

DIGITAL ECONOMY IN TOURISM INDUSTRY

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ABSTRACT

This article presents the results and the trends in the development of the tourism market in the context of the transition to a digital economy and changes in business processes in tourism that occur with the introduction of new information and communication technologies are considered. The characteristics of the latest digital technologies used in tourism now are given. With the advent of the twenty – first century, the world has entered the era of the most intense development of digital technologies in recent years. Along with this, a revolution is taking place in the information space. The process of globalization of the world economy is proceeding much faster. Such changes affect the life of every person, creating new opportunities, but at the same time, some global problems arise.

KEYWORDS

Digital economy •tourism market •financial resources •market segments •dynamic package of tours •venture financing •international capital •investment •digitalization •tourism

ACM Reference Format:

N. Karimov and N. Khujanazarova. 2021. DIGITAL ECONOMY IN TOURISM INDUSTRY. In *The 5th International Conference on Future Networks and Distributed Systems (ICFNDS 2021)*, December 15, 16, 2021, Dubai, United Arab Emirates. ACM, New York, NY, USA, 4 pages. <https://doi.org/10.1145/3508072.3508228>

1 INTRODUCTION

The object of research of the article is tourism, considered as a science. The work uses a descriptive method for a comprehensive disclosure of the topic, as well as a synthesis method that unites the positions of Russian scientists on this issue. The digital economy is a type of economic activity that focuses on electronic and digital technologies. This also includes e-business and commerce. The concept of the digital economy encompasses all social, business, economic and networked communication technologies. Don Tapscott first used the term in a 1995 book [1]. In recent years, the growth of the Internet economy has been the most significant. First of all, this is noticeable by the constant emergence of new digital platforms. In addition, social networks have a great influence on the consumer previously it was not so significant. Now, the Internet

is an integral part of human life. It is also, deeply embedded in banking, healthcare, education, tourism and other areas. The digital economy can be considered an activity that is closely related to the progress of computer and increased costs, which technology, combining services related to the provision of online services, as well as electronic payments, crowdfunding and trade.

1.1 as a result of the development of the countries of the world, the processes of globalization and integration between the states are developing accordingly. As a result, the development of the global capital market is leading to changes in both quality and structure. The main elements of the digital economy are the following:

- *Online games and online advertising;
- *Electronic commerce;
- *Electronic transfers and internet banking;
- *Blockchain and cryptocurrency;
- * Electronic transfers and internet banking;

The digital economy can be as digital manufacturing. At the moment approximately 50% of the world's population uses the Internet every day for the purpose of teaching or doing business. The amount sold through the web projected by pass other types of trade relationships. This is partly because electronic payments are much more reliable than transforming paper money. In virtual life, a large number of new ideas have implemented and new products are emerging. If there is a need to test a new invention, thanks to new technologies, it has been much better technologies. By emulating projects, scientists identify all their pros and cons at minimal cost. In a few more years, according to experts, the electronic economy will make great changes in the understanding of doing business and economic relationships. Every future businessman must understand that in order to successfully start his business, he must learn the basics of the digital economy:

- market economy
- the theory of the efficient market;
- mixed economy.

2 LITERATURE REVIEW

The key factor in the development of the economy in modern conditions is the data presented in digital form. In this regard, IT technologies play a dominant role in ensuring the competitiveness of companies, industries and entire states. Widespread digitalization involving the fundamental changes in the process of business organization, the primary impact of the digital economy has on the service sector a variety of trade, transport organizations, catering enterprises, hotels and tourism are undergoing a serious transformation. With the help of the latest digital technologies, businesses manage to expand their target audience, advertising coverage and improve the quality of customer service in the shortest possible time. These and other achievements of digitalization allow businesses

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ICFNDS 2021, December 15, 16, 2021, Dubai, United Arab Emirates

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ACM ISBN 978-1-4503-8734-7/21/12...\$15.00

<https://doi.org/10.1145/3508072.3508228>

to develop at an accelerated pace remain competitive because in the conditions of the fourth industrial revolution, only those companies whose arsenal will involve the most scientific research. For example, in the research work of Frolova E.A. [2], the problem of changing tourism under the influence of global economic trends is raised. Ustinova N.G [3] and Bagamazova I.V. [3], analyze the processes of digital transformation of the industry. Ozimina L.A. [4] and Pastukhova A.E. [5], the main digital channels for promoting tourist services are considered and highlighted. Osipova N.I. [6], notes the impact of digitalization on the development of CIS tourism. Kryukov V.Yu [7], Itsakov E.D. [8] and Alyamkina A.V. [9], assesses the transition to online booking of tourists from Western countries.

According to world statistics, tourism is the most profitable area of any state. Analyzing the development of the tourism industry in Uzbekistan over the past decade, it is necessary to note the outlined successes in the development of domestic tourism. These changes are taking place with the widespread use of innovative technologies and measures taken in the country. So, according to the Association of Tour Operators and the Minister of Tourism and Sports Mr. A.Abdukhakimov, the total number of trips of foreign citizens to Uzbekistan amounted to 1.5 million compared to the data for 2020. Foreign analysts also note this trend, E-Marketer, a digital economy research firms. According to the company's analysts, the growth of the Uzbek market for online travel booking will double. This will have facilitated by the transition of sales channels from offline to online and increased costs, which contributes to the sustainable expansion of tourism as per sustainable development program as:

Understand the impact of economic, sociocultural and environmental impact of tourism;

Identify the key actors in the sustainable tourism to understand the role and possibilities of each stakeholder to contribute to the development of sustainable tourism;

Understand different types of ecotourism, motivation of Eco tourists and main principles of this sector of tourism;

Identify the main tools required for the sustainable development of tourism.

The growing car rental sector, the proliferation of service provider websites, and a host of factors demonstrate that this dynamic market is worth watching. In addition, the gradual recovery of the economy after COVID-19 and the promotion of domestic tourism will allow consumers to spend more money on travel an important aspect of the lives of many. Tourism is a productive and rapidly growing service sector around the world. This complex is very popular today and is in great demand both among those who want to go on vacation, and among professionals who want to find themselves a prestigious job. Almost every seventh person works in this area, and every 5 is planning a vacation. Today, tourist's expenses are very high money has spent every day on trips, accommodation and meals.

Today, the tourism sector is developing and exists in two trends:

Direct influence of external economic and political factors on it;

The ability in adverse situations to quickly restore their work and all its volumes.

Considering the current situation in the world and in the global economic market, there have been some changes in the tourism economy. Today's tourists began to think about saving money on

vacation. This is due to prices as well as the distribution of vacations by seasons. There are many cases of unplanned vacations, which do not allow pre-booking tours or plane tickets. Also, the cash expenses during the holiday itself have significantly decreased, but this does not stop tourists. This potential indicates that tourism has become well established among people and has become an integral part of the life of a modern person. Tourism is widespread in all countries of the world and in Uzbekistan as well. Recently, travel has become popular within the country, as well as in the near abroad.

For example, the digital economy and society index which includes 5 dimensions:

Connectivity (fixed and mobile broadband, prices);

Human capital (internet use, basic and advanced digital skills);

Use of Internet services (citizens' use of content, communication, online transactions);

Integration of digital technology (business digitalization, e-commerce);

Digital public services are (e -government, e-health).

The index consists of five main indicators, which are subdivided into three levels. Five indicators are located at the first level, namely Connectivity, Human Capital, Use of Internet, and Integration of Digital Technology and Public Digital Performances. At the second and third level, these five indicators are specified and divided into 13 subgroups of the second level and 34 subgroups of the third level. After determining the indicators of the second and third levels and bringing them into a comparative form through the coefficients provided by the calculation methodology, there are 5 indicators of the first level, each of them corresponds to a specific weighting factor.

3 DATA AND METHODOLOGY

The authors compared the trends of digital economy penetration into the tourism industry in European countries and Uzbekistan. By comparative analysis, the main achievements and negative aspects are highlighted the vectors of the industry development are analyzed. The digital platform of the tourism sector "Tourism 4.0" is working in some companies in Uzbekistan because the tourism industry is subject to the trends of the global economy. The most important trend allows companies to explore new tourist markets and business models are the widespread penetration of elements of digitalization. Digitalization offers technologies, approaches and tools that can increase the value of a tourist product. The potential of digitalization of business in the tourism sector depends on the financial and technological capabilities of each entity and the industry as a whole. In recent years the Uzbekistan tourism market has significantly increased its volumes. Online booking services in our country have serious growth prospects, while classic travel agencies will also continue to exist. Tourism is currently one of the largest and most promising sectors of the world economy. It plays a significant role in creating jobs, export earnings of a large number of countries, in the total contribution to GDP. Despite the existing political differences, the imposition of sanctions, regional conflicts, the number of international tourist destinations is steadily growing every year.

The digital economy is based on the integration of ongoing business processes at all levels, by providing access to information about the activities of all systems, often in real time. To ensure the functioning of a unified information system, meet all the requirements for the information and communication environment and the services used. However, it should be understood that the tourism sectors its significantly fragmented and therefore many components of the sector like housing, restaurants, transport, catering number of problems when it comes to digitalization of the industry. Coming back to the result of the index has calculated using the following formula:

$$EGDI = \left(\frac{1}{3}\right)(OSI + TII + HCI)$$

Where:

OSI – the quality index of the state's online services;

TII – State telecommunication infrastructure development index;

HCI – Human capital development index.

New opportunities that open up for a person due to the development of the digital economy are undoubtedly positive changes that open up new opportunities in almost every field of activity. With the development of digital technologies, the consumer can receive ordered services much faster, as well as save money, since prices on the Internet are often lower than those offered by offline businesses. Another striking example is the purchase of an electronic version of a book, which will be much cheaper than a printed analogue. In addition, each person has the opportunity to purchase the necessary product at a wholesale price, by negotiating with other customers. Thus, a rather large amount can be saved in a year.

Another significant advantage is the ability to start your own business from the comfort of your home. You just need to choose a suitable area for this:

- Increasing the number of representatives of the middle class and overcoming social inequality;
- Growth in labor productivity;
- The emergence of new jobs;
- Increase in the number of competitive companies;
- Reduced production costs.

These are far from all the positive aspects of the digital economy. There are many more of them and they all depend on the specific field of human activity.

- "Digital divide". This refers to the inequality in digital education, since not all people have access to digital products and services, which directly affects their well-being;

- Threats from hackers. To protect the personal data of your customers, you need to carefully build a security system, but not every business has such an opportunity;

- Growth of unemployment. In the labor market, with the advent of new online services, some professions or even entire industries are gradually disappearing;

- Many experts are of the opinion that such progress will affect the disappearance of the banking system and this will happen in 10-15 years. This situation is possible against the backdrop of the rapid development of digital products;

- As soon as a person begins to actively use the Internet, he has to enter personal data in the questionnaire. Globally, using

information about people to influence their behavior has called digital slavery.

4 RESULTS AND DISCUSSION

A key factor in the digital economy is information that is provided digitally. In the future, the use and processing of this data is used to improve efficiency, productivity, and quality in certain types of production, which as a result affects the technology and equipment at the time of sale, storage or delivery of products.

For a better understanding, an example of the digital economy is any activity in this area that has a connection with the Internet. That is, it can be any organization partially or fully connected with the network. Electronic technology is often associated with essential aspects of operation, such as analysis, management and control, the delivery of goods and the provision of services. This can also include marketing and logistics.

For example, Uber is one of the tech companies that builds its relationship with customers through an app. Thus, consumers began to use a new type of service delivery, which significantly reduced the cost of travel. Sometimes, traditional companies are deliberately moving into the digital economy.

As an example of such a transition, we can consider the situation with "Pyaterochka" supermarket chain in Russia or "Korzinka" supermarkets in Uzbekistan. The administration found that over 60% of resources are spent on maintenance. Therefore, it was decided to launch digital transformation through a partnership with IBS. Thus, new technologies were introduced, thanks to which there was a transition to a more modern business models like:

- Transnational corporations;
- What is a marketplace;
- What is take holding;

Basic tools in digital economy - There are 4 main instruments of the digital economy, namely:

Blockchain - This technology used to work with cryptocurrency. Now, there are more than 100 varieties of it in the world. As a tool, blockchain designed to store data. If technology continues to develop at the same pace, the burden on banks will soon decrease significantly. The situation will also affect the work of state bodies and notaries;

Bigdata - This term used to understand the huge amount of data that processed daily through special software tools. The concept also combines programs that help to store and process all incoming information;

Information technology - Here we are talking about data processing using artificial intelligence. Experts believe that

soon artificial intelligence will be able to regulate and create situations that were previously only possible for humans. Thanks to the introduction of modern technologies, now, many processes and systems automated;

Internet of Things (IoT) - This technology appeared against the background of the production of a huge number of devices that allow using the Internet for various purposes. As a result, there are more of them than the people themselves who used the Internet. IoT is a network of objects in contact with the outside world or with each other without human intervention. Thanks to technology,

regardless of the sphere of the economy, many processes automated, which eliminates the need for human labor.

Today, in the tourist environment, work is being actively carried out to promote the dynamic packaging of tours to the market. This is a new technology for the formation and sale of a tourist product by direct access to the resource systems of airlines, hotels and aggregators of tourist services. The professional community discusses its impact on the tourism market and the benefits for agencies and tourists. The experience of countries developed in tourism terms shows that, in the short term, dynamic design will become the technological basis for a new strategy for the development of the global tourism industry. Recently, the share of packages created using this technology has accounted for half of the volume of tourism products sold on the European market. The high technological efficiency of the product is ideal for online bookings. Online tour sales are growing in Europe mainly due to dynamically generated packages. The new technology is of great importance for expanding the geography of the tourist product. It allows you to bring to the consumer a separate resource of small resorts and individual accommodation facilities. This solution makes available regions in which the organization of charter programs is not possible. Essentially, the new technological model for organizing the tourism industry will provide benefits for all market participants from consumers to travel service providers of airlines, hotels, airports and etc. The online dynamic design service from tour operators is an example of a new free solution for travel agencies that allows you to quickly and easily find the best prices for hotels and flights. The introduction of new technologies will make it possible to occupy new segments of the tourist market targeted at millennial's young people aged 21 to 35. Usually consumers in this group are spending more and more money, so any business is very interested.

Speaking about the digital economy of Uzbekistan, three main groups of technologies distinguished here:

Near future;

Gradually introduced;

Breakthrough.

The first group is the human-machine interface, quantum computing, business drones, and cryptocurrency. The second group combines digital platforms, business applications for smartphones, integrations and chatbots. The third group is the combination of the Internet of Things, big data, blockchain, augmented reality and artificial intelligence. President Shavkat Mirziyoyev signed a decree "On approval of the Digital Uzbekistan 2030 Strategy and measures for its effective implementation". A wide range of measures is planned as part of the strategy implementation. During the digital transformation of regions and industries in 2020-2022 expected to increase from 78% to 95% of the level of connection of settlements to the Internet, including by increasing up to 2.5 million broadband access ports, laying 20 thousand km of fiber-optic communication lines and developing mobile communication networks.

5 CONCLUSION

This paper makes analysis of the future of digitalization in tourism industry will be accompanied by a further process of ousting traditional companies with offline offices from the tourism market, the development of the design of tours according to the parameters

individually set by each specific client. Consequently, the competitive advantage will be given to those travel organizations that can best implement the customization process in the provision of travel services consumers. The digital economy can be perceived as an economic activity, where information in digital form is used as a key factor of production, as well as the processing of large amounts of data, after which they are used for analysis. When compared with more familiar forms of management, in this way it is possible to influence the efficiency of certain types of production, technologies and equipment. Based on research by Booking.ru, the world's population interested in artificial intelligence, smart technologies. Today chat bots can replace live communication with a consultant, because they are capable answer various questions from users like, for example, Kayak - the chatbot makes recommendations and travel tips from shopping air tickets, taking into account the available user budget, ending with a recommendation to sightseeing in the desired locations. However, the use of mobile devices and also mobile applications significantly simplify the work of tourist enterprises due to the fact that personalization in the field customer service enables organizations collect the necessary data about the client cost structure, their preferences and interests, as well as other information that allows you to carry out various marketing research, resulting in improved quality services provided. The digitalization of tourism is acquiring various forms of manifestation, which include the online purchase of ready-made tours formed by tour operators, and individual tours developed through mobile applications or computer software systems intended for both tour operators and tourists. Today digital technologies are rapidly penetrating all spheres of human life. In turn, the states that have taken the path of such development in a timely manner achieve success and those countries that work in the old way are lagging behind progress.

REFERENCES

- [1] Don Tapscott first used the term in a 1995 book
- [2] Frolova E.A. "Digitalization in CIS countries" Moscow 2001.
- [3] Ustinova N.G and Bagamazova I.V. "Digitalization in tourism industry" Kiev 2015.
- [4] Ozimina L.A. "Digitalization in 21st century. Georgia 2018.
- [5] Pastukhova A.E. "Kazakhstan in IT development (2018). ICT and economic growth-Comparing developing, emerging and developed countries.
- [6] Osipova N. A. (2019). "Successful digitalization in society"
- [7] Kryukov V.Yu (2021). Education and Science. Moscow.
- [8] Itsakov E.D."Digital transformation of the world economy" Baku 2017.
- [9] Alyamkina A.V. "Tourism industry in digitalization". Ukraine 2016.
- [10] Akhmedova A.S. Possibilities of practical application of blockchain technology / Innovations in science: scientific journal - 2018. - No 10 (86).
- [11] Parshina M.V. Digital Technologies as a Tooling Influencing Consumer Choice in Tourism // Education and Science in Russia and Abroad. 2019. # 2 (50). S. 495-500
- [12] Starodubtseva E.B. - Digital transformation of the world economy.
- [13] Chris Anne Wright. 2015. Digital Tourism.
- [14] S-D logic -informed customer engagement, integrative framework, revised fundamental propositions and application to CRM.
- [15] Skog D.A.2019. The Dynamics of Digital Transformation: The Role of Digital Innovation, Ecosystems and Logics in Fundamental Organizational Change.
- [16] Zhen Richard Tang and Robert F. Lusch 2018. Open Innovation World Scientific Book.
- [17] Information technologies in tourism: Textbook /S.V.Sinorov, O.V.Pikulik, N.V.Bochenin. ISBN 978-5-98281-267-4.
- [18] Lundberg, Donald E. Krishnamoorthy M and Stavenga, Mink H. (1995).
- [19] Tourism Economics. NY: John Wiley and Sons.
- [20] Ritchie J.R. Brent and Goeldner, Chuck R. (Editors) 1994.Travel, Tourism and Hospitality Research: A Handbook for Managers and Researchers. 2nd edition NY.