# Tourism and transport infrastructure: an analysis of ethnic preferences

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> Abstract. Despite the restrictions caused by the COVID-19 pandemic and unfavorable foreign policy factors, tourism remains attractive to the population of many countries. The desire of a person to "move" in order to see something new, to feel what representatives of other cultures feel, is natural, in line with the logic of the historical development of peoples, and should be welcomed and encouraged at all levels of the state system. The transformation of travel into a mass phenomenon (including travel for tourism purposes) is largely due to almost revolutionary changes in the transport system. In modern conditions, the traveler is more focused on the independent choice of the tour, the alternative ways and means of transportation in an unfamiliar country. This imposes an additional burden on public transport, which must be taken into account when analyzing the potential of the transport infrastructure of the host country. In the main areas of analytical work, special attention should be paid to identifying social preferences of foreign travelers in the field of transport, determining priorities when choosing a travel method. In this regard, the following are relevant: a) the motives for choosing a mode of transportation / mode of transport by a tourist; b) the relationship of ethnic preferences and expectations when choosing a transport service; c) assessment of the emotional characteristics of the choice. Consideration of these issues and some conclusions obtained as a result of experimental work are presented in this paper.

# 1 Introduction

Tourism as a sphere of social and cultural activity is important for the functioning of any society. In modern conditions, the factor that largely determines the development of tourism is the quality of the transport infrastructure of the state. This factor is indicated among the first when conducting international expertise, compiling analytical reviews, reports, bulletins [1, 2, 3].

It should be noted that at present, when the vector of tourist needs is changing in the direction of strengthening the "individual principle", manifested in the refusal to participate in intermediary organizations (travel agencies), independence in planning the tour,

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choosing methods and means of transportation in an unfamiliar country, strengthening the role of integrative mechanisms takes on special significance. In this sense, the transport infrastructure acts as a kind of catalyst that stimulates the emergence of new tourism products focused on the maximum satisfaction of the requirements and needs of each person. Indeed, all attempts to know a foreign country are doomed to failure if a person does not know how to move around this country, or encounters obstacles with every attempt to learn it. The more convenient the transport infrastructure, the more comfortable the movement around the country, the more people can be involved in the tourism industry and, accordingly, in the country's economy. It seemed to us interesting to study social preferences of foreign travelers in the field of transport and to determine which components of the transport infrastructure are predominant when choosing a travel method. This is the purpose of this article. The objectives of the study are: 1) to study theoretical aspects of the organization of transport services for tourist groups; 2) to conduct a survey of foreign citizens traveling in different countries to identify their transport preferences; 3) to formulate conclusions on certain issues related to the provision of transport services to traveling citizens.

### 2 Methods

A comprehensive analysis of the literature on identifying social preferences of travelers in the field of transport touched upon several aspects:

1) social - in terms of involvement in tourism and excursion activities of various strata and groups of the population [4, 5];

2) financial and economic - in terms of the financial attractiveness of certain modes of transport for travelers [6, 7];

3) geographic - in terms of the "suitability" of the transport infrastructure of individual territories for tourism purposes [8, 9];

4) organizational - in terms of mechanisms for integrating transport infrastructure and tourism infrastructure [10];

5) humanitarian - in terms of the contribution of tourism to the process of intellectual and spiritual development of a person [11, 12].

In the course of the work, it was revealed that there are not enough studies related to the specifics of the preferences of foreign citizens in the field of transport to form a complete picture of the phenomenon under study, and this explains the timeliness of this work.

The information base of the study was data from open sources: 1) analytical reviews on the development of the transport infrastructure of the regions [13, 14]; 2) generalized statistical data concerning the movement of tourist flows [6, 15, 16]; 3) materials from the websites of foreign transport and travel companies.

To analyze ethnic stereotypes of travelers in the assessment of transport infrastructure, an author's questionnaire was developed, including closed and open questions. During its development, theoretical and practical recommendations of modern researchers were taken into account [17, 18]. The block of open questions made it possible to clarify the attitude of respondents to certain transport realities and problems. Foreign citizens (university students, employees of companies) took part in the survey. The total number of respondents was 82 people.

# 3 Results

In this paper, we present the results of the analysis of the social preferences of foreign travelers in the field of urban transport. By social preferences we mean a formed, ethnically and nationally determined choice, manifested in a specific relationship to some objects or realities. The structure of social preferences includes three components: a) affective (emotional assessments of the object); b) cognitive (knowledge, ideas, judgments, rational understanding of realities by the subject); c) conative (motivational attitudes of the subject) [19]. In our study, this structure is reflected in the formation of the statements of the questionnaire, which can reveal the nature of the relationship of the respondents to specific objects of the transport infrastructure.

Of the types of urban transport for which the survey was conducted, the subway, bus, trolleybus / electric bus, tram, taxi, fixed-route taxi were singled out. During the experiment, the subjects were offered blocks of questions assessed on a five-point Likert scale (Likert scale), on which the respondents had to give from "strongly agree" to "strongly disagree" answers. These questions asked to evaluate such parameters as: 1) convenience of paying for the fare; 2) fare; 3) comfort of the trip; 4) professionalism of drivers / employees; 5) the modernity of vehicles 6) ease of navigation; 7) comfort of waiting places; 8) availability of benefits for students, disabled people, pensioners; 9) security; 10) general impression.

In the block of open questions, the following types were proposed:

- 1) How often do you use public transport (in your country / in Russia)?
- 2) What type of transport is your priority (in your country / in Russia)?
- 3) How much money do you spend on travel (in your country / in Russia)?
- 4) What surprised you about the transport system in Russia?
- 5) What type of transport seems the most attractive to you?
- 6) What modes of transport in Russia seem outdated to you?
- 7) What, in your opinion, can be improved in the Russian transport system?
- 8) What should the environmentally friendly behavior be when traveling?

As it becomes clear from the proposed questions, the focus of our attention is on the social preferences of foreign citizens arriving in Russia for tourism purposes, business trips or living in Russia and often traveling around our country and other countries. The analysis of the results made it possible to identify social preferences in the field of transport infrastructure along several lines, such as: a) the choice of the mode of movement / mode of transport; b) the relationship of ethnic preferences and expectations when choosing a transport service; c) the assessment of the emotional characteristics of the choice. Let us consider them in more detail.

#### 3.1 Choice of mode of transportation

The choice of the mode of transportation when traveling is determined by a number of factors, the main of which are: 1) comfort, 2) safety, 3) price. It is interesting that in the answers to closed questions, these factors go in the order indicated (given above). In a clarifying conversation, when the respondent was asked to choose between the mode of transport "convenient, safe, but expensive" and "less convenient, safe and cheap", the frequency curve clearly leaned towards price for all ethnic groups involved; and in the choice between "convenient, less safe, but cheap" and "less convenient, safe and cheap", the curve leaned towards safety. This is a general trend, although the frequency index turns out to be different for different ethnic groups, which is comparable with the data of other researchers [20, 8, 21].

Some additional criteria to the assessment system such as 1) ease of fare payment; 2) professionalism of drivers / employees; 3) the modernity of the vehicle fleet; 4) ease of navigation; 5) comfort of waiting places; 6) the availability of benefits for students, the disabled and pensioners were added. As the result ethnic and personal reasons for preferences (traditions, habits, social and ethnic restrictions, travel opportunities) are more

clearly traced. For example, up to 80% of respondents choose ease of navigation and ease of fare payment as their preferred criteria. They motivate their choice with "personal freedom": "I don't like to feel helpless", "I don't like to ask people on the street, I prefer to get to the right places on my own - through signs on the streets, on a map, using a smartphone", "The easier navigation, the less you need to think about search, you can focus on city view." That is, when coming to a foreign country, most people do not seek active communication with the locals and prefer "views of the city" and "search for sights on their own." Obviously, this is largely due to the attitude of a modern person to self-isolation and a greater appeal to public information than to a real interlocutor.

The professionalism of drivers and the modernity of vehicles are considered to be compulsory attributes of safety. An insufficiently new vehicle is perceived as unsafe, which, of course, is only partly true.

Social preferences also manifest themselves when choosing a mode of transport for a specific travel situation [8, 5]. For example, the situation when people choose transport (a rented car, taxi, bus, metro, etc.) to visit the theater (opera, ballet) is often associated with traditions: the attitude towards the theater is different in different societies. As a result, a person develops certain habits in terms of the dress code and in terms of the time and method of arriving at the theatre.

Environmentally friendly travel behavior was rated by the majority of respondents as a real issue that needs to be addressed collectively. About 7% of respondents rated their travel behavior as environmentally friendly. 19% said they were ready to sacrifice comfort for the sake of the environment. This is also confirmed by the studies of other scientists [20, 22]. Recognizing the danger of transport for the environment, many participants in the experiment named the following mitigating factors:

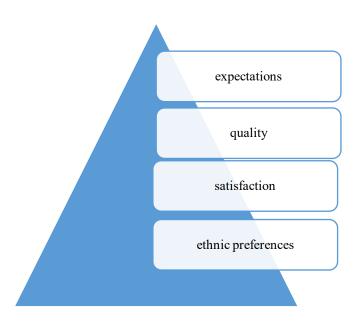
1) choice of a less harmful type of transport (a bus was offered to travel around the city, a bus or train- between cities);

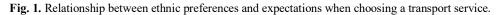
2) limiting the speed of traffic (it was noted that the worst accidents occur outside the settlements and the reason for them more often is speeding; in addition, speed limits have an environmental effect in the form of noise reduction);

3) use of applications (an environmental effect was noted - we save paper: tickets for all types of transport can be shown on a smartphone screen; a smartphone navigation application replaces paper maps and guides). We also find some data confirming the choice of our respondents from other researchers [23, 24, 25, 26].

# 3.2 Relationship between ethnic preferences and expectations when choosing a transport service

The relationship between ethnic preferences and satisfaction with the transport service can be represented as a pyramid, at the top of which are expectations, and at the bottom are ethnic preferences. "Intermediaries" between expectation and preference are 1) the quality of the transport service, i.e. the degree of conformity of the set of inherent characteristics to the requirements, and 2) satisfaction, i.e. the traveler's perception of the degree of meeting his expectations (see Fig. 1).





Satisfaction with the transport service is the most noticeable result of motivation - a result that can be presented in the form of materially expressed values, "calculated", analyzed statistical data [12, 5].

As the result of the survey, we identified such indicators of satisfaction with the transport service as 1) a positive emotional assessment of the received transport service and 2) an assessment of the degree of achievement of the goal when receiving the service. For all their obviousness, these criteria did not give identical results. 7% of the analyzed questionnaires showed that even in case of not receiving service (or receiving incomplete service), the tourist can evaluate it positively. Thus, a tourist who called a taxi for a trip to the museum could not get there due to traffic jams, but was quite pleased with the trip, as he received extensive information about the city's attractions from the driver, who spoke good English.

Satisfaction monitoring made it possible to determine which components of the transport service are most important for tourists and which components of the transport service are in the zone of increased dissatisfaction and, accordingly, require corrective efforts. Thus, according to the classification of E.R. Kedott and N. Turgeon (Cadotte, & Turgeon, 1988) [27], crucial for the assessment of transport infrastructure were transport safety (professionalism of the driver, his discipline, modern vehicles, etc.) accessibility (convenient location, ease of calling, including in mobile applications). Neutral factors were the brand and design of the transport (in compliance with safety requirements) and the gender of the employee (driver, technician, controller, etc.). Among satisfying factors the respondents mentioned frequent updating of the vehicles, frequent updating and replenishment of mobile applications and knowledge of English and other languages by employees of transport companies. Disappointing factors were an incomprehensible parking payment system, unsuccessfully organized parking lots, the operator's refusal to accept payment with the most common bank cards and the unfriendliness of employees of transport companies.

### 3.3 Evaluation of the emotional characteristics of choice

The satisfaction of the tourist is determined by the emotions of pleasure or disappointment that he has after receiving the transport service. A low indicator cannot guarantee progress in the development of a particular mode of transport. Moreover, with a negative development of events, the tendency towards the formation of a specific ethnic stereotype becomes quite real.

We derived the emotional characteristics of choice from two blocks - closed and open questions.

In "closed questions" on a five-point Likert scale (Likert scale) the overall impression of a particular type of transport (metro, bus, trolleybus / electric bus, tram, taxi, fixed-route taxi) in different cities of Russia was assessed.

In the block of "open questions" the following type of questions were proposed:

1) How often do you use this type of transport (in your country / in Russia)?

2) Will the need to return home by this mode of transport spoil your mood?

3) Will you refuse to attend an interesting event if you have to use this type of transport?

4) Can you say that this type of transport is preferable for you? Why?

5) Do you think it is unreasonable (offensive) to spend money on a fare for this type of transport?

6) In what cases can using this type of transport become stressful for you?

7) How, in your opinion, does the use of this type of transport affect the status of a public person (artist, politician, sportsman, etc.)?

8) Do you think that the use of this type of transport can negatively affect the status of a businessman?

9) What feelings would you experience in case of a ban (impossibility) to use this type of transport?

10) What advice would you give to a compatriot who wants to use this mode of transport in Russia?

We present only some of the results.

Of the modes of transport that cause positive emotions for most tourists, the metro was in the first place. 78% of the respondents preferred it. The characteristics that cause positive emotions were: a) high comfort, b) aesthetics, c) speed, d) safety, e) affordability, f) extensive system, g) convenient working hours. Almost all travelers noted the unique "architectural style" of the Russian metro and named it as an independent cultural object. The MCC and MCD, lines of railway passenger transport in Moscow partially integrated with the metro, were noted separately.

Fixed-route taxis were the least attractive for foreign tourists (they were noted by just over 8% of respondents). Among the "emotionally positive" characteristics were: a) rather high mobility of this type of transport and b) affordability.

Tourist satisfaction survey and assessment of the level of positive and negative emotions play an important role in managing business processes in the fields of tourism and transport. Obviously, measures to evaluate and measure this indicator should be carried out systematically at the "intercountry" level. "Tourism growth cycles and thereby the turning point or directional change forecasting is another important aspect in tourism forecasting research. It has a high practical value because tourism-related firms are keen to know not only the overall trends of tourism demand, but also the timing of the directional change in tourism growth" [17].

# 4 Discussion

We can say that the development of tourism and the development of transport infrastructure in modern conditions is an interconnected and interdependent process. "Many scholars have carried out tourism demand forecasting through qualitative analysis, time series models, econometric models with artificial intelligence, and the accuracy of forecasting has gradually improved. However, tourism and tourists are closely correlated in terms of spatial mobility, and if spatial effects are ignored, a model estimation can be biased and produce misleading coefficient estimates" [28]. The qualitative state of transport, transport infrastructure in the country invariably affects the number of attracted travelers. A competent transport policy of the state is based on scientific understanding of all aspects of the problem, taking into account goals, resources, updating of internal and external economic factors [17, 18, 7, 29]. In this context, acquaintance with the experience of foreign researchers and the use of their materials containing such an analysis can become very valuable [30, 9, 31].

The passenger's need for movement is secondary to the purpose of movement. In the case of tourist groups, these goals are limited to cultural and community or, less often, business areas (visiting embassies, consulates). Hence the importance of certain transport preferences for cultural objects, as well as for objects located "in the zone of intersection of tourist flows." This can become real when systematically monitoring the movement of tourist groups and identifying the preferences of foreigners in the field of transport infrastructure [32].

The level of need for movement is influenced by various organizational factors. The more obvious of them are the territorial remoteness of urban objects, the duration of movement, the distance between stopping points. The less obvious are the transport fare, qualitative and quantitative characteristics of the vehicles (comfort of travel, waiting time), the availability of various benefits, the availability or absence of information about the methods of movement. In some cases, less obvious facts have a greater influence on the choice of means of transport. For example, when choosing between the metro (shorter travel time) or the MCC (long travel time), tourists choose the MCC, motivating this by their reluctance to "go underground" and the desire to "see the outskirts of the city". If, however, for a trip by transport, a passenger needs to make significant pedestrian movements (get to a stop), then the passenger can refuse to travel altogether and go on foot or, more often, opt for a taxi.

Tourism is completely dependent on the "discipline" of traffic flows - their speed, safety, quality of services provided to the tourist during his movement. Understanding the basics of relationships with transport companies, the rules of interaction in matters of ensuring the safety of passengers and the safety of their property, the use of appropriate discounts and benefits in sales is important for both tourists and travel organizers.

Such studies are, of course, extremely important, since they are socially orientated and their focus is on the improvement a person's well-being in a foreign sociocultural environment [33, 34]. Such studies are of particular relevance for megacities, where significant cultural and historical objects are concentrated. Preliminary advice and recommendations to foreign travelers on issues of transport mobility, behavior in transport facilities, the quality of services provided in transport should become part of the work of companies involved in the sale of tourism products.

# **5** Conclusion

Despite the restrictions caused by the COVID-19 pandemic and unfavorable foreign policy factors, tourism remains attractive to the population of many countries. The desire of a

person to "move" in order to see something new, to feel what representatives of other cultures feel, is natural, in line with the logic of the historical development of peoples and should be welcomed and encouraged at all levels of the state system. The transformation of travel into a mass phenomenon (including travel for tourism purposes) is largely due to almost revolutionary changes in the transport system. In modern conditions, a traveler is more focused on the independent choice of the tour, the alternative ways and means of transportation in an unfamiliar country. This imposes an additional burden on public transport, which must be taken into account when analyzing the potential of the transport infrastructure of the host country.

In the main areas of analytical work, special attention should be paid to identifying social preferences of foreign travelers in the field of transport, determining priorities when choosing a travel method. In this regard, the following are relevant: a) the motives for choosing a mode of transportation / mode of transport by a tourist; b) the relationship of ethnic preferences and expectations when choosing a transport service; c) assessment of the emotional characteristics of the choice. Some of the results of such analysis are presented in this paper. It is evident that the results of our experiment cannot provide answers to all the questions posed. We see the further development of this topic in two directions: a) in determining the structure of the ethnic needs of travelers related to transport infrastructure, b) in identifying ethnic stereotypes and prejudices that affect the attitude to a particular type of transport in a foreign country. In our opinion, this approach will allow creating a more complete picture of the interaction between tourism and transport and will help to find weak points in the mechanism for integrating the two systems and offer competent options for solving emerging problems quickly.

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