

ские факторы», «природно-климатические ресурсы», выделить отличительные черты круизного туризма, особенностью которого является наличие как раз нескольких разных дестинаций. Вывод об особенностях содержания и функционирования стратегического потенциала также в этой связи нуждается в большей прикладной направленности именно в связи с темой статьи и заявленным во введении акцентом на круизный туризм.

С этой точки зрения статья, может быть, не в полной мере отражая заявлен-

ные цели и вызывая ряд вопросов применительно к методологии туристической индустрии, импонирует смелой и достаточно новой попыткой применить проработанные методы и аналитические инструменты стратегического менеджмента к сфере туризма. Хочется надеяться, что это только первый шаг, и в дальнейшем такой подход будет более конкретизирован, синхронизирован с исследованиями туристической сферы, получит более прикладной характер. В любом случае — это базис для возможных дискуссий и решений.

DEVELOPMENT OF CLUSTERS' COORDINATION SEGMENTS WITH SECTORIAL FOCUS

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ABSTRACT

The article examines economic approaches and structural characteristics of strategic potential of the cruise industry; the correlation has been found out and clustering of its components by blocks of individual capacities combining functional, reproductive and resource criteria has been carried out. Taking into account the hierarchical level of the formation of industry capacity (national, regional, sectoral, local), rational forms, methods and tools of managerial influence on the process of its functioning as an integrated system are investigated in the aspects of expert analysis of a case type.

ENGLISH SUMMARY

Background.

Current economic realities indicate increasing importance of tourism industry as a whole and its individual types, in particular, in the structure of the national economy, focused on the maximum possible use of the available resource potential and defining socio-economic growth of the state.

Cruise tourism is one of the most popular and fastest growing segments of the international tourism market, with significant investment potential, based on the natural features, the ever-increasing demand and, as a consequence, the economic results that are achieved in this kind of business.

Development of cruise tourism in one or another tourist destination depends primarily on the availability and efficient use of competitive advantages as unique tangible and intangible resources with exclusive value which form the basis for the formation of the strategic potential of cruise tourism complex, based on the aggregation of existing and potential opportunities in the implementation of priority objectives of a long-term nature.

Multifactor nature of this direction requires the participation of expert groups and their assessments

based on an analysis of the trend and situational decisions.

Objective.

The objective of the authors is to investigate the cruise industry as a part of tourism business from the standpoint of its strategic potential.

Methods.

The authors use economic analysis, comparative and decomposition method and mathematical calculations.

Results.

Strategy economy

Despite numerous studies of terminology category «potential», its interpretation from the strategic position is rarely used in the contemporary scientific literature, to a greater extent in the works of scientists «potential» in relation to the tourist and recreation field is used in conjunction with the adjective «economic», «socioeconomic», «resource», etc. [1–3]. However, there is a need for the complex interpretation of the concept based on well-known resource and product concepts, and accumulation of objective and subjective factors influencing the choice of the optimal strategy for effective development of industry, region or country as a whole.

At the same time, despite the proximity of the terms «resource» and «potential», the latter is characterized by the fact that «although it is used in the singular form, it always involves a set of characteristics, objects, phenomena» [5].

Introducing strategic potential as a set of strategic resources, effective use of which can achieve the desired results in the long term, qualitative and quantitative aspects of the goals should be clearly identified for their further adjustment with account of changes occurring in the external environment. Strategic potential in a volatile economic environment forms only those resources that can be changed as a result of strategic decisions [7].

Consequently, preferring the concept of resource capacity of potential's formation and classifying resources depending on the impact on the process of creating a cruise tourism product, they must be considered in the context of the adaptation mechanism to achieve high quality results.

In addition, the objective accessory of this process is availability of basic elements such as natural resources, which form the primary potential of the cruise sector and ensure its initial development, and capital as a resource produced by human labor, which «unites all productive resources ... in order to use them to carry out production of the future economic benefits for profit» [8, 9]. That capital gain creates the preconditions for the development of cruise business and related business activities (Pic. 1).

Labor – land – capital

Taking into account the different conceptual approaches to the definition of tourist resources and the specific provision of cruise tourism services, the authors offer the following classification of the resources as directly affecting the demand for cruise tourism product, and indirectly – the formation and maintenance of the entire cruise-tourism infrastructure, which include [11]:

- Climatic resources, necessarily presupposing the existence of water space, a mild climate and beautiful nature;
- Tourist resources, which include recreational resources, historic sights and attractions, etc.;
- Human resources, including skilled workers in various sectors of the economy, their knowledge and competence;
- Logistics, transportation and financial resources;
- Information resources, which are based on the information about consumers of cruise products, dynamics and trends of the cruise market, production and sales of cruise tourism services, databases of customers and suppliers, processes, methods and tools for information processing;
- Commercial resources, involving communication with customers, suppliers and partners, supply chains, brands and advertising technologies;
- Organizational and managerial resources, including several interrelated systems: the system of organization and management of business processes, supply system, a system of planning and resource allocation, the system of motivation and control.

All these resources are united in the system of traditional factors of production «labor-land-capital». So, factor «labor» covers both human and partly organizational and managerial resources; factor «land» – climatic resources and the part of the tourist resources, which are not produced; factor «capital» – all other resources. The main difference between strategic resources from the common understanding of the category of «resources» is a complex task, which they have to solve, and those basic qualities they should have (Pic. 2).

Interrelation of resources, competitive advantages and potential in the implementation of strategic objectives justifies the selection of the following structural components of the strategic potential (Pic. 3):

- Basic potential, which is supported by initially given factors that ensure the conditions for achieving the goals and allowing gaining a sustainable competitive advantage in the cruise market;

- Hidden potential, which does not represent a competitive advantage at this stage, but assumes the transformation in the basic facilities through the acquisition of relevant skills and experience of workers in the tourism sector, organization of cruise tourism;
- Crossover potential, characterized by efficient management system of industry's development, which contributes to more efficient use of available potentials (production, transport, financial, investment, human resources, etc.).

Decomposition of components

Given that the strategic potential of the cruise industry is the root of the implementation of strategic priorities and a positive socio-economic impact, to explore its significance it is advisable to carry out decomposition of the aggregate of its components by blocks of individual potentials combining functional, reproductive and resource criteria. At the same time the hierarchical level of potential's building (national, regional, sectoral, local) should be taken into account, which determines the choice of rational forms, methods and tools of managerial influence on the process of its functioning as an integrated system (Pic. 4).

Formation of strategic potential of the cruise industry as a process of complex interaction of resources, capacity and capabilities of the productive forces to achieve effective results, determines the need to consider it as a system consisting of subsystems, each of which includes a set of functional elements of the potential, capable of performing the task.

It should be noted that the essence of the category «strategic potential» in relation to the cruise industry can be represented in the form of four key components. Firstly, the strategic potential is based on the category «resources» (the first component), which possess properties such as value, rarity, uniqueness and non-substitutability that promotes the acquisition of key competencies (the second component) and the competitive advantages of high, medium and low degree of stability (the third component) on the cruise market, and together create the possibility for the formation of cruise tourism cluster (the fourth component).

All these components are responsible for «compliance of detected, estimated capacities and resources with capabilities of the environment» [11] and ensure effective implementation of the strategy of efficient development of cruise tourism. In any process of decomposition it is possible to resort to expert assessments (EA) to solve the task.

Expert assessments

Suppose an object Z is in one of M possible states (classes) $V_1, \dots, V_M$ with known a priori probabilities $P(V_1), \dots, P(V_M)$, $\sum_{j=1}^M P(V_j) = 1$. Provided

incomplete information, state Z should always be assigned to the class having the highest a priori probability, then

$$P_0 = 1 - \max\{P(V_1), \dots, P(V_M)\} \quad (1)$$

defines the minimum probability of misclassification.

Assume that there are N experts (algorithms) $A_1, \dots, A_N$, that on the basis of additional information independently of one another make decisions $\delta_i(Z)$ about the state of the object Z in the form of indicator functions

$$\delta_i(Z) = k, i = 1, \dots, N, k = 1, \dots, M, \quad (2)$$

if A_i decides in favor of V_k .



Then the authors estimate the level of experts by misclassification probabilities $P(A_i)$, which are considered known to all N experts on the basis of previous experience. It is logical to assume that the probabilities satisfy

$$P(A_i) < P_0 \forall i = 1, \dots, N. \quad (3)$$

If $N > 2$ experts conduct independent assessments on the functioning and development of one of the tourist destinations for the customer (or industry) Z , as a result of which it is then related to the class V_1 (optimal) or V_2 (suboptimal). Suppose that we know a priori probabilities $P(V_1)$ and $P(V_2)$, and sensitivity $Q_1, \dots, Q_N$ and specificity $W_1, \dots, W_N$ of each of the experts. After the analysis of the set of decisions, set I_1 is specified by numbers of experts who decided in favor of the class V_1 , i. e. recognized Z suboptimal, and I_2 – the set of numbers of experts who recognized the direction optimal ($I_1 \cap I_2 = \emptyset, I_1 \cup I_2 = \{1, \dots, N\}$); in a situation S , the authors assume that Z is suboptimal, when

$$\prod_{i \in I_1} Q_i \prod_{i \in I_2} (1 - Q_i) > \lambda \prod_{i \in I_2} (1 - W_i) \prod_{i \in I_1} W_i,$$

and Z is optimal, if

$$\prod_{i \in I_1} Q_i \prod_{i \in I_2} (1 - Q_i) < \lambda \prod_{i \in I_2} (1 - W_i) \prod_{i \in I_1} W_i.$$

Modifications of EA techniques can be various; this paper displays only one of the possible ways to solve the problem. Given the range of informatization of research field [11], it is advisable to use first and foremost the technology of so-called «situational management». However, understanding the universality and multifold possibilities of the approach has led to the creation and rapid development of the theory of precedents known as Case-Based Reasoning (CBR) – the method of reasoning based on precedent.

Basing on precedents

Considering the projected analytical system «man-machine-environment» it should be given the properties, which are laid in it for the design and implemented during operation. Properties of the system mean its objective features. In particular, there is a number of quality indicators affecting human activities and at the same time dependent from it:

- reliability – characterizes inerrancy of solutions of the tasks, which the system faces:

$$P_{np} = 1 - \frac{M_{ou}}{N},$$

where M_{ou} and N – respectively, the number of erroneous decisions and the total number of tasks.

- timeliness of solving the problem – probability that the problem will be solved in a time not exceeding allowable is estimated:

$$P_{cb} = 1 - \frac{M_{nc}}{N},$$

where P_{cb} – likelihood of timely decisions, M_{nc} – number of untimely decisions, N – total number of tasks.

- automation degree of the system – characterizes the relative amount of information processed by automatic devices:

$$K_a = 1 - \frac{H_{on}}{H_{чум}},$$

where K_a – automation coefficient, H_{on} – amount of information, processed by the operator, $H_{чум}$ –

amount of information, circulating in the system «man-machine-environment».

At the same time the CBR paradigm combines several different methods of organization, recovery, removal, and indexing the knowledge stored in the form of precedents: arguments based on the sample (Exemplar-based reasoning); arguments based on case (Case-based reasoning); arguments based on memory (Memory-based reasoning); arguments based on the example (Instance-based reasoning); arguments based on analogy (Analogy-based reasoning).

Building of DSS (decision-making support system) of a case type for the tourism industry involves the development of ways to represent knowledge about the situation and possible solutions, selection of precedents, methods of identification and adaptation of solutions, storage and indexing of precedents.

Existing precedents comparison methods will facilitate the search for possible options in this field:

1) Nearest neighbor method (NN - Nearest Neighbor). It is a fairly used method to compare and retrieve precedents that can evaluate the degree of similarity of the current problem situation and precedents from storage of precedents (SP) of the system. To determine the degree of similarity on a set of parameters, used to describe the current situation and precedents, a certain proximity function is introduced. In accordance with a predetermined function, distance from the target point corresponding to the current problematic situation, to the points representing precedents, is detected and then the point, which is the closest to the target point, is selected.

2) Precedents' extraction method based on decision trees. Each top of the tree indicates at which of its branches search for solutions should be carried out. Selection of the branch occurs on the basis of information about the current problem situation. If terminal top is associated with a subset of precedents, then for a suitable solution the nearest neighbor method should be used.

3) Precedents' extraction method based on the knowledge of experts in a particular subject area (the coefficients of the importance of the parameters, identified dependencies, the importance of the criteria, etc.). It can be used in conjunction with other methods of precedents' extraction, especially when SP is large and the subject area is open and dynamic.

4) Extraction method based on the applicability of precedents. The basis of this method is principles that precedents' extraction is based not only on their similarity to the current problematic situation, but also on the fact of appropriacy of the model they represent to achieve the desired result.

Conclusion.

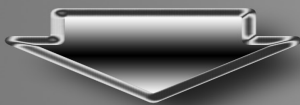
Strategic potential is a complex multifacet category, which includes a number of functionally interrelated and interdependent components, ensuring its viability and development. Features of tourism business, associated with investment potential, transport economics, human resources, validate demonstrated market-based approaches and economic criteria. To assess sources of strategic potential's formation it is recommended to use the technology of «situational management», based on the mathematical tools of expert assessments and aggregating several different methods of organization, recovery, removal, and indexing the knowledge stored in the form of precedents.

Keywords: tourism business, economics, strategy, investment potential, resources, cruise operators, cruise industry, decomposition, expert assessment, precedent.

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EDITORIAL RESUME

The article raises an important question of the development of tourism clusters, but to a greater extent it is devoted to some significant aspects of the application of strategic management, and in this respect the mode in which it highlights some aspects of tourism does not look so advantageous. It would be reasonable to ask the authors during further elaboration of the theme to pay greater attention to unequivocal interpretation of the terms «tourism cluster», «tourist resources», «recreational resources», «climate factors», «climate resources», to distinguish specific features of cruise tourism, typical of which is its formation on the basis of several destinations. Conclusion about the nature of the content and operation of the strategic potential in this

regard also needs more applied character in connection with the topic of the article and should be more focused on cruise tourism, stated in the introduction.

In this regard, the article may not fully reflect the stated goals and cause a number of issues in relation to the use of conventional approaches and methodologies of the tourism industry, but it sufficiently appeals to a brave and rather a new attempt to apply the well-developed techniques and analytical tools of strategic management to the tourism sector. Hopefully, this is only the first step and in the future this approach could be more elaborated, synchronized with researches in the tourism industry, get more applied nature. In any case, this is a good basis for debate among specialists.

