

Digital transformation in tourism and consumer behavior in the digital environment

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Abstract

Digital transformation, as one of the most significant processes of contemporary socio-economic development, affects all sectors of the economy, including the tourism sector. As one of the most dynamic economic branches, tourism is particularly susceptible to digital changes, such as mobile applications and social networks, because it depends on information, communication, and experiences of tourists. In the theoretical part of the paper, the digital transformation in the modern digital economy is described; the theoretical knowledge about digitization, digital trends in tourism, and the understanding of consumer behavior in the digital environment are presented. The aim of this work is to present the key aspects of digital transformation in tourism, analyzing its impact on business models, communication with consumers, and the creation of new trends. It lists key digital technologies, including artificial intelligence, big data, and mobile technologies, which companies use in the tourism sector to improve tourism services. By applying key digital technologies, along with the organizational changes of the company, the improvement of the quality of tourist service and a long-term competitive advantage are achieved, all for the purpose of satisfying the wishes and needs of consumers. Understanding consumer behavior in the digital environment has become crucial for organizations looking to adapt their marketing strategies and gain a competitive advantage.

Keywords: digital transformation, tourism trends, consumer behavior in the digital environment

1. Introduction

Within the framework of economic development, the emergence of digital transformation has strong effects on both tourism and all economic sectors, while simultaneously encouraging certain changes in the way organizations and society function. The process of digital transformation also brings numerous challenges, such as new investments for modern technology and addressing issues of data privacy and security.

The emergence of social networks and other forms of communication has significantly influenced consumers to change their way of communicating, as well as their perception and decision-making regarding tourist destinations and the use of services. The use of the internet and digital technologies in tourism activities has led to the development of innovations in the tourism industry, creating new business models that generate new value for users of tourism services. Besides technological aspects, digital transformation is closely linked to changes in consumer behavior. Digital consumers have become active participants in the market, using digital platforms and social networks for information, sharing experiences, and making decisions.

2. Theoretical framework of digital transformation in tourism

Theoretically speaking, digitization represents the use of digital technologies for the purpose of changing the business model and creating new value for companies (Gartner Glossary 2018). An organization is said to have digitally transformed its business if, with the help of digital technology, it changes its way of doing business in a short period of time, including not only the change in business but also the change in business models and processes within the organization.

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The theoretical framework of digital transformation implies the integration of digital technologies into all spheres of business and social activities, which changes not only business processes but also the way in which value is created and delivered to users (Verhoef et al., 2021). However, the process of digital transformation itself also brings numerous challenges through the need for constant investments in technology, where the importance of developing the digital competencies of employees in tourism, adjusting the regulatory framework, and solving issues of privacy and data security is highlighted (UNWTO, 2019). Today, digitization is increasingly seen as a necessity for the sustainable growth and development of the tourism industry (Gretzel et al., 2020).

The use of the Internet and digital technologies in tourism activities has led to the development of innovations in the tourism industry, creating new business models that provide new value for users of tourism services. Technological innovations have a great impact on the tourism industry because they enable the creation of a personalized experience for travelers and improve their overall satisfaction (Kindzule Millere & Zeverte-Riveza, 2022).

Tourism can be considered one of the first branches of the economy in which the digitization of business processes began through the service of online booking for airline flights and accommodation (Kindzule Millere & Zeverte-Rivza, 2022). Today, digitalization offers organizations as well as tourists significant opportunities to increase their operational efficiency, provide time savings, and achieve savings in resource use while focusing on strategic tasks, as well as developing new business models and internationalizing their operations.

The processes of digitization and digital transformation are changing the tourism industry, encouraging its growth and development based on technological innovations-Tourism 4.0. The adoption of technological innovations in tourism aids in business management, the development of innovative tourism products and services, and a better understanding of the tourism market (Kindzule-Millere & Zeverte-Rivza, 2022).

Digital transformation, based on the application of modern information and communication technologies such as the Internet, mobile applications, and social networks, as well as artificial intelligence (AI), represents a profound change in how tourist organizations function and communicate with their users. The transformation is reflected in the transition from traditional to digital channels of communication, reservations, and promotions, which significantly affects the overall user experience. These are key tools in modern tourism management related to Online Booking Platforms (e.g., Booking.com), mobile applications, artificial intelligence in personalizing offers, as well as presence on social networks (Apps Chopper, 2025). Technological development, special mobile applications, the Internet of Things (IoT), artificial intelligence (AI), and big data analytics (Big Data) enable tourism entities to enhance the experience of tourists and manage resources more efficiently. In addition, digital transformation allows the monitoring of trends, behavior, and preferences of tourists in real time, which is crucial for making strategic decisions (Li et al., 2008).

Furthermore, digital transformation enables tourists to quickly and easily search for destinations, book accommodation, follow offers, and rate services, while simultaneously opening space for service providers for innovative ways of promotion, digital marketing, and personalizing offers. However, the process of digital transformation also brings numerous challenges, such as the need for constant investments in technology, emphasizing the importance of developing the digital competencies of employees in tourism, adjusting the regulatory framework, and addressing issues of privacy and data security (UNWTO, 2019).

According to UNWTO (2019), the digital transformation of tourism can be viewed through three key dimensions:

1. Technological dimension-development and application of innovations such as AI, big data, and IoT in tourism. Social networks like Facebook, Instagram, and TikTok allow tourists to receive real-time information and recommendations while simultaneously shaping perceptions of destinations (Xiang & Gretzel, 2010).
2. Organizational dimension - adapting the business model to the digital environment. Many agencies and hotels have had to adapt to the competition from global online platforms such as Airbnb and Booking.com, which operate on a sharing economy model and mediate between supply and demand in the digital market (Guttentag, 2015).
3. Consumer dimension - changes in tourist behavior and their expectations. The digital transformation of business models in tourism is one of the most obvious effects of digital transformation as a change in business models in tourism.

2. Digital trends in tourism

The emergence of digitization has influenced changes in the way organizations operate when competing in the market, which implies an increase in the availability and consumption of tourist services. The use of the Internet and digital technologies in tourism activities has led to the development of innovations in the tourism industry, as well as the creation of new business models that generate new value for users of tourism services.

Emphasis is placed on digital trends that are present in tourism. One of them is the smart destination concept, characterized as an innovative tourist destination that intensively uses technological infrastructure to enhance the tourist experience for

visitors through personalization and educating tourists about the content and services that the destination offers (Xiang et al., 2015). A smart destination utilizes information and communication technologies as a foundation for innovation and competitiveness. Additionally, there is an increasingly frequent use of digital technologies such as artificial intelligence, virtual and augmented reality, and the Internet of Things (IoT). The application of the gamification model in tourism has been known for a long time; at the World Travel Market in 2011, Euromonitor International identified it as a tourism trend - a business model that results in a positive effect on user engagement, improved customer loyalty, brand strengthening, and an overall enhanced customer experience (Hordov et al., 2019).

3. Consumer behavior in the digital environment

The introduction of the digitization process significantly influenced the change in consumer behavior through new ways of informing, interacting, and making purchasing decisions. Schiffman and Kanuk (2004) define consumer behavior as the behavior that consumers show in searching, purchasing, using, evaluating, and disposing of products and services that they expect to satisfy their needs.

The digital environment is characterized by a rapid flow of information, constant availability of content, and active communication between consumers and brands. Namely, consumers are not passive recipients of information and messages but are active participants who search for new information, create content, and share personal experiences with each other.

The digital environment shapes new patterns of behavior where consumers are looking not only for a product but also for experience, values, and an emotional connection with a brand. When purchasing, consumers are not only looking for new products but also personalized messages about the same products and possible education about the use of new brands. Speed, transparency, and two-way communication are very important for consumers because modern consumers expect quick and immediate answers, information, and customized content.

Consumer behavior in the digital space is influenced by several factors: availability of information, trust in online sources, social influences, and technical characteristics of digital platforms. The availability of information in real-time allows users to make more informed decisions but also to quickly change their opinions in accordance with new knowledge or experiences of other users (Hunjet, Kozina, & Vuković, 2019). Trust is especially important because consumers often express doubts about the security of payment transactions as well as privacy protection. Also, online reviews and recommendations from other users are a key source of influence on purchasing decisions (Chevalier & Mayzlin, 2006). The basic characteristic of consumer behavior is that they intensively use digital channels when researching as well as purchasing certain products. Before making a decision, they first search for reviews, analyze comments from other users that help them decide whether to buy or refuse, compare prices, and then review comments on social networks, etc. This is a much more complex and serious process compared to the earlier period before the introduction of digitization and artificial intelligence.

Consumer behavior in the digital environment varies significantly depending on generational affiliation. Younger generations show a high degree of digital literacy and expect a highly personalized and interactive experience in every segment of consumption through the use of mobile applications, social networks, and review platforms when making purchasing decisions (Ahmad, Ismail, Saad, & Hama, 2025, p. 21). While older generations still show a greater preference for more traditional forms of communication and booking, they are gradually adapting to digital channels, especially when they offer them simplicity and time savings.

In the field of tourism, digitization has particularly affected all stages of consumer behavior, starting from the initial research of the destination, through the reservation of accommodation and transportation, to the sharing of experiences among consumers after the trip. The platforms they use are Booking.com, Airbnb, and TripAdvisor in order to be informed about the quality of service provision regarding the destination. All this influences more effective digital strategies that can increase customer satisfaction and competitiveness in the market.

4. Conclusion

Digital transformation has significantly influenced modern business in tourism and shaped new patterns of consumer behavior. With the development of information technology, the application of mobile applications and social networks has enabled consumers to have greater availability and speed of information, easier comparison of offers and prices, and the creation of individualized tourist experiences.

Modern tourists become active participants in the decision-making process, relying on online reviews and recommendations from social networks, while expecting fast, transparent, and personalized communication from tourist organizations. For the provision of services, this means the necessity of constant adaptation, innovation, and adoption of digital tools in order to meet the needs and expectations of consumers. These innovations can significantly improve the experience of tourists but require strategic planning and cooperation among all stakeholders in tourism.

In perspective, the synergy of digital transformation and consumer behavior is a key factor in competitiveness in tourism, and successful destinations and organizations will be those that can effectively combine technology.

In the future, further development of smart destinations, greater use of AI in the personalization of offers, as well as wider applications of virtual reality are expected.

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