

Role of Social Media in Smart Tourism

Taesung Brian Kim^{*}, Chien-Ta Bruce Ho, Nathatenee Gebsoambut

Graduate Institute of Technology Management, National Chung Hsing University, 145 Xingda Rd, South Dist, Taichung City 402, Taiwan

ABSTRACT

Social media is no longer a personal communication channel. It became an effective business platform in various industries. However, its application in the tourism business is still limited. The concept of smart tourism provides a framework to apply numerous smart technologies for the purpose of making the operation of the tourism business more efficient and innovative. Furthermore, it also aims to improve tourists' satisfaction, which, in turn, affects the growth of overall tourism industries. In this study, we analyze literature related to smart tourism to summarize the theoretical definition of smart tourism, unique characteristics of smart tourism technologies, the core value of social media. Social media is able to meet the needs of all the stakeholders such as tourists, tourism destinations, and potential on a single platform. It implies social network sites are not only a vital challenge but also a great opportunity for tourism industries to take advantage of. Finally, it presents the benefits of applying smart technologies such as social media to the tourism business.

Keywords: Communication elements; Smart tourism; Smart tourism technologies; Social media

INTRODUCTION

Information and communication technologies have been deeply adopted in travel services and products [1,2]. Thereafter, the informational environment surrounding the tourism industry has been experiencing a fundamental shift from unidirectional to multi-directional communication. Traditionally, the separation of information provider and consumer was distinctive. However, with the advent of social media, this paradigm has been disrupted and the horizon of the industry has been going through unprecedented innovation. Consumers no longer stay as passive participants in the process of the transaction. They start to contribute valuable information to the decision-making process that eventually affects other tourists' intention to purchase services and products. Moreover, the tourism industry intrinsically relies on massive information to attract the attention of their potential customers. During these transformations, technology plays a critical role in facilitating smart tourism.

LITERATURE REVIEW

Smart tourism

As information and communication technology evolves, tourism industries constantly face novel challenges on how to create

values by innovatively embracing them. As a result, the concept of smart tourism emerged to understand how technologies can enhance the experience of each stakeholder including tourists, travel destinations, regulatory bodies within the government. Currently, the word 'smart' is associated with almost every sector of the industry worldwide. The tourism industry is not an exception in regard to embracing technologies into the core of its infrastructure.

Several countries such as China and Korea have been promoting smart tourism at the government level by establishing infrastructure based on various information and communication technologies, especially, focusing on how technology contributes to create the positive image of travel destinations such as landmarks in the city and historic sites [3]. Likewise, in Europe, smart tourism is recognized as a crucial element in constructing smart cities. By providing an environment where tourists can take advantage of various city facilities to enhance the experience while they stay in the city [4].

Correspondence to: Taesung Brian Kim, Graduate Institute of Technology Management, National Chung Hsing University, 145 Xingda Rd, South Dist, Taichung City 402, Taiwan, E-mail: briankim@smail.nchu.edu.tw

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In academia, smart tourism has drawn attention from several scholars. Among them, Gretzel et al. [5] formulated the definition of smart tourism, which is widely adopted by researchers in the field of smart tourism. The definition focus on the data including who generates it, when it is generated, where it is generated, why it is generated, how it is transferred. Not only travel destinations but also tourists create information regarding services or products, then share with the aim of enhancing the travel experience. Any technologies used in these activities are called smart tourism technologies.

Smart tourism technologies

Smart tourism technologies refer to online information processing systems including websites, smartphones, applications, and data supporting various activities related to tourism industries [6]. Since 2000, tourism industries started embracing technologies into various operations within travel transactions such as online flight ticket booking, online hotel booking under the name of E-tourism. However, these applications target improving operational efficiency rather than creating additional value by providing innovative experiences. Huang et al. [6] classified researches on smart tourism technologies into three categories: maturity of information, features of the website, emerging channel. For the maturity of information, they address that travel website provide information for not only their primacy products such as flight tickets but also additional products such as dining, concert tickets, and shopping. Secondly, features of websites mainly deal with consumers' perception of various features provided by travel websites. Researches in this category attempt to pinpoint influential factors affecting the intention to use. Lastly, researches on emerging channel focus on social media that provide a large amount of user-generated information in real-time. Particularly, information created by someone who has already experienced the travel services or products is highly trusted by potential tourists. Furthermore, Ho et al. [7] demonstrated communication elements affect consumers' intention to use social media. Stakeholders such as tourists, tourism destinations, service providers utilize smart tourism technologies to enhance tourists' experience that eventually affects the growth of tourism industries. Thus, it is vital to understand the uniqueness of smart tourism technologies for maximizing their potential benefits to every stakeholder. **Table 1** summarizes factors that are frequently examined in the researches of consumers' perception regarding smart tourism.

Authors	Dependent variables	Key factors
(Suki & Suki, 2017) [8]	Intention to use a flight ticket booking application on a mobile device	Perceived usefulness
(Liébana-Cabanillas et al., 2017) [9]	Intention to adopt m-commerce	Customer involvement Customization

(Hur et al., 2017) [10]	Continuance intentions of travel-related networks Information intentions through social networks	usage of travel-social sharing of tourists social	Information-seeking motive Entertainment motive Relationship maintenance motive
(YH. Lin et al., 2017) [11]	Consumer SNSs intention	mobile WOM	Social benefits Social enhancement Economic incentives Intriguing messages Immediate social-affective communication Immediate information support
(Yoo et al., 2017) [12]	Customer patterns of smart applications	adoption of gamified tourism	Hedonic or entertainment motivation
(Hossain & Kim, 2018) [13]	Sustainable SNSs	use of SNSs	Service quality of SNSs
(Wen, 2012) [14]	Attitude towards the online Purchases of tourism products		Quality of website design

Table 1: Frequently examined factors in smart tourism researches.

Characteristics of smart tourism technologies

Unique characteristics of smart tourism technologies are accessibility, informativeness, interactivity, and personalization [15]. Firstly, accessibility indicates the level of easiness in accessing information using the technology. Without limitations of location and time, consumers can obtain necessary information anywhere, anytime. Secondly, informativeness refers to the degree of information accuracy. Since the tourism business highly relies on information, it is crucial to maintain high-quality data all the time to earn trust from potential consumers. In various empirical researches, the quality of information is identified as a key element to determine the quality of service [16-18]. Thirdly, interactivity presents how rapidly the communication between parties is exchanged successfully. Higher interactivity encourages consumers to have a favorable attitude to the products or services. Lastly, personalization specifies the level of customization to suit each individual customer's needs.

Core value of social media

Accessibility: Social network sites provide unique and valuable features for service providers and consumers. From the service provider's perspective, both current and potential consumers are

just a click away. In other words, information flows directly from providers to consumers seamlessly. Thus, social network sites became a central place for promoting new services and products in various industries. The trend of online shopping has already shifted from traditional online shopping sites to social network sites such as Facebook, Instagram [19].

Co-creation: Contrast to traditional media, social network sites provide both service providers and consumers with a convenient interface to create new information and share it with others without hassle. There is no distinct separation between provider and consumer. Anyone can play both roles and able to monetize their efforts by co-creating valuable information through various types of collaboration with others. In particular, consumers' word-of-mouth became a powerful tool for social marketers to promote products or services [11]. Consumers collect information from social network sites to make an informed decision to purchase. Furthermore, compared to the information posted by marketers, the information created by other consumers who have already experienced the same products or services receives higher credibility from potential consumers.

Social media in tourism

One platform fits all: Social media provide an environment where each stakeholder can easily achieve their goals in a single platform. From a travel destination's perspective, it is a direct channel to reach customers and grasp their most up-to-date needs for travel services or products. Tourists are eager to use social network sites to acquire and share the latest information instantly. Moreover, for potential tourists, social network sites provide a convenient channel to obtain trustable information, arrange an ideal travel plan. As explained above, social network sites are able to meet the needs of all the stakeholders using a single platform, which implies social network sites are not only a vital challenge but also a great opportunity for tourism industries to take advantage of.

Smart tourists and sustainability

Travel is an experiential product, indicating that it is extremely hard to evaluate the perceptive value of the product before consuming it. Thus, consumers highly rely on reviews with videos and photos from others who have already experienced it. Social media successfully placed itself at the core of this information generation and consumption mechanism. Furthermore, consumers share their reviews about experiential products more frequently than physical products [20]. For example, tourists use social media to both acquire information and share their experiences seamlessly and transparently. Naturally, the effect of word of mouth would be intrinsically maximized for the benefit of consumers and also for travel destinations. It, eventually, help tourists to make a smart decision in all stages of travel. Furthermore, media exposure has been identified as a crucial determinant in affecting tourists' intention to visit travel destinations [21]. Particularly, the impact of social media is stronger than traditional media. It indicates that the tourists have higher confidence in the information available on social media.

With regard to the issue of overtourism [22], travel destinations aim to improve the sustainability of resources by utilizing them as efficiently and responsibly as possible [23]. Smart technologies such as social media and social network sites have been examined as tools to achieve this goal. By sharing various information about the environmentally friendly way of travel, tourists would develop a mindful attitude toward travel destinations to respect and protect the environment. It, in turn, would create a positive relationship between local residents and tourists [24].

DISCUSSION

Smart tourism destinations represent places where provide tourists with suitable smart infrastructures by utilizing smart tourism technologies for enhancing travel satisfaction. Travel destinations have been attempting to utilize social media to enhance the level of tourists' satisfaction [25]. Social media enables service providers to deal with feedbacks from tourists and respond as quickly as possible. Also, it improves the accessibility of the latest information which facilitates various extra services such as finding lost luggage, minimizing waiting time in the line. Moreover, smart destinations can take advance of smart technologies by providing personalized service in three different stages; before trip, during trip, and after trip stages.

CONCLUSION

In the stage of before trip, it could provide more customized travel information to the user by analyzing the user's preference data and help customers to make an informed decision in selecting services or products. During trip stage, it assists customers by responding to the feedback in real-time. Customers can get up-to-date information to explore destinations. During after trip stage, it attracts customers to provide a positive review about their experiences. These examples demonstrate how smart technologies help tourism industries to create innovative products or services for maintaining their business's sustainability and enhance tourists' satisfaction.

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