

The Use of Digital Technologies in Tourism Management

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Abstract

In the conditions imposed by the pandemic, technology has helped provide digital travel options, leading to an even greater awareness of its importance in our lives. The ease of mobility and the power of information has led to a growth in the online tourism market; more and more travel platforms and apps have emerged, social media and global distribution have taken a well-deserved place in tourism marketing. Due to these factors and taking into consideration the growth of online tourism in recent years, as well as its expanding in the foreseeable future, it is imperative to continuously conduct studies concerning the integration of digital technologies in tourism management strategies. The purpose of this research is to evaluate the use of technology in tourism, focusing on the online travel agency market and its influence on tourism management and tourists' consumer behaviour.

Key words: tourism, digitalization, management

J.E.L. classification: Z3

1. Introduction

With the rapid development and implementation of information technologies, the tourism and hospitality sector has adapted and updated its use in all areas of activity, and in recent years, especially in the development of the online tourism market. Online platforms provide interfaces that allow customisation of customer (tourist) searches and facilitate choices to be made, while also providing valuable information on previous experiences of other customers. Favourable brand attributes and images increase the search and demand for tourist destinations among customers. With the development of specific online platforms and the growing trend towards new and more efficient ways of improving the service package and the offer and making them accessible to customers, expectations and requirements are rising.

From this context lies the need to understand the important role that digital technologies play in the design and delivery of tourism services and in the experiential value of tourism customers. The use of technology has a significant positive impact on tourism business development because it makes it possible to accurately analyse tourist preferences. Modern software applications can quickly respond to tourist preferences, assist in destination search and perform an evaluation of the organisation's tourist attractions. On the basis of this information, data about the profile of a tourist, the objects he/she visits, the time spent sightseeing, etc. can be analysed.

Underlining this importance, this paper aims to highlight the importance of the use of technology, especially online travel platforms, in the management strategies used and their potential and influence on customers. It also analyses the different online travel platforms, their place and role in the tourism market and the extent of their use by both tourism business owners and customers. Technology is part of everyone's lives and we need to use and exploit its positive side in every area of business.

2. Literature review

Digital marketing as a means of promoting a product or service has become an important part of the modern economy. Every major market segment is growing with the help of digital technologies, using them to increase sales, brand awareness and to create certain trends related to the activities of the company or organisation. Tourism sees digital technologies as the shortest and most efficient way to achieve its goal, as the end user can be thousands of miles away from the travel destination. That is why the use of technology plays an important role in the tourism industry (Ziyadin et al., 2019).

The tourism sector has seen an improvement in its global reach due to easy accessibility through the use of digital technology compared to traditional tourism. However, to create an impact on customers requires complex ways to make the tourism experience as favourable as possible. Technology can be used to enhance every stage of a journey leading to the creation of memorable experiences for tourists. Technology is also present in the interactions with services and touch points in the physical tourist destination or online space with various stakeholders, differentiating it from other experiences. Immersive technologies add value to customers through high levels of interaction and co-creation options (Flavian et al., 2019).

Technology-enhanced tourism experiences allow customers to actively participate and shape the creation of their experiences. Thus, customers interact with websites and various online platforms through comments, reviews and ratings, thus having the opportunity to share experiences (Tussyadiah Fesenmaier, 2009). The higher level of customer involvement in the tourism experience makes it a dynamic process between the company, the tourism customer and other consumers through a platform.

Technology has made it possible to create these online distribution methods/platforms in the travel industry that serve to improve the process of planning and booking a trip. Search engines, websites owned by travel companies and travel agencies using different business methods (merchant model, agency model or opaque model) facilitate the process of purchasing tourism services. The most important distributors of hotel accommodation services are online travel agencies (OTAs). They have emerged to expand hotel distribution channels and increase business opportunities, thus playing a critical role in the distribution of tourism products and facilitating access to potential customers worldwide (Park et al., 2019)

Kotler et al. (2017) defined OTA as a "travel agency that conducts business over the internet without physical locations or stores" (Kolter et al, 2017). According to Kim & Han (2007), OTA is an online travel agency that provides travel information as well as options for booking products and services (Kim et al, 2007).

Using the merchant model, OTAs buy hotel rooms at a discount and put them on sale at a profit (Denizci&Basak,2008). By doing so, OTAs accept the risk of the unsold offer and make a profit when a room is booked. Under the agency model, OTAs arrange bookings for hotel-owned stock at agreed prices that have been made available to them and receive an agreed commission for each. With the change in tourism technology more choice is being offered to customers and a very competitive environment has emerged among OTA providers. Since then, every OTA has tried to ensure a high level of customer satisfaction with online booking systems.

In 1996, the OTA giant Booking.com was founded and followed by several sister companies such as Agoda.com, based in Asia, and Kayak.com in the United States. The success of OTAs in distributing hospitality products and services led to the establishment of other OTAs. Many of the emerging OTAs attract their customers by selling several tourism products in addition to accommodation, such as air tickets, car rental or restaurant reservations. By offering more choice, OTAs are becoming the best alternative to travel. For this reason there is a great need for hotels, especially small ones, to be available in OTAs for greater visibility and also to meet consumer needs. (Toh et al., 2011).

Technology greatly influences customer expectations, their needs and desires are constantly evolving, which must be carefully managed. The use of technology in tourism management contributes considerably to brand image and customer satisfaction which have been widely confirmed as influential antecedents of customer loyalty. Customer satisfaction and loyalty in the hospitality industry is a critical issue to be addressed in dealing with an online travel agency.

(Serenko&Stach, 2009) The relationship with OTAs is based on an exchange between these partners, as the hotel feeds the OTA websites with information and the OTA attracts customers to the hotels (Chang et al., 2019). However, in terms of relationship between OTAs and hotels, the latter can be disadvantaged if they do not manage the situation well because the high fees charged by the platforms can reduce hotels' profit margins.

In this respect, when entering into a contract with an online travel agency, contractual provisions related to market exposure, securing rates and setting commissions should be taken into account. From a transaction cost theory perspective, hotels should benefit from a collaborative relationship in which OTAs can economically perform the distribution function. The hotel, in turn, will focus on its service and accommodation functions. Thus, some hotels with low visibility end up paying a commission-type fee to an online agency to increase their visibility and get more visitors. (Ling et al., 2011)

However, the setting of commissions paid is not the only way to establish a relationship between OTAs and hotels. Their cooperation is also made more effective by alignment of interests and commitment, as the relationship is specifically affected by the power and dependency between the partners. In this respect, research on inter-organisational relationships should be mentioned, whose relationships are often based on power conflicts over managerial decision makers and the development of trust.

To create and maintain a productive relationship, the mediating role of goal congruence is necessary. Industrial marketing research highlights how much symmetry and power asymmetry influence the development of trust in a counter-intuitive way and that goal congruence has an effect on this interaction (Cuevas et al., 2015). On the one hand power symmetry has a positive influence, and on the other hand power asymmetry has a negative influence on the development of trust in organizational relationships (Hingley, 2005a). The development of a trust-based relationship between organizations requires symmetry of power and information, with the balance of power being crucial between actors. When one party has more information than the other, it also has more contractual power and at the same time will not serve the interest of the other party.

As far as the relationship between hotels and OTAs is concerned, the asymmetry of power is caused by the fact that OTAs have much more information about the consumer and their purchasing options than the hotels themselves. In this respect, hotel managers should aim to establish relationships based on symmetry and trust. B2B relationships should be developed between OTAs and hotels by increasing trust through active cooperation and by sharing information and power equally.

3. Research methodology

The development of online tourism has led to the emergence of more online platforms and their diversification, with the value of online travel bookings peaking at USD 613 billion in 2021.

The information presented was obtained from previous research consisting of statistical data at an European and international level and a thorough review of literature. The collected data was analysed, selected and interpreted so as to provide truthful information. The data analysed concern the ways in which tourists book tourist accommodation, the extent to which independent hotels use online promotion and booking platforms; the criteria for choosing a tourist destination or accommodation using online platforms and the evolution of the online tourism market. We also analysed and presented the benefits of using online tourism platforms and how they are integrated into management strategies. In addition to data collection, observation and analysis were key activities for the study. As a result of these activities, important findings were and conclusions were drawn about the online tourism market.

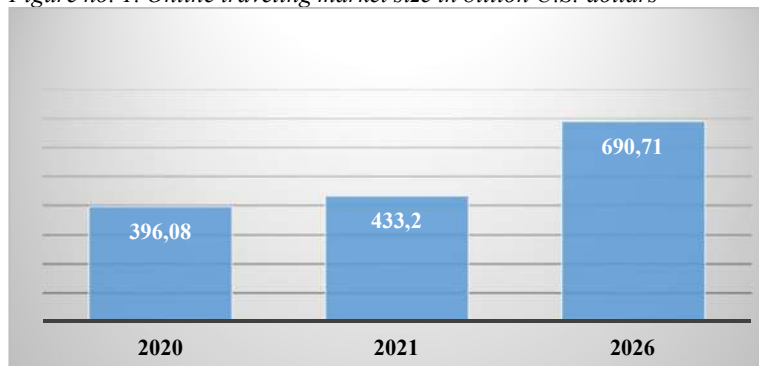
4. Findings

Interest in online travel services is growing worldwide. As most travellers have access to mobile phones and/or computers, online travel is easily accessible. The demand for online travel is also growing as a result of innovative travel apps that appeal to the general public, as well as social networks used to share videos, information and travel destinations. Higher booking rates are a result

of this information provided online, as well as reliable package deals and travel events. In addition, booking on social media has a higher conversion rate than booking on the website. These factors will increase the overall profit in the online travel market and further progress is expected in the coming years. (Global Online Travel Market Size to reach USD 1,835.6 Bn by 2030, 2020). Consumer intention to fly and book hotels online was 50% higher in September 2021 than in September 2020 (Deloitte holiday travel survey, 2021).

According to a market study by Spherical Insights & Consulting, demand for the global online travel market size and share has been estimated at around USD 354.2 billion in 2021. The market is expected to grow over a CAGR of 14.8% and is anticipated to reach over USD 1,835.6 billion by 2028 (Global Online Travel Market Size to reach USD 1,835.6 Bn by 2030, 2020). According to the statistical study conducted by Statista Research Department, the market size of the online travel sector online travel market increased in 2021 compared to the previous year. Thus, the global online travel market is worth about 433 bn. USD in 2021, up from about 396 bn. US\$ compared to 2020 and this market is projected to reach approximately US\$ 691 bn. in 2021 by 2026.

Figure no. 1. Online traveling market size in billion U.S: dollars

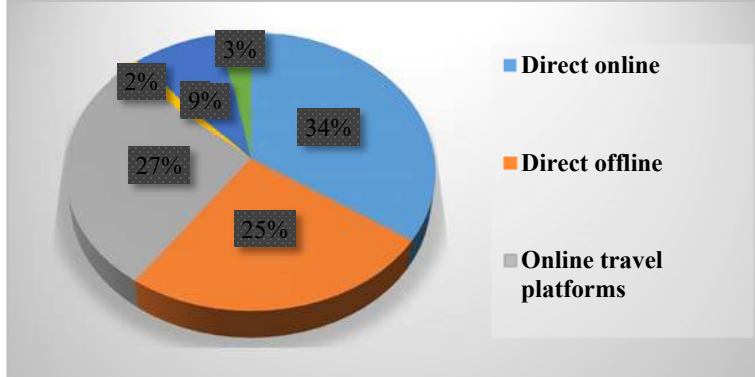


Source: processed by the authors based on data obtained from: <https://www.statista.com>

Many tourists nowadays consult websites or online travel apps when they want to plan a trip because it is much easier, which has led to an increase in demand. Also, the emergence of travel businesses as well as changing standards and lifestyles among people who want to travel more have resulted in a steady growth of the online travel market. Moreover, the market could be supported by an increase in incomes, the popularisation of weekend tourism culture or the introduction of more low-cost air services.

The advanced use of technology has led to an increase in bookings made online, so that they are preferred by tourists wishing to book accommodation in Europe. In total, online bookings made directly with the hotel, via online travel platforms and through social media accounted for 64.6% of all bookings at European hotels in 2022, while offline bookings made directly with the hotel (25.3%) or through a tour operator or travel agency (8.5%). More than half of all bookings made during 2022 in Europe, either online or offline, were made directly with the hotel. This means that online bookings were predominantly made on accommodation establishments' websites (34.5%) and to a lesser extent via online platforms (27.1%). Still, despite the increasing digitalisation in the accommodation industry, offline bookings still account for a quarter of all European hotel bookings.

Figure no. 2. Distribution of hotel bookings in Europe by channel in 2022



Source: processed by the authors based on data obtained from: <https://www.statista.com>

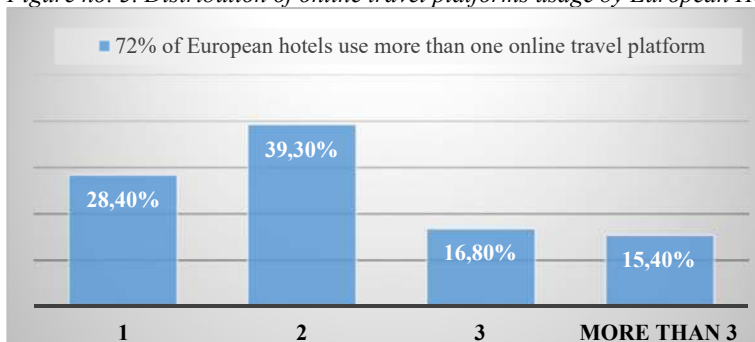
Over the past 10 years hotel management has focused on developing trusting relationships with online travel agencies, but also with communities and social media platforms. These relationships are based on the exchange of information, with the aim of reaching the public as easily, quickly and efficiently as possible. Interaction between hotels and online travel agencies must be based on continuous interaction and trust in order to create long-term value and confidence on brand community development.

In this context, accommodation establishments have complied with the current conditions and are increasingly using travel platforms or online travel agencies (OTAs), which play a crucial role in the marketing strategies of any travel organisation. According to Phocuswright's 2022 research report, bookings via OTAs accounted for around 64% of total online hotel and accommodation bookings and have more visibility and marketing power than most individual properties could have individually (OTA bookings projected to climb 55% in Europe, Phocuswright Research, 2021).

So hotels of all sizes - including bed and breakfasts, inns and ryokans - sign contracts to list their properties on online travel platforms. There are no upfront fees for listing rooms on the marketplace, and online travel agencies only earn money when hotel rooms are booked, collecting a percentage (between 15-25%) of the total value of each secured booking. Many hotels choose to contract with more than one TAO in order to get the most visibility.

According to statistics provided by The Statistics Portal of Market Data, 72% of hotels in Europe use more than one online travel platform. According to this study, 28.40% of hotels use one online travel platform, while almost 40% use 2 such platforms. Of the hotels in Europe 16.80% use 3 online travel platforms and 15.40% use more than 3 (as shown in figure no.3).

Figure no. 3. Distribution of online travel platforms usage by European Hotels



Source: processed by the authors based on data obtained from: <https://www.statista.com>

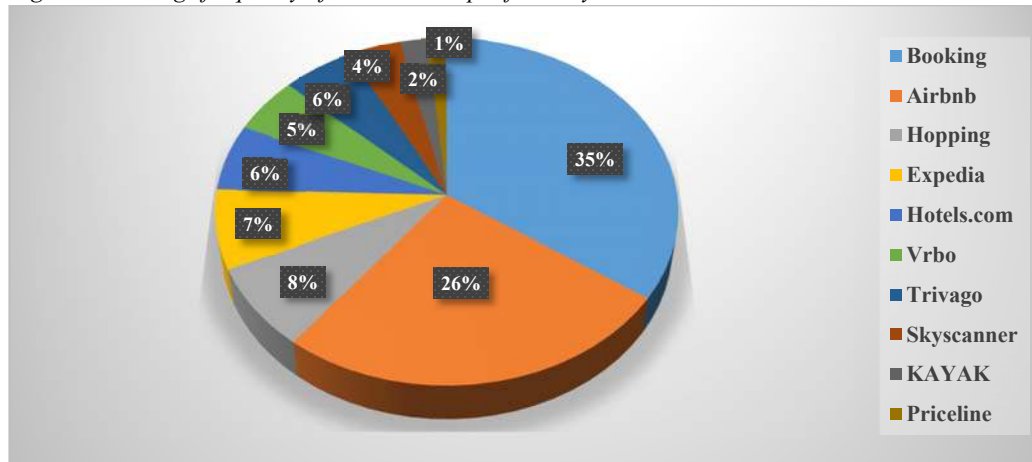
Online travel agencies have come to life with the adaptation to new technologies, with the internet playing a significant role in the travel industry in recent years. Most traditional suppliers and intermediaries have extended their distribution to the online channel by setting up online travel agencies (OTAs). OTAs have been recognized as key agencies in travel distribution because they

provide reliable and efficient platforms for consumers to purchase travel and also provide the opportunity for consumers to share information about their travel experiences (PhoCusWright, 2014).

Today there are many online travel agencies because they influence service quality, customer satisfaction levels, customer behavioural intentions and loyalty, and tour operators' profits. The leaders in the online travel market in terms of bookings are Booking Holdings and Expedia Group, accounting for about 60% of all travel bookings in the US and Europe. Airbnb is the new entrant, taking an innovative approach to online tourism by offering people's homes (apartments, houses) for tourists to book. This agency is seen as a direct threat to the hotel industry.

These OTAs are followed by newer travel apps such as Hopper, Vrbo or Hotels.com. Trivago is a German OTA app that may be best remembered for advertising "Hotel Trivago". SkyScanner is an important website when it comes to researching flight prices and trying to find the best deals on flights. Kayak is a subsidiary site of Booking Holdings, which operates in much the same way as Booking, as a one-stop shop for all areas of travel. Another Booking subsidiary, is Priceline which was the name of the holding company before the change to Booking Holdings. And last but not least, TripAdvisor known mainly for restaurant and hotel reviews, but recently offering booking services as well. (Curry, 2023). Booking.com was the most used travel app worldwide in 2021, with a market share of nearly 35%. Expedia took a step back in market share, while Hopper and Vrbo moved up the rankings.

Figure no.4. Usage frequency of online travel platforms by hotels



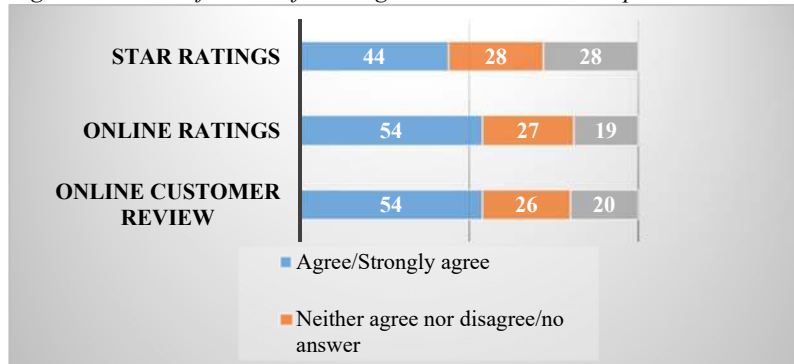
Source: processed:by the authors based on data from: <https://www.businessofapps.com/data/travel-app-market/>

Today's travel consumers rely heavily on online information when making decisions about tourist destinations or hospitality establishments. Online travel platforms allow customers to provide feedback on their travel experiences by providing a star rating and through reviews. 72% of new customers do not book a hotel room until they read reviews from other travellers. More than half of Tripadvisor users don't choose a hotel or vacation property that doesn't have reviews (The Influence Reviews have on the Travel Industry, 2022). Positive reviews provide reassurance and make people feel comfortable about their decisions, while negative reviews act as a warning sign, prompting them to avoid negative experiences from previous customers.

According to European statistics, more than half of consumers are influenced by online reviews and ratings from previous customers when purchasing an accommodation service online, while only a fifth of them do not take such reviews and ratings into account. Two out of five European consumers also consider star ratings as a reference factor when booking hotel rooms, while for around one in three consumers, star ratings do not play a role. So online reviews are more important to tourists than star ratings when it comes to choosing a hotel (see figure no.4).

Another study shows that in the analysis stage of corporate travel planning and booking, videos and photos are the two most important factors affecting global travel decisions. Travel planners also consider a hotel's ability to showcase its facilities and amenities (Diosi, 2022).

Figure no. 5 Main factors influencing customers' decision to purchase an accommodation service in 2022



Source: processed by the authors based on data obtained from: <https://www.statista.com>

Three of the types of reviews that have a negative impact on most tourists relate to unappealing hotel rooms, unsightly food photos and boring content presentation. (Diosi, 2022). According to a survey by Booking.com, 63% of travellers believe technology plays a key role in controlling health risks while travelling and reducing travel anxiety. (Sustainable Travel Report, Booking, 2022). In 2022, 64% of online bookers make online purchases from desktop and 44% make them on a mobile device. This shows a change from 2021, when 59% of bookings were made on desktop and 41% on a mobile device. (Charlton, 2022).

5. Conclusions

Online travel agencies have revolutionised the travel industry and changed the way travel is planned by aggregating information from the internet in one place so customers can compare options, prices, reviews and more. So today, most travellers plan their trips online using OTAs such as Booking, Hopping, Expedia or Hotels.com. Most tourists who purchase accommodation online are influenced by reviews from previous customers and the rating a hotel has on an online travel platform such as Bookin.com.

In this context, the collaboration of hotels with online travel platforms is a clear benefit, but management should be aware that pitfalls can arise. They need to actively manage registrations, pricing and inventory and take a strategic approach to online distribution to reap the benefits of this method of promotion and booking. When done correctly, working with the right online travel platforms as part of your distribution strategy can effectively help generate direct bookings through the 'billboard effect'. Creating a comprehensive channel mix that incorporates different types of online travel agents can ensure access to the target audience and ensure a steady flow of bookings.

Consequently, tourism management in general, and hotel management in particular, needs to pay more attention to online visibility and the use of technology by working with online travel agencies and building positive relationships with them. If the relationship with online travel agencies is a positive one, tourism management can be helped by understanding the motivations that lead the consumer to choose a destination, accommodation and/or services and in this way the manager can act to improve the service and respond to the current needs of the tourist.

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