EXTENDED ABSTRACT

ADVANTAGES AND BARRIERS TO THE CREATION OF A TOURISM INTELLIGENCE SYSTEM IN SMART DESTINATIONS

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1. INTRODUCTION

Tourists generate data by searching for and consuming tourist products. Data analysis offers new opportunities for managers of tourism organisations (Dolnicar, 2022; Dolnicar *et al.,* 2018; Li *et al.,* 2020; Xie *et al.*, 2021) and makes possible to generate tourism intelligence (TI). TI is the organisational ability to anticipate changes, collect, analyse, interpret, and disseminate strategic information for use in the decision-making process (Köseoglu *et al.,* 2019, Köseoglu, *et al.,* 2016). TI identifies opportunities and threats in the environment, generates predictions that can identify business opportunities and competitive advantages in the tourism industry (Britt, 2006; Casado Salguero *et al.,* 2019; García-Madurga *et al.,* 2020; Ranjan and Foropon, 2021). TI facilitates strategic management in tourism organisations by capturing and analysing relevant environmental information. The generation of TI requires data, and Big Data (BD) becomes an essential resource for generating TI (Cobanoglu *et al.,* 2022). BD analysis facilitates pattern identification in the evolution of environment variables (Martina *et al.,* 2023).

Tourism organisations have the opportunity to increase the added value in the services they provide (Birenboim *et al.,* 2022; Malthouse *et al.,* 2019; Shafiee, *et al.,* 2023) using the data generated by tourists. According to Line *et al.* (2020), transparency in data collection is essential, and the creation of added value must be related to ethics, technology, and legal issues depending on the geographical space where it is applied (Line *et al.,* 2020; Moreno and Pedreño, 2020).

Therefore, the aims of this research work are: (1) to identify the foundations of Tourism Intelligence Systems (TIS) in the context of Smart Destinations (SDs) in Spain; (2) to understand data analysis of relevant information and competitive benchmarking through the use of BD; and (3) to identify advantages and barriers of the TIS implementation in

SDs. This article contributes identifying actual needs in SDs in Spain, overcoming barriers for destination managers, highlighting changes in tourism governance through TI, and addressing resistance to change among destination managers.

Based on the previous academic arguments, the following research questions are proposed:
– How do TIS align with strategic objectives in SDs?
– What are the advantages of TIS for SDs?
– What are the obstacles that hinder the effective development of TIS?
– How are these barriers managed, and what suggestions are offered to overcome these challenges in the implementation of TIS?

2. METHODOLOGY

To answer the previous questions, a qualitative method is employed as there were no previous research works that measured TIS when this research work was written. The decision was made to utilize this qualitative method for exploratory purposes and to develop theories about TIS in SDs. It is important to highlight that using a qualitative method helps in building theory due to its inductive approach (Hong *et al.,* 2018; Molina-Azorín *et al.,* 2024).

A comprehensive interview was conducted with 15 experts from February 14 to April 3, 2023.The interviewees have a deep knowledge of using TI in tourist destinations. The group of interviewees was made up of four innovation managers (three from autonomous communities in Spain and another innovation manager for all of Spain); two academics from tourism-specialised universities with a focus on BD analysis, three representatives from associations (one from the hotel industry, and two from the technology and tourism industry); six managers from companies specialised in BD and tourism, known for creating TIS in Spain and other different countries.

3. RESULTS

This section includes the results of the qualitative analysis based on expert interviews. The results or responses are divided by the level of analysis (destinations and tourism companies) to answer the research questions.

The first research question is about how TIS are aligned with strategic objectives in SD. Responses regarding tourist destinations as a level of analysis are focused on city management and planning. An expert says, "the destination should have information about past events. These events should be analysed, and the destination should also research the evolution of its indicators. "Another expert refers to the fact that TIS provide information about what has already happened and more about what will happen: *That is, to strengthen its predictive and prescriptive abilities, so that it can recommend what to do in each of these situations depending on the scenario."*

In regards to analysis of tourism companies, a respondent says that "*it must help create the future strategies of the tourism business. Related to investments and actions that compromise the future of the company or the campaign: Identify new market segments,*

find markets where you can promote yourself, set opening and closing dates, launch campaigns, and make asset investment decisions. New locations and repositioning; looking at what are the competitors doing and planning for the future)".

Two areas of information are essential: first, competitive benchmarking (based on TI, which to understand how competitors face new challenges). Secondly, user/customer information that is supported by internal information sources (CRM) and techniques for collecting information on customer behaviour (BD).

The second research question consists of identifying the advantages that TIS has for a SD. The following response summarizes the strengths at the destination. *"Speeding up decision-making, increasing the level of success of decisions, reducing economic losses in actions, and maximizing profitability and return. And also, in terms of sustainability, TIS should allow us to measure our impact as a tourist destination"*. Tourism companies highlight the following advantages: *"Our industry is experiencing rapid changes. It can be very expensive not to align with new trends, what customers expect from us, their expectations and needs, and new threats. The proper information is provided by a good intelligence system to establish roadmaps in the most efficient way, as long as the right people are available"*.

One expert points out that: *"The main advantage of TIS is that it produces a change of mentality in organisations to make decisions based on information and knowledge. This fact leads to a significant increase in efficiency and performance from management, promotion and investment decisions. In addition, TIS allows increasing the destination's capability to be resilient to changes in the environment"*.

The third research question is to identify the barriers for implementing TIS in SDs. It is widely agreed upon by experts that the main obstacles are human factors, as individuals (such as managers and other employees) must accept and engage in the change. It is crucial for managers to provide training and motivation to their employees to work in a coordinated manner.

Tourist destinations have the following barriers: the absence of human competencies to be able to carry it out; the lack of recurring resources to be able to invest in the essential technological and human competencies; lack of time to develop it properly; the absence of reliable sources of information; no political awareness of how important TI is; the reduced budgets for Tourism Department in City Councils; communication and marketing actions prevail, minimizing the investment in TI; TI is not a preference in public budgets; there are no specialised technical teams; the private sector requests greater efforts in marketing, beach conservation, training, subsidies, or digitalisation but has not yet requested a greater effort in TI. The tourism company point of view claims that there is a significant barrier: "*The lack of continuity and political cycles*". It is difficult for a TI project to have the necessary continuity due to changes in budgets, and policies.

Regarding the fourth research question, it is stated that there are barriers such as lack of training or leadership in public management, as well of the private sector to create data models and share information. Smart governance by destination managers is the only way to overcome the barriers mentioned above, and it will require significant changes in destination management practices (Gretzel, 2021).

4. CONCLUSIONS

The responses to the research questions reveal valuable information, highlighting that TIS in an SD should include governance as a central factor, incorporating information analysis to enhance destination and tourism business management. Despite identifying barriers and difficulties, the advantages of implementing TIS are significant and require specific strategies for success.

The qualitative results of the extensive interviews show a humanistic approach, which outlines a path to strengthening human capital in the tourism industry. At the same time, the objective of destinations is to enhance their operational efficiency and promote sustainability, according to the concept of smart governance proposed by Gretzel (2021).

These humanistic and proactive approach captures the essence of smart tourism and provides valuable guidance for future development in the field of SDs. Therefore, the integration of TIS emerges as an essential tool to drive efforts toward more efficient and customised tourism management promoting environmental and socioeconomic sustainability. This approach addresses the current and future demands of SDs in the era of digital transformation. The managerial contributions of this research work are relevant for destinations, companies and society in general. TIS facilitate the creation of more effective roadmaps, prevents failures, identifies improvements, and strengthens public-private collaboration. This study contributes to the identification of relevant elements in the processes of creating TI: obtaining data sources, creating adequate budgets, training human capital, developing leadership, and analysing the market and competitors.