Chapter 3
Smart Tourism in Destinations: Can It Be the Way Forward?

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ABSTRACT

Business enterprises have gained leverage through artificial intelligence (AI) in the tourism and hospitality industry. The roots of the concept and its link with big data environment has drawn a lot of interest from researchers. The employment of technology has increased economic viability of tourism enterprises due to the efficiency, effectiveness, and transparency it creates for tourism and hospitality organizations. The chapter views the emergence of smart tourism in destination management in accordance with sustainable tourism concept and evaluates the issue both in supply side and demand side of tourism. Moreover, it aims to discuss the use of such a paradigm. If the destinations have a viable ground for motivational change to adapt, this philosophy will also be high lightened. For this reason, value creation will be evaluated in accordance with cost-benefit assessment.

INTRODUCTION

This chapter provides a theoretical overview of the impacts of smart applications have had on tourism industry, as well as how smart tourism transforms supply side and demand side of tourism sector in the digital era. In the first part of the chapter, evolution of artificial intelligence in smart tourism will be examined. Similarly, description of smart city and smart destinations will be explored. Besides, sustainable tourism concept a long with local tourism planning issue will be discussed within in the chapter. The second part will be devoted to the use of cost-benefit analysis within the chapter. Finally, this chapter will end with conclusion and recommendations as well as challenges that different stakeholders are facing when engaging with smart systems and conversion towards digitalized foundations.

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BACKGROUND

Transport has a significant role in tourism as tourists cannot reach destinations without using it in tourism industry. Most of the time governments are concerned with transport infrastructure programs and therefore they need to counteract the negative and positive impacts of the policy choices. For example, a highway development may bring about saving time for users, by contrast noise can adversely affect local people (Mouter, 2014).

In the literature Cost Benefit Analysis is utilized in updating decision-making process about the advantageous and disadvantageous of a program, or a plan in tourism development. The benefits together with expenses are rated and evaluated in monetary terms of the concept in the literature. (Hayashi and Morisugi, 2000; Mouter, 2014, Hanson, 2007). Therefore, the chapter offers a theoretical review of pros and cons of smart tourism through cost-benefit analysis in order to put forward what part of the smart tourism is in line with sustainable tourism and what part is not within tourism planning issue.

EVOLUTION OF ARTIFICIAL INTELLIGENCE IN SMART TOURISM

Technology was predominantly being utilized in innovations with a critical effect of development on the tourism industry (Hjalager, 2010). Borras, Morreno & Vals (2014) recorded the surveys where these structures were applying some of the AI practices such as;

intelligent autonomous agents that can analyze the users behavior, learn about their profile and derive proactive recommendations in certain period of time, optimization in terms of a detailed timetable of the visit according to the opening hours of the site clustering or classifying tourists, with similar characteristics, inferring the preferences of the users through approximate reasoning methodologies, deducing users' preferences through reasoning of tourism domain knowledge by ontologies (Borras et all 2014, pp.7370-7371).

Big data and analytics has given rise to emergence of smart tourism ecosystem within large data sets in many different formats obtained from various stakeholders through the internet of things, artificial intelligence, cloud computing services, sensors, mobile devices and the Internet are processed with different analysis techniques such as emotion analytics, text analytics, and web analytics. Then this information is being transferred by algorithms into interpreted information to guide decision-making process.

Embarking on Industry 4.0 and the latest progress in communication and information technologies have given rise to improvement of new product and services in line with this paradigm modification. In the digitalization process we live in, the big data that emerges as a result of the widespread use of the internet, smart phones and social media applications is analyzed and then tried to be used in decision making process (Chen H, Chiang R H, Storey; 2012). Naturally, tourism as an industry is also one of the fields that try to keep up with this rapid change and start to benefit from the opportunities offered by big data and data analytics (Carigliu A, Del Bo; 2011).

The tourism industry, which has changed with a data oriented approach, has adopted the word "smart", which we have started to hear frequently in different areas, pointing to the use of the concept of Smart City and Smart tourism, and as a result, a paradigm shift triggered by digitalization in the field (Del Bo and Nijkamp, 2011; Boggia and Camarda 2014; Damari 2013; Albino, Berrardi and and Dangalico, 2015).