacts, which implies the use of new innovative technologies, the implementation of energy and resource saving measures, the use of modern electronic control systems for technological and information processes, and the strengthening of human resources in the industry.

Altogether, the types of effects form a common integral effect, which makes it possible to evaluate the total economic efficiency of the cruise industry [11,12], the scope and types of which are presented in Figure 2:

\[ IE = EE + SE + OE + RE + STE \]  

where \( IE \) - the integral effect of cruise tourism;  
\( EE \) – the economic effect of cruise tourism;  
\( SE \) - the social effect of cruise tourism;  
\( OE \) - the environmental effect of cruise tourism;  
\( RE \) - the resource effect of cruise tourism;  
\( STE \) – the scientific and technical (innovative) effect of cruise tourism.
### Manifestations of the efficiency

| Type of Efficiency | Description |
|--------------------|-------------|
| **Efficiency during the billing period** | The result obtained during the period of implementation of activities for the production of a cruise tourist product |
| **Annual efficiency** | The efficiency obtained during a conditional year (usually averaged) |
| **One-time efficiency** | Indicates the total initial result obtained by the territory (enterprise) from the provision of cruise services |
| **Multiplication efficiency** | Characterizes the result of the development of cruise tourism, which extends to other industries, as a result of which there is a multiplication of the effect, i.e. the process of multiplying it |
| **Local efficiency** | Characterizes the results of activity at the level of an individual business entity |
| **Regional efficiency** | Includes the receipt of tax payments and fees from the development of cruise tourism in the regional budget, and the economic growth of the region |
| **Industry efficiency** | Characterizes the results of activity at the level of business entities of the industry |
| **National efficiency** | Characterizes the total efficiency in all areas of production and use of cruise tourist products within the country |
| **Absolute efficiency** | Shows the overall result obtained by a separate territory (enterprise) from carrying out economic activities for a certain period of time |
| **Comparative efficiency** | Testifies to the results of the activities of several territories (enterprises), on the basis of which the best is selected |
| **By the place of receipt** |  |
| **By the purpose of determining** |  |
| **By the time of recording results and expenses** |  |
| **in the product sense** | Improving the quality of a cruise product and expanding the range of cruise services offered |
| **in a technological sense** | Increasing productivity and improving working conditions for cruise industry workers |
| **in the functional sense** | Increasing the efficiency of managing the cruise sector or an individual cruise industry enterprise |
| **in the social sense** | Improving the quality of life of the population, improving the national healthcare |

**Figure 2.** Areas of manifestation and types of economic efficiency of cruise tourism.
The relationship of the effects of the development of cruise tourism at all levels is also manifested in the receipt of:

- direct effect, including profit from objects of group I: income of cruise agencies and operators, seaports, shipbuilding and shipping companies, hotels, restaurants, historical and cultural facilities, shops and other tourist enterprises;
- indirect effect - profit from objects of group II: organizations of communal, banking, construction and other fields, as well as the salary of employees of enterprises of group I;
- indicative effect - profit from objects of group III: income of other residents in the form of wages, dividends, rents and other types of payments received from the sale of products and services to objects of group II.

In addition, when assessing the efficiency of the cruise tourism, one should keep in mind the ratio of the growth rates of the main indicators characterizing changes in the results of its development over time: profits earned by cruise industry enterprises as a result of carrying out entrepreneurial activities ($Gr_{pr}$); the number of passenger days spent by tourists on a cruise ship ($Gr_d$); sales volume of cruise tourism product ($Gr_V$); the total assets of enterprises ($Gr_a$), and the number of employees of the cruise industry ($Gr_n$) [268, 296]:

$$Gr_{pr} > Gr_d > Gr_V > Gr_a > Gr_n \tag{2}$$

The first inequality ($Gr_{pr} > Gr_d$) indicates the excess of the profit growth rate of enterprises over the growth rate of passenger days spent by tourists on a cruise ship, which characterizes the increase in the efficiency of enterprises and organizations of the cruise industry.

The second inequality ($Gr_d > Gr_V$) indicates a decrease in the cost of producing a cruise tourist product and, accordingly, the cost of the cruise for the final consumer due to the economies of scale, which contributes to the growth of cruise passenger traffic and an increase in the duration of the cruise.

The third inequality ($Gr_V > Gr_a$) shows the outstripping growth in the volume of sales of the cruise tourism product and services associated with its production over the growth of the total capital of cruise industry enterprises, which characterizes the economical use of available resources.

The fourth inequality ($Gr_a > Gr_n$) means that the enterprises involved in the formation and implementation of a cruise tourism product increase their potential, shape and develop their competitive advantages, increasing the value of assets and the scale of their activities, without attracting additional labor resources. Therefore, there are intensification of using available resources and an increase in the efficiency of use of human capital.

The possibility of quantitative measurement of the total results of enterprises is a necessary requirement for assessing the success of their activities. At the same time, the result of integrated development is reflected at both micro and macro levels, thereby ensuring consistency of national interests with the interests of individual economic entities.

It should be noted that one of the most important types of manifestations of the effectiveness of cruise tourism is a significant social effect. However, if economic efficiency can be expressed quantitatively - evaluated it in monetary terms, then the system of general and particular indicators of a social plan is very difficult to be measured or it is simply impossible to do it [10].

The social aspect of the cruise industry is expressed in the formation of three fundamental social systems: effective employment systems, system to ensure the necessary standard of living and incomes of the population, and a system that provides favorable conditions for work and leisure.

The social efficiency of the functioning of the cruise sector is manifested at the local, regional, and national levels and is based on the integrated use of the potential of the territory and factors of production of various industries, which leads to the development of appropriate infrastructure and related activities, to the formation of new types of communications and forms of information exchange. At the local level, social impact is caused by an increase in the cultural, educational, and professional level of the local population involved in the process of tourist services, which in practice can be manifested through the revival and support of folk crafts, traditions and national holidays. At
the same time, socio-cultural identity acts as an attractive factor for the formation of cultural brands of the territory.

At the regional level, the impact is manifested in changing the structure of the region’s economy and the possibility of using national, historical, cultural and other traditions in real economic life, providing opportunities for intercultural relations and exchanges. At the state level, it is possible to form a “growth point” for the cruise industry in new regions and navigation areas, which helps to increase the level of employment, and, consequently, the standard of living of the population, reduce unemployment, and preserve the cultural heritage of the peoples living in Russia.

An integral indicator of the social efficiency of the cruise industry includes three key areas that reflect the interests of various social groups [10]:

\[ SE = SE_s + SE_w + SE_t \]  \hspace{1cm} (3)

where \( SE \) - the integral coefficient of social efficiency; 
\( SE_s \) - social efficiency from increasing the level of satisfaction with the improvement of management by employers; 
\( SE_w \) - social efficiency from improving working and resting conditions on the part of workers; 
\( SE_t \) - social efficiency from increasing the level of satisfaction with the rest on the part of tourists who prefer sea trips.

Each of the summarized indicators includes an appropriate set of qualitative and quantitative characteristics that objectively reflect social changes in society in the provision of cruise tourism services, which together create a single basis for determining the social effectiveness of the cruise business (Table 1).

Table 1. Indicators characterizing the social effectiveness of cruise tourism.

| Manifestation of social effect | Qualitative assessment indicators | Quantitative assessment indicators |
|--------------------------------|----------------------------------|-----------------------------------|
| Social efficiency from increasing satisfaction with improved management by employers | - ensuring comfortable working conditions and improving the standard of living of personnel due to its professional development and competent management of a business career; 
- the willingness of employees to solve common problems, cooperation, group identification; 
- achieving the goals of the organization through the effective use of the labor potential of its employees. | - growth in labor productivity; 
- decrease in labor input; 
- reduction of losses of working time; 
- decrease in staff turnover; 
- an increase in the coefficient of constancy of composition; 
- reduction in injuries; 
- the ratio of the growth rate of wages and labor productivity of workers. |
| Social efficiency from improving working and resting conditions for workers | - advanced training of employees and their competencies, 
- the growth of well-being and quality of life for workers; 
- achievement of the individual goals of employees, the possibility of promotion and career growth; 
- increasing the level of job satisfaction and self-esteem; 
- getting satisfaction from communication with colleagues; 
- formation of a stable psychological atmosphere in the team. | - the growth of total income of workers (wages, bonuses, material compensation); 
- an increase in the cost of acquiring tangible and intangible goods; 
- an increase in the proportion of skilled workers and workers with higher education in the total number of personnel. |
Social efficiency from increasing the level of satisfaction with rest by tourists who prefer sea trips
- getting new impressions and new acquaintances;
- improving health;
- increase in the content of leisure and quality of using free time;
- strengthening family ties (77% of tourists travel with spouses);
- obtaining a communicative experience of friendly communication.

- an increase in the level of satisfaction with the rest;
- an increase in the number of tourists going on a cruise;
- reduction in incidence;
- an increase in the level of performance.

It should be noted that the assessment of the social efficiency of the cruise industry is interconnected with economic indicators characterizing the final results of enterprises’ performance, such as: growth in sales of the cruise tourism product, reduction in its cost, increase in profits, increase in the efficiency of capital use, on which the level of labor productivity of workers employed in the cruise sector has a significant impact.

At the same time, labor efficiency directly depends on a set of social factors motivating an increase in labor productivity, the most important of which are: remuneration of labor, its content, the possibility of personal self-realization, satisfaction with communication with colleagues, etc.

In addition, the influence of social working conditions on its productivity is reflected in the loss of working time due to temporary disability and social and labor conflicts, in the overtime payment, expenses for labor protection, safety, improving working conditions and compensation payments to employees [3,7].

3. Conclusions
Thus, the efficiency of the cruise industry is based on the selection of relevant criteria that reflect relevance, multidimensionality and significance (state, regional, sectoral, and significance for the business entity) and involves the quantitative determination of certain types of effect obtained as a result of the cruise business development.

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