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**SYSTEM OF MODELING THE TOURIST SPHERE**

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***Abstract***

The article describes the methodology of modeling the tourism sphere, necessary for further innovation in this industry as the basis for digital transformation in the services sector, the transition from real tourism to virtual tourism, as in the current conditions of economic development for a number of Russian regions, the tourism sphere becomes budget-forming. In this connection, modeling as a study of the processes occurring in the tourist business and the general system of tourism is of interest. By now, there are several models that are not possible to combine for any signs in a single system. Existing models differ both in terms of perception of the general social structure, and in terms of advantages and representation of a particular tourist system. The use of models due to the need for the mental detection of complex processes, analysis and explanation of cause-effect connections in the structure of the model, since tourism in the system of scientific knowledge in a broad concept refers to intangible resources. The authors attempted to systematize the existing theoretical scientific base of the tourism sphere with the aim of presenting such a tourism model as a science, which allows the process of transition to the digital plane to carry out the modeling process for abstracting from real complexes, and focusing on the aspects that help making decisions, and in turn, have an impact on the reality of the transfer and implementation of this process in the country's digital economy.

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## 1. Introduction

Today, tourism has acquired the status of a special sociocultural phenomenon that unites both the history of the country and information technologies in the field of communications and territorial development. Currently, tourism opportunities have increased due to the development of the digital economy in large agglomerations and determining the place of tourism in Smart City projects. But, the developing theories of “smart” tourism mainly determine the impact of Internet communications technologies and large amounts of data on the development of marketing, products and tourist destinations and do not consider the processes of co-designing tourism using many elements of the tourism industry, communicative interaction between customers of tourist services and operators tourism, due to the lack of a unified theoretical model of tourism, which does not allow to introduce intellectual tourism into action. Also, due to the lack of a single conceptual apparatus in the field of tourism, the lack of science "tourism" in its pure form, we cannot effectively explore and comprehend something new and participate in processes that encourage the emergence of new projects in the development of intellectual virtual tourism as traveling to the world of learning new thoughts and ideas, which opens, first of all, wide opportunities for the young generation.

The fundamentals of any science consist in the possibility of presenting an object under investigation in a conceptual way. In our case, this is not an easy task, due to the multifaceted essence of the concept “tourism”, which requires its own scientific reflection: quite a few articles and monographs have already been written that reflect various theoretical and applied aspects of tourism.

Most of the description techniques relate to the theory of systems, therefore, it is possible to choose a variety of approaches to represent elements of tourism (Diaz, Blasquez, & Martin-Consuegra, 2012; Seluh, 2015; Réau, 2016). On the one hand, this corresponds to the scientific substantiation of models, schemes and systems and simplifies the complex of social relations to several basic structures, which can then be analyzed in more detail, on the other hand, some factors that are not directly related to the specific formulation of the question and methods are inevitably neglected (Morrison, 1989; Jafari, 1994; Bernecker, 1952; Hunziker, 1959; Morgenroth, 1927; Hömberg, 1977, Freyer, 2010).

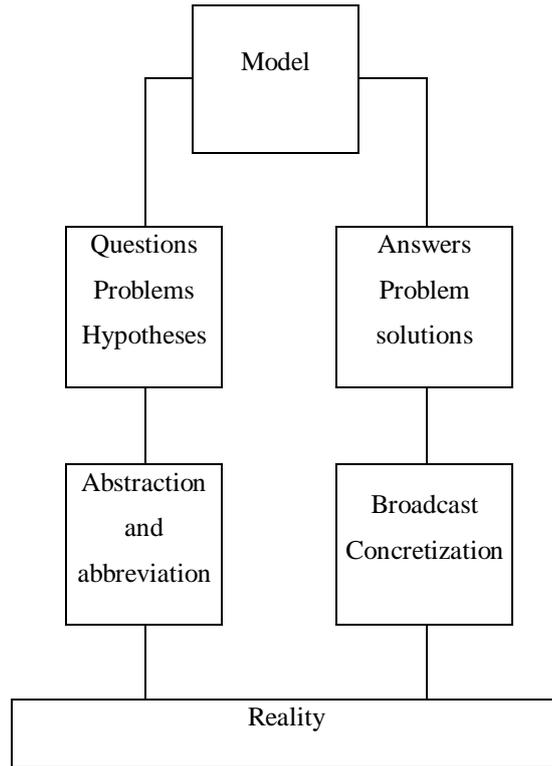
## 2. Problem Statement

The use of models is due to the need for the mental detection of complex processes, analysis and explanation of cause-effect relationships in the structure of the model (Stankov, Lazich, & Dragich, 2010). In the process of modeling, the process of abstraction from real complexes takes place, and emphasis is placed on those aspects with which solutions are possible, which, in turn, influence the reality of the transfer. This article assumes consideration of the stages of modeling to substantiate the possibilities of determining the optimal structure of tourism and the transition to the digital plane of the entire services sector (Figure 01).

Model level

Level of abstraction

Real level



**Figure 01.** Stages of modeling

### 3. Research Questions

**3.1 Scientific or practical approach to define a single common model or theory for tourism?**

**3.2 What do we want to get when determining the optimal model of tourism?**

**3.3 How will the use of modeling in the tourism industry have an impact on the development of professional competencies of tourist destinations?**

**3.4 How to identify the factors that provide the rationale for tourist phenomena?**

### 4. Purpose of the Study

This article attempts to present, first of all, the various paradigms of studying the structure of tourism in the context of explaining the phenomenon of tourism as a science:

- one definition for tourism from the point of view of a single science of tourism;
- several definitions, as these are different tourist sciences.

In addition, tourism destinations based on communities as networks of tourism service providers who need to combine their resources and competencies to create a common leisure experience are considered. Based on the laws of strategic management, the study is aimed at studying the relationship between the reflexive possibilities of managing appointments and the joint core competencies of the tourist area. Using reflexive capabilities, it is assumed that destination management can stimulate a high

level of network quality, which, in turn, can be a prerequisite for integrating the competences and resources of service providers, that is, developing a cooperative core of competencies and implementing a tourism modeling process.

Also, a general model of tourism with the possibility of using the Smart City platform in the context of transition from real tourism to virtual tourism, as well as due to the need to transition the country's economy to the digital plane, has been defined.

At present, there is no single general model or theory describing the connection between theory and methods for tourism; it is characteristic for all scientific sources that they combine and additively constitute various scientific approaches or deal with distinguishing tourism as part of subspecies. In most cases, the scientific approach prevails corresponding to the “type of science”, which is reflected in the relevant theories and methods. The principal differences in tourism are presented below (Freyer, 2010).

1. The science “tourism” (general tourism) exists on the basis of auxiliary disciplines (tourism economics, sociological, ecological, political, research tourism, tourism geography, tourism psychology, etc.). “General tourism” exists as a kind of “roof of science”, therefore it is necessary to analyze various aspects of tourism on this general background. Other disciplines act as a kind of “auxiliary sciences” for general tourism, but this structure does not currently exist.

2. Tourism with all its phenomena is one of the sections in the basic sciences, such as economic sciences (tourism economics), ecology (ecological tourism), sociology (sociological tourism), geography (tourism geography), psychology (tourism psychology), political science (political tourism), philosophy (philosophy of tourism), medicine (medical tourism), space (space tourism), other sciences (research in tourism). This structure exists now.

So, at present, the first paradigm exists only in theory, and tourism is analyzed in the tradition of “general discipline”. In practice, various tourist sciences coexist alongside each other, where an approach is applied with different problems and objectives of tourism as a phenomenon.

The economy explains tourism in its economic aspects, such as supply and demand for tourism products, the contribution of tourism to the social product, the management tasks of the tourism business, etc.

Sociology studies tourism in its social dimension, for example, group activities, social systems, social values (and their changes), organizations, etc.

Ecology deals with issues of environmental impact and landscape design tourism.

Geography explores aspects of the influence of the spatial factor of tourism.

Psychology is interested, for example, in assessment and approaches regarding personal qualities, needs and motives of tourists.

Political science explains political activities in tourism, as well as national and international tourism legislation.

Similarly, the methods and questions on tourism are transferred to other areas of science, for example, transport economics (tourist transportation), law (laws); organization of free time (tourism as recreation), spatial planning (tourism planning), protection of land resources (ecological tourism), education (tourist education), cultural studies (tourist culture and cultural tourism), history (history of tourism), architecture (tourist architecture), medicine (medical tourism), etc.

The consequence of this isolated scientific approach is the fragmentation of the science of tourism into various sections. Methodically, a similar approach can be seen with other things being equal when considering economic science (Pechlaner, Böchinger, Volgger, & Anzengruber-Fisher, 2014). Although the importance of other areas of science is usually not disputed, in particular, it is worth repeating the need for a “holistic” point of view, since tourism is mainly analyzed from the point of view of a part of science. Thus, the economic consideration of tourism in general theory is a relatively independent part of additive theory and modeling.

In connection with the above, it is difficult to transform tourism as a single science into a digital plane, at this stage it is only possible to use separate sets of services included in the tourist complex on the digital platform. For this it is necessary, first of all, to conduct a comprehensive survey and explanation of tourism through tourist models.

## **5. Research Methods**

### **5.1 Research of the general theory of systems**

### **5.2 Complex analysis and survey**

### **5.3 Modelling**

Examples of complex surveys and explanations of tourism are the tourist models presented below. It is worth noting that only the first and fourth model can be considered as complete models. The two other models focus on aspects of space and time and are therefore considered to be private models.

The first basic travel model is tourism in spatial dimension. People travel from point A to B and back, using different means of transport to cover the distance from their home to the point indicated by the purpose of the trip. At the same time tourism implies the passage of a certain distance from the origin. Consequently, "travel" in the place of residence and travel outside the place of residence can not be attributed to one category of tourism.

There is no consensus on how far the journey begins. One of the criteria may be the distance that can be covered in one day, without the need for overnight stay. However, with the progressive development of transport, these criteria are becoming less and less clear. You can already plan a walking tour, which includes one overnight stay in about 20-30 km, while a bicycle trip, after more than 100 km, on road trips is several hundred kilometers, and by plane you can travel almost a thousand kilometers day without the need for overnight stay.

The meaning of the term “tourism” is “tour”, i.e. round trip. Compared to other forms of travel, tourist trips are always connected to a quick return to the starting point. Thus, in the tourist spatial model, three forms are distinguished: home space, transportation and tourist destination:

- home space are usually travels in a permanent place of residence. Surveys conducted in travel agencies concerning the target area of travel in the place of residence, gave the following information. The following travel goals were identified - shopping, visiting museums or restaurants or day trips in the surrounding area;

- transport space is usually a way to cover the distance in the place of residence to the target area. On some tours, the movement itself is the primary experience of the trip (“flow experience”). There are also cruises, bicycle tours, trips on famous trains of the world, such as the Trans-Siberian or the Orient Express;
- tourist destination, where the tourist temporarily lives, he takes part in such activities as visits, business trips, etc.

The second model is a derivative of the basic model of tourist trips, illustrating the overcoming of space from the source area to the target area, this is the possibility of trips to several areas coming from the target area (for example, during a concert tour).

In addition, the spatial model (the third model) provides for circular routes in recipient countries or senders of tourists, which include trips to several regions of interest and return to the original coordinate.

The fourth - tourist temporal model - “step model of movement” - differs from daily (household, home) and one-time (during vacation), between which the tourist moves back and forth, also suitable for displaying spatial and cultural experience based on the basic spatial model tourism of three different types: residence, time of transportation, as well as place of residence or destination during the trip.

A combination of spatial and temporal modeling can be a general modular model of tourism: people leave their permanent residence, their homes, where they live most of the time of the year, usually about 11 months. And then, for a relatively short time, take a trip to a target area with the help of vehicles. The delivery time of tourists usually takes several hours or days, depending on how they travel: by car, train, plane or using other vehicles. During this very short time, the traveller gets a lot of impressions from the landscape, local residents, etc.

At the destination, arriving tourists, for the period of time in a foreign country, must adapt to changing circumstances and establish a new temporal rhythm. Another feature of the tourist phenomenon is that tourists meet on the way and at the destination with other people in their daily life. In order to allow people to rest, local residents provide transportation and accommodation services for arriving tourists during their working hours. Residents of tourist destinations who are owners and spend their daily time on travellers, in order to acquaint them with the culture of the host country, know well what is rest for travellers, this is part of their daily life and everyday culture, the so-called “Host culture country”. Also, the travellers themselves are changing their lives during this time period (Anchor, 2011).

After the end of the holiday season, tourists move in the opposite direction and are again immersed in everyday life. In the first days after the travellers return, their daily lives are slightly changed; they may be impressions of new acquaintances, culture, climate, etc. (Bonson, Bednarova, & Wei, 2016)

An example of a comprehensive survey and explanation of tourism may be the Swiss model of tourism. It is based on a common image of tourist and public system elements. This model was used with small variable changes in the textbooks of Swiss economists who study the development of tourism (Krippendorf, 1984; Müller, 2002) and includes the following elements:

- social system with its value system;
- system environment with existing resources;

- economic system;
- the political system of the state is the main control system for other subsystems.

These systems are the subject of various scientific disciplines, sociology, political science, economics, geography, psychology, anthropology, philosophy, history, etc., forming the core of tourism learning (Lieburd, Nielsen, & Hiep, 2017).

Between these four areas, a person is in his own world, namely, home, work, leisure time. In his free time, a person can be presented as a tourist, and meet with other people in a tourist destination.

This system is common and can differentiate further: economic aspects are understood as market relations, supply and demand; sociological aspects mean meeting people; in the field of political science, social norms and laws are of interest; under environmental aspects - the impact of tourist traffic on the environment.

All four areas are found among many researchers in the field of tourism and each with contradictions or conflicts:

- political system - centralized or decentralized;
- economic structure - united or decentralized;
- natural resources - exhaustible and inexhaustible;
- system of values - between to have and to be.

This model was widely introduced in the 80-90s of the twentieth.

## 6. Findings

At present, the presented general modular model is relevant, and may be one of the options for developing strategic directions for the development of tourism in the Russian Federation.

As mentioned above, there is still no generally accepted model of tourism. For most scholars, however, a consensus regarding the requirements for an integrated tourism model has been adopted. It must comply with the following general principles:

- it is necessary to integrate various subdisciplines that previously worked with tourism, integrate them into a network;
- to be multifunctional and "holistic";
- tourism must be understood as an "interdisciplinary field";
- to be able to implement in the digital plane.

Since these "all-embracing" principles of tourism do not exist, then it is necessary to rely on the approaches of system theory and decompose the complex general system "Tourism" into various subsystems, analyze patterns that will give a better understanding of the entire system and then develop tourism. The main difficulty is to reduce the complexity of the system as a whole, as a result of differentiation into a possible number of parts.

To identify the factors that support the rationale of tourist phenomena, we identified seven main areas (“modules”), including the maximum number of aspects taken into account in the holistic view of tourism:

- “Economy” module (economics and business administration): economic development (for example, economic income and development, external factors, competition changes, etc.) and economic activity (for example, in production, personnel policy, investment, marketing, etc.) influences tourism in its economic dimension;
- "Sociology" module: group activities, social systems, social values (and their changes), organizations, government, etc. influencing tourism in its social dimension;
- “Ecology” module: this module in the holistic model of tourism includes issues of environmental impact and tourism design, they play an important role in all other modules (for example, economy, society, leisure, individual, international). Landscape, as the nature of the environment is considered as one of the most important elements for tourism.
- “Recreation” module (leisure study): tourism is an integral part of general leisure activities (“tourist recreation”), and trends in recreation and tourism currently dominate.
- “Psychology” module: tourism influences to a large extent the attitudes and behavior of individuals. Character traits, motives of needs are a powerful incentive to study the phenomenon of travel.
- “Politics” module (partly political science): political institutions and supporting political decisions for the development of tourism, for example, in the context of economic, social and political aspects in the field of tourism, approval of national and international doctrines, laws and rules;
- Smart Tourism module: Internet, social networks, content, digital platform, virtual tourism, intellectual tourism.

The focus of this modular model is the objects of knowledge of tourism, processed by various methods in various fields of science:

- relations between people, such as meetings between people of different cultures during the trip, “local residents” or “host”, “foreigners” or “guests”;
- people's attitudes towards state institutions, for example, opportunities for traveling and obtaining a residence permit (passport, visa) in government structures;
- attitudes towards government institutions (for example, service providers, ministries and departments of tourism, etc.);
- travel motives (philosophy, motivation);
- demonstrating the capabilities of society (for example, economic, social or environmental strategies);
- travel as an important element of tourism, which brings together most of the previous aspects;
- tourist destination networks, intellectual tourism.

All these elements can be described in accordance with the current social aspects, explained with the help of scientific aspects or implemented in the form of political laws.

Besides, for a predominantly economic explanation of tourism in order to create a holistic model of tourism, their repeated use is possible. This is a necessary condition in order to explain the supply, demand, marketing and tourism of political structures in the context of the integrity of the model and understand that this is the universal nature of tourism activities.

In addition to the seven main modules forming a comprehensive model of tourism, you can add any legal, geographical, spatial planning, educational, historical, architectural, medical and other modules. These extensions to the modular system may affect the context of tourism as an activity. Depending on the specific point of view, objectives and scientific goals of the research, the output point of consideration may be one or another module of the external area instead of the six main modules included.

## 7. Conclusion

The model considered above gives a clear idea that, depending on the starting point or “maternal discipline”, tourism can have different methodological approaches to defining and justifying tourism as a phenomenon. The elements of the model can be described in accordance with the existing social aspects, explained with the help of scientific points of view or made in the form of political laws, their use should be implemented to provide a holistic view of the tourism model and determine the universality of the nature of tourism activities in the transition to a digital economy platform in the country.

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