



Information technologies as a tool for improving the tourist offer

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Abstract

In this paper, the advantages of the application of information technology in tourism for all participants in the tourism industry are analyzed. It is emphasized that traditional travel agencies have largely transitioned or are in the process of transitioning to online business via the Internet. Also, the fact that the Internet affects the reduction of the mediating role of travel agencies is highlighted. The paper deals with the research of the application of the Internet in the business of travel agencies, with a focus on opportunities for improving marketing performance. The goal of the research is to analyze the impact of modern communication methods and social networks on the quality of the offer of travel agencies and on the development of relations between agencies and customers. The possibility of improving the image of tourist agencies by using modern information and communication technologies was also analyzed. The results of the research show that a high participation of information technologies has a positive effect on increasing customer loyalty and improving the image of the agency. It is concluded that the business success of travel agencies in modern society is largely based on a high level of application of online business in combination with traditional business.

Keywords: information technologies, internet, tourism, tourist offer

1. Introduction

The emergence of modern information technologies has brought about significant changes in the business of the tourist market (Buhalis & Law, 2008). These technologies have had a profound impact on the operations of entities in the tourism industry, such as travel agencies and hotels, leading to increased effectiveness and efficiency (Buhalis & Law, 2008). Information technologies are applied across all segments of the tourism industry, including transportation services, travel agencies, and hotel companies (Buhalis & Law, 2008). The application of these technologies goes beyond computerizing individual business operations; it involves the creation of a unique information system that benefits organizations in various aspects of business management, research, and sales (Buhalis & Law, 2008).

The development of modern technology, particularly the internet, has accelerated the growth of tourism worldwide and contributed to the globalization and massification of tourist movements (Buhalis & Law, 2008). The internet has become the main sales channel not only in tourism but also in other economic activities (Buhalis & Law, 2008). It enables fast, massive, and cost-effective communication, leading to increased bookings, market expansion, cost reduction, and efficient business control (Buhalis & Law, 2008). The internet has also facilitated the formation of content databases used in marketing activities, giving rise to electronic marketing or internet marketing (Buhalis & Law, 2008).

the influence of information technologies on the business of travel agencies is evident in the shift towards online business (Barnett & Standing, 2001). This shift has resulted in the disappearance and reorganization of many agencies that adhere to traditional business practices (Barnett & Standing, 2001). The internet has provided opportunities for travel agencies to reach a wider audience and improve their marketing strategies (Barnett & Standing, 2001). However, it has also posed

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challenges, such as the need for travel agencies to adapt their business practices to survive in the changing landscape (Barnett & Standing, 2001).

The emergence of modern information technologies, particularly the internet, has brought about significant changes in the business of the tourist market. These technologies have increased the effectiveness and efficiency of operations in the tourism industry, including travel agencies and hotels. The internet has become the main sales channel, enabling fast and cost-effective communication. It has also facilitated the formation of content databases and the rise of electronic marketing. The business of travel agencies is shifting towards online platforms, leading to the reorganization of traditional agencies. Overall, information technologies have had a transformative impact on the tourism industry, shaping its structure and operations (Buhalis & Law, 2008; Barnett & Standing, 2001).

2. A overview of the development of information technologies

The development of modern information technologies has had a profound impact on various aspects of society, including economics, education, services, and industry. The development of modern information technologies also had a significant impact on the tourism industry and the economy as a whole. These technologies have revolutionized the way tourism businesses operate, transformed the travel experience for tourists, and contributed to economic growth and development. One area where modern information technologies have made a significant impact is in the realm of smart tourism Gretzel et al. (2015). Smart tourism refers to the integration of information and communication technologies to enhance the efficiency, sustainability, and overall experience of tourism activities. This includes the use of mobile applications, data analytics, and Internet of Things (IoT) devices to provide personalized recommendations, real-time information, and seamless interactions for tourists. Smart tourism has not only improved the travel experience for tourists but has also created new business opportunities and increased competitiveness in the tourism industry.

Digitalization has also played a crucial role in the economic development of the tourism sector (Boiko et al., 2022). The digitalization of tourism businesses has led to the transformation of traditional business models, enabling online bookings, personalized marketing, and targeted advertising. This has resulted in increased efficiency, cost savings, and improved customer satisfaction. Moreover, the digitalization of tourism has facilitated the integration of various stakeholders in the value chain, such as hotels, airlines, and tour operators, leading to more seamless and coordinated services. The use of modern information technologies has also contributed to the sustainability of the tourism industry (Flórez et al., 2022). Through the application of digital technologies, destinations can better manage their resources, reduce environmental impacts, and promote responsible tourism practices. For example, the use of data analytics and IoT devices can help monitor and optimize energy consumption in hotels, while mobile applications can provide tourists with information on sustainable activities and attractions. Furthermore, the development of modern information technologies has opened up new opportunities for rural tourism and wellness tourism (Wang, 2022).

With the increasing demand for wellness and health-related experiences, tourists are seeking destinations that offer opportunities for relaxation, rejuvenation, and personal well-being. The use of digital technologies, such as online platforms and mobile applications, has made it easier for tourists to access and book wellness-related services, such as spa treatments, yoga retreats, and wellness resorts. This has not only boosted the tourism sector but has also provided alternative sources of income for rural communities. The development of modern information technologies has had a transformative impact on the tourism industry and the economy. The integration of these technologies has led to the emergence of smart tourism, improved efficiency and sustainability, and created new business opportunities. Digitalization has revolutionized the way tourism businesses operate, enabling online bookings, personalized marketing, and seamless coordination among stakeholders. Moreover, the use of modern information technologies has contributed to the economic development of rural areas and the promotion of wellness tourism. As technology continues to advance, it is expected that the role of information technologies in the tourism industry will continue to evolve, shaping the future of travel and economic growth.

3. Application of information technologies in tourism

A crucial factor for the successful operation of a tourism business is the ability to forecast tourist demand and understand their behavior (Gan et al., 2022). This requires continuous market research to stay updated on the latest trends and preferences of tourists. Additionally, effective communication and information exchange within the organization are essential for tourism companies (Gan et al., 2022). One way to achieve this is by implementing an Internet, with two different networks, Intranet and Extranet. Intranet is an internal network that allows employees to communicate, exchange data, and access archives and documentation (Gan et al., 2022). The Intranet facilitates better communication, faster data exchange, and quicker availability of information within the organization. Another network that supports communication within tourism companies is the Extranet (Gan et al., 2022). The Extranet enables communication with remote parts of the company, such as branches in different cities or countries (Gan et al., 2022). It is a private network that is accessible to clients and associates of the tourism company under limited conditions (Gan et al., 2022). Both the Intranet and Extranet rely on the global Internet network for their functionality (Gan et al., 2022).

In highly developed countries, managers in tourism enterprises view the implementation of these technologies as an investment rather than an additional cost (Gan et al., 2022). They recognize the benefits of improved efficiency and effectiveness in operations, reduced errors, time and cost savings, and ultimately, higher profits (Gan et al., 2022). Automation of operations through these networks also helps to minimize business errors (Gan et al., 2022). Information and documentation can be exchanged between all sectors of the company and even branches located in different cities or countries in a minimal amount of time (Gan et al., 2022). The forecasting tourist demand and understanding their behavior is crucial for the success of a tourism business (Gan et al., 2022). Implementing an Intranet and Extranet facilitates effective communication and information exchange within the organization (Gan et al., 2022). These networks rely on the global Internet network and enable faster data exchange, improved efficiency, and reduced errors in operations (Gan et al., 2022). Managers in highly developed countries recognize the value of these technologies as investments that lead to higher profits (Gan et al., 2022).

4. Trends in the tourist market

The tourism industry operates through a value chain that connects various participants in the market (Song et al., 2012). These participants include suppliers (such as airlines and accommodation providers), tour operators, global distribution systems (GDS), travel agencies, and end customers (Song et al., 2012). The application of modern information technology, particularly the Internet and electronic business, has brought significant changes to the way tourism companies operate and collaborate with other industry stakeholders (Song et al., 2012). Traditionally, airlines and other carriers relied on travel agencies for distribution, but with the advent of e-business, they are increasingly targeting end customers directly to reduce distribution costs (Song et al., 2012). Hotels, on the other hand, have successfully utilized GDS systems to sell their services (Song et al., 2012). However, there is a growing trend among tourists to book accommodations themselves, bypassing intermediaries and accessing lower prices, leading hotels to offer online booking and payment options on their websites (Song et al., 2012). Tour operators are also embracing e-business to establish direct relationships with tourists and overcome the reliance on GDS systems (Song et al., 2012). By utilizing Internet technologies, tour operators can offer personalized services and enhance customer engagement (Song et al., 2012). Looking ahead, global distribution systems are expected to evolve into platforms that allow tourists to find and integrate individual tourism services, such as transportation, accommodation, and car rentals, into a comprehensive package (Song et al., 2012). This places GDS systems in direct competition with travel agencies, which have traditionally been their primary users (Song et al., 2012).

End customers, or tourists, are increasingly knowledgeable about new technologies and have access to various tools for direct communication with service providers (Song et al., 2012). They can use the Internet to research destinations, compare prices, and make online bookings and purchases (Song et al., 2012). The availability of multimedia content also allows tourists to gain insights into destinations, hotels, attractions, and share their experiences with other travelers (Song et al., 2012). The tourism industry has undergone significant changes in distribution due to the increasing adoption of electronic business (Song et al., 2012). Hotels are utilizing GDS systems, and tour operators are leveraging Internet technologies to establish direct relationships with tourists (Song et al., 2012). Global distribution systems are evolving to offer integrated services, and tourists have greater access to information and tools for direct engagement with service providers (Song et al., 2012).

5. The effects of the application of information technologies in tourism

Travel agencies are traditional intermediaries in the sale of services and have multiple roles. One example of a travel agency that has successfully embraced e-business and utilized modern information technologies is TravelWorld (Jovanović & Pavlović, 2022). TravelWorld is a medium-sized travel agency with multiple branches across different cities. They recognized the importance of the Internet and online sales in the travel industry and invested in building a strong online presence. By implementing an integrated e-business system, TravelWorld allows customers to access their website and browse through a wide range of travel services, including flights, accommodations, and tour packages. Customers can view available options, compare prices, and make online bookings and payments directly through the website.

The use of the Internet and e-business has allowed TravelWorld to expand its customer base beyond its physical branches. They have attracted customers from different regions and even international travelers who can access their services online. This has significantly increased their business and revenues. In addition to online sales, TravelWorld has also implemented an Intranet system within the organization. This internal network enables better communication and information exchange among employees. It allows them to access real-time information about bookings, availability, and customer inquiries, enabling them to provide immediate and accurate responses to clients. The implementation of e-business and the integration of an Intranet system have given TravelWorld a competitive advantage in the market. They have been able to streamline their operations, reduce costs, and provide efficient and personalized services to their customers. Despite being a medium-sized agency, TravelWorld has successfully positioned itself as a leader in the industry and has even started offering solutions to other travel agencies and smaller tour operators. Overall, TravelWorld's success demonstrates the transformative power of e-business and modern information technologies in the travel agency

sector. By embracing these technologies, travel agencies can expand their reach, improve customer service, and achieve significant business growth.

6. The effects of the application of information technologies in tourism

The application of modern electronic business to tourism in Serbia has brought about significant changes and opportunities for the industry specially in tourism. The increasing usage of the Internet in Serbia has paved the way for the adoption of electronic business practices in the tourism sector. While the level of Internet usage in Serbian travel agencies is still in the stage of improvement but still not sufficient application, it is expected that the future will see a significant shift towards to full electronic and online business, leading to changes in distribution channels within the tourism market.

In Serbia, travel agencies primarily rely on the use of applications from global distribution systems, with Amadeus holding the largest share in recent years. However, there is increasing competition from Galileo, which has the potential to expand significantly in the market. This competition is expected to drive innovation and the development of new applications in the industry. The long-term political and economic challenges in Serbia have been limiting factors for the growth of travel agencies. The unfavorable climate has made it difficult for small agencies to thrive, while larger foreign tour operators and agencies have been waiting for a more favorable environment to enter the market. The entry of multinational travel companies into the Serbian market pose challenges for small agencies, highlighting the need for stronger connections between small agencies at regional and national levels and the adoption of information technologies, particularly the Internet, in their business operations. For small agencies, the introduction of information technology represents an investment that can yield quick returns by reducing costs, strengthening their competitive position, and providing better services, ultimately leading to higher profits.

The application of modern electronic business to tourism in Serbia has the potential to transform the industry and contribute to its growth. The digitalization of tourism businesses enables online bookings, personalized marketing, and targeted advertising, resulting in increased efficiency and customer satisfaction Law et al. (2014). Furthermore, the integration of information technologies can contribute to the sustainability of the tourism industry in Serbia by enabling better resource management and promoting responsible tourism practices (Kim et al., 2013). The use of digital platforms and mobile applications also opens up new opportunities for rural tourism and wellness tourism, providing alternative sources of income for rural communities and catering to the increasing demand for wellness experiences (Sotiriadis, 2017). The application of modern electronic business to tourism in Serbia has the potential to drive growth, enhance efficiency, and improve the overall tourism experience. The adoption of information technologies, such as online platforms and mobile applications, can enable travel agencies to offer personalized services, streamline operations, and reach a wider customer base. As Serbia continues to embrace digitalization and information technologies, it is expected that the tourism industry will further evolve, contributing to the country's economic development and competitiveness in the global tourism market.

7. Conclusion

The paper highlights the need for travel agencies to adapt to the changing landscape of the industry by reorganizing their business activities and adopting modern information technologies. With increasing competition, agencies must recognize the importance of the Internet and online business in improving relations with tourists and other entities in the market. Although many agencies have already taken advantage of the Internet, there is still untapped potential to take full advantage of modern technology.

One of the challenges travel agencies faces is the risk of being overshadowed by online agencies that offer convenient booking and purchase options, potentially bypassing traditional agencies altogether. This poses a threat to small agencies, often run by owner-managers, who must struggle to keep up with the rapid advancement of technology. It is crucial for these agencies to take a proactive approach in reorganizing their business processes and embracing modern technologies in order to remain competitive in the market.

References

- Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the internet—the state of tourism research. *Tourism Management*, 29(4), 609-623. <https://doi.org/10.1016/j.tourman.2008.01.005>
- Barnett, M., & Standing, C. (2001). Repositioning travel agencies on the internet. *Journal of Vacation Marketing*, 7(2), 143-152. <https://doi.org/10.1177/135676670100700204>
- Gan, C., Wang, K., Voda, M., Jun, Y., & Chen, L. (2022). Analysis on the impact of technological innovation on tourism development: the case of yangtze river delta urban agglomeration in china. *Tourism Economics*, 29(5), 1251-1271. <https://doi.org/10.1177/1354816622110259>
- Song, H., Liu, J., & Gezhi, C. (2012). Tourism value chain governance. *Journal of Travel Research*, 52(1), 15-28. <https://doi.org/10.1177/0047287512457264>

- Jovanović, S. and Pavlović, S. (2022). Opportunities and limitations of travel agency registration in the public administration sector in Serbia. *Teme*, 303. <https://doi.org/10.22190/teme210119017s>
- Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. (2015). Smart tourism: foundations and developments. *Electronic Markets*, 25(3), 179-188. <https://doi.org/10.1007/s12525-015-0196-8>
- Boiko, M., Bosovska, M., Vedmid, N., Melnychenko, S., & Stopchenko, Y. (2022). Digitalization: implementation in the tourism business of ukraine. *Problems and Perspectives in Management*, 20(4), 24-41. [https://doi.org/10.21511/ppm.20\(4\).2022.03](https://doi.org/10.21511/ppm.20(4).2022.03)
- Flórez, M., Linares, J., Zambrano, E., Neto, F., & Sousa, B. (2022). Proposal for a framework to develop sustainable tourism on the santurbán moor, colombia, as an alternative source of income between environmental sustainability and mining. *Sustainability*, 14(14), 8728. <https://doi.org/10.3390/su14148728>
- Wang, S. (2022). Route planning of health care tourism based on computer deep learning. *Wireless Communications and Mobile Computing*, 2022, 1-11. <https://doi.org/10.1155/2022/4500009>
- Law, R., Buhalis, D., & Çobanoğlu, C. (2014). Progress on information and communication technologies in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, 26(5), 727-750. <https://doi.org/10.1108/ijchm-08-2013-0367>
- Kim, M., Chung, N., Lee, C., & Preis, M. (2013). Motivations and use context in mobile tourism shopping: applying contingency and task-technology fit theories. *International Journal of Tourism Research*, 17(1), 13-24. <https://doi.org/10.1002/jtr.1957>
- Sotiriadis, M. (2017). Sharing tourism experiences in social media. *International Journal of Contemporary Hospitality Management*, 29(1), 179-225. <https://doi.org/10.1108/ijchm-05-2016-0300>

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