

DIGITAL TECHNOLOGIES AS A CONDITION FOR THE DEVELOPMENT OF THE TOURISM SECTOR OF THE ECONOMY OF UKRAINE

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Abstract. The article is devoted to highlighting the use of digital technologies as a condition for the development of the tourism sector of Ukraine's economy. Accordingly, the purpose of the research is to analyze the specifics of the use of digital technologies as a condition for the development of the tourism sector of Ukraine's economy. Methodology. The methodological basis of the study was a systematic analysis and specifically scientific methods: systematization, generalization, testing of theoretical knowledge during the study. In the course of the research the author established the main conditions and factors of development of the tourism sector of the economy of Ukraine. At the same time, the author notes that tourism was one of the sectors most affected by the COVID-19 pandemic, which seriously affects the economy, people's livelihoods, public services and limits the range of opportunities throughout Ukraine. It was proved that in the conditions of the COVID-19 coronavirus pandemic and periodic introduction of quarantine measures in all regions of Ukraine, it is expedient to use interactive information technologies to promote the improvement of the tourist image. To this end, the results of a study on the distribution of online sales by segments of the tourism market. It is also established that today the tourism industry is actively implementing technologies to further improve the service, including hotels and transport companies successfully using online booking systems and various mobile applications. The author emphasizes that interactive information technologies presented in the field of tourism can be systematized on the basis of two key factors: the physical presence or absence of the tourist who uses them in the tourist destination, and the system of motivation to achieve intermediate or final goal. The results and proposals of the author in this article are primarily related to the fact that the use of interactive technologies can serve as a new driver of the tourism industry of Ukraine, allowing to create new competitive advantages in the region and differentiate based on personalized approach and customer orientation. Also, the development of tourism in Ukraine should be accompanied by consistent actions to overcome the conditions and factors that cause dissatisfaction of the population, and create new opportunities to improve the quality and quality of life, preservation and development of human capital.

Key words: digital technologies, tourist, tourism sector, infrastructure system, mobile applications

JEL Classification: O14, L83, O18

1. Introduction

One of the directions of the tourism economy development for most of the leading countries today is the innovative technologies formation to promote tourism services at different levels that allows not only to attract additional investments in the destination development, provide additional jobs for locals, modernize or create the necessary infrastructure for tourism sector, but it also ensures the formation of a favorable and friendly social climate. The issue of the successful development of tourist regions becomes increasingly important because they are directly related to their socio-economic development, modernization

and environmental safety of modern infrastructure, quality of tourism services and public involvement in the tourism industry.

The foundations of the tourism development in the context of digitalization were considered and developed by such scientists as (Aleksandrova, Krutikova, 2017); (Book, 2003); (Buhalis, Deimezi, 2004); (Chkan, 2012); (Gooroochurn, Sinclair, 2003); (Kostynets, Baranov, 2020); (Wagler, Hanus, 2018) and others. These scientists have made a significant contribution to the theoretical study of tourism in modern environment: research of theoretical foundations, definition of laws and patterns of tourism

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development, formation of effective mechanisms for tourism, research and development of the resource potential of Ukraine, coverage of the information component of the tourism sector development, etc. At the same time, it should be noted that the tourism development does not stand still, so the research of digital technologies as a condition for the development of the tourism sector of the economy of Ukraine is considered appropriate.

The purpose of this scientific paper is to analyze the specifics of the digital technologies application as a condition for the development of the tourism sector of the economy of Ukraine. The methodological basis of research is a systematic analysis and specifically scientific methods: systematization, generalization, testing of theoretical knowledge during the study.

2. General characteristics of the development of the tourism sector of the economy of Ukraine

From the standpoint of the state of development of the Ukrainian tourist services market for today, the realization of the existing tourist potential can be described as unstable and limited. This situation is due to the concentration in the market of tourist services of several attractive regions, the prerequisites for tourism development of which "lie on the surface", and the city itself is an infrastructure center and its bypass is often impossible or illogical due to geographical and administrative location marketing actions and their results.

The situation is different in the small and medium-sized cities, some areas, the tourist potential of which in many cases is certainly strong, but due to historical and other conditions (geographical remoteness, low level of infrastructure, etc.) and further ways of city development (according to the relevant profile – industrial, scientific, etc.), the tourism sector has receded into the background and has not been chosen as a source of economic development in the region nor part of it. The rapid growth of the tourism role in the national economy indicates the active development of this area and the urgency of its intensification in Ukraine.

Among the conditions and factors of the tourism sector development of economy of Ukraine today it is appropriate to highlight the following:

- an availability of natural healing resources, rich cultural and historical heritage;
- the presence of a developed transport system;
- an availability of an international airport;
- the well-developed network of roads and their satisfactory condition provide access to objects of tourist interest;
- system of communication services and telecommunication services (IT-industry) provides access between territories;

– poorly developed financial infrastructure.

In addition, it should be noted that tourism is one of the sectors most affected by the COVID-19 pandemic, as it seriously influences the economy, people's livelihoods, public services and limits the range of opportunities throughout Ukraine (Kostynets, Kostynets, Baranov, 2020). The current crisis is also an unprecedented possibility to transform tourism's relationship with nature, climate and the economy. Innovative digital technologies could play a central role in the resumption of tourism.

3. The main trends in the development of the tourism sector of the economy as factors in the formation of the tourist image of Ukraine

One of the main trends in the economy of Ukraine during 2019–2021 is the rapid growth rates of online payments. One of the most dynamic sectors of the economy is tourism. According to the research (Criteo, 2022), today the share of online services in the tourism sector of Ukraine does not exceed 1% of total tour sales, but the segment is actively developing. The structure of online sales by segments of the tourism market is presented in Figure 1.

Every year more and more Ukrainians want to buy tours without visiting the offices of travel companies. According to the author's own research in 2019 compared to 2018, online sales of Ukrainian travel services have been increased by about 40%. In turn, the trend of 2020 was a boom in the field of purchases made by mobile phones. Previously, it could be argued that mobile devices play only a supporting role in planning a purchase – as a means of researching the market and obtaining product information, now such statements are more illegal. According to a study conducted by the marketing agency Criteo, in 2019–2020 up to 26% of all online payments were made using mobile devices (Criteo, 2022).

The preconditions for such a change were the rapid increase in the coverage area of 4G+ networks, increasing access to smartphones, the development of payment services and increasing the security of payments made through mobile transactions, coming to the market of large payment services (Google Pay, Apple Pay).

A significant role in such rapid development of mobile tourism is played by the benefits offered to travel agents who are increasing their online presence. Mobile online technologies are forcing travel agencies and airlines to rethink the usual "life cycle" of a tourist trip and the strategy of communication with the traveler. Now the content seller gets the opportunity to stay in touch with the traveler from the moment of booking, during the trip and after it. This opens up completely new opportunities for cross-sell and up-

sell by sending the tourist relevant push messages at certain points in the trip (for example, with recommendations on where to go and what to see).

In addition to the possibility of push messages, it should not be forgotten that mobile technology – it's also Bluetooth, electronics (smart watches, bracelets), access to user geolocation, NFC and a number of sensors built into the device. All this allows to build communication with the client on a completely new, previously inaccessible level of involvement and personalization.

It is worth noting that users of applications are more loyal. Using a browser, it is quite easy to close the tab or switch to a competing service, but switching between different applications takes much more time. Perhaps this is one of the reasons why mobile applications, according to statistics, have a higher conversion than browser versions of the service (both for PC and adapted for mobile devices). Thus, according to the marketing agency Criteo, if on average the full-size version of the site and the version for the mobile browser show approximately equal conversion in sales, then in the case of the application conversion is higher by an average of 20% (Criteo, 2022).

All major players in the tourism market of Ukraine have already developed mobile applications to work with their services, assessing the benefits of this method. However, the possibilities of modern mobile advertising technologies open up many unoccupied or undeveloped niches, the development of which is only a matter of time.

According to Google Ukraine, tourists during the trip use the following services (Figure 2).

The user, especially one who is on trip, due to an often limited ability to use an Internet connection, seeks to find the necessary services in the shortest possible time, and preferably from an already known supplier.

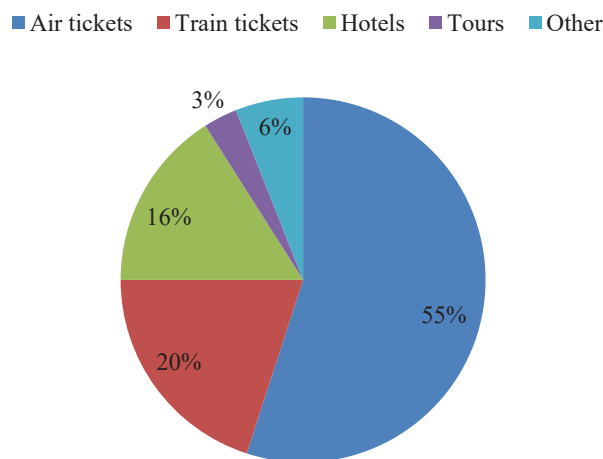


Figure 1. Distribution of online sales by tourism market segments (Criteo, 2022)

Given the general trend of service integration, it should be assumed that online travel agencies in general, and their mobile services in particular, will follow the same path. This is already happening, as evidenced by the development of dynamic packaging services and meta-search engines.

Digitalization and innovative solutions provide a unique opportunity to expand the implementation of operational procedures that make travel safe and convenient in the context of the COVID-19 pandemic on the development of domestic tourism and the formation of a favorable tourism image of Ukraine as a whole. The most effective formation of a favorable tourist image can take place only in the case of close cooperation between the local population and producers of tourist services. Currently in Ukraine, on the contrary, there is no relationship between the local population and representatives of this business, whether it is a resort area or a nature park.

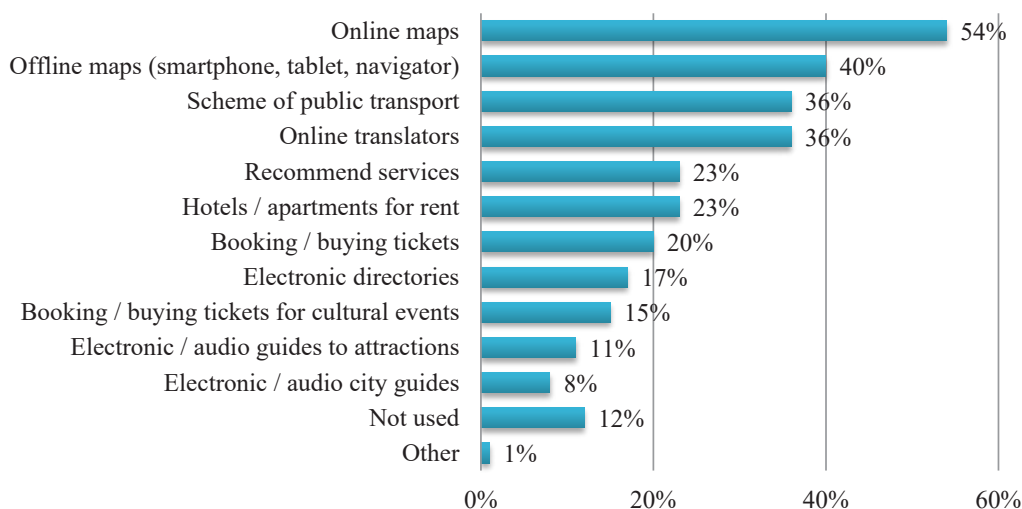


Figure 2. Services used by tourists during the trip (Google Ukraine, 2022)

4. The main prospects for the use of interactive information technologies for the development of the tourism sector of the economy of Ukraine

In the context of the COVID-19 pandemic and the periodic introduction of quarantine measures in all regions of Ukraine, from the author's point of view, it is advisable to use interactive information technology to promote the development of the tourism sector of the economy of Ukraine.

One of the areas of the game technologies application is gamification. In the World Travel Market in 2011 Euromonitor International (Chkan, 2012) gamification was identified as a new trend in the tourism development, and since then research, seminars, studies of industries in the field of gamification have begun to be conducted all over the world in order to adapt it to the tourism sphere. Gamified products, in addition to being a tourist product, can also be an independent marketing tool which pushes the tourist to make a decision to travel to the destination.

Unlike gamified travel products, products that partially use gaming and interactive technologies can be conducted both entirely in virtual reality (VR-tours) and in real life, but using additions in so-called "Augment reality" (AR-tours).

Interactive information technologies presented in the field of tourism can be systematized on the basis of two key factors: the physical presence or absence of the tourist who uses them in the tourist destination, and the presence of a system of motivation to achieve an intermediate or final goal. The proposed classification is presented in table 1.

Application of interactive technologies can serve as a new driver of the tourism sector development. It allows to create new competitive advantages of each region of Ukraine and to differentiate on the base of personalized approach and the principles of customer orientation.

The tourism development in Ukraine should be accompanied by consistent actions to overcome the conditions and factors that cause dissatisfaction of the population and create new opportunities to improve the standard and quality of life, preservation and development of human capital. This motivate the

residents to support actively the tourism prospects and participate in projects, that is, it allows to achieve constructive social activity of the population.

In the involvement practice special tools can be used (Figure 3), that ensures the creation of certain external incentives and circumstances aimed at providing new opportunities to the population through its development and training.

Support and participation of the population of Ukraine in the tourism sector is possible only in the conditions of the industry development on the principles of sustainability, reproduction of cultural and natural resources of the territory and preservation of a unique look and local way of life. Manifestation of socio-economic activity of the population is an entrepreneurial initiative. The prerequisite for the overall development of the tourism sector of the economy is the creating of the favorable conditions for the development of small business in the field of tourism and social entrepreneurship.

4. Conclusions

To sum up, we should note that tourism is a major socio-economic phenomenon, and its impact extends to the entire national infrastructure system. The growing market of information technologies, including mobile applications, does not bypass the tourism sector in Ukraine. At this stage, applications are being developed that promote the development of independent tourism, the introduction of services to order taxis, restaurants and more. Entities in the tourism industry themselves are actively implementing technologies to improve the service in the future, including hotels and transportation companies that successfully use online booking systems and various mobile applications.

In general, it should be noted that active development of the tourism sector of the economy of Ukraine will be promoted by the development of proposal for optimizing regulation in the field of tourism and competition in the market of tourism services, removing all barriers to the tourism development, comprehensive assistance in intensifying business activities in tourism, active introduction of information and communication technologies.

Table 1

Brief classification of interactive products for the tourism development

Motivational factors	The tourist is physically present in the destination	The tourist is physically absent from the destination
The tourist motivation system is present	– ticket booking systems that use dynamic pricing; – games in the field of "augmented reality" with a certain end result.	– virtual games that allow you to gain travel experience.
The tourist motivation system is absent	– tours (excursions) in augmented reality; – travel reviews forums.	– fully virtual tours (excursions) to museums, etc.; – travel reviews forums; – online booking platforms (booking.com, airbnb, etc.).

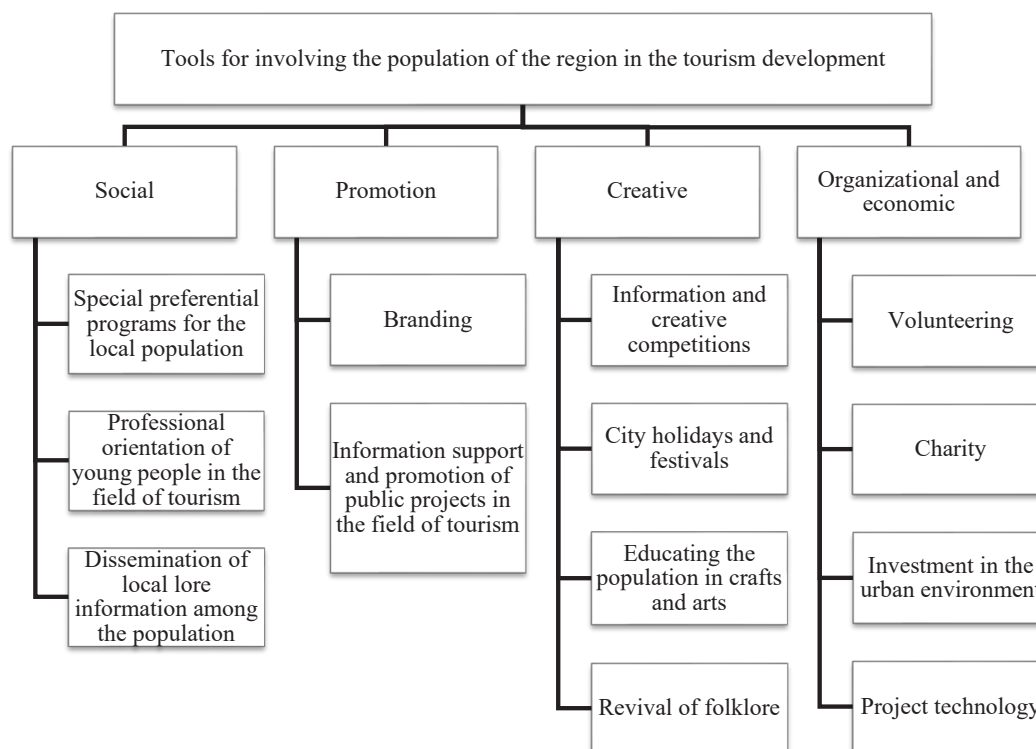


Figure 3. Tools for involving the population of Ukraine in the tourism development

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