Progress in information technology and tourism management: 30 years on and 20 years after the internet - Revisiting Buhalis & Law's landmark study about eTourism

Julio Navío-Marco[a,*], Luis Manuel Ruiz-Gómez[a], Claudia Sevilla-Sevilla[b]

[a] Departament of Business Organization, UNED, Spain
[b] Departament of Business Economy & Accounting, UNED, Spain

ARTICLE INFO

ABSTRACT

"Progress in information technology and tourism management: 20 years on and 10 years after the Internet—The state of eTourism research" is reviewed in terms of its significance to academic literature linking Information and Communication Technologies (ICTs) and tourism. Ten years after its publication in 2008, we revisit this paper with a view to observing the main changes in eTourism over these years, analysing the strategic lines that are driving its evolution, and verifying the fulfilment of the tendencies anticipated by Buhalis and Law. Their diagnosis has been very accurate and, given the rapidity of the technological changes, it is appropriate to highlight the changes that this sector has experienced since then.

1. Introduction

Ten years ago, in 2008, Buhalis and Law published a landmark study on digital tourism: "Progress in information technology and tourism management: 20 years on and 10 years after the Internet - The state of eTourism research". This Progress in Tourism Management article reviewed the literature on ICTs in Tourism (eTourism in short) over a 20 years timeframe, and analysed prior studies in the context of ICTs tand tourism. The paper also forecastfuture developments in eTourism and identified critical changes that might affect the tourism industry structure.

In 2018, this commentary suggests that this progress paper has become a mandatory reference for academics and practitioners. A major contribution made by this paper is its overview of the research and development efforts that have been undertaken in the field, and the challenges that tourism researchers are facing now and will be facing in the future.

This research area undoubtedly was, and still is, timely: it is a well-known fact that the tourism industry has undergone a drastic transformation with the arrival of information and communication technologies (ICTs) since the 1980s, and especially with the advent of the Internet since the late 1990s (Buhalis & Law, 2008; Law, Qi, & Buhalis, 2010; Aldebert, Dang, & Longhi, 2011, among others). Increasingly,

ICTs plays a critical role in boosting the competitiveness of tourist organisations and destinations (Buhalis & O'Connor, 2005; Berne, Garcia-Gonzalez, & Mugica, 2012), as well as shaping the market itself. Digitalisation is changing the structure of the industry by altering barriers to entry, facilitating price transparency and competition, revolutionising distribution channels, optimizing costs and improving production efficiency (Assaf & Tsionas, 2018; Kim, Nam, & Stimpert, 2004). In fact, the tourism industry has become the largest category of products and services sold over the Internet (Abou-Shouk, Lim, & Megicks, 2013). The Internet penetration rate in the world is 51.7%, and in some regions such as North America or Europe the figure is more than 80% (Stats, 2017). International tourism has been growing more quickly over the past 5 years than the world goods trade (UNWTO, 2017) and it continues to be one of the main online commercialisation sectors.[1]

A growing corpus of literature has been analysing the impact of ICTs on the tourism ecosystem, as reflected in extensive bibliographical reviews. After the studies by Frew (2000) and Leung and Law (2007), Buhalis and Law (2008) conducted their thorough research into the state of eTourism, and analysed the progress of information technology in the management of tourism. Then, following in their footsteps, new research work has also been done and a variety of literature compilations have also been brought together on applying ICT to tourism (Law,

Buhalis, & Cobanoglu, 2014; Law, Leung, & Buhalis, 2009; Law et al., 2010; Law et al., 2014; Leung, Xue, & Bai, 2015; Leung, Law, van Hoof, & Buhalis, 2013; Lu & Stepchenkova, 2015; Pesonen, 2013; Singh, 2016; Zeng & Gerritsen, 2014), alongside the literature review by Ukpabi and Karjaluoto (2017), which examined how consumers have adopted ICTs for tourism services. Research into eTourism is currently so fruitful and the tourist industry so vast and covers so many areas (WTTC, 2016), that literature reviews tend to limit the number of journals included, restricting themselves to those with the largest impact (i.e. Pesonen, 2013) or focusing on specific topics (i.e. user-generated content in Lu & Stepchenkova, 2015).

However, we do not intend to carry out a fully canonical literature review, but, following the itinerary marked by Buhalis and Law (2008) and their holistic approach, analyse the changes that tourism has gone through in these ten years, using the new contributions of literature as an instrumental support. We have maintained the three key issues identified by Buhalis and Law (2008) as fundamental axes in the investigation of eTourism, namely: consumers and demand, technological innovation, plus the state of the industry and its functions, and we have used the same structure as they did in their paper in order to tread the same path, trying to update it, detect new trends not clearly present in 2008 and reflect on their intuitions and projections for the future.

On the basis of the five review typologies established by Grant and Booth (2009), our study can therefore be classified as a critical/narrative review. A critical/narrative review aims to analyse extensively researched literature and conduct a critical evaluation of its quality (Kim, Bai, Kim, & Chon, 2018). The main purpose of a critical/narrative review is to identify significant items in the field; no formal quality assessment for each study is required, and the review is typically conducted in a conceptual or chronological way; this method is a traditional and frequently used way of reviewing and integrating studies to provide a comprehensive theory to reconcile the findings of each study (Crouch, 1995).

Furthermore, from a methodological point of view, our research uses online databases (i.e. Web of Science, ScienceDirect), using different combinations of keywords that are related to eTourism. Buhalis and Law (2008) considered that a major limitation in their study was the predominant inclusion of publications from tourism. We have reviewed and included references from journals associated with ICTs (i.e. Telematics and Informatics) that during those ten years have made major contributions and that have already appeared frequently in the most recent bibliographic reviews. To favour methodological transparency the procedure proposed by Aguinis, Ramani, and Alabduljader (2018) was taken into consideration, as follows in Fig. 1:

This study poses several research questions:

1. How have the eTourism developments anticipated by Buhalis and Law (2008) ten years ago evolved?
2. What new trends, topics and phenomena have appeared on the digital tourism scene since this fundamental study?

We intend to present the current status of evolution and a holistic diagnosis based on Buhalis & Law's (2008) findings and conclusions. In this sense, our contribution is mainly twofold: firstly, we develop the eTourism literature with an increased and current understanding of the eTourist, by updating sources and research work; secondly, this document reflects development over time, and allows us to understand the diversity of evolution in customers, technology and industry over the 10-year period since the publication of the article we are using for reference purposes.

This study consists of five sections. After the introduction, from Section 2 to Section 4, we develop the three main themes established by Buhalis and Law (2008): consumers and demand, technological innovation, and the state of the industry and its functions. Finally, Section 5 contains the document's conclusions and their effects on the future of eTourism, as well as their limitations and future avenues of research.

2. Consumers and demand dimensions

Buhalis and Law (2008, p.661) indicate that "the key to success lies in the quick identification of consumer needs and in reaching potential clients with comprehensive, personalised and up-to-date products and services that satisfy those needs. Gradually new, experienced, sophisticated, and demanding travellers require interacting with suppliers to satisfy their own specific needs and wishes". The concept of personalisation of the offer to the customer is vital (Kotiloglu, Lappas, Pelechrinis, & Repoussis, 2017; Zheng, Liao, & Qin, 2017). Every tourist is different, carrying a unique blend of experiences, motivations, and desires. To a certain extent, the new sophisticated traveller has emerged as a result of experience. Internet promotes the large-scale customisation of tourist products, because it enables the industry to pinpoint relatively major market niches in different geographical locations. In this vein, the notions of customer centricity, empowerment and involvement have been highlighted as main driving forces of the new tourist services (Sigala, 2012).

Buhalis and Law (2008) also placed special emphasis on the information search and how ICTs change tourist behaviour. In this context, one way to approach digital tourists and their behaviour is to observe the digital activities that they can perform in relation to their tourist activities. The activities that eTourists can carry out with digital tools could be (Buhalis & Law, 2008; Buhalis, Leung, & Law, 2011):

1) Consulting and obtaining the information required to build and design their travel experience (Chung & Koo, 2015; Filieri & McLeay, 2014). This also includes online searches and price comparisons (Amaro & Duarte, 2015). The ever-increasing availability of tourist information has been conducive to enabling tourists to find by electronic means, their destination, accommodation, private renting services, etc., thereby enabling them to organise their own tourism packages. Despite the fact that it is possible to study consumers' online purchase intentions in the academic literature, sufficient in-depth information is still not available for the ways in which travel websites are selected (Qi, Leung, Law, & Buhalis, 2010).

2) Managing the eTourism services selected, such as booking a hotel, airline tickets and purchasing trips on the Internet or mobile devices (Amaro & Duarte, 2015; Escobar-Rodríguez & Carvajal-Trujillo, 2013; Kim, Lee, & Chung, 2013; Suki & Suki, 2017; Wang, Li, Li, & Zhang, 2016).

3) Other activities related to their needs "in situ", once the eTourist is travelling, for example, looking for a restaurant or other specific services when already at the destination (Bai, 2015).

4) Post-trip situations, such as proactive recommendations to others (Kim, Qu, & Kim, 2009; Morrison, Jing, O'Leary, & Cai, 2001) or blogs (Chen, Shang, & Li, 2014; Ho & Lee, 2015).

We have also been able to identify a new, emerging category:

5) Being actively involved in tourism e-business, introducing their own abilities and services into the market, for example, becoming an Airbnb Superhost (Ert, Fleischer, & Magen, 2016; Gunter, 2018; Liang, Schuckert, Law, & Chen, 2017) or taking advantage of the tourist-tourist connection and sharing like in BlaBlacar. This category concerns the arrival of the *prosumer*,[2] shifting our attention away from creating value for tourists, toward co-creating value with tourists (Rihova, Buhalis, Moital, & Gouthro, 2015). This concept is increasingly widespread in e-business, influencing the process of e-tourism. In general, the hospitality and tourism literature on co-

---

[2] The term was coined by Toffler in his book "The Third Wave", where he refers to a new agent of the global village who is not limited to the role of consumer, but can also provide other goods or services to the network.