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# Transformation of consumer behavior in the tourism industry in the conditions of digital economy

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**Abstract.** The tourist's «mobility» increasing trend is the result of traveler's activity, who prefer to build the routes and book the accommodations through different services themselves, and digitalization of tourist market. Blackwell-Miniard-Engel model was used for the Customer Journey Map creation. The Customer Journey Map includes the possible touch points with customers for impact (communication) and help meet the need at different stages of the make buying decision. Studying the characteristics of digital travel services, the authors applied an online survey of 100 consumers aged 18-35. Because the estimation of the correctness of the choice concerns not only the tourist object, but also digital travel applications, respondents were asked about the used travel applications, the desired benefits and the degree of customer satisfaction with an available service. The usefulness of content and travel applications can be viewed in terms of the reliability of the information provider, the breadth of opportunities in evaluating options, price incentives, service levels and usability.

**Keywords.** Consumers behavior, tourism industry, digital economy, travel applications, tourism transformation, Customer Journey Map.

## 1. Introduction

Digital technologies have made a significant contribution to the human mobility development. Tourism as an impression industry is undergoing serious changes not only in terms of volumes but also in terms of providing a unique travel experience.

The World Tourism and Travel Council (WTTC), in its annual report, provided a qualitative assessment of the impact of tourism on the global economy and employment in 185 countries and 25 regions. The study shows that this sector accounted for 10.4% of global GDP and 319 million jobs, or 10% of total employment in 2018. Most of the expenses of travelers accounted for the leisure market that is 78.5% of the total expenses compared with 21.5% of business expenses. The tourism sector accounted for 6.5% of total world exports and 27.2% of total world exports of services [1].

According to various estimates in 2018 the volume of the Russian domestic tourism market in 2018 increased by 8-10% and reached about 900 billion rubles, more than 43 million Russians traveled outside their region of residence, that is 13 million more than in 2017. A similar trend is expected in 2019.

According to the Association of Tour Operators of Russia (ATOR), in 2018 there was an increase in the number of foreign tourists by 20% compared to 2017. The outbound tourism market significantly reduced its growth rate in 2018. The outbound tourism market finished the year of 2018 with a humble (compared to growth rates of 2017) growth in the number of tourists. At year-end 2018, the outbound tourist flow grew only by 6.1% (in 2017 – by 35.9%) [2, 3].

The tourist's "mobility" increasing trend is the result of traveler's activity, who prefer to build the routes and book the accommodations through different services themselves, and digitalization of tourist market. On the Euromonitor company expert's opinion, this trend will only strengthen [4].



According to the information portal Turazbuka [5] every third Russian organized leisure on his own (29%) in 2018. Young Russians aged 18 to 34 years old (35 – 39 %), plan trips on their own more often than others. According to various estimates, the share of unorganized tourists in the total inbound flow is 70 - 90%. The development of digital technology is significantly changing the process of planning and implementing of travel. The consumer becomes a full participant of the creation of a tourism product.

Considering the object of study, the authors took into account the classification of tourism depending on the method of organization into organized and unorganized ones. Organized tourism involves a pre-designed travel program and a travel organized by a company for tourist/tourists according to their wishes and budget. A travel company books and pays for all tourist services along the route, prepares all the necessary travel documents. Most of the work of researchers focuses on the features and development paths of organized tourism.

Unorganized tourism suggests that tourists organize their trip themselves without the participation and / or mediation of a travel agency. They independently develop a travel route, determine objects for excursion visits, plan overnight stays, do travel documents, etc. It is this category of tourists that remains beyond attention when analyzing the requirements for the digital transformation of tourist services.

There are few studies of unorganized (independent) tourism. Theorists and practitioners (association of travel agencies, individual tour operators) focus on the estimates of volume of unorganized tourism [6, 7]. The estimation of volumes is important for the tourism industry, as it characterizes the additional load on tourism facilities.

In the Tourism 2020 Vision research, carried out by the WTO, the most popular type of tourism will be recreation tourism. Many papers are devoted to the analysis of the digitalization impact on the formation of new types of tourism, for example, nature-oriented tourism [8-14].

The use of IoT-technologies (Internet of Things) [15-17] and digital technology [18-24] for destination promotion are actively discussed. However, many factors of consumer behavior remain outside the scope of research.

Digital technologies can change the consumer's experience based on their individual features. The active consumer's position has led to the appearance of different services conscripted to give new unique experience for consumers and generate new kinds of impression. In the digital economy conductions, the buying decision model is undergoing significant changes.

The purpose of the work is to identify the impact of digital technology on the transformation of the decision-making process by tourists. The tasks are to assess the state of the digital tourism infrastructure, classify the available services to identify unfilled niches; to find out the attitude of consumers to various kinds of travel applications and their place in travel planning.

## 2. Methods

The empirical sources of the study were reports and analytical articles characterizing the state of the tourism industry, as well as consumer reviews and the results of quality marketing research.

An important direction in the study of unorganized tourism is the development of digital technologies for collecting and processing data on the actions of Internet users. While tour operators underestimate the segment of unorganized tourists, Internet companies are actively developing their service. The work analyzes data from the researches by Google, PayPal, Booking.com.

In 2017 Google conducted a study of the needs and actions of Internet users in the field of vacation planning.

Booking.com analyzed over 163 million guest reviews and conducted a survey among 21 500 travelers from 29 countries to identify the main travel trends for 2019.

Issues of the consumer research based on the conceptual model of consumers behavior by Roger D. Blackwell, Paul W. Miniard, James F. Engel [25]. The model including the stages of make buying decision: awareness of need, searching for the information, alternatives selection, purchase, estimation of the correctness of the choice. The model is oriented on the purchasing of goods process. The authors suggest its adaptation to the process of travel choice.

This conception has been used for the Customer Journey Map creation. The Customer Journey Map includes the possible touch points with costumers for impact (communication) and help meet the need at different stages of the make buying decision.

Studying the characteristics of digital travel services, the authors applied an online survey of 100 consumers aged 18-35. Respondents were asked about the used travel applications, the desired benefits and the degree of customer satisfaction with an available service.

Based on the specifics of digital environment the stage of estimate has been added by the research of

the consumers reviews. Suggested method is allowing to reveal as strengths and as weaknesses of the travel service.

This method of analysis of the consumers feedback comes from assumption:

- consumers satisfaction is formed as a result of their estimation of cumulative utility (attribute amounts) of some object (good, brand, organization); i.e. object is considered as a set of attributes [26, 27].
- private utility is considered as a selected attribute, the degree of the selected attribute satisfaction depends on the degree of presence this attribute in the object and its significance (importance) for consumer; attributes can have different importance for consumer;
- the total utility estimate is integrated by consumer on a compensatory principle, i.e. a low estimate of one attribute can be compensated by a high estimate of another one.

The sources used were:

- "Otzovik" (otzovik.com) is a community where users are sharing useful information about any goods or services, help each other. The choice of this source is determined by the presence of many useful reviews and real estimates from real visitors.
- "IRecommend" (<http://irecommend.ru/>) is a site where reviews about goods and services, unique photos and owner experience are presented.

The travel service evaluation was carried out as a sum of estimates of selected attributes. Every i-th attribute estimation is counting with the equation:

$$O_i = \frac{3*n_{3i}+2*n_{2i}+1*n_{1i}}{n_{3i}+n_{2i}+n_{1i}}, \quad (1)$$

where  $O_i$  – the coefficient of the i-attribute embodiment;

$n_{3i}$  – number of the i-th attribute reference with a score of 3 points out of 3;

$n_{2i}$  – number of the i-th attribute reference with a score of 2 points out of 3;

$n_{1i}$  – number of the i-th attribute reference with a score of 1 points out of 3.

As the attributes were considered the reliability of the travel service as a provider of credible information, the breadth of opportunities in the evaluation of variants, price compliance, service level and usability.

### 3. Results and Discussion

#### 3.1 Awareness of need

The focus of attention is focused on communications in order to influence the choice of the place of visit. Digital technologies in this area have significant advantages. In this case marketing promotion tools are used for territories, cities, individual places and attractions, events and events, as well as other objects that meet the purpose of visiting (medical, educational, business and etc.). Currently, such technologies are actively used by both tour operators and consumers themselves. The main purpose is to increase awareness of the tourist and recreational value of objects, the formation of interest and desire to visit a promoted object.

The most popular and tourist-crowded cities at this stage seek to redirect the travelers flow by reorienting them to other destinations for "authentic" experiences. According to the NAFI Analytical Center [28], 97% of online shoppers choose a place to visit on the Internet. Travel goals of online shoppers are mainly related to recreational activities. For domestic tourism, a seaside vacation was chosen by 19% of online shoppers; 17% chose visiting attractions; 15% chose trips to nature, for sports. Business travel in Russia was carried out by 17% of online shoppers.

For outbound tourism to non-CIS countries, the leading purpose of travel is also sea vacations (18%); 13% of online shoppers chose sightseeing; 3% chose trips to nature, for sports, Business trips to non-CIS countries were chosen by 5%.

Digital technology allows to make a personalized offer based on browsing history and orders. Touch points are created by advertising and thematic programs on TV, targeted advertising on social networks, video content and opinion leaders in blogs.

According to consumers the main elements of content about tourist object are:

- date of foundation of the object;
- positioning (the status of the object);
- author;
- history of origin (the origin of the idea of creating an object);

- target segment (the consumer prefers to know for what audience this object would be interesting, whether visit is available for children);
- information that can be obtained when visiting a tourist object (cultural and entertainment program: exhibitions, excursions, lectures);
- the cost of visiting the tourist object;
- possibility to get there (transport accessibility).

### 3.2 *Searching for the information*

Sources of information about travel destinations are diverse. According to Google, 39% of Russian Internet users study online reviews, 21% study video reviews, 18% study YouTube, 15% use opinions on social networks, 11% use opinions on forums. Thus, we can conclude that the Internet generates travel expectations and creates motivation for visiting places [29].

For independent travelers, there are various services and blogs that facilitate orientation in the digital space. The learning function has prospects for expansion, since the ability to share knowledge causes a positive attitude among independent travelers. Training of independent travelers also offer travel planning and gathering services, searching for opportunities to communicate with residents, translators. Travel applications stimulate the creation of as many varied and enjoyable memories as possible and offer to share them with other travelers.

Reviews are a valuable source of information about the other consumers opinions. Negative attitude reflected in customer reviews can lead to refusal to buy a product or service disapproved by other consumers.

Tourists are increasingly using the information and experience of residents who know much more interesting places, local customs and traditions. Touch points are created by accounts in social networks, aggregators of reviews.

### 3.3 *Alternatives selection*

The tourism industry is saturated with various Internet and mobile applications that act as a metasearch engine or accumulate reviews and other useful information and are not directly related to the production of services. Having collected the results, the metasearch engine gives them in a convenient form for perception (considering the client's filters), which facilitate the search and planning of the tour. Having gained popularity, information portals often also begin to monetize their reputation by adding the functionality of a metasearch engine.

The classification of applications is given by the authors in terms of their specialization for the provision of tourist package services:

- a means of transportation to a place of rest (purchase of tickets for trunk transportation),
- accommodation (reservation of housing),
- a place of rest (selection of attractions and excursions, buying tickets to museums, theaters, stadiums, etc.),
- moving within the place of rest (maps, navigators, local public transport schemes, buying tickets for public transport, ordering a taxi, renting a car),
- catering (location of shops and catering points, booking a table in a restaurant).

Touch points are created by metasearch engines. Digital services allow to personalize the choices by customizing various filters and sorting options to meet your consumer preferences. You can also set up notifications about the appearance of suitable options in the future, the application will make a calendar and a price map, saving favorites and search history.

In the fight for the consumer, travel applications consolidate many functions in one package, provide reservations and pay online, and work on the convenience of the interface. However, for consumers this is a kind of standard, below which they do not consider the use of applications. The search for ways to develop digital solutions for unorganized travelers should be based on identifying the significance of new features and the time of use of the application.

### 3.4 *Purchase*

Touch points on this stage are created by the office of travel companies, customer support department, on websites and in mobile applications. Most organizations serving the tourism sector currently have sites or mobile applications with the function of booking and buying tickets. Digital technologies allow online travel agencies to interact with potential customers on the selection, payment and support of the tour completely online. The desire to expand sales through online consumers has led to the creation of online services owned by transport companies (for example, Aeroflot, Russian Railways), hotels and other tourist infrastructure organizations.

The payment service PayPal and the Russian research agency Data Insight investigate the habits of Russians with online payment, including travel services, on a sample of 4 000 people. The results indicate that more than half of tourists from the Russian Federation prefer to book and pay for trips via the Internet. In Moscow the share of online travel services purchases has grown to 61% [30, 31].

### 3.5 Estimation of the correctness of the choice

The presence of many options on the market indicates the absence of obvious favorites among consumers. Therefore, the estimation of the correctness of the choice concerns not only the tourist object, but also digital travel applications.

Satisfaction with the holiday destination inspires the creation of new content. Currently, consumers can leave feedback and share photos and their experiences with a wide range of people. This allows to help and share experiences with other travelers. Learning content is generated by experienced travelers.

An online survey conducted by the authors shows that consumers are actively using applications, while they are searching for new, more convenient or profitable options, based on the advice of the immediate environment and reviews on the Internet.

The table 1 shows the result of consumers' estimation of popular travel applications.

In the absence of satisfaction, the consumer is ready to continue to search for a new travel application. The presence of commitment to the application can be judged by the age of use of the service (1.5-2 years).

The reliability of the results is confirmed by the consistency of the data obtained with an independent rating of Google Play on a scale from 1 to 5.

**Table 1** – Estimation of popular travel applications

Estimation parameter	"Skyscanner"	"Tripadvisor"	"OneTwoTrip"
Reliability (from 1 to 3 points)	1.79	1.5	2.33
Breadth of opportunities (from 1 to 3 points)	3.00	2.73	2.11
Price compliance (from 1 to 3 points)	1.61	1.43	2.04
Service level (from 1 to 3 points)	1.52	1.73	2.59
Usability (from 1 to 3 points)	2.79	1.47	2.54
Total (5-15)	10.71	8.86	11.61
Rating of Google Play (1-5)	4.6	4.4	4.7

## 4. Conclusions

Digital technology has significantly changed the tourism infrastructure, which has made tourism a popular leisure activity. Travel applications for many consumers are an integral part of travel planning and implementation.

Studying of customer journey helps:

- to find out if the consumer is satisfied;
- to reveal the reasons of dissatisfaction for the next correction of a situation;
- to form a range of goods and services in demand among consumers in a timely manner;
- to balance the price policy with respect to purchasing possibility and with the benefit for the company;
- to form a relevant marketing strategy for promotion;
- to form loyalty to the company and adjust its image.

The usefulness of content and travel applications can be viewed in terms of the reliability of the provider of credible information, the breadth of opportunities in evaluating options, price incentives, service levels and usability.

According to consumers the main elements of content about tourist object are:

- date of foundation of the object;
- positioning (the status of the object);
- author;
- history of origin (the origin of the idea of creating an object);
- target segment (the consumer prefers to know for what audience this object would be interesting, whether visit is available for children);
- information that can be obtained when visiting a tourist object (cultural and entertainment program: exhibitions, excursions, lectures);

- the cost of visiting the tourist object;
- possibility to get there (transport accessibility).

The model of consumer behavior can be adjusted to the conditions of the digital environment. The process of searching for information and selecting alternatives in the digital environment are combined. The different filters of travel applications and metasearch engines select unnecessary information, so the consumer has only a limited number of options for thinking about choice.

Reducing the stages of consumer behavior does not mean reducing the duration of the process in time, if the consumer has barriers to decision-making. In the absence of barriers, the decision process can be very fast. At the same time, consumer involvement is at a high level. High consumer involvement is manifested in the number of filters and metasearch engines used to search for information and select alternatives.

Touch points are various moments and places of contact of the consumer with the company. In a digital environment, the number of touch points increases many times. The company can find a potential consumer through contextual, targeted and display advertising on different sites or social networks and return to the interrupted selection process if the decision selection process has not been completed. At the stage of estimation of the correctness of the choice, additional touch points are created by encouraging consumers to leave reviews, photos, share impressions.

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