Destination Management Systems Implementation

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INTRODUCTION

Destination Management Systems (DMS) are considered the most sophisticated and effective web applications supporting tourism destinations' marketing efforts. However, their implementation processes have been remarkably challenging for the Destination Management Organizations (DMOs) that usually manage them. Evidence suggests that failure is considerably higher than success when it comes to developing and maintaining successful DMS. Through an extensive literature review, the purpose of the present article is to explore which factors to consider when implementing a DMS.

BACKGROUND

The growing global competition among tourism destinations has enhanced the role of DMOs A DMO is an official tourism body of a destination - country/state, region or municipality -, responsible for the management of tourism and for coordinating the multiple players engaged in the supply and distribution of tourism services of that destination (Ritchie & Crouch, 2003; Estêvão, Carneiro, & Teixeira, 2012). Destinations marketing efforts, often coordinated by DMOs, are one of the main sources of destinations' competitiveness (Bornhorst, Ritchie, & Sheehan, 2009; Ritchie & Crouch, 2003).

According to the World Tourism Organization (WTO) (WTO, 2004), the major change that occurred in the operating environment of DMOs was the introduction of the Internet, which became the preferred medium for prospective tourists to search for and, to a lesser extent, purchase tourism products. Nonetheless, most studies suggest that most of these organizations have only been able to develop brochure-like destination websites that replace their traditional paper-based promotion, not adding value to destination marketing strategies (Ndou & Petti, 2007; Wang, 2008; WTO, 2004).

However, the emergence of DMS, in the mid-90s, dramatically changed DMOs' *eTourism* policies and goals, adding new dimensions and capabilities to DMOs online strategies. DMS provide many advantages from the visitors' perspective, since they go much beyond the promotional sphere, also encompassing transactional and relational functionalities aimed at visitors and at the various destination-based stakeholders. Under a B2B perspective, they support destinations to jointly and coherently promote and sell their offerings to prospective visitors while fostering networking and, specifically, more systematic communication flows among suppliers aiming at promoting collaboration efforts within the destination (Dwyer, Edwards, Mistilis, Roman, & Scott, 2009). Under a B2C/C2B perspective, DMS allow visitors to search, plan and dynamically purchase tourism products without leaving the official destination IS (Egger & Buhalis, 2008). However, the factors accounting for the successful adoption of DMS and explaining their high rate of DMS failure are complex and go far beyond the mere technological dimension.

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FACTORS AFFECTING DMS ADOPTION AND SUCCESS

Despite its promised benefits, both for destination marketing and for the coordination of destinations' internal stakeholders, there are but a few success cases in DMS implementation (Alford & Clarke, 2009; Sigala, 2013). According to Buhalis and Spada (2000), most of DMS development initiatives have aborted in their initial stages.

Successful DMS development requires a systematic approach to understand key factors supporting its management and implementation from both business and technical perspectives (Wang, 2008). However, previous research has focused on narrow technological issues and often explains DMS failure based on the poor *eReadiness* of business suppliers or DMOs (Brown, 2004) or on the digital gap between different types of tourism organizations (Egger & Buhalis, 2008). Due to the scarcity and narrow focus of DMS research on factors that determine their success, and considering that DMS are a form of Inter-Organizational Information Systems (IOIS) (Bédard, Louillet, Verner, & Joly, 2008; Sigala, 2013) - "ICT-based systems that enable companies to share information and conduct businesses across organizational boundaries" (Boonstra & de Vries, 2005: 485) -, literature on IOIS may also offer important insights on potential critical success factors of DMS.

The present article's primary goal is to identify the main factors influencing the successful implementation of DMS. Through an extensive literature review on DMS and IOIS, it was possible to identify the following three main types of factors influencing successful DMS implementation: (1) DMS features (associated with technological issues and business model); (2) organizational factors (both intra- and inter-organizational); and (3) external environment (Table 1). A more detailed discussion of these factors is presented in the next sections.

DMS Technological/Business Model Related Factors

The intrinsic characteristics of a DMS have been identified in previous research as strong determinants of DMS implementation and adoption success or failure (Buhalis & Spada, 2000). Some characteristics of DMS that assume special importance in this scope are related to technical features and quality of these systems (e.g. functionalities, architecture, interactivity, user-friendliness), as well as to their business models, and correspond to the following characteristics of DMS (Buhalis & Spada, 2000; Mistilis & Daniele, 2004; Ramamurthy, Premkumar, & Crum, 1999; Wang, 2008): geographical basis, functionalities' diversity and scope, standardization and compatibility with other tourism-related platforms, and product *vs* market orientation.

DMS Geographical Basis

One of the factors typically undermining destination-brands' success is their limited geographical scope which often results from administrative divisions, thus scattering development and promotional efforts of tourism products that should be carried out in unison (Lew, 1987). Regional approaches to tourism planning and marketing that would make more sense in terms of destination development are often replaced by the emergence of multiple local initiatives aiming at promoting one single community as a tourism destination, thus undermining its competitiveness and jeopardizing the opportunity of fostering more appropriate inter-municipal tourism development processes (Page & Hall, 2000).

According to Buhalis and Spada (2000), this problem is evident in DMS development since "the majority of DMS has been implemented at local level and operates on a limited basis" (p.474), which is one of the main reasons of collapse few years after their initial development. Buhalis (2003) argues that locally-developed DMS are usually managed by small and consequently more limited organizational structures regarding destination management and technological skill assets.

DMS Functionalities' Diversity and Scope

The diversity of functionalities of a DMS greatly depends on the interest or knowledge that the system promoters and its associated members (the tourist suppliers) have, and on their ability to use and integrate DMS in daily operations (Wang, 2008). Although most DMS encompass informational, communicational, transactional and relationship-building functionalities,