

## Cluster Analysis in Tourism Development

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**Abstract:** The concepts of an image, state, region and cities turned out to be an effective instrument in the tourist industry since it handles these concepts. Tourism has an advantageous multiplier effect and serves as an accelerator of the social-economic development. As the social development is taking place within the territory and the change of the functional status of territories and cities' image is an all-around and continuous process, the evaluation of cities' role in the touristic attraction of the region is an urgent task. Holding the 27th World Summer Universiade in Kazan in 2013, the decision to hold the World Aquatics Championships in 2015, the football World Cup in 2018 raised an event attraction of tourist and recreational complex in the republic of Tatarstan as evidenced by the statistics and the increasing tourist interest in our republic. However, spatial differentiation is observed within the country, the evaluation of which is the subject of this research.

**Key words:** Tourism, regional development, cluster analysis, touristic-recreation potential, tourism development

### INTRODUCTION

Touristic-recreation sphere of the Republic of Tatarstan was formed on the basis of the two main issues: inhomogeneity, spread across the territory of the Republic of Tatarstan-natural-resource recreation and cultural-historical potentials and local inhomogeneity social-historic-cultural Centres of Recreation Activity (CRA). The latter are the "central places" well-known in the theory of network planning, where the recreation activity is materialized (Ogonowska, 2013; Mingaleva and Bunakov, 2014a, b; Shabalina *et al.*, 2014). Recreation potential is always complex, versatile and multi-aspect. Natural factors, social-economic and historic-ethnographic factors as well as the factors of set of mind formation in the region, identification of nodal bonds of recreation activity intensity and others take place in the formation of recreation potential (Nurtdinov and Nurtdinov, 2015; Bagautdinova *et al.*, 2012; Rozhko and Maklakova, 2014). In this context one should speak of the geodemographic infrastructure formation in the region (Gabdrakhmanov and Rubtsov, 2014). In this case, CRA serve as functional centres that have some mutual relations.

Today the city and its processes are quite complicated, contradictive and cannot be studied and explained by only one scientific approach. Being a social structure on the one hand, one should use a system approach and being an objective reality, on the other hand, one should use an extensional approach. As the result of a joint interpretation one can get an objective image of reality.

In this case, a city is an object of a possible touristic-recreation activity. Its study can be presented as a "frame-cloth" model of a city environment by A.E. Gutnov and a "polar-landscape" model by B.B. Rodoman.

The structure of a recreation space of a city environment is overlapped and formed out of the historic nuclear, one or several radii and several local nuclei which correspond either to the administrative centres of cities or to the touristic objects. Thus, being the main element of the recreation space structure, the historic centre of a city becomes a focus having local centres of recreation infrastructure in a circumferential direction. They can differ in size, set of objects and importance for the city's recreation environment. They stand apart from the others in their significance and can serve as additional sub-centres of the main ones or can be locally significant and stay within these borders (Mingaleva and Bunakov, 2014b).

Now, the urbanization percent of the Republic of Tatarstan is 73, consequently, most part of the people is concentrated in cities which become touristic-recreation centres. Most trips are made between cities. This turns the cities into the touristic recreation destinations of different range, fame, significance in the space.

The total of the modern inhabited localities of the Republic of Tatarstan is a frame for the reclamation of the territory, a single regional urbanized region which includes cities, settlements and villages of different size and importance. Tourism plays an important role in solving economic and social problems, providing more

jobs, the employment growth of the economically active population and increasing the welfare of the nation, has a stimulating effect on the development of many related fields of economic activity. It contributes to the socio-economic development of Tatarstan Republic municipalities (Komarova *et al.*, 2014). Tatarstan Republic plays a significant role in the development of Russian Federation tourism, showing a stable positive dynamics on the main indicators.

## **MATERIALS AND METHODS**

The contemporal conditions of globalized market relations provide very promising trends of research and modeling for tourism and recreation activities which may become the cluster approach. Clusters as spatial combinations are formed in market conditions. As a cluster makes a multicomponent formation, the application of his theory to the recreation and tourism study seems worthwhile.

The isolation of tourism and recreation cluster components enables to characterize as functional interaction in general and between elements and the connection between them play a decisive role in the allocation of cluster structural units. In our opinion the selection of the following components is faithful:

- Natural component objects
- Cultural and historical heritage objects
- Infrastructural facilities for recreants and tourists servicing
- Administration authorities
- Educational institutions of appropriate profile
- Research and design institutions

This approach allows identify the most promising tourist and recreation centers which may have a stimulating effect on the development of tourism and recreation in the Republic of Tatarstan (RT). Tourism and recreation sphere of RT has developed on the basis of two main factors: heterogeneity of natural resources, recreational, cultural and historical potentials and local heterogeneity of socio-historical and cultural Centers of Recreational Activities (CRA) distributed within RT. The last ones represent “central places” well-known in the theory of network planning where recreational activity is performed. Exploring these ideas and positions, the character CRA and their functional linkages distribution may be described by the “two layer” (two-stage) area zoning, where an integral picture of the RP values distribution along territory serves as the basis. This

picture is obtained on OTE cut, represented by the administrative areas of the Republic of Tatarstan. CRA are also applied to this situation as functional centers, the relationship between which just make the second layer (stage) of zoning. Thus, we can get a two-layered map of recreational activity features on RT territory.

After the performance of evaluation and analysis of RT recreational potential and the obtaining of spatial availability characteristic the typology of RT municipal regions with the definition of the taxonomic rank (first, second and third) was performed. The third level with the lowest rating indicators will be Recreational and Tourist Areas of local importance (RTA). The second level is presented by Recreational and Tourist Areas (RTA) of regional value which have as common so as specific features. The first level is presented by Recreational and Tourist Complexes (RTC) of federal and possible international importance, the presence and development of which has a large regional importance.

## **RESULTS AND DISCUSSION**

The annual increase of tourist flow into the country makes about 14.8% on the average (Fig. 1). Tatarstan is one of the most developed regions of the Volga region in hotel industry and the Federal District leader for a number of basic indicators characterizing the hotel market state: accommodation facilities are in high demand among customers, the Republic is also ahead of its neighbors by hotel numbers. The growth of provided hotel services made 29.7%, the growth of tourist services made 22.7% during of 2014 compared with of 2013 (Table 1). The total volume services of tourist sphere increased by 20.6 percent during of 2014 compared with of 2013 (Fig. 2).

According to the final total RTP index of natural and recreational, cultural and historical resources and the level of socio-economic development, presented in municipality, the Republic was given 10 recreational and tourist districts.

Three districts (Zelenodolsky, Elabuzhsky and Spassky) are of federal importance for the development of recreation and tourism and belong to the first hierarchical level. The lack of common borders and remote position from each other allows consider them as independent and self-sufficient recreation centers. This is due to the availability of unique recreational resources.

The second hierarchical level is presented by Prikazansky and Arsky RTR. The first area consists of three municipalities (Laishevsky, Vysokogorsky and Verkhneuslonsky) the total area of which makes 5139.3 km<sup>2</sup>. This emerging recreational complex, the

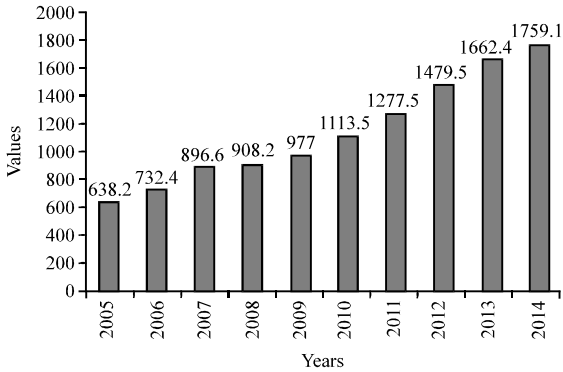


Fig. 1: Tourist flow dynamics in the Republic of Tatarstan (thousands of people)

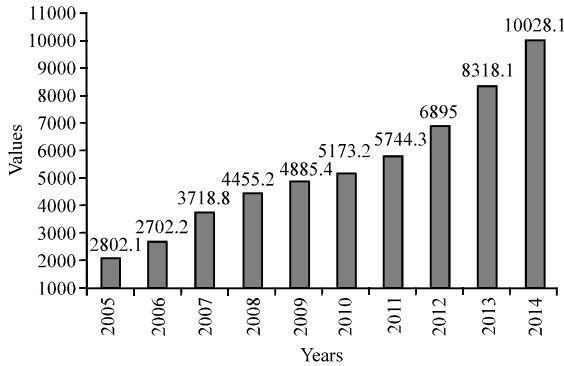


Fig. 2: Tourist services sales volume in the republic of tatarstan (millions of rubles)

Table 1: Volume of services (millions of rubles)

Values	2010	2011	2012	2013	2014
Hotel services	1990.9	2294.0	2730.1	3454.0	4475.1
Tourist services	1016.3	1140.0	1602.3	2133.1	2617.0
sanatorium and wellness services	2166.0	2310.3	2562.6	2731.0	2936.0

functional specialization which is cognitive one for the local population oriented for active leisure time during weekend.

The third hierarchical (zonal) level is presented by 5 includes territories. The Kama region includes four district (with the area of 8010 km<sup>2</sup>). It's a young recreational system is of therapeutic and recreational nature. The resort of national importance (Bakirovo) and the regional network of "Tatneft" OJSC favor the formation of the area, serving the needs of industrial cities. Tukaevsky and Nizhnekamsk regions may become not only Republican ones but also the federal development centre of therapeutic and environmental trends.

The Volga area combines six districts (Kaybitsky, Kama-Ustynsky, Apastovsky, Tetushsky, Buinsky, Drozhzhanovsky) with the total area of 453.2 km<sup>2</sup>. The recreational potential is low one. The group of regions is

generally unpromising for the development of recreation and tourism industry, except for Tetyushsky area in which separate territories are possible for local short rest development. This will require the creation of summer camps and recreation bases.

The Kama region includes eight municipal districts with the total area of 11,222.3 km<sup>2</sup>. The values of the individual capacities are typically average and below the average. The level of infrastructure development is an average one. The territory is characterized by the combination of relatively intact natural conditions in developed economy. There are some prerequisites for the organization of some recreational activities (especially field-hunting).

Zakamskaya zone consists of 7 regions with the total area of 12 049.3 km<sup>2</sup>. This is mainly the territory of rural settlements. The zone value may be defined as the "backup" for population recreation not only of nearby industrial areas but also for the population of more remote areas.

The eastern zone is presented by 11 regions with the total area of 16,831.2 km<sup>2</sup>. The total recreational space of territory is weakly explored (Zainsky, Bugulminsky, Menzelinsky areas) or not explored at all. It's permissible to assume that this group will form the recreational areas around cities and regional centers for a short rest of the local population.

Thus, the main centers of generating and receiving tourist flows are socio-economically developed areas with a high proportion of infrastructure. Peripheral areas have hindered accessibility and the lack of comfortable accommodations.

The Republic of Tatarstan has high tourism and recreational potential. Its territories are presented by unique natural and recreational resources, objects of national, cultural and historical heritage. Important economic, sports and cultural events are held here where special place belongs to the capital of the Republic-the city of Kazan. Many municipal and urban districts also provide a wide range of facilities, promising in terms of tourist interest.

**CONCLUSION**

As priority types of tourism, developing in the country, one may name such types as health, cultural, educational, event, business tourism, cruise, environmental tourism and pilgrimage. The promising forms of tourism are ethnic, fishing and hunting tourism, adventure tourism, rural and social tourism. These types of tourist market segments require specific and comprehensive approach applied in tourist market development by taking into account the demands made by different social groups.

Given the stated above we may conclude the presence of the actual and reasonable necessity of activating the role of government in addressing the priorities for the development of tourist and recreational complex of the Republic of Tatarstan, the creation of a competitive tourism market and increase the level and quality of life.

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