Chapter N 018

Innovative technologies and business models for the digital transformations of tourism firms

**Abstract.** Over the last few decades, tourism has changed profoundly and at the same time both the forms of travel and those of travelers have changed.

Due to the Covid-19 pandemic, tourism was one of the sectors that paid the highest price in economic terms, not only in the lockdown period, but also in the following months in which, in correspondence with the first reopening, consumers have associated a high perception of risk to travel avoiding the planning of their departures. In the tourism sector, the entire supply chain has been affected: from the hoteliers of the largest and most renowned structures to small Bed & Breakfasts, from the phenomenon of guest houses to hostels, from restaurateurs to suppliers, from operators to tourist guides and museums. This work aims to investigate the new dimensions of the post-Covid-19 tourism offer by including some innovation factors such as, for example, the alternatives offered by smart working to tourists and to the citizens of large cities in which many hotels are placed.

This research highlights how the digital transformation of tourism services has so far changed the information-decision-making process that leads to the choice of travel, its post-experiential phase, and how in the new post-pandemic normality it can change how consumers experience their vacation, travel, and the ancillary services connected to them.

**Keywords.** Technologies, digitization, tourism businesses, decision making, value proposition, customer experience.

# Introduction

The diffusion and widespread use of information and communications technology tools, as well as that of social media, has triggered strong behavioral changes in tourists, and has influenced the way they organize a trip, the way they face the travel and how they behave after the trip. Large technological platforms have made it possible to move from a standard product to a personalized experience (Vescovi et al., 2010). We could summarize the main use of pre and post technologies in two macro areas:

1. Search for information. Tourists are looking for what to do on site, where to eat, what to see, etc. The most interesting technologies are certainly Metasearch (Trivago, skyscanner.net) (Vescovi, 2019), Online Travel Agencies (OTA), Experience Marketplace and Hotel Networks. These companies allocate huge investments to support very aggressive marketing and commercial activities (Dall’Ara, 2017).

2. Generation of information (information posting). The main feature of the 2.0 tourist is the generation of information. This macro area includes all the social networks that are the main vehicle for the generation of content during and after the trip. Tripadvisor, in this context, is the most used platform and the one in which tourists pour the most trust (www.formazioneturismo.com).

# Review of the literature

The companies of the sector are now called to compete in an increasingly complex and articulated global market (WTTC, 2021). The digitization of hospitality businesses is not only strategic in the relationship with customers, but also represents an important efficiency tool in the management of structures (Benevolo, Grasso, 2018). The evolution of new technologies can represent a disruptive element to overcome the constraints arising from the small size in accessing management programs and software (Corigliano and Baggio, 2017). ERP (Enterprise Resource Planning) management systems, software for the efficiency of profitability linked to customer relations, for example CRM (Customer Relationship Management), PMS (Property Management System) solutions in cloud version, Channel Manager, are that integrate with online marketing platforms, which are easy to customize and low investments, also allowing considerable economic advantages for businesses (Vescovi, 2019). The concept of innovation in the tourism sector goes beyond mere aspects related to technology, as it is also accompanied by the ability of operators to innovate in terms of business models and environmental and social sustainability (Dall’Ara, 2017). Artificial intelligence, the Internet of Things, blockchain and big data are changing both the supply structure and the dynamics and behavior of demand, creating new opportunities and at the same time new challenges for companies and policy-makers (Corigliano, Baggio, 2017).

# Material and methods

The technological innovations that promise to have disruptive effects on the tourism market mainly concern the sectors of entertainment, comfort during all stages of travel, robotics, and information (big-data, machine learning, artificial intelligence and social networks play a increasingly central role) (Rossi, 2018). The Covid-19 pandemic, in addition to the significant impact on social life and economic activity, has stimulated many accommodation facilities to a digital transformation, bringing out new models of work organization, with extensive use of remote working, smart working and teams virtual (Hepburn et al., 2020). The main research question that drives this study is focused on gathering information on: level of awareness of companies, importance of digitization, impacts generated, potential, threats, benefits and difficulties encountered in the implementation of fourth industrial revolution technologies (Amendola et al ., 2022). To answer this question, the study adopts a qualitative approach, through the administration of a questionnaire, consisting of 10 multiple choice questions, to a sample of about 200 companies in the sector operating on the national territory, in the period January-April 2022.

# Results and discussions

As a result of digitization, companies have found themselves forced to change their business model and adapt to the speed of technological transformation. The sample is mainly made up of large companies, with a number of employees greater than 250 units and with a turnover of more than 50 million euros; followed by medium-sized enterprises, small and micro enterprises. (see fig. 1).

Fig. 1. Size classes of the companies in the sample.

Sources: n/s processing.

To understand and analyze the level of awareness regarding digitization and the impact it has on the organization, questions were asked which, although generic, are able to give us a clear vision of the phenomenon. When asked how companies define the level of digitization within their organization, 58.12% of the sample replied that they have a high level of digitization, 31.08% an average level and only 10.80% declares to have a low level of digitization (see fig. 2). Therefore, most companies have adapted to the change taking place by taking a proactive attitude.

Fig. 2. Degree of digitalization of companies.

Sources: n/s processing.

When asked to what extent the digital transformation had influenced the sector to which they belong, 70.59% of the sample replied that digitization has a strong impact on the tourism sector (level 4) (see fig. 3); for 5.88%, digital transformation has a medium-high impact (level 3). The remainder of the sample found low or very low incidence levels (with percentages of 17.65% for level 2 and 5.88% for level 1). Companies, therefore, express a positive opinion on their situation and are well aware of the changes resulting from digitization.

Fig. 3. Measurement of the impact of digital transformation in the tourism sector.

Sources: n/s processing.

Moving on, therefore, to defining the degree of awareness and use of investments in digitization both in the present and in the future, from figure 4 it is evident that the majority of the sample made significant investments in digitization, while the remainder, on the other hand, shows a more prudent if not downright disinterested in the subject.

Fig. 4. Level of investments in innovation and digitalization supported by companies in the sector.

Sources: n/s processing.

With regard to the forecast on the investments that the companies in the sector intend to make over the next three years, the situation shown in figure 5 is shown. The data show that companies that intend to invest in digitalization in the future are much higher than companies that do not want to invest, or that want to allocate only those strictly necessary. This highlights how companies have completely internalized the trend of change.

Fig. 5. Level of investments in digitization of companies in the sector over the next 3 years.

Sources: n/s processing.

Furthermore, the digital transformation induces companies to implement policies aimed at the management and adequate training of human resources capable of dealing with this phenomenon. The analysis of Figure 6 shows the strategies implemented by companies to keep up with the technological and cultural change taking place.

Fig. 6. Digital innovation projects carried out by companies.

Sources: n/s processing.

To better understand the phenomenon, companies were asked to what extent industry 4.0, and more generally digitization, has influenced their evolution. Using the Likert scale, 49.06% of the sample stated that their organization has been highly influenced by digitization, for 20.65% the effects are quite high, 17.65% registers a more moderate level, for 5.88% the effects are relatively scarce and only 6.76% declared a nil influence (see fig. 7).

Fig. 7. Effects of Industry 4.0 (and more generally of digitization) on companies in the sector.

Sources: n/s processing.

Finally, analyzing the potential benefits and criticalities encountered following the implementation of digital technologies, Figure 8 shows the potential benefits that can be obtained from the new technologies. But the technological leap in addition to the innumerable benefits also brings various challenges to be met, in fact there are difficulties in finding highly qualified professionals, as well as a lack of human resources prepared at an operational level (see fig. 9).

Fig. 8. Main benefits brought by the digital transformation.

Sources: n/s processing.

Fig. 9. Main challenges and criticalities of the digital transformation.

Sources: n/s processing.

# Conclusions and future perspectives

For the future, evolution is the key word to follow, tour operators must keep up with changes in consumer behavior and technology to occupy a good position in the market. The operators are oriented towards consumer satisfaction and knowledge of the power of review sites and everything related to Social Networks. The digital transformation has affected the transformation of business models, with particular regard also to marketing and social media marketing channels, modifying the consumer segments and the value proposition (Ronchi, Ciancia, 2019). It is not just a question of building a lasting relationship over time with customers, but of ensuring that the buyer speaks positively about loyalty with other consumers, especially through the Web, and thus be able to acquire new customers.

# References and Citations

Amendola C, Casalino N, La Bella S, Savastano M (2022) Innovazione dei processi lavorativi e ruolo degli artefatti nei modelli di cultura organizzativa: un’indagine empirica sulla trasformazione digitale della Pubblica Amministrazione. Prospettive in Organizzazione, La rivista di organizzazione aziendale

Benevolo C, Grasso M (2018) L'impresa alberghiera. Produzione, strategie e politiche di marketing. Franco Angeli, Milano

Corigliano M, Baggio R (2017) Internet e Turismo 2.0. Egea, Milano

Dall’Ara G (2017) Le nuove frontiere del marketing applicato al turismo. Franco Angeli, Milano

Hepburn C, O‟Callaghan B, Stern N, Stiglitz J, Zenghelis D (2020) Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change? Oxford Review of Economic Policy, 36

Gabetti Property Solutions (2020). L’hospitality del future. Tendenze, prospettive e opportunità del settore alberghiero in italia. Gabetti Property Solutions, Ufficio Studi, Milano

Ronchi M, Ciancia M (2019). Digital transformation. Metodi e strumenti per guidare l’evoluzione digitale delle imprese attraverso design, marketing e comunicazione. Franco Angeli, Milano

Rossi C (2018) In viaggio…verso il digitale. Le imprese della distribuzione turistica di fronte alla sfida del web. Congresso Internazionale “Le Tendenze del Marketing”, Egea, Milano

Vescovi T (2019) Il marketing e la rete. Il Sole 24 ore, Milano

Vescovi T, Gazzola P, Checchinato F (2010) I clienti invadenti: nuove relazioni di mercato tra clienti e imprese. Journal of Marketing Trends, Volume 1, 41-57

World Travel & Tourism Council (2021) Travel & Tourism. Economic Impact 2021. Global Economic Impact & Trends 2021. World Travel & Tourism Council, London, UK

www.formazioneturismo.com