

TOURISM CLUSTERING AS A FACTOR OF REGIONAL ECONOMIC GROWTH: STRUCTURAL FEATURES OF A REGIONAL CLUSTER

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Abstract

The cluster model is crucial for developing tourism. Such clusters enable the economic development of any region and the whole country and increase the competitiveness of the final product in the market and the production activities of enterprises included in the clusters. This is especially relevant for the tourism industry, which is a promising area of economic development. Therefore, it is significant to study the possibilities and experience of implementing the cluster model in further research. The study aims at determining and analyzing the main structural features of the regional tourism cluster. Based on an expert survey, the article determines and considers the main structural features of the regional tourism cluster as exemplified by the existing regional tourism clusters in Russia. It is concluded that the main structural feature of a regional tourism cluster is its structural connectivity which provides participants with an advantage over competitors acting separately.

Keywords: Cluster; Region; Tourism Industry; Regional Tourism Cluster; Tourist Attraction.

O CLUSTER TURÍSTICO COMO FATOR DE CRESCIMENTO ECONÔMICO REGIONAL: CARACTERÍSTICAS ESTRUTURAIS DE UM AGRUPAMENTO REGIONAL

Resumo

O modelo de cluster é crucial para o desenvolvimento do turismo. Tais clusters permitem o desenvolvimento econômico de qualquer região e de todo o país e aumentam a competitividade do produto final no mercado e as atividades de produção das empresas incluídas nos clusters. Isto é especialmente relevante para a indústria do turismo, que é uma área promissora do desenvolvimento econômico. Por conseguinte, é significativo estudar as possibilidades e a experiência de implementação do modelo de clusters em investigação futura. O estudo visa determinar e analisar as principais características estruturais do cluster turístico regional. Com base num inquérito de peritos, o artigo determina e considera as principais características estruturais do cluster turístico regional, como exemplificado pelos clusters turísticos regionais existentes na Rússia. Conclui-se que a principal característica estrutural de um aglomerado turístico regional é a sua conectividade estrutural que proporciona aos participantes uma vantagem sobre os concorrentes agindo separadamente.

Palavras-chave: Aglomerado; Região; Indústria Turística; Cluster do Turismo Regional; Atração Turística.

EL CLUSTER TURÍSTICO COMO FACTOR DE CRECIMIENTO ECONÓMICO REGIONAL: CARACTERÍSTICAS ESTRUCTURALES DE UNA AGRUPACIÓN REGIONAL

Resumen

El modelo de cluster es crucial para el desarrollo del turismo. Estas agrupaciones permiten el desarrollo económico de cualquier región y de todo el país y aumentan la competitividad del producto final en el mercado y las actividades de producción de las empresas incluídas en las agrupaciones. Esto es especialmente relevante para la industria del turismo, que es un área prometedora de desarrollo económico. Por lo tanto, es significativo estudiar las posibilidades y la experiencia de la aplicación del modelo de cluster en la investigación posterior. El estudio pretende determinar y analizar las principales características estructurales del cluster turístico regional. Sobre la base de una encuesta de expertos, el artículo determina y considera las principales características estructurales del cluster turístico regional ejemplificadas por los clusters turísticos regionales existentes en Rusia. Se concluye que la principal característica estructural de un cluster turístico regional es su conectividad estructural, que proporciona a los participantes una ventaja sobre los competidores que actúan por separado.

Palabras clave: Grupo; Región; Industria del Turismo; Clúster de Turismo Regional; Atracción Turística.



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1 INTRODUCTION

The strategic goal of tourism development is to create a competitive tourism product in both national and global markets. Today, the effectiveness of tourism enterprises is ensured by the introduction of innovations in the provision of tourism services (Kutsenko & Tyumentseva, 2011; Nedosugova et al., 2021). This requires the tourism industry to apply a creative approach to competitive behavior.

A creative approach to ensuring competitiveness consists in the creation and implementation of managerial, technological, and organizational innovations, which will provide advantages over competitors (Higgins-Desbiolles, 2018).

Considering that each region has its own natural and climatic conditions and ethnic, historical, and cultural traditions, it is necessary to conduct a qualitative analysis and assessment of activities fulfilled by tourism entities (Sinay et al., 2019; Kuhn et al., 2018).

This will allow considering the requirements for using effective and optimal forms of management in order to preserve and improve the tourist attractiveness of a certain territory with due regard to its geographical and socio-economic conditions of functioning and development (Kostruykova, 2011).

An effective tool for increasing the competitiveness of the tourism industry and regional economic growth is the creation of tourism clusters. Such clusters enable the economic development of any region and the whole country and increase the competitiveness of the final product in the market and the production activities of enterprises included in the above-mentioned clusters.

The cluster is a modern organizational form that

promotes cooperation, strategically coordinated activities of enterprises and organizations, the transition to an innovative path of economic development, and the growth of international competitiveness. The cluster strategy provides any region with significant advantages and opportunities for business, government, and higher education institutions to work together in order to strengthen the regional economy (Ketels, 2013).

Considering this scenario, the purpose of this paper is identify and analyze the main structural features of the regional tourism cluster. Specifically, the authors want to:

1. To systematize the main approaches to the "cluster" category and define the concept of "regional tourism cluster";
2. To determine the main structural features of the regional tourism clusters;
3. To conduct a comparative analysis of structural features of the existing regional tourism clusters in Russia.

In order to achieve this goal, the following section will review and analyze how the cluster organizational form has been mobilized in the specialized literature in Russian context and abroad. In the sequence, the case study method related to the expert survey is presented. Then, the main advantages and disadvantages of the cluster approach, according to their view and to the literature review, are highlighted. In the conclusion, the remarkable issues related to tourism clusters are pointed out and as well as their implications.

2 LITERATURE OVERVIEW

Economists often consider the cluster category using several approaches (Table 1).

Table 1. The systematization of the main approaches to the "cluster" category

Source	Main provisions of the approach
Fernando & Long (2012), Ulyanchenko (2011) Jackson & Murphy (2006), Yalçinkaya & Güzel (2019)	The territorial, synthetic or other association of enterprises The association of tourist attractors, enterprises, and accommodation facilities (or defined space)
Odinokova (2019), Lee, Jang & Kim (2021), Ababkova & Vasileva (2020)	Temporary network-based regional structures (organizations)
Delgado, Porter & Stern (2015), Capone (2016)	System of production structures and modules
Martínez-Pérez & Beauchesne (2018), Kundius, Chermianina & Santalova (2011)	Non-institutionalized associations of economic entities with a high level of aggregation
Da Cunha & Da Cunha (2005), Luo (2019)	Multi-level interaction systems
Peiró-Signes, Segarra-Oña, Miret-Pastor & Verma (2015), Miller & Gibson (2005), Melisidou, Papageorgiou, Papayiannis & Varvaressos (2014)	Group of combined business entities

Source: own elaboration based on the literature reviewed.

A cluster as an association of tourist attractors, enterprises, and accommodation facilities is presented in several studies (Jackson & Murphy, 2006; Yalçinkaya & Güzel, 2019). Its structure includes a

synthetic association of tourist attractors, enterprises, and accommodation facilities with an innovative sector of the economy, a number of related areas, and regulatory authorities (Yalçinkaya & Güzel, 2019).

Broadly speaking, a cluster as an association of enterprises is defined in the following scientific works (Fernando & Long, 2012; Ulyanchenko, 2011). At the same time, the cluster is understood as a voluntary association of independent legal entities that retain their autonomous legal status but work together for the production of competitive products and common and personal economic benefits (Fernando & Long, 2012).

However, within the framework of this approach, the essence of a cluster is not associated with its geographical coverage. Instead, this understanding highlights its organizational cohesion.

Scientists (Jackson & Murphy, 2006) note that clusters can comprise a wide range of legal entities:

1) independent enterprises (including specialized manufacturers of tourism products);

2) scientific institutions (universities, research institutes); other institutions (brokers, consultants); financial structures and consumers connected with each other by the chain of production and sale.

The approach to clusters as temporary network-based structures (organizations) was formed by scientists (Ababkova & Vasileva, 2020; Lee et al., 2021; Odinkova, 2019) who characterized the essence of clusters as a set of economic entities that temporarily interact on the basis of partnerships that reduce costs or focus on the creation and implementation of a certain value chain that allows new products to be launched (Odinkova, 2019).

Clusters are associated with temporary network-based regional structures that are formed by hubs of interconnected companies and related institutions (Lee et al., 2021). In particular, Ababkova and Vasileva (2020) emphasizes that a cluster can be considered a form of temporary concentration of intercompany organizations, for which the network principle is applied to the entire complex of relationships within and outside partnerships, as well as their external environment.

A cluster as a system of production structures and modules is considered in (Capone, 2016; Delgado et al., 2015). It is noted that a cluster is an association created as a result of the modernization of previous production structures and modules.

In addition, scholars (Delgado et al., 2015) note that such an artificial combination of production structures and modules can be formed on the basis of interconnected complexes and related organizations and institutions (including the department of culture and tourism of the local state administration and other local authorities) operating in a certain area, which are characterized by common interests and complement each other. In other words, cluster members might not compete with each other, but serve individual segments of the industry.

In (Martínez-Pérez & Beauchesne, 2018), a cluster is regarded as a voluntary non-institutionalized association of scientific institutions and business entities with a high level of aggregation. Such an association is determined by the following integration features: location within a certain territory; competition within the cluster to win a consumer and ensure their safety; competitiveness in the market through high labor productivity; the connection of participants through a technological chain in a single logistics system of relationships that creates a synergistic effect and added value; the involvement of related industries, local self-government bodies, and scientific institutions to achieve a synergistic effect (Kundius et al., 2011).

Clusters as systems of multilevel interaction are considered in (Kindl da Cunha & Da Cunha, 2005) from three perspectives:

1) as regionally limited forms of economic activity within related sectors that can be connected to certain scientific institutions (mezocluster);

2) as vertical production chains and highly specialized sectors in which adjacent stages of production form the core of the cluster, for example, the supplier-sales-customer chain (microcluster);

3) as industries defined at the highest level of aggregation. For example, a chemical cluster or a set of sectors at the highest level of aggregation, i.e. an agro-industrial complex (macrocluster).

However, it is not the concept of a cluster that is singled out but its possible systematics from the viewpoint of scalability.

Moreover, scholars (Luo, 2019) specified the content of clusters through their fundamental characteristics. The differentiation of integration features is as follows: 1) competitive enterprises and competitive advantages, for example, an advantageous geographical location, affordable raw materials, specialized human resources, etc. (competitiveness); 2) cluster members are in geographical proximity to each other and have the possibility of active interaction (concentration); 3) the association of companies producing final products and services, suppliers of components for products, equipment, specialized services, professional educational institutions (cooperation); 4) joint efforts to obtain advantages from the consumer (competition).

A cluster as a group of business entities in (Peiró-Signes et al., 2015) is described as a group of localized interdependent business entities that complement each other and enhance each other's competitive advantages. A similar approach is presented in (Miller & Gibson, 2005) that emphasizes the spatial limitation of a group of business entities.

For the purposes of greater specificity, it is indicated that this association is artificial and, according

to practical experience, corresponds to three criteria: geographical affiliation (functioning in a certain territory); technological features (the use of a common technological base) and vertical integration (Melisidou et al., 2014). Within the framework of this approach, attention is drawn to a synergistic effect rather than the introduction of cluster models of economic development.

If we generalize the existing approaches, we can develop our own interpretation of "regional tourism cluster", according to which the regional tourism cluster is considered a voluntary, territorially limited association of a wide range of participants (business entities, regional and local authorities, local self-government bodies, education and science, regional (local) development institutions, etc.).

In order to increase the competitiveness of the tourism product, which has close structural connections and provides its participants with an advantage over competitors acting separately.

3 METHODS

The case study method was used as the main method approach. However, in the course of the research, we used the following research methods in a subsidiary way:

– The analysis of scientific literature on clustering the tourism industry, in particular, the analysis of the map of Russian clusters (<https://map.cluster.hse.ru/>) (Russian Cluster Observatory, 2022);

– An empirical field research was conducted using an survey driven to experts in the topic (expert survey), aiming to determine the main structural features of the regional tourism cluster and a comparative analysis of the structural features of regional tourism clusters in Russia.

The criteria for the selection of experts included at least 5 years of experience in the tourism industry in relation to the creation of a regional (local) tourism product within the existing regional tourism cluster or at least 10 years of teaching experience in the specialty "Tourism".

The survey involved 48 respondents, including 32 employees of travel companies from various regions of Russia and 16 teachers from Russian universities (the Russian State University of Tourism and Service, the Moscow State University of Technology and Management named after K.G. Razumovsky). Thus, we tried to ensure maximum variability based on the type of activity, organization, location, and work experience (Table 2).

Table 2. Expert profile

Organization	Location	Number of experts
Russian State University of Tourism and Services Studies	Moscow	10
Moscow State University of Technology and Management	Moscow	6
OOO "ETK "Alyans-Tur"	Rostov on Don	5
AO "Korporatsiya "GRINN"	Oryol	4
OOO "Inturist-Novgorod"	Novgorod	5
OOO "Raduga Severa"	Murmansk	4
OAO "Ded Moroz"	Vologda	5
SOGBUK "Smolenskii oblastnoi informatsionnyi tsentr kultury i turizma "Smolenskii terem"	Smolensk	4
ZAO "Inter-GRUP"	Ryazan	5

Source: own elaboration.

The experts were asked to express their opinion online via e-mail regarding the main structural features of regional tourism clusters.

The experts were asked to express their opinions online via e-mail regarding the main structural characteristics of the regional tourism cluster.

The expert survey took place in several stages.

At the first stage, the experts were asked to answer the question "What are the main structural characteristics of the regional tourism cluster?" and provide a description.

According to the results of the first stage of the expert survey, based on expert answers, a pool of the main structural characteristics of the RTC and their

content were determined, and their ranking was carried out.

At the second stage of the expert survey to assess the development of RTCs in Russia, experts were presented with eight RTCs (Republic of Sakha (Yakutia), the Ryazan, Vologda, Novgorod, Murmansk, Oryol, Rostov, and Smolensk regions) and were asked to evaluate their development according to such previously defined main structural characteristics of the RTC as structural connectivity, the existence of a single center, load balance, and the existence of target consumers.

The questions were formulated as follow: "Evaluate the level of such structural characteristics of the regional tourism cluster according to its:

- a) structural connectivity (high, average, low – underline as necessary)
- b) the existence of a single center (yes, no – underline as necessary)
- c) load balance (sufficient, insufficient – underline as necessary)
- d) the existence of target consumers (yes, no – underline as necessary).

At the second stage of the expert survey, the experts were asked to compare these clusters based on the identified structural characteristics.

According to the results of the second stage of the expert survey, based on expert answers, a

comparative analysis of these clusters was carried out based on the previously identified structural characteristics of the RTC.

Next, we ranked the expert opinions. The consistency of expert opinions was assessed using the concordance coefficient. The concordance coefficient was defined using the SPSS software

4 RESULTS

While analyzing the Cluster Map of Russia, we revealed eight regional tourist clusters in the territory of the Russian Federation (Table 3).

Table 3. The features of tourist clusters of the Russian Federation

No	Region	Year of creation	Participants	Coordinating organization	Cluster structure
1	The Republic of Sakha (Yakutia)	2011	13	AO "The center of cluster development "Yakutia"	The following complexes: recovery centers "Tabaginskiy Mys", "Yamshchikaya stantsiya", "Lesnaya sloboda", "Tsarstvo yakutskoi zimy", "Severnyi forum" (multifunctional center, ski slope, pavilions), a visitor center, ethnic parks "Evenki", "Dolgany", "Yakuty", "Yukagiry", "Chukchi", the architectural and ethnographic complex "Uraankhai-Sakha", etc.
2	Ryazan Oblast	2011	12	The Ministry of Culture and Tourism of Ryazan Region	The complexes "Okskaya Zhemchuzhina", "Rybatkaya derevnya" and "V nekotorem tsarstve" in the region, "Staryi gorod" in the city of Ryazan, the State Museum-Reserve of S.A. Yesenin
3	Vologda Oblast	2014	34	ANO "Regional Business Support Center of Vologda Region"	Five sub-clusters: "Veliky Ustyug is the birthplace of Father Frost"; "Priozerny" (Belozersk), the "Northern Thebaid" (Kirillovsky district); "Vologda is a cultural capital of the Russian North"; "Cherepovets is a hot heart of the North"; the zone of active tourism "Onego"
4	Novgorod Oblast	2014	27	The Novgorod Foundation for Small Business Support	Tour operators, travel agencies, organizers of recreation and events, including outdoor activities and sports events; hotels, hostels, guest houses, catering; craft and trade enterprises
5	Murmansk Oblast	2015	12	The Cluster Development Center of Murmansk Region	Small- and medium-sized business entities engaged in tourism, including the hotel business (collective accommodation facilities) and tour operator activities, as well as educational and scientific institutions, non-profit and public organizations
6	Oryol Oblast	2016	21	ANO "The Business Support Foundation of Oryol Region"	The main cluster enterprise AO Corporation "GRINN", additional enterprises are travel companies
7	Rostov Oblast	2017	10	NKO "The Association of Regional Tourist Organizations"	The main cluster enterprise is OOO ETK "Alyans-Tur", additional enterprises are souvenir traders, non-profit, educational and cultural institutions
8	Smolensk Oblast	2017	13	NKO "The Cluster Development Center of Smolensk Region"	Travel companies, hotels, museums, trade enterprises, public catering and souvenir production, educational and cultural institutions, information centers

Source: own elaboration.

Table 4. Structural features of the regional tourism cluster

№	Features	Content	%*	Rank
1	Structural connectivity	Elements connected by a single system of close structural interactions. As a result, the participants of regional tourism clusters get the ability to work together or complement each other. If such ties break, the cluster disappears.	85.4%	1
2	Single center	It determines the main directions of economic, industrial, and innovative activities, which creates a corporate regulatory system with common support for all the participants of regional tourism clusters (organizational, personnel, methodological, material-and-technical, and scientific).	79.2%	2
3	Load balance	Production, commercial, scientific and other tasks are carried out by specific elements of the regional tourism cluster, so that each enterprise (element of the regional tourism cluster) performs work in proportion to its capacity, without downtimes.	75%	3
4	Target consumers	The regional tourism cluster should meet the needs of a particular consumer (if the product is not in demand, there are no means of subsistence).	70.8%	4
5	Cluster failures	Experiencing destructive factors, a participant of the regional tourism cluster might terminate its activities due to force majeure circumstances. Under such conditions (due to dense connectivity), the effective functioning of other participants is impossible.	66.7%	5

Note: compiled on the basis of an expert survey;* – % of expert references; the value of the concordance coefficient $W = 0.79$ ($p < 0.01$), which indicates strong consistency of expert opinions.

Source: own elaboration.

Based on the expert survey, we determined the structural features of regional tourism clusters (Table 4). The experts were asked to compare these clusters

based on the structural features of regional tourism clusters they identified. The results of this comparative analysis are presented in Table 5.

Table 5. The comparative analysis of structural features of regional tourism clusters in Russia

Constituent entity	Structural connectivity	Single center	Load balance	Target consumers
The Republic of Sakha (Yakutia)	High	+	Sufficient	+
Ryazan Oblast	High	+	Sufficient	+
Vologda Oblast	High	+	Sufficient	+
Novgorod Oblast	Moderate	+	Sufficient	+
Murmansk Oblast	Moderate	+	Sufficient	+
Oryol Oblast	Moderate	+	Insufficient	-
Rostov Oblast	High	+	Sufficient	+
Smolensk Oblast	Low	+	Insufficient	-

Note: compiled on the basis of an expert survey.

Source: own elaboration.

5 DISCUSSION

The results of determining the structure of regional tourism clusters (Table 3) allow to identify the specifics of its functioning. The experts noted (Table 3) that there is a structural connection within regional tourism clusters, which provides its participants with an advantage over competitors that act separately. It is natural that the elements of regional tourism clusters are interconnected by a single system of close structural interactions. Each interaction is a kind of indirect or direct, internal or external fundamental connection.

As shown by a comparative analysis of the structural features of regional tourism clusters in Russia (Table 4), a high level of structural connectivity is ensured by the following components:

1) Tourist services, for example, recreational facilities, including medical and preventive (sanatoriums, dispensaries), health-improving (rest houses, boarding houses, recreation centers), tourism (tourist camps, hotels, motels, campsites, green houses), children's recreation organizations and others (transport companies, private carriers, including those that work on tour circuits, trade enterprises);

2) Support services (catering, consumer services, publishing for information support of tourists, animation services);

3) Tourism planning and development (financial institutions, insurance companies, educational institutions, department of culture and tourism of the local state administration, other local authorities, organizations, and institutions).

In addition, regional tourism clusters have a single decision-making center that can be a non-profit organization, a joint-stock company (the Republic of Yakutia (Sakha), or a government body (Ryazan Oblast), coordinating and directing joint activities of cluster enterprises.

The presence of a single center is consistent with the opinion of scholars (Martínez-Pérez & Beauchesne, 2018) who note that regional tourism clusters specifically implement the regulatory impact since it is necessary to regulate joint efforts to develop a particular regional tourism cluster and an effective model for their formation and elaboration. Otherwise, the cluster ties break up and the cluster itself disappears.

The conclusions drawn in such studies demonstrate that there should be a single development strategy in order to focus on cluster development (Mosalev et al., 2018; Tsenina et al., 2022); on the efficient use and transfer of mobile resources (Bondarenko et al., 2020); on the promotion of scientific works (Velazco et al., 2021).

If we compare the structural characteristics of Russian RTCs with foreign, for example, with tourist clusters of Latin American countries, we can find both common and distinctive features. Thus, a high level of structural connectivity is common, while, unlike Russian RTCs, tourist clusters, for example, in the Dominican Republic (Romana-Bayahibe, Puerto Plata, Jarabacoa, Constanta, Barahona, Altigracia (Punta Cana/Bavaro), Samana, Santo Domingo, Pedernales, Montecristi) were not only formed with the support of the National Council for Competitiveness but they themselves represent a nationwide network of tourism clusters under the auspices of a non-governmental organization – the Dominican Consortium for Tourism Competitiveness (CDCT).

The comparative analysis of regional tourism clusters in Russia has demonstrated that most tourism clusters are characterized by a sufficient, according to the experts, level of load balance, when the tasks assigned to the cluster are solved by various enterprises that are part of the cluster, depending on their specialization.

As noted in the study (Luo, 2019), due to the specifics of tourism enterprises (when most enterprises are highly specialized and provide services directly at the place of production), a unified communication system should be created to manufacture tourism products and ensure fast data transfer.

A number of scholars and we believe that such a system might include e-tourism (an online service that sells the tourist services provided by the cluster to end consumers) and e-travel (an online service that provides advice on types of tourism available in the cluster).

In our opinion, regional tourism clusters create a certain integrative structure through the association (integration) of its participants on the basis of a single development strategy (which contributes to the mutual convergence and the formation of tourist attractors in the regional economy). Such an integrative structure automatically becomes a source of integration for all the participants of regional tourism clusters.

Speaking about such a characteristic as load balance and making a comparison with Mexican RTCs, it should be said that in the Mexican RTC of Cancun (Quintana Roo), which occupies 64.7% of the Mexican international tourism market, related and auxiliary tourism industries create a significant part of the regional and national GDP, among them: hotel infrastructure of 42,420 placements from 4.5 to 4 stars; a wide range of airlines and car rental companies; a variety of restaurants of high national and international cuisine.

An equally significant feature of regional tourism clusters is target consumers (Table 2), which is not inherent in the existing regional tourism in Russia. Thus, the target audience is present in the tourism cluster of the Republic of Sakha (Yakutia), which has clear ethnographic specifics, in the tourist clusters of Ryazan Oblast and Vologda Oblast, combining cultural, historical, and recreational areas that can be of interest to tourists.

Comparing Russian and Latin American RTCs in terms of the presence of target consumers, we note that tourism in Latin America is much more aimed at the target consumer (Alderete & Bacic, 2020). Thus, the tourism sector of Peru is mainly focused on tourists intending to visit the main attraction of Peru, Machu Picchu, which dominates this sector. The Machu Picchu RTC includes the Machu Picchu nature reserve and related infrastructure. Tourists, as a rule, do not visit the rest of the country but are concentrated in a few areas. 73% of foreign tourists come to Lima, mostly in transit or on business, and 40% visit Cusco and Machu Picchu. Only 20% of international tourists visit the next most popular places – Arequipa and Lake Titicaca. Moreover, the number of tourists that Machu Picchu can receive is limited by the need to preserve this site. Currently, the daily number of tourists admitted to the reserve is 2,000 people. Machu Picchu is actually over-saturated and cannot be relied upon as a future source of RTC growth (Punzo et al., 2022).

Considering the last structural feature of regional tourism clusters noted by the experts (Table 3), it is obvious that this association needs failure protection. Since the activities of all participants are connected with overcoming uncertainty, this integrates financial, investment, operational, commercial, innovative, production, and currency risks. There are always risks of losing resources (Kozhamzharova et al., 2022;

Kryukova et al., 2018) or not receiving income, which can lead to a domino effect (Ababkova & Vasileva, 2020). The regulated development of regional tourism clusters should aim at minimizing the risks in the activities of each participant and ensuring the high quality of the tourism product they make (quality is the basis for the competitiveness of any tourism product).

According to Odinkova (2019), the development of regional tourism clusters requires the following steps: 1) to ensure a high level of profitability for participants with a minimum level of risks; 2) to ensure the stable financial condition of participants, which guarantees their well-coordinated work (mandatory to achieve a synergistic effect); 3) to ensure the high quality of tourist products produced by the cluster through continuous and systematic influencing the factors and conditions that form the best-quality product by participants and its full consumption by tourists.

6 CONCLUSIONS

The cluster model for developing the tourism sector is characterized by the following processes: the support and stimulation of interaction between the subjects of the tourism sector; the promotion of innovative activity; the specific integration of business and other structures in regions.

The regional tourism cluster is regarded as a voluntary, territorially limited association of a wide range of participants (business entities, regional and local authorities, local self-government bodies, education and science organizations, institutions to stimulate regional (local) development) in order to increase the competitiveness of the tourism product.

Further research can aim at the analysis of the institutional environment forming and developing regional tourism clusters based on a multi-level set of institutions that determine framework conditions for the functioning and development of economic entities within the cluster.

REFERENCES

Ababkova, M., & Vasileva, O. (2020). System approach to evaluation of tourism cluster companies environment and performance. *E3S Web of Conferences*, 175, 10014. <https://doi.org/10.1051/e3sconf/202017510014>

Alderete, M.V., Bacic, M.J. (2020). The impact of brazilian clusters on local development: a propensity score matching approach. *Interações*, 21(1), 173–194. <https://doi.org/10.20435/inter.v21i1.2417>

Bondarenko, N. A., Oleynik, A., Biryukov, V. A., Tarando, E. E., & Malinina, T. B. (2020). Smart city: Integration of information and communication technologies. *The I/OABJ Journal*, 11(S3), 106-110

Capone, F. (2016). Tourist destinations, clusters, and competitiveness: An introduction. In: F. Capone (Ed.), *Tourist clusters, destinations and competitiveness: Theoretical issues and empirical evidences* (pp. 1-12). Abingdon, UK: Routledge.

Delgado, M., Porter, M. E., & Stern, S. (2015). Defining clusters of related industries. *Journal of Economic Geography*, 16(1), 1-38.

Fernando, I. N., & Long, W. (2012). New conceptual model on cluster competitiveness: A new paradigm for tourism? *International Journal of Business and Management*, 7(9), 75-84.

Hernández de Velazco, J., Chumaceiro, A. C., & Atencio Cárdenas, E. (2009). Calidad de servicio y recurso humano: Caso estudio tienda por departamentos. *Revista Venezolana De Gerencia*, 14(47), 458-472.

Hernández García de Velazco, J. J., Ravina Ripoll, R., Chumaceiro Hernandez, A. C., & Tobar Pesantez, L. B. (2021). Knowledge management and key factors for organizational success in the perspective of the 21st century. *Revista Venezolana De Gerencia*, 26(6), 65-81. <https://doi.org/10.52080/rvgluz.26.e6.5>

Higgins-Desbiolles, F. (2018). Sustainable tourism: Sustaining tourism or something more? *Tourism Management Perspectives*, 25, 157-160.

Jackson, J., & Murphy, P. (2006). Clusters in regional tourism an Australian case. *Annals of Tourism Research*, 33(4), 1018-1035.

Ketels, C. (2013). Recent research on competitiveness and clusters: what are the implications for regional policy? *Cambridge Journal of Regions, Economy and Society*, 6(2), 269-284.

Kindl da Cunha, S., & Da Cunha, J. C. (2005). Tourism cluster competitiveness and sustainability: Proposal for a systemic model to measure the impact of tourism on local development. *Brazilian Administration Review*, 2, 47-62.

Kiseleva, E. S., Berkalov, S. V., Doroshenko, S. V., Khmelkova, N., Petrova, G. A., Krukova, E. M., & Karelina, A. A. (2017). The importance of customers' character accentuations. In: F. Casati, G. A. Barysheva, & W. Krieger (Eds.), *III International scientific symposium on lifelong wellbeing in the world (WELLSO 2016)*. European Proceedings of Social and Behavioural Sciences (Vol. 19, pp. 318-328). Future Academy. <http://dx.doi.org/10.15405/epsbs.2017.01.43>

Kostryukova, O. N. (2011). Turistsko-rekreatsionnye klasternye sistemy: sushchnost i znachenie dlya ekonomiki regiona [Tourism and recreational cluster systems: their essence and meaning for regional economy]. *Ekonomika i upravlenie*, 9, 35-39.

Kozhamzharova, G., Omarbakiyev, L., Kogut, O., Zhumasheva, S., Saulembekova, A., & Abdrakhmanova, G. (2022). Banking risks and lending to tourism and hotel businesses amid the COVID-19 pandemic. *Journal of Environmental Management and Tourism*, 13(2), 427-437.

Kryukova, E., Kaurova, O., Khetagurova, V., & Makeeva, D. (2018). Peculiarities of socially responsible tourism in Russia and prospects of its development. In: A. Maloletko, N. Rupcic, & Z. Baracska (Eds.), *Economic*

- and social development: Book of proceedings (pp. 438-447). Moscow, Russia: Russian State Social University.
- Kuhn, E., Haselmair, R., Pirker, H., & Vogl, C. R. (2018). The role of ethnic tourism in the food knowledge tradition of Tyrolean migrants in Treze Tílias, SC, Brazil. *Journal of ethnobiology and ethnomedicine*, 14(1), 26. <https://doi.org/10.1186/s13002-018-0224-9>
- Kundius, V. A., Chernyanina, V. V., & Santalova, V. N. (2011). Perspektivy razvitiya turizma v regione na osnove ekonomicheskogo klaster'nogo partnerstva [Prospects for developing tourism in a particular region based on the economic cluster partnership]. *Regional'naya ekonomika: Teoriya i praktika*, 9, 40-46.
- Kutsenko, E., & Tyumentseva, D. (2011). Klastery i innovatsii v subektakh RF: rezultaty empiricheskogo issledovaniya [Clusters and innovations in the constituent entities in the Russian Federation: the results of empirical research]. *Voprosy ekonomiki*, 9, 93-107.
- Lee, Y.-J. A., Jang, S., & Kim, J. (2021). Tourism clusters and peer-to-peer accommodation. *Annals of Tourism Research*, 83, 102960. <http://dx.doi.org/10.1016/j.annals.2020.102960>
- Luo, X. (2019). Coastal tourism commodity industry cluster based on diamond model and ecological niche. *Journal of Coastal Research*, 94(1), 828-832.
- Martínez-Pérez, Á., & Beauchesne, M. M. (2018). Overcoming the dark side of closed networks in cultural tourism clusters: The importance of diverse networks. *Cornell Hospitality Quarterly*, 59(3), 239-256.
- Melisidou, S., Papageorgiou, A., Papayiannis, D., & Varvaresos, S. (2014). Tourism clusters as a potentially effective tool for local development and sustainability. *Review of Tourism Sciences*, 9, 218-232.
- Miller, M. M., & Gibson, L. J. (2005). Cluster-based development in the tourism industry: putting practice in to theory. *Applied Research in Economic Development*, 2(2), 47-63.
- Mosalev, A. I., Kryukova, E. M., Mukhomorova, I. V., Egorova, E. N., & Khetagurova, V. S. (2018). *Experience of socially responsible tourism projects in Russia*. IOP Conference Series: Earth and Environmental Science, 204, 012030. <http://dx.doi.org/10.1088/1755-1315/204/1/012030>
- Nedosugova, A. B., Khairullina, D. D., Baranova, E. A., Shugaeva, E. A., & Korotaeva, I. E. (2021). Teaching tourist guides foreign languages: Finding effective methods. *Revista Entrelinguas*, 7(S4), e021102.
- Nimatulaev, M. M., Sirbiladze, K. K., Tsvetkova, O. N., Ivanova, L. I., & Shelygov, A. V. (2021). Digital technologies as a factor in increasing services sales in tourism industry. *Journal of Environmental Management and Tourism*, 12(4), 916-921
- Odinokova, T. (2019). Tourism cluster as a form of innovation activity. *Economics. Ecology Socium*, 3(2), 1-11.
- Peiró-Signes, A., Segarra-Oña, M. D. V., Miret-Pastor, L., & Verma, R. (2015). The effect of tourism clusters on US hotel performance. *Cornell Hospitality Quarterly*, 56(2), 155-167.
- Punzo, G., Trunfio, M., Castellano, R., Buonocore, M. (2022). A Multi-modelling Approach for Assessing Sustainable Tourism. *Social Indicators Research*. <https://doi.org/10.1007/s11205-022-02943-4>
- Russian Cluster Observatory (2022). *Map of clusters of Russia*. Available at: <https://map.cluster.hse.ru/>
- Sinay, L., Sinay, M. C. F. D., Carter, R. W. (Bill), & Passos, F. V. D. A. (2019). Traditional People, Protected Areas and Tourism: A 15-Year Brazilian Case Study of Cultural Change. *Ambiente & Sociedade*, 22. <https://doi.org/10.1590/1809-4422asoc0070r4vu1911ao>
- Tsenina, E. V., Danko, T. P., Kiselev, V. M., Chaykovskaya, L. A., Epstein, N. D., Rauskiene, O., & Sekerin, V. D. (2022). Cluster analysis of the expenditures for environmental and technological innovations in sustainable development policy formation. *Journal of Environmental Management and Tourism*, 13(1), 63-74
- Ulyanchenko, L. A. (2011). Soderzhanie protsessov formirovaniya turistskikh klasterov [The essence of processes forming tourism clusters]. *Nauchnyi vestnik MGIT*, 2, 48-54.
- Yalçınkaya, T., & Güzel, T. (2019). A general overview of tourism clusters. *Journal of Tourism Theory and Research*, 5(1), 27-39.

Table. CRediT author statement

Term	Definition	Author 1	A.2	A.3	A.4	A.5
Conceptualization	Ideas; formulation or evolution of overarching research goals and aims	+	+		+	
Methodology	Development or design of methodology; creation of models			+		+
Software	Programming, software development; designing computer programs; implementation of the computer code and supporting algorithms; testing of existing code components			+	+	
Validation	Verification, whether as a part of the activity or separate, of the overall replication/reproducibility of results/experiments and other research outputs	+	+			+
Formal analysis	Application of statistical, mathematical, computational, or other formal techniques to analyze or synthesize study data	+	+	+	+	+
Investigation	Conducting a research and investigation process, specifically performing the experiments, or data/evidence collection			+	+	
Resources	Provision of study materials, reagents, materials, patients, laboratory samples, animals, instrumentation, computing resources, or other analysis tools	+	+			+
Data Curation	Management activities to annotate (produce metadata), scrub data and maintain research data (including software code, where it is necessary for interpreting the data itself) for initial use and later reuse	+		+	+	
Writing - Original Draft	Preparation, creation and/or presentation of the published work, specifically writing the initial draft (including substantive translation)		+			+

Term	Definition	Author 1	A.2	A.3	A.4	A.5
Writing - Review & Editing	Preparation, creation and/or presentation of the published work by those from the original research group, specifically critical review, commentary or revision – including pre-or post-publication stages	+		+	+	
Visualization	Preparation, creation and/or presentation of the published work, specifically visualization/ data presentation		+		+	+
Supervision	Oversight and leadership responsibility for the research activity planning and execution, including mentorship external to the core team	+		+		+
Project administration	Management and coordination responsibility for the research activity planning and execution					
Funding acquisition	Acquisition of the financial support for the project leading to this publication	+	+	+	+	+

Source: adapted from Elsevier (2022, s/p), based upon Brand et al. (2015).

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