

The Impact of Digital Technologies on the Transformation of the Tourism and Hospitality Industry

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Abstract

The article deals with the assessment of the impact of digital technologies on the transformation of the tourism and hospitality industry. It is established that the tourism and hospitality industry is information-rich since it is characterized by a variety of business relationships with partners, dynamic character of business processes, customization of tourist and hotel services, technological improvement, and a highly competitive environment. It is proved that the development of the tourism and hospitality industry becomes impossible without the implementation of state-of-the-art digital technologies that provide integration and communication, improve service quality, and transfer a significant amount of information. The authors note that various types of digital technologies are used in the practical activities of enterprises in the tourism and hospitality industry, such as global distribution systems, booking and reservation systems, electronic information systems, management information systems, mobile communication systems, and global computer Internet services.

Key-words: Digital Technologies, Tourism and Hospitality Industry, Booking, Reservation, Management, Marketing.

1. Introduction

A significant place in the development of the tourism and hospitality industry is occupied by the issues of ensuring a sufficient level of digitalization of the activities of business entities, which allows managers to timely draw the right conclusions and make appropriate managerial decisions to improve the performance of tourism and hospitality enterprises.

In this context, using modern digital technologies in the economic activities of enterprises in the tourism and hospitality industry, in particular, in accounting, marketing, and management, is becoming increasingly relevant. This is because such specialists have to constantly solve the problems of using digital technologies in the processing of economic information in various areas of economic activity of the tourism and hospitality industry enterprise.

At the same time, the impact of digital technologies on the development of the tourism and hospitality industry is significant, since it is directly related to improving the performance efficiency of both business entity, and the entire tourism and hotel business in general. This directly affects the competitiveness of the enterprise in the tourism and hospitality industry. Therefore, the use of digital networks, the Internet and online technologies, software products for end-to-end automation of all business processes in the tourism and hotel business is currently not just a matter of leadership and creating competitive advantages, but also survival in the current market in the foreseeable future.

The study of issues related to the development of the tourism and hospitality industry is reflected in the works of M.V. Voitenko (2016), O.A. Geshko (2020), E.A. Dzhandzhugazova (2019), M.A. Morozov (2019), M.S. Oborin (2019), V.Yu. Shaigardanova (2020), and others. At that, there are currently no clear determinants of the impact of digital technologies on the transformation of the tourism and hospitality industry.

2. Methods

The theoretical and methodological basis of the research included an abstract-logical method, methods of induction, deduction, analysis, synthesis, and systematization, used to justify approaches to determining the impact of digital technologies on the transformation of the tourism and hospitality industry.

The information base of the article included statistical data of state bodies, legislative and regulatory documents governing the development of the tourism and hospitality industry in the context of digitalization, as well as the results of scientific research (Agamirova et al., 2017; Zavalko et al., 2017; Zhukova et al., 2020).

The research aimed to systematize the development features of the digital technologies in the tourism and hospitality industry, to develop measures aimed at coordinating activities between the main participants of the digital process in the tourism and hospitality industry, and to determine its individual features in the context of recent changes.

3. Results

The practice has shown that the contemporary tourism and hospitality industry has undergone very significant changes in the recent period due to the implementation of new digital technologies. In these circumstances, the success of any company in the tourism and hotel business market is almost impossible without using state-of-the-art digital technologies.

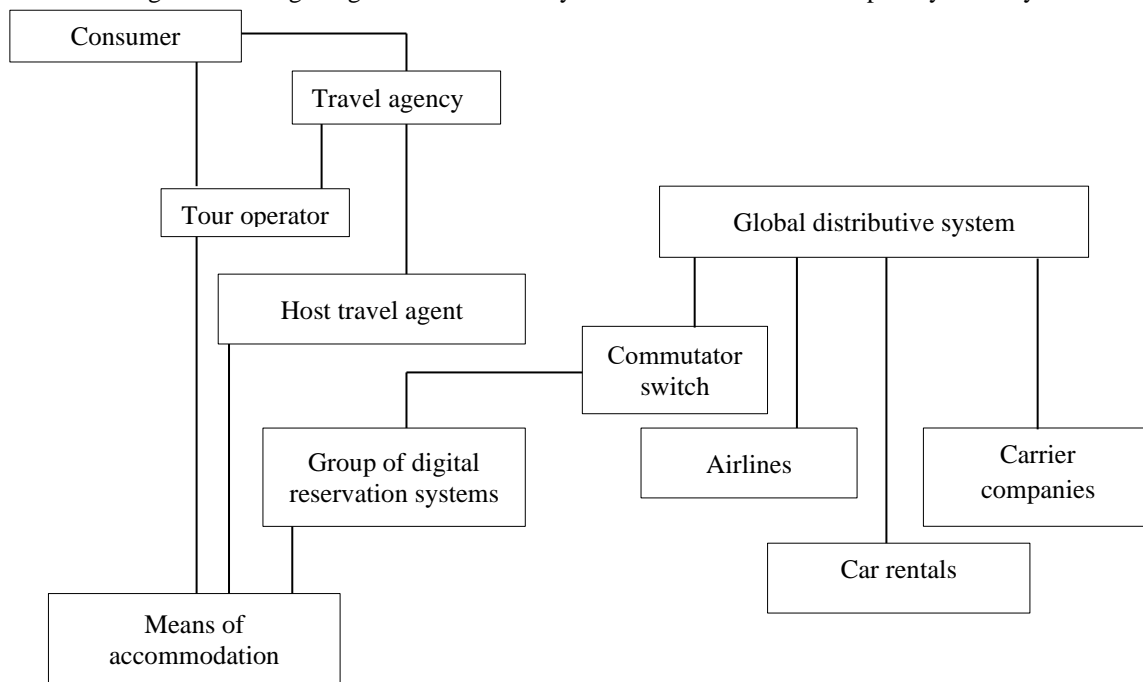
The specifics of the development and implementation of the tourism and hospitality products require such systems that promptly provide information about the availability of vehicles and accommodation facilities for tourists, ensure quick reservation of travel tickets and hotels, as well as automate solutions of additional tasks when providing tourist and hotel services (simultaneous release of documents, such as travel tickets, accounts, and guides), as well as providing bills and reference information.

All this can be achieved through the widespread use of modern digital technologies in the tourism and hospitality industry. However, the tourism and hospitality industry is multifaceted and requires using a wide variety of digital technologies, ranging from the development of specialized software tools that automate the work of an individual travel company or hotel, to the use of global computer networks.

Currently, forming the tourism product involves the use of global distribution systems that provide fast and convenient booking of travel documents, hotel rooms, car rentals, currency exchange, as well as tickets for entertainment and sports events (Fig. 1).

Videotext is also widely used in the tourism and hospitality industry since it combines the capabilities of computer reservation systems and e-mail. Such a system contains information about tourism and travel, as well as offerings from tour operators, railway lines, ferries, hotels, and airlines, and is easily accessible to consumers.

Figure 1 - Using the global distributive system in the tourism and hospitality industry



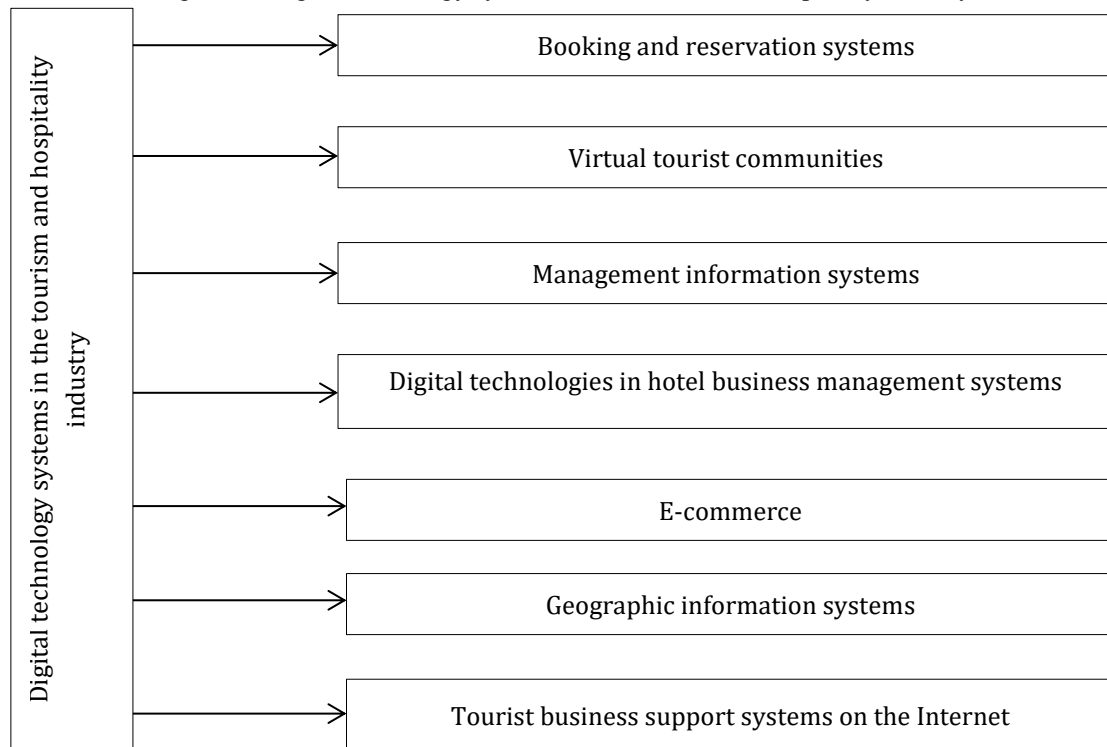
At the same time, the tourism and hotel business is one of the most dynamic economic sectors and is an extremely information-rich industry. In other words, the collection, storage, processing, and transmission of up-to-date information are the most important and necessary condition for the performing of any enterprise in the tourism and hospitality industry. In this context, the success of the tourism and hotel business directly depends on the information transmission and exchange rate, its relevance, timeliness, adequacy, and usefulness.

In this regard, the successful development of this area involves the widespread application of the latest technologies in the field of both creating tourism products and promoting them to the services market. Modern digital technologies are being actively implemented into the tourism and hospitality industry, and their use is becoming an essential condition for improving the competitiveness of any tourism and hotel enterprise. Besides, the tourism and hospitality industry allows using all the variety of digital technologies, starting from specialized software products for managing an individual firm to the use of global computer networks.

Currently, the tourism and hospitality industry uses the latest digital technologies, such as global computer reservation systems, integrated communication networks, multimedia systems, and information management systems. These digital technologies are used with different activity rates and have different distribution. The extent of their influence on the development of the tourism and hospitality industry also differs.

At that, the impact of digital technologies on tourism is felt at different stages of the creation and progression of tourism products. But most of all, they affect the promotion of tourism and hotel products. First of all, this concerns the possibility of using booking and reservation systems, virtual tourist communities, and information technologies in hotel business management systems (Fig. 2).

Figure 2 - Digital technology systems in the tourism and hospitality industry



Today, electronic-based technologies penetrate the traditional tourist and hotel business. In particular, this concerns e-commerce which is actively penetrating the tourism and hospitality industry. There are already electronic tourist offices that allow any credit card holder to purchase a tour, book a seat on a plane or a room in a hotel, purchase tickets for entertainment events, and rent a car anywhere in the world. Thus, digital technologies have provoked the creation and application of fundamentally new electronic marketing channels for tourism product promotion and sale.

Thus, computer reservation systems made it possible to speed up the process of booking air tickets and implement it in real-time mode. As a result, the quality of services has improved by reducing the time of customer service, increasing the volume and variety of services offered. Besides, this has allowed ensuring the loading of aircraft, implementing a flexible pricing strategy, and applying new managerial approaches.

The high reliability and convenience of such reservation systems contributed to their rapid and widespread adoption. At the moment, most companies in the tourism and hospitality industry use such reservation systems. At the same time, one of the main areas of digital technologies applied in the tourism and hospitality industry is the implementation of multimedia technologies, in particular, reference guides and catalogs. Currently, tourist guides and catalogs are available both in printed form and on the Internet.

Besides, electronic catalogs allow traveling virtually along the proposed routes, viewing these routes in active mode, getting information about the country, objects along the route, information about hotels, campsites, motels, and other accommodation facilities, getting information about benefits and discounts, as well as legislation in the tourism sector. At that, these catalogs usually contain information about the rules for processing tourist documents, tourist formalities, and the behavior of tourists in extreme situations. The customer can plan the tour program, and choose it according to the specified optimal parameters (price, benefits, transport, hotel, and season).

Therefore, using digital technologies allows a potential client to quickly get information about any tour that is of his interest, and thus quickly and accurately select exactly the right tourism product. At the same time, the tour operator has the opportunity, if necessary, to make changes to this tour or create a new exclusive tour, make proper reservations and sell tourism service created in the real-time mode.

Studies show that dramatic changes have occurred also in the management in the tourism and hospitality industry. The current development level of the tourism and hotel business, as well as the fierce competition in this area, give special importance to the digital systems of travel agencies. The functionality of these systems should provide input, editing, and storage of information about tours, hotels, customers, the current status of applications, as well as provide information output in the form of various documents, such as forms, lists of tourists, descriptions of tours, hotels; calculate the price of tours taking into account the current exchange rate and discounts; control the payment of tours, generate financial statements, carry out data export and import, and create other software-generated products.

These systems not only speed up the calculation and preparation process of relevant documents but also allow reducing the cost of tourism and hotel services by choosing the best-priced option for customer's trip, accommodation, entertainment, etc. However, creating an individual digital automation system for a tourist office is quite expensive, and at present, there is no special need for this, since there are several standard software products that have proven themselves well.

The Russian market of software products is represented by several digital systems that allow automating the internal activities of an enterprise in the tourism and hospitality industry. As a rule, these systems provide input of reference databases of clients, hotels, transport, embassies, as well as allow leading tours, accounting for payments, accepting orders and working with clients, forming output documents. Almost all software systems form standard accounting reports and often ensure export and import of data based on specialized accounting programs.

Along with the automation of the tourism enterprises' performance in the tourism and hospitality industry, similar development of software is being carried out for automating operations of hotels, restaurants, and other enterprises of the tourism and hotel business. The use of information systems in this area leads to significant changes in management, as well as improves the quality of service in the tourism and hospitality industry.

The practice has shown that if the specialist of the company in the tourism and hospitality industry uses at his workplace personal computer, inputs information for processing using proper software tools that implement certain methods of qualitative transformation of information, then such a set of interrelated elements of a workstation is called a local automated digital system.

In this case, any automated digital system represents a combination of information, methods, software, and hardware tools and specialists that serve for data processing and managerial decision-making. First of all, the digital information system provides for the use of economic information and digital technologies that change the management technology, free users from time-consuming information processing procedures, and significantly increase the efficiency of decision-making.

At the same time, using digital technologies depends on the specifics of the object's activity (tourism company, hotel, restaurant). At that, if there is a need to automate in practice an additional section of economic information processing using appropriate digital technologies, then it is necessary to do the following: first, to describe the problem (to determine which documents and guides are used, and what is their structure, then, to build or describe an algorithm for transforming input information into output information, to calculate parameters, that is, to define the information support of the task); second, to choose the software and information processing methods; and third, to implement the solution of the problem using a personal computer.

4. Discussion

The reliability of the presented approaches is confirmed by the fact that when using digital technologies for processing economic information in the tourism and hospitality industry, it is necessary to know the algorithm for implementing the task (Lukiyanchuk et al., 2020; Ogloblina et al., 2020; Reznikova et al., 2020). In this case, the algorithm is a set of technological operations of the sequential transformation of information. Besides, using digital technologies also determines the choice of software – either typical or specialized.

Besides, in the context of fierce economic competition and a market economy, no successful enterprise in the tourism and hospitality industry can fully develop and effectively promote itself without modern automated digital technologies. Besides, the active use of profit optimization and tariff management systems has become a stable trend in the development of the international tourism and hospitality industry. Enterprises in the tourism and hospitality industry that actively use such systems gain a significant competitive advantage and achieve a noticeable increase in revenue.

Such a system works in real-time mode, analyzes the information received from the enterprise management system of the tourism and hospitality industry (booking trends, seasonal fluctuations, dynamics of previous periods), takes into account the specifics of market segments, and conducts reconstructions on pricing and tariff management. The recommendations concern both the strategy of the commercial policy of the tourism and hospitality industry enterprise in the medium and long term, and the daily actions of the ordering, sales, and placement departments.

At the same time, the implementation of the digital system opens up new opportunities for the effective solution of the main tasks of the tourism and hotel business. The application of the system allows the enterprise of the tourism and hospitality industry to implement resource-saving programs by reducing operating costs for the maintenance of communication systems, reducing energy consumption, avoiding peak loads, increasing labor productivity, improving the quality of work performed, as well as skills of employees.

5. Conclusion

Thus, one can conclude that the tourism and hospitality industry is information-rich since it is characterized by a variety of business relationships with partners, dynamic character of business processes, customization of tourist and hotel services, technological improvement, and competitive environment. In this regard, the development of the tourism and hospitality industry becomes

impossible without the implementation of state-of-the-art digital technologies that provide integration and communication, improve the quality of services, and transfer a significant amount of information.

Besides, various types of digital technologies are used in the practical activities of enterprises in the tourism and hospitality industry, such as global distribution systems, booking and reservation systems, electronic information systems, management information systems, mobile communication systems, and global computer Internet services. Thus, the conducted analysis of modern digital technologies in the tourism and hospitality industry shows their practical value and feasibility.

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