Information & Management 54 (2017) 687–702

Contents lists available at ScienceDirect

Information & Management

journal homepage: www.elsevier.com/locate/im

Effects of tourism information quality in social media on destination image formation: The case of Sina Weibo

Sung-Eun Kim[a], Kyung Young Lee[b], Soo Il Shin[c], Sung-Byung Yang[d,*]

[a] Gyeonggi Tourism Organization, 1150 Gyeongsu-daero, Jangan-gu, Suwon 440-711, South Korea
[b] Rowe School of Business, Dalhousie University, 6100 University Ave., PO Box 15000, Halifax, Nova Scotia, B3H 4R2, Canada
[c] Austin E. Cofrin School of Business, University of Wisconsin – Green Bay, 2420 Nicolet Dr. WH 460G, Green Bay, WI 54311-7001, USA
[d] School of Management, Kyung Hee University, 26 Kyungheedae-ro, Dongdaemun-gu, Seoul 02447, South Korea

ARTICLE INFO

Article history:
Received 31 May 2016
Received in revised form 30 December 2016
Accepted 13 February 2017
Available online 21 February 2017

Keywords:
Tourism information quality
Destination image
Information quality framework
Heuristic-systematic model
Social media
Sina Weibo

ABSTRACT

This study investigates the role of content and noncontent cues of tourism information quality in forming users' destination image in social media. Empirical analysis based on data collected from Sina Weibo users suggests that several content cues and web page design as a noncontent cue are positively related with cognitive and affective images, which lead to a conative image. This study contributes to the body of knowledge on the role of tourism information quality in social media by providing empirical evidence on destination image formation. It also helps tourism managers build their marketing strategies to attract more tourists through social media.

1. Introduction

Today, one of the major trends in the tourism industry is that personal or independent tours are getting popular compared to traditional group package tours. According to the Chinese International Travel Monitor [1], almost half (i.e., 49%) the Chinese travelers, who have been the world's top spenders in international tourism since 2012, prefer an independent tour rather than a package or a semi-package tour. These trends have given rise to a growing number of independent tourists who mostly book their travel online by themselves (not through travel agencies) and travel in small groups or as couples [2]. Moreover, more than half (53%) the Chinese and US tourists book their trips through digital means by using mobile applications [3]. As such, increasingly more number of independent travelers search for information about their trips and even book their trips online or through mobile applications [4].

According to the Tourism Highlights by the United Nations World Tourism Organization (UNWTO) in 2015, the number of international tourist arrivals (overnight visitors) increased from 1.087 billion in 2013 to 1.122 billion in 2014 [5]. In addition, UNWTO forecasted that the number of international tourists worldwide will reach 1.8 billion in 2030 on the basis of a 3.3% increase per year until then. The tourism industry accounts for 1 in 11 jobs and 30% of the world's service exports [5]. Therefore, not only many countries but also more cities and regions have been paying special attention to the tourism sector.

Along with the rapid growth of the individual travel over the world, social media has become a popular platform for people's daily lives [6]. According to wearesocial.com [7], as of January 2016, more than 2.3 billion people (approximately 31% of world population) have active social media accounts, and on average, they spend more than 2 h per day using social media. Moreover, Facebook alone, which is one of the leading social media, has 1.71 billion monthly active users as of June 30, 2016, and 1.03 billion daily active users on average access Facebook using their mobile devices [8]. In the tourism industry as well, social media has made a huge impact on the way people search and share information and even make a decision on their destinations. Therefore, social media is considered an important source of tourism information [6,9]. That is, it is changing the way how tourists search, find, read, and process information about tourism suppliers and their destinations. Tourists can share their travel stories through social media such as Facebook, Instagram, Twitter, YouTube, and Tripadvisor [10]. These user-generated contents (UGCs) in social media are

* Corresponding author.
E-mail addresses: milleniero@gmail.com (S.-E. Kim), kyunglee@dal.ca (K.Y. Lee), shins@uwgb.edu (S.I. Shin), sbyang@khu.ac.kr (S.-B. Yang).

http://dx.doi.org/10.1016/j.im.2017.02.009
0378-7206/

playing an important role in all industries, particularly in the tourism sector [11,12].

Not surprisingly, social media is becoming a distinct tourism marketing and communication tool for marketers in various firms because they can directly interact with tourists and influence decision-making processes of their travel consumers [13,14]. Tourism organizations and destination marketing organizations (DMOs) are aware of such ongoing trends and thus try to explore the opportunities to use tourist-generated contents for their own and their destination brand positioning purposes [15,16]. Therefore, a variety of national and regional tourism organizations manage various types of social media such as Twitter, Facebook, Instagram, Weibo, YouTube, and Flickr to improve their tourism destination images.

As suggested in the tourism literature, the destination image plays a significant role among tourists in their destination choice processes and future visiting behaviors [17–19]. In other words, tourists who have favorable destination image are more likely to intend to visit or recommend to others [20]. Moreover, a number of studies have discussed the role of UGCs and social media in forming tourists' destination image (e.g., [21,22]). Although the topics on tourism information in social media and its role for various beliefs and behaviors of tourists have received increasing attention from tourism researchers, very little empirical evidence has been found about *the relationship between the quality dimensions of tourism information in social media and the destination image formation*.

Thus, this study mainly aims to propose and examine relationships between tourism information quality (IQ) in social media and the three types of destination image formation. In other words, this study identifies factors of tourism IQ in social media that influence both cognitive and affective images, which eventually contribute to form behavioral (conative) image, based on the discussion of Wang and Strong's [23] conceptual framework of IQ, Chaiken's [24] heuristic-systematic model, and Gartner's [25]) destination image formation theory. More specifically, this study answers the following research questions: (1) what are the factors (as contextual/representational dimensions or content/noncontent cues) consisting of tourism IQ in social media? and (2) what are the impacts of those IQ factors on various aspects of tourism destination image (cognitive, affective, and conative images) formation in social media?

To answer these research questions, the present study is organized as follows. Section 2 provides a theoretical background on social media in tourism, tourism IQ, destination image, and their relationships based on the literature review. Section 3 presents the research model, which explores the relationships between tourism IQ factors in social media and destination image formation. Section 4 explains the research methodology on data collection and measurement, and data are analyzed in Section 5. The results, theoretical and practical implications, and limitations of the study are discussed in Section 6, followed by the conclusion in Section 7.

2. Theoretical background

2.1. Social media in tourism

Before the Web 2.0 era, the Internet functioned mostly in one direction – a "reading-only" format – and interactions among users were very limited. However, since the advent of the Web 2.0 platform, users can read, write, and interact with other users more easily [26]. In other words, the Web 2.0 enabled people to collaborate and share their information over the Internet with others. Adopting the Web 2.0 technology, social media has become one of the most influential marketing tools for firms that want to enhance better communication with customers [27]. In fact, in terms of communication media, social media is one of the important tools for many organizations. The majority of academic studies on social media have been conducted since 2008 [28], and those studies have defined social media in the following ways. Xiang and Gretzel [6][6,p. 180] defined social media as *"Internet-based applications that carry consumer-generated content encompassing media impressions created by consumers."* In a recent study, Chung and Koo [10,p. 219] summarized the definition of social media as *"a group of Internet-based applications that exist on the Web 2.0 platform and enable Internet users from all over the world to share ideas, thoughts, experiences, perspectives, information, and forge relationship."* As such, social media is regarded as a group of Internet-based applications, built on the Web 2.0 platform, which enable anyone to produce UGCs and share them easily regardless of region or time.

Consumers now regard social media as a much more trustworthy source of information regarding products and services than corporate-sponsored marketing communication channels, which have traditionally served as the means of promoting goods and services [29]. Accordingly, across various industries, social media has recently been used as an important consumer communication tool that influences various aspects of consumer behavior including information acquisition, attitudes, purchase, post-purchase communication, and product/service evaluation [30,31]. For example, an empirical study found that corporates social media management activities influence public perception of firms [32]. In the case of Facebook, when users gain some information regarding products and services from their friends, they tend to become a consumer at a 15% higher rate than when they receive the information through other channels [33].

In particular, the role of social media is now important in the tourism sector as tourism is an information-intensive industry that strongly relies on electronic systems (i.e., Internet) to distribute its products in the marketplace and communicate with customers [34–37]. In addition, as tourism-related products and services are relatively expensive and are characterized as high-involvement products [38], travelers generally try to collect and review a lot of information related to their travel for their decision-making processes [39]. Traditionally, travelers have consulted travel TV programs and offline-based printed sources such as books, newspapers, and magazines to search for information they need. Over the past 15 years, however, these traditional tourism information sources have been substituted by Internet travel websites and social media feeds, which provide travel information to users and allow them to share their experiences in an interactive manner [10]. Therefore, many companies in the tourism industry (e.g., hotels) have been launching or participating in various social media channels to communicate with and provide various travel information to customers [40]. According to Dellarocas [41], social media provides companies with unprecedented opportunities to understand and react to their customers. More specifically in the context of the tourism industry, social media has become one of the most prominent components for DMO's marketing strategy [42]. By analyzing comments on online websites and social media, firms in the travel industry can better understand customers' preference regarding services and products provided by firms [39]. Further, social media is now changing the decision-making processes of tourism consumers [43].

In academia, many researchers have focused on the role of social media in the tourism industry as an emerging topic. Leung et al. [39] published a literature review study on social media in the tourism industry by focusing on 44 studies published in academic journals by 2011. The key findings of their study are that consumers usually use social media during the search phase of their travel planning process, so trustworthiness in social media as an information source is a crucial factor regarding their decision to

use information [39]. Zeng and Gerritsen [9] also reviewed the literature on social media in tourism industry and suggested that more effort is needed to understand the economic contribution of social media to the tourism industry. Other empirical studies have looked into the impact of social media on tourists' travel information search, the quality of travel recommendation, and tourists' purchasing behavior. Xiang and Gretzel [6] found that a big chunk of travel information search results is rooted from social media, and Huang et al. [44] also identified motivational factors for tourists' travel knowledge sharing in social media. Chung and Koo [10], based on mental accounting theory, further demonstrated that the tourist's perceived value of social media is considerably associated with travel information search. He et al. [45] found that even social relationships data embedded in social media (on top of users' online reviews) influence users' travel behavior and recommendation quality as well.

Despite the importance of tourism information in social media found in the literature, there is a lack of understanding about the details of tourism information in social media. That is, little has been known about which dimensions of IQ in social media are most relevant in the context of tourism, and what factors of tourism IQ significantly influence customers' decision-making process in terms of forming various types of destination image. Therefore, this study aims to first identify important factors of tourism IQ and then investigate their impacts on customers' decision-making process with regard to destination image formation to increase our understanding of the role of tourism information in social media.

2.2. Tourism information quality

In information systems, a variety of studies have identified various dimensions of IQ. Most frequently cited dimensions are those proposed by DeLone and McLean [46] and Lee et al. [47]. Although those IQ dimensions are well suited for studies on information system users, we believe that, in this study, it is necessary to focus on IQ dimensions that emphasize consumers' (in particular, travelers') viewpoint, rather than information system users' viewpoint. Therefore, we abide by the literature on IQ conducted from the consumers' perspective who evaluate IQ for their purchases of products and services. For example, Huang et al. [48] defined IQ as information, which is fit for use by information consumers, and Kahn et al. [49] described IQ as the characteristic of information that satisfies customer expectations.

Among prior studies that have proposed the dimensions of IQ from consumers' viewpoint, we adopt Wang and Strong's [23] conceptual framework of IQ because a variety of studies on IQ from the consumers' perspective (rather than information system users' one) have been conducted in various research settings based on this seminal work. In brief, their framework categorized IQ into four dimensions of quality (i.e., intrinsic, contextual, representational, and accessibility qualities), and each quality dimension consists of two to five factors, illustrated in Fig. 1. The details of each aspect of quality are described by Agarwal and Yiliyasi [50].

As mentioned, various studies employed this framework to investigate the phenomena related to consumers' view of IQ. For example, Pipino et al. [51] reorganized this conceptual framework into subjective and objective dimensions, and Kahn et al. [49] used this framework to map IQ dimensions into Product-Service-Performance/IQ (PSP/IQ) model and assessed soundness, usefulness, dependability, and usability as important dimensions of IQ for consumers. Klein [52] analyzed the contextual quality of information in the World Wide Web (WWW), and Knight and Burn [53] also developed metrics for information retrieval from WWW based on Wang and Strong's [23]. Recently, Agarwal and Yiliyasi [50] and Emamjome et al. [54] recategorized this conceptual framework of IQ in the context of social media. As such, our literature review on extant studies adopting Wang and Strong's [23] IQ framework implies that this conceptual framework of IQ is appropriate for consumers who search and use information for their products and services. In addition, this framework can be reconstructed or reappropriated depending on different circumstances of information use by consumers such as WWW [52], e-commerce [49], social media [50,54], and even tourism sectors.

To identify influencing IQ factors in a tourism setting, this study focuses mainly on the factors in the contextual dimension of IQ (i.e., *value-added*, *relevancy*, *timeliness*, *completeness*, and *amount of information*) from Wang and Strong's [23] framework because the contextual quality emphasizes the requirements determined in the context of the task where it is to be used; accordingly, we believe that this dimension best describes the various information requirements that travel consumers need when they search, find, read, and finally evaluate tourism information in social media. Then, we add two more factors that could possibly belong to the contextual (i.e., *interestingness*) and the representational (i.e., *web page design*) dimensions of IQ respectively to propose more suitable tourism destination image formation model in the context of social media platforms. Detailed explanations on the process of identifying important factors of tourism IQ from Wang and Strong's [23] framework are as follows:

First, although it is not included as one of the original contextual factors in Wang and Strong's [23] framework, we consider

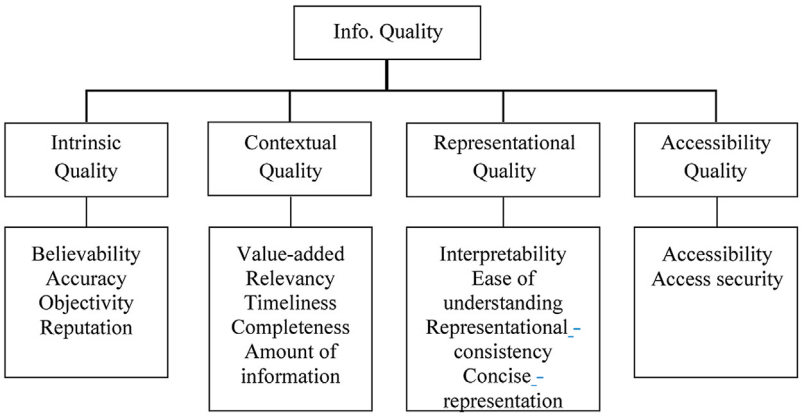

Fig. 1. Wang and Strong's [23] conceptual framework of information quality.

interestingness as one factor that can belong to the contextual dimension of IQ because people usually use social media not only for goal-oriented activities but also for amusement [55]. Moreover, interestingness is found to be a relevant factor for tourism customers' intention to visit a destination [55].

Second, for the representational dimension, we replace the majority of representational factors of IQ (e.g., representational consistency and concise representation) with *web page design*. Because we focus on users who look for tourism information from the same social media (i.e., Sina Weibo), we believe that their perceived representation of information itself will not vary significantly among the users. Each social media has its own user interface for all users and its own policy dealing with the representation of their contents. Although we do admit that there could be some variance in how users perceive the representation of information even from the same social media, we argue that such variance is not as significant for users to form destination image as the contextual dimension factors of IQ. However, one of representational factors of IQ that can be perceived with different extents among users and could be relevant for users' destination image formation is the "design of a web page of a specific destination" within social media (e.g., usually created by tourism bureaus of the destination, DMOs, see Fig. 3) because the same informational contents could be perceived differently by users depending on its background (e.g., halo effect). Moreover, we believe that *web page design* should be a relevant IQ factor of our study because the primary purpose of well-designed web page for tourists is to attract people, particularly who access such websites using social media and those who would like to visit and find relevant information about the destination.

Finally, we did not consider the accessibility dimension of IQ in this study because users' networking environment such as the Internet speed and page loading speed to social media (i.e., Sina Weibo) can hardly be distinguishable among users nowadays. Although there can be some variation in different users' perceived accessibility to these social media depending on devices they use and their connection environments, we believe that the accessibility dimension factors (e.g., accessibility and access security) of IQ are not much relevant to consumers' formation of destination image. Further, we also exclude the intrinsic dimension of IQ because factors of this dimension (e.g., believability and objectivity) are generally evaluated without considering the contextual inferences; thus, the intrinsic IQ dimension is less relevant to the destination image formation than the contextual one. On the basis of the abovementioned arguments, this study considers six contextual factors (i.e., *value-added, relevancy, timeliness, completeness, interestingness, and amount of information*) and one representational factor (i.e., *web page design*) of IQ as influencing factors on users' destination image formation in social media.

Such factors identified from Wang and Strong's [23] IQ framework can also be recategorized as content (i.e., systematic) and noncontent (i.e., heuristic) cues drawing on *heuristic-systematic model* (HSM), which is regarded as a representative example of communication models proposed by Chaiken [24]. HSM is generally used to explain how a person receives and processes the information, introducing two basic ways: heuristic and systematic processes. While systematic processing entails a comprehensive and analytic examination of judgment-relevant information, heuristic information processing needs minimal cognitive effort to reach conclusions based on the least effort principle of the model (HSM), relying on heuristics or noncontent cues [56]. As Wang and Strong's [23] IQ framework does, this HSM can also provide a useful framework for explaining users' behavior on the web [57,58]; thus, HSM can also be applied to this research. When users receive and process tourism information in social media, they will usually consider not only *content qualities* (e.g., *valued-added, relevancy, timeliness, completeness, and interestingness*) but also *noncontent qualities* (e.g., *amount of information and web page design*). Therefore, this study seeks to investigate empirically how the content and noncontent ques of tourism IQ in social media influence tourists' destination image formation.

2.3. Destination image

Destination image has been investigated as one of the most popular topics in the tourism literature for a long time since early 1970s [59]. Destination image plays a considerable role in tourists' decision-making process for destination selection [17,60], in the process of spreading positive word of mouth (WOM) reviews, and in recommendations to acquaintances [61]. In other words, destination image influences tourists' satisfaction and behavioral factors such as the choice of travel destination, the subsequent evaluations of the destination, and their behavioral intentions in the future [62].

Extant studies have defined destination image in various ways. According to Gallarza et al. [19] and Zhang et al. [63] who conducted a comprehensive literature review on its definition, *destination image* can be defined as the sum of impressions, perceptions, feelings, and beliefs that people have about a destination. Moreover, many studies on the topic of destination image have suggested that destination image should be considered by incorporating both cognitive (e.g., knowledge and ideas) and affective (e.g., feelings) aspects [17,60,64]. Baloglu and McCleary [17] proposed a generalized framework of destination image formation, containing perceptual/cognitive evaluation, affective evaluation, and overall (i.e., conative) image, which is the result from the interaction of both cognitive and affective images [65]. This model has been generally accepted as the basic theoretical framework of destination image by subsequent studies (e.g., [64]). *Cognitive image* refers to the beliefs and knowledge about the destination, and it is related to "the components of a destination that attract tourists such as attractions to be seen, environment to be perceived (e.g., weather and public hygiene), and experiences to remember underlying in the cognitive structure of destination image" Wang and Hsu [62,p. 831]. *Affective image* refers to emotion and feelings that a tourist holds with regard to various features of the destination. Finally, *conative image* represents a behavioral component implying future action and intention (e.g., intention to visit the destination and positive WOM comments) [17,25]. Gartner [25] proposed the *destination image formation theory* that consists of a hierarchical causal model. The cognitive component influences both the affective and conative components, and the affective component influences the conative component as well. On the basis of this theoretical model, Baloglu and McCleary [17] provided empirical evidence that indicates that the cognitive and affective components are interrelated, and the effect is greatly dependent on cognition. Afterward, many studies supported these findings in various contexts (e.g., [60,66,67]), and recently, Agapito et al. [61] also empirically confirmed that the three destination image components are interrelated.

Quite a few studies have identified various factors that significantly influence the destination image formation such as length of stay [68], advertising [17], previous travel experience [69], and UGCs by peer travelers [22]. Another group of scholars has highlighted the importance of destination image formation and found that destination image is positively associated with perceived quality of a destination [70], travel satisfaction [71], and intention to visit the destination [64]. In addition, a couple of literature review studies summarized the literature on destination image formation. For example, Tseng et al. [65] divided destination image studies into three stages. According to them, the first stage started with Gunn [72] who proposed three factors related to

destination image: organic, induced, and modified-induced images. Many fundamental definitions were produced at this stage. At the second stage, theoretical perspectives on users' perception were introduced (i.e., cognitive, affective, and conative images), and they became the most popular theoretical framework for subsequent research on destination image formation. Finally, the third stage attempted to connect destination image with the notion of destination branding and positioning (e.g., [59]).

Our literature review on destination image provides us with two interesting points, which can be the key contributions of this study. First, although many studies provided empirical evidence on the antecedents of destination image, little efforts have been made to investigate the impact of different dimensions of IQ on the process of destination image formation in the context of social media. Second, historically, many studies have been conducted in the Western contexts. For example, Pike [59] found that studies focusing on the Asian region accounted for only 25 out of the 142 papers on destination image published during the period from 1973 to 2000. Thus, we believe that our research fills this gap emphasizing the importance of research context in the Asian region.

2.4. Destination image formation in social media

As discussed in previous sections, social media and destination image are emerging subjects in the tourism literature, and the relationship between the two topics has been recently investigated in some studies. For example, Hanlan and Kelly [73] conducted in-depth interviews with 21 international backpackers who visited Australia and found that conventional media (e.g., broadcasting, newspaper) played little or no part in those interviewees' image formation. Rather, WOM and independent information sources were key factors for those backpackers' destination image formation. Tham et al. [74] argued that the important role of electronic WOM (eWOM) in social media in terms of strengthening the visibility of destination image by spreading multiple perspectives with regard to the destination. In addition, Camprubí et al. [75] discussed the emerging role of tourists as agents in destination image formation and contended that today tourists are playing an active role in the process of the destination image formation through their spontaneous responses in blogs, social media, etc. Furthermore, Ghazali and Cai [21] posited that social media connects three components: suppliers (destinations), consumers (tourists), and third parties. They stated that "with the social media sites as the agent, an overall conative image of a destination is formed by the overlap and intersection of provision and evaluation of cognitive and affective information by and among suppliers, consumers, and third parties" Ghazali and Cai [21,p. 86].

Chen et al. [55] investigated the relationships among IQ of tourism blogs' content, tourists' attitude, and their behavioral intention to visit the destination. They found that reliability, understandability, and interestingness of content are positively associated with users' perceived enjoyment, which leads to intention to visit the destination. This study is one of the first attempts to investigate the relationship between IQ and conative image regarding the destination. Moreover, Alizadeh and Isa [76] focused on current social media websites operated by 193 countries' national tourism organizations (NTOs) and analyzed their contents by utilizing data mining techniques; as a result, they found that numerous NTOs still do not recognize marketing opportunities provided by social media, even though there is abundant room for improvement.

On the basis of our literature review on the relationship between social media and destination image, we found that social media has been treated as an emerging information source in tourism destination marketing, and more scholars in the field of tourism have had an increasing interest in the roles of social media in destination image formation. However, the topic of tourists' destination image formation in social media is still under-investigated, especially in an empirical manner. Most extant studies on the relationship between social media and destination image are conceptual studies (e.g., [21,74]) or focusing only on behavioral intention (conative image), not including cognitive and affective images (e.g., [55]). Further, majority of the studies have been performed with only Western-orientated cases (e.g., [75,73,77]). As such, this study contributes to the literature on destination image as it examines the role of influencing factors of tourism IQ in social media in forming tourists' destination image, in the viewpoint from Chinese social media users.

3. Research model and hypotheses

On the basis of the discussions of Wang and Strong's [23] IQ framework, HSM, and destination image formation theory in the context of tourism-related social media use, we propose the tourism destination image formation model as our research model, depicted in Fig. 2. The seven factors of tourism IQ identified in Subsection 2.2 are classified into two categories (i.e., content and noncontent cues) of tourism IQ according to the HSM of

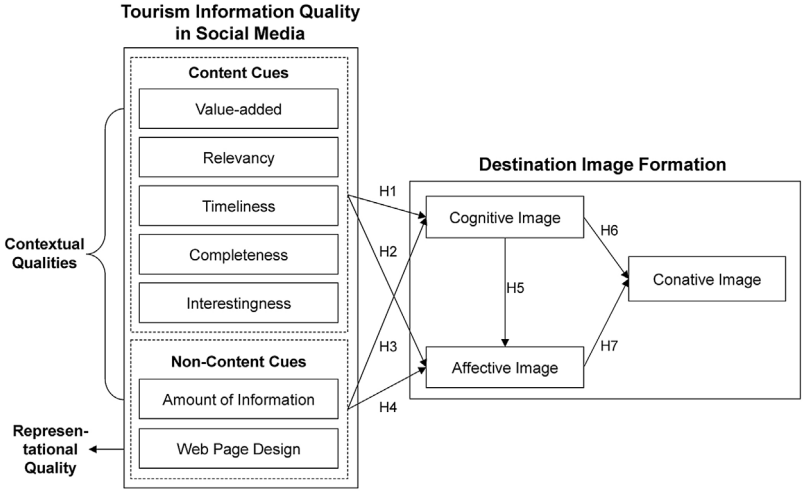

Fig. 2. Research model.

Fig. 3. Sina Weibo web page of GTO.

information processing [24] and three components of destination image (i.e., cognitive, affective, and conative images) identified from the destination image formation theory are proposed as dependent variables.

3.1. The relationship between tourism information quality and cognitive/affective destination image

To relate the seven identified factors of tourism IQ in social media to destination image formation, we reviewed and applied two streams of research: (1) the literature on destination image formation and (2) the literature on users' information processing in online environments (i.e., HSM). First, extant studies on destination image formation in the tourism industry have suggested that information source is one of the most important factors for users' tourism image formation [60,78]. For example, quite a few studies argued that various information sources influence the way tourists form destination image [17,79,77]. In addition, Um and Crompton [80] found that users' cognitive and perceptual image about destination is formed not only by promotional information provided by tourism suppliers but also by social influence such as recommendations from family members or friends. Furthermore, other studies suggested that various characteristics of information sources (e.g., amount of information, variety of information sources, and the contextual dimension factors of IQ) are important determinants for users' destination image formation [81,78,82]. Second, extant studies based on HSM [24] have found that both content and noncontent cues significantly influence information processing by users in various online contexts [57]. For example, Zhang et al. [58] found that both systematic and heuristic cues in online communities are important determinants of customers' behavioral intention in online review sites, and Lee and Yang [83] also found that both systematic and heuristic cues of information in online product reviews are positively associated with information adoption by product developers. We apply these two streams of research studies (i.e., destination image formation and information processing based on HSM) to argue the relationships between various factors of tourism IQ and users' destination image formation. Taken together, because users' image about any products or services is formed by information processing with various information sources [84], those two streams of research can be applied to form a general theoretical perspective that *various content (systematic) and noncontent (heuristic) cues* of tourism information in social media may influence *the way users form various types of destination image*. Therefore, we offer the following four general hypotheses, which will be broken down into several specific hypotheses.

H1. Content cues of tourism information in social media are positively associated with the cognitive image of a destination.

H2. Content cues of tourism information in social media are positively associated with the affective image of a destination.

H3. Noncontent cues of tourism information in social media are positively associated with the cognitive image of a destination.

H4. Noncontent cues of tourism information in social media are positively associated with the affective image of a destination.

Value-added refers to the degree to which the information consumer obtains a benefit by using the information [23]. It can be expected that if the tourism information in social media is perceived to be valuable to tourists, they will adopt that information content and process it to think about how to use that information in the destination they will visit. For instance, if a social media page on a certain destination provides valuable information about local foods and restaurants, they will use the information to plan their trip, which is a process of forming destination image. This destination image formation can be both cognitive and affective. With value-added information, users can form cognitive image about their trip with knowledge they got from the information (e.g., how to get to the restaurants based on geographical information posted in the social media page). At the same time, especially with more visualized information provided by the content in social media, they can form more affective image about the future experience they can get from the value-added information (e.g., a feeling about having local cuisines with their travel partners). Filieri and McLeay [85] also found that there is a positive relationship between value-added information and travelers' information processing, which in turn leads to the adoption of the content in online review sites. Therefore, we hypothesize that

H1a. Value-added tourism information in social media is positively associated with the cognitive image of a destination.

H2a. Value-added tourism information in social media is positively associated with the affective image of a destination.

Relevancy refers to the degree to which information is relevant for a particular task [23]. Tourism information is relevant if it provides particular information about the destination a user plans to visit. For tourists, one of the main purposes of following a particular page related to tourism in social media is to acquire tourism information from the destination that is relevant for their trips. If the content in a social media page of a destination provides relevant information for tourists, they will process the information to form images about the destination. A couple of studies also supported this argument. Frias et al. [78] argued that providing relevant information for tourists helps users avoid information overload when searching information about their trips and eventually helps them form destination image. In addition, Filieri and McLeay [85] found that there is a positive relationship between information relevancy and travelers' adoption of information from online review sites. On the basis of these discussions, we assume that relevant information could help tourists form both cognitive and affective destination image. Therefore, we hypothesize that

H1b. Relevancy of tourism information in social media is positively associated with the cognitive image of a destination.

H2b. Relevancy of tourism information in social media is positively associated with the affective image of a destination.

Timeliness refers to the degree to which the information is current and sufficiently up-to-date for the task in hand [23]. In social media, the latest content is usually shown up first so that the content that a user can see first is the most up-to-date information. In this context, tourists should be more interested in looking into more up-to-date information to form their destination image. Several studies also argued or found evidence that the timeliness (or recency) of online information influences users' information processing, adoption, and even behavior of choosing products or services. For example, Cheung et al. [86] suggested that the timeliness of information is positively associated with users' perceived usefulness of information in online reviews. Filieri and McLeay [85] indicated that there is a positive relationship between information timeliness and travelers' information adoption from online review sites. Recently, Xie et al. [87] found that the recency of online review is an important factor that draws more attention from the audience in TripAdvisor.com. With these findings, we argue that timeliness will be positively associated with users' information processing from the content in social media, which will eventually influence their destination image formation. Therefore, we hypothesize that

H1c. Timeliness of tourism information in social media is positively associated with the cognitive image of a destination.

H2c. Timeliness of tourism information in social media is positively associated with the affective image of a destination.

Completeness refers to the degree to which information is of sufficient breadth and depth for the task at hand [23]. Information completeness has been proposed as one of very important factors of IQ [46]. The more detailed and the wider range of information, the more likely users of the information retain and process the information [88]. Moreover, it is found that complete (or comprehensive) information is positively associated with information users' perceived usefulness and information adoption [86]. In the case of tourism information in social media, complete information provided by social media will help users form better image of the destination. With the same argument we discussed above, complete information could help tourists form both cognitive and affective destination image. Therefore, we hypothesize that

H1d. Completeness of tourism information in social media is positively associated with the cognitive image of a destination.

H2d. Completeness of tourism information in social media is positively associated with the affective image of a destination.

Interestingness refers to the degree to which information is perceived to be interesting [55]. It is natural that if some contents of a particular web page are perceived as interesting, the user may spend more time reading and sharing them in social media. Chen et al. [55] empirically demonstrated that the interestingness of the content in travel blogs positively influences intention to visit a tourism destination. As for the destination image formation, interesting postings in a social media page will encourage users to process the information and imagine what they will do with the information (cognitive image formation) and how they will feel (affective image formation) after doing activities using the information in social media. Therefore, we hypothesize that

H1e. Interestingness of tourism information in social media is positively associated with the cognitive image of a destination.

H2e. Interestingness of tourism information in social media is positively associated with the affective image of a destination.

Web page design refers to the design of displayed pages in social media including color, layout, and entire graphical appearance with pictures and other types of multimedia contents [89]. Ranganathan and Ganapathy [89] demonstrated that the design of web page generally plays an important role in attracting the attention of a consumer on a website. In addition, they found that the design of web page has an impact on the online purchase intent of consumers. Moreover, Frias et al. [78] suggested that graphical contents also help improve the effectiveness of destination image formation. In the case of social media, we argue that a well-designed tourism social media page would improve users'

perceived trustworthiness of the information posted in the website [90] so that it will encourage them to process the information to form both cognitive and affective destination image. Therefore, we hypothesize that

H3a. Web page design in social media is positively associated with the cognitive image of a destination.

H4a. Web page design in social media is positively associated with the affective image of a destination.

Amount of information refers to the degree to which the quantity or amount of available information is appropriate [23]. Baloglu and McCleary [17] provided empirical evidence that the appropriate amount of information has a positive impact on cognitive destination image formation. However, Gartner [25] argued that the amount of information received by an individual influences the formation of the cognitive component of image but not the affective counterpart. In the context of a social media page regarding tourism, we argue that the amount of information is positively associated only with the cognitive image formation but not with affective image formation for the following reasons. First, for the relationship between the amount of information and the cognitive image formation, a good amount of information is presented in a social media web page of a DMO, such as travel routes (e.g., 3 days in a city), local event calendars, and a list of must-eat restaurants, will help tourists form a cognitive image about what to do in the destination. However, simply having good amount of information contents presented in a social media web page does not necessarily guarantee that those contents influence a tourist's affective side of destination image. Sometimes, small amount of information (e.g., a very short video clip or even a good photo of a destination) could have a great effect on affective image formation. On the other hand, long and well-described text-based information contents in social media may not be much related to the affective side of destination image. With these perspectives, we hypothesize that

H3b. Amount of tourism information in social media is positively associated with the cognitive image of a destination.

3.2. The relationships among cognitive, affective, and conative destination image

Numerous extant studies have shown that there are three main dimensions in destination image (i.e., cognitive, affective, and conative destination image) and that these components are found to be interrelated. On the basis of Gartner's [25] destination image formation theory, Baloglu and McCleary [17] and Agapito et al. [61] provided empirical evidence on their interrelated relationships. As such, we argue that the interrelationship among these three components will hold in the context of tourism social media pages as well. As argued and found in extant studies, cognition comes first so that users form cognitive image using information provided by a social media page on their tourism destination. For example, using video contents posted in a social media website, they get to know what to do in the destination. Then, future feeling about doing the activities will come next. Finally, both cognitive and affective images may influence actual behavior they might be doing in the destination, which are all based on information contents posted in a social media page. Therefore, we propose the following three hypotheses:

H5. Cognitive image is positively associated with the affective image of a destination in social media.

H6. Cognitive image is positively associated with the conative image of a destination in social media.

H7. Affective image is positively associated with the conative image of a destination in social media.

4. Research method

4.1. Data collection

To validate our research model empirically, we developed a survey instrument, targeting for Chinese Sina Weibo users who are following the official page of Gyeonggi Tourism Organization (GTO), which is one of the South Korean DMOs funded by Gyeonggi province, the most populous province in South Korea, surrounding the capital city, Seoul. An online survey was designed to collect data effectively in China using SurveyMonkey's cloud-based service. Approximately 1.8 million fans are following GTO page in Sina Weibo (see Fig. 3). The word "Weibo" is a compound of the word "博客" meaning "blog" and "微" meaning "small." Weibo is one of many microblogs and is similar to Twitter. Indeed, the Chinese government prohibited the use of social media such as Facebook (since 2008), Twitter (since 2009), and Instagram (since 2014) in mainland China, excluding Macau and Hong Kong. Therefore, Weibo could be a Chinese-style social medium, which most Chinese people are using. Sina Weibo is the first microblog in China made and operated by "SINA.com," which is one of the biggest portal Internet sites in China. Sina Weibo has the highest proportion in Weibo market in China, and the number of users is more than 0.5 billion.

There are several reasons why this survey targeted Chinese Sina Weibo users. First, China is the largest market in the world tourism industry. The amount of Chinese travel expenditure, for example, was over $128 billion in 2014, and it was ranked first in terms of volume [5]. In addition, the proportion of Chinese tourists who visited South Korea accounted for more than 50% out of the total number of 12 million foreign tourists who visited South Korea [91]. Second, the ratio of tourists who visited South Korea using a full package tour was 24.9%, whereas the ratio of independent tourists was 68.9% in 2014. Among international tourists to South Korea in 2014, 99.2% of American, 72.6% of Japanese, and 57.8% of Chinese visitors were also independent travelers [91]. Finally, according to Korea Tourism Organization [92], the main sources of travel information in China are the Internet homepages of travel agencies (56.2%) and social media (40.9%). This means that social media is being used as one of the major tourism information sources among Chinese tourists.

We collected 212 usable survey responses. Seventy-nine percent (n = 167) of the survey participants were female and 93% (n = 198) of survey participants were aged in their 20s and 30s. In addition, 60% of respondents were employed and 33% of respondents were students. After evaluating the gender composition statistics of Chinese tourists who visit South Korea in recent years [93], we found that somewhere between 65% and 70% of Chinese tourists visiting South Korea were female, which aligns with the ratio of our survey respondents (over 75% of female in current research). Additional demographic characteristics of the sample are summarized in Table 1.

4.2. Measurement

We developed measurement items from extant studies to fit them into the context of this study. The items selected for each construct were revised to ensure face validity. In addition, the pilot tests were conducted by 20 Chinese students. Throughout this

Table 1
Demographic characteristics of the sample.

Variable	Value	*n*	%
Gender	Male	45	21.2
	Female	167	78.8
Age	10s	3	1.4
	20s	144	67.9
	30s	54	25.5
	40s	8	3.8
	50s(+)	3	1.4
Education	Middle school or equivalent	2	0.9
	High school	11	5.2
	Some college	32	15.1
	Undergraduate	123	58.0
	Graduate or more	44	20.8
Job	Student	69	32.5
	Employee	126	59.4
	Housewife	4	1.9
	Self-employed	9	4.2
	Others	4	1.9
Income	$500(−)	56	26.4
	$500–$1000	100	47.2
	$1000–$2000	47	22.2
	$2000–$3000	3	1.4
	$3000(+)	6	2.8
Travel experience using Social media	Yes	172	81.1
	No	40	18.9
Frequency to visit Weibo	2–3 times a day	143	67.5
	Once a day	22	10.4
	2–3 times a week	24	11.3
	Once a week	2	0.9
	2–3 times a month	11	5.2
	Once a month	1	0.5
	Others	9	4.2
Frequency to visit	2–3 times a day	29	13.7
Gyeonggi Weibo	Once a day	49	23.1
	2–3 times a week	47	22.2
	Once a week	27	12.7
	2–3 times a month	20	9.4
	Once a month	9	4.2
	Others	31	14.6

phase, some ambiguous and erroneous terms were revised, and explanations were updated in detail. With the exception for some demographic variables, all constructs were measured on a seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree), unless otherwise indicated (see Appendix A). Table 2 briefly summarizes operational definitions and references used for the variables in this study.

5. Data analysis

5.1. Measurement model

On the basis of the discussions of Wang and Strong's [23] IQ framework, HSM, and destination image formation theory in the context of tourism-related social media use, we propose the tourism destination image formation model as our research model. IBM SPSS Statistics 20.0 and SmartPLS 3.0 [95] were used for our data analysis. We used the partial least squares (PLS) method rather than the covariance-based structural equation modeling (CB-SEM) method (e.g., LISREL and AMOS) because it is an appropriate statistical program for validating an exploratory multipath model with latent variables, even with small number of samples [55,96,97]. This study is exploratory in nature and thus does not test or confirm a proposed theory [55,96]; our study aims to (1) validate the relationships between IQ dimensions (a group of antecedents) proposed by Wang and Strong [23] and three types of destination images proposed by Gartner's [25] destination image formation theory and (2) identify which dimensions of the quality

Table 3
Reliability analysis on overall factors.

Factor	Number of questionnaire	Cronbach's alpha
Conative image	3	0.897
Cognitive image	7	0.930
Affective image	3	0.899
Relevancy	3	0.926
Timeliness	3	0.950
Completeness	3	0.899
Interestingness	3	0.947
Value-added	3	0.941
Web page design	3	0.934
Amount of information	3	0.909

Table 2
Operational definitions and measurements.

Variables	Operational definitions	References
Value-added	The degree to which tourism information about destination provided through social media is useful and beneficial to the users	Agarwal and Yiliyasi [50]; Emamjome et al. [54]
Relevancy	The degree to which tourism information about destination provided through social media is relevant to travel and intention to use	Agarwal and Yiliyasi [50]; Emamjome et al. [54]
Timeliness	The degree to which tourism information about destination provided through social media is new and sufficiently up-to-date for the task in hand	Agarwal and Yiliyasi [50]; Chai et al. [94]
Completeness	The degree to which tourism information about destination provided through social media is accurate and is of sufficient breadth and depth	Agarwal and Yiliyasi [50]; Chai et al. [94]
Interestingness	The degree to which tourism information about destination provided through social media is perceived to be interesting	Chen et al. [55]
Web page design	The degree to which design of web page in social media providing tourism information is attractive to users	Ranganathan and Ganapathy [89]
Amount of information	The degree to which the quantity or amount of available tourism information about destination provided through social media is appropriate	Agarwal and Yiliyasi [50]; Chai et al. [94]
Cognitive image	The social media user's beliefs or knowledge attached to a tourism destination	Chew and Jahari [64]; Wang and Hsu [62]
Affective image	The social media user's feelings and emotion attached to a tourism destination	Chew and Jahari [64]; Wang and Hsu [62]
Conative image	The social media user's behavioral factors related with the tourism destination	Baloglu and McCleary [17]

Table 4
Outer loading on overall factors.

Construct	Items	Factor Loading	*t*	CR[1)]	AVE[2)]
Value-added	VA 1	0.937	73.977***	0.962	0.894
	VA 2	0.952	94.159***		
	VA 3	0.949	105.875***		
Relevancy	REL 1	0.919	56.088***	0.952	0.868
	REL 2	0.947	65.896***		
	REL 3	0.929	61.360***		
Timeliness	TIME 1	0.950	95.597***	0.968	0.910
	TIME 2	0.956	110.087***		
	TIME 3	0.956	100.164***		
Completeness	COMP 1	0.915	43.208***	0.937	0.831
	COMP 2	0.916	36.737***		
	COMP 3	0.904	48.249***		
Interestingness	INTR 1	0.939	71.531***	0.965	0.902
	INTR 2	0.955	106.322***		
	INTR 3	0.956	119.346***		
Web page design	WPD 1	0.925	58.504***	0.958	0.884
	WPD 2	0.954	110.238***		
	WPD 3	0.941	94.932***		
Amount of information	AOI 1	0.918	32.750***	0.942	0.844
	AOI 2	0.942	64.097***		
	AOI 3	0.895	35.797***		
Cognitive image	COG1	0.833	25.897***	0.939	0.838
	COG2	0.829	25.616***		
	COG3	0.845	25.687***		
	COG4	0.875	36.692***		
	COG5	0.820	25.988***		
	COG6	0.803	20.064***		
	COG7	0.850	30.189***		
Affective image	AF1	0.921	61.610***	0.942	0.700
	AF2	0.878	38.961***		
	AF3	0.946	81.569***		
Conative image	CON1	0.860	19.355***	0.936	0.830
	CON2	0.948	108.368***		
	CON3	0.923	39.127***		

1) = Composite Reliability, 2) = Average Variance Extracted, ***: $p < 0.001$.

of information in social media web pages are the most relevant for users' destination image formation. In addition, PLS is advantageous over CB-SEM in case of possible occurrence of non-convergent results and in terms of not necessarily distributional requirement being made [98].

To ensure the reliability of this research, internal consistency was used, measured with Cronbach's alpha and composite reliability (CR) scores. As given in Tables 3 and 4, Cronbach's alpha and CR values of all constructs were greater than 0.70, which ensures internal reliability of items in this study.

To ensure the validity of latent variables, we assessed both convergent and discriminant validities [99]. First, convergent validity was assessed by examining both the average variance extracted (AVE) scores and the factor loadings of the indicators related to each construct. A confirmatory factor analysis was adopted to compute the factor loadings. Table 4 shows that AVE values ranged from 0.700 to 0.910, which are well above the threshold value of 0.5 [100]. The factor loadings ranged from 0.803 to 0.956, and all of them were statistically significant at the $p = 0.001$ level, supporting the presence of convergent validity [101].

Discriminant validity was assessed by comparing the square root of the AVE for each construct against the interconstruct correlations [100]. As shown in Table 5, all the diagonal elements, which are the square root of AVE, exceed the interconstruct correlations, thereby satisfying the discriminant validity.

5.2. Structural model

To test the hypotheses, we measured the explained variance (R^2) of the dependent and mediating variables, path coefficients (β), and their levels of significance (t-values), which were obtained from a bootstrapping with resampling (5000 resamples) to assess the significance of the hypothesized relationships. Results of the hypotheses testing, summarized in Fig. 4 and Table 6, show that nine hypothesized paths in our research model are supported. First, for the role of content-cues, relevancy was significantly associated with both cognitive ($\beta = 0.320$, $p < 0.001$) and affective images ($\beta = 0.197$, $p < 0.01$), supporting H1b and H2b. Value-added was found to be significantly related to affective image ($\beta = 0.302$, $p < 0.001$), supporting H2a. In addition, completeness was related to cognitive image ($\beta = 0.223$, $p < 0.05$), and interestingness was significantly associated with affective image ($\beta = 0.165$, $p < 0.05$), supporting H1d and H2e, respectively. However, significant relationships were not observed between timeliness and cognitive image and between timeliness and affective image (H1c and H2c are not supported). Similarly, the relationship between value-added and cognitive image (i.e., H1a) and the relationship between interestingness and cognitive image (i.e., H1e) were not supported. We also could not find a significant relationship between completeness and affective image (i.e., H2d). Second, for the noncontent cues, we found a significant relationship between web-page design and cognitive image, supporting H3a, although we could not find significant relationships for H3b (Amount of Information → Cognitive Image) and H4a (Web Page Design → Affective Image).

As expected, cognitive image was significantly associated with affective image ($\beta = 0.617$, $p < 0.001$), and affective image was also significantly associated with conative image ($\beta = 0.386$, $p < 0.001$),

Table 5
Correlation between all factors.

Factor	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Conative image (1)	***0.911***									
Cognitive image (2)	0.618**	***0.915***								
Affective image (3)	0.627**	0.828**	***0.837***							
Relevancy (4)	0.537**	0.762**	0.730**	***0.932***						
Timeliness (5)	0.500**	0.753**	0.682**	0.829**	***0.954***					
Completeness (6)	0.568**	0.779**	0.741**	0.816**	0.856**	***0.911***				
Interestingness (7)	0.548**	0.730**	0.733**	0.708**	0.778**	0.861**	***0.950***			
Value-added (8)	0.558**	0.720**	0.749**	0.761**	0.772**	0.838**	0.841**	***0.945***		
Web page design (9)	0.497**	0.718**	0.665**	0.699**	0.762**	0.780**	0.817**	0.798**	***0.940***	
Amount of information (10)	0.270**	0.511**	0.460**	0.487**	0.554**	0.554**	0.541**	0.519**	0.638**	***0.919***

**: $p < 0.01$, *: $p < 0.05$, bold italics: square root of average variance extracted.

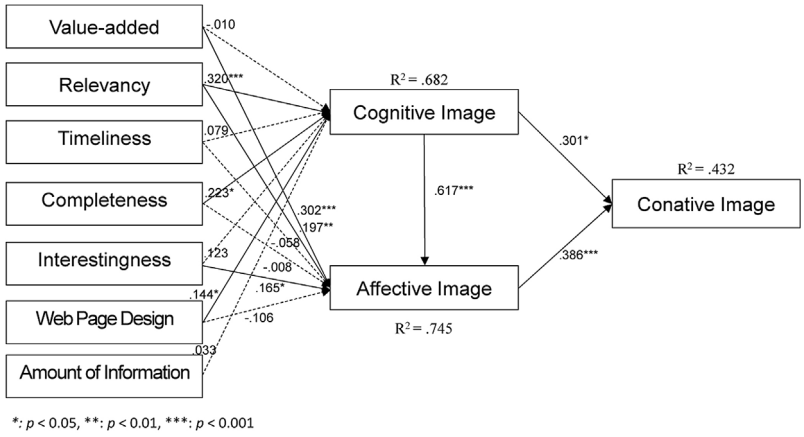

Fig. 4. Result of hypotheses analysis.

Table 6
Structural model testing.

H#	Path	Coefficient	*t*	*p*	Result
H1	**Content cues -> Cognitive image**				**Partially supported**
H1a	Value-added-> Cognitive image	−0.010	0.119	0.905	Not supported
H1b	Relevancy -> Cognitive image	0.320	3.740***	0.000	Supported
H1c	Timeliness -> Cognitive image	0.079	0.861	0.389	Not supported
H1d	Completeness -> Cognitive image	0.223	2.360*	0.026	Supported
H1e	Interestingness -> Cognitive image	0.123	1.533	0.126	Not supported
H2	**Content cues -> Affective image**				**Partially supported**
H2a	Value-added -> Affective image	0.302	3.401***	0.001	Supported
H2b	Relevancy-> Affective image	0.197	3.293**	0.001	Supported
H2c	Timeliness -> Affective image	−0.058	0.598	0.550	Not supported
H2d	Completeness -> Affective image	−0.008	0.076	0.939	Not supported
H2e	Interestingness -> Affective image	0.165	2.040*	0.045	Supported
H3	**Noncontent cues -> Cognitive image**				**Partially supported**
H3a	Web page design -> Cognitive image	0.144	2.086*	0.037	Supported
H3b	Amount of information -> Cognitive image	0.033	0.440	0.660	Not supported
H4	**Noncontent cues -> Affective image**				**Not supported**
H4a	Web page design -> Affective image	−0.106	1.369	0.171	Not supported
H5	**Cognitive image -> Affective image**	0.617	8.272***	0.000	**Supported**
H6	**Cognitive image -> Conative image**	0.301	2.549*	0.011	**Supported**
H7	**Affective image -> Conative image**	0.386	4.422***	0.000	**Supported**

SRMR = 0.039 ($t = 6.542$, $p < 0.01$), 95% confidence interval of SRMR is (0.038: 0.062), *: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$.

strongly supporting H5 and H7, respectively. In addition, the hypothesis suggesting a relationship between cognitive image and conative image (H6) is also supported ($\beta = 0.301$, $p < 0.05$).

As self-reported survey studies, which rely on responses in a cross-sectional setting, may suffer from common method bias (CMB), we performed Harman's one-factor test, following Podsakoff and Organ's [102] recommendation. The results of exploratory factor analysis (EFA) with all items related to independent and dependent variables indicate that not a single factor accounted for a large portion of the variance; the most prominent factor explained 32% (0.316) of the variance in the data, which is below the recommended threshold (50%) [102]. Thus, it is concluded that there is no significant threat from CMB in this study. Moreover, because the correlation between some independent variables is relatively high (as shown in Table 5), we performed the multicollinearity test by estimating the values of variance inflation factor (VIF) of each independent variable on the basis of the results from the ordinary least squares regression model [97]. The test results show that the highest VIF value of 2.80 (value-added) is far below the critical value of 10 [97], indicating that the problem of multicollinearity is not a serious concern in the study.

6. Discussion

6.1. Discussion of results

This research highlights the relationship between tourism IQ factors in social media and destination image formation. The results suggest that various aspects of tourism IQ in social media are positively associated with different types of destination image. According to our demographic survey results, about 81% of respondents had travel experience using social media, which demonstrates that Chinese tourists used social media as an influential source for obtaining tourism information. We further discuss our research findings in terms of content and noncontent cues of tourism information and destination image formation as follows.

First, most content cues of tourism information affected either cognitive or affective image except for timeliness. For the *timeliness*

factor, people may take it for granted that tourism information shown in our focal social media is current and updated because of the nature of the focal social media. More specifically, the research site where we collected data from is a very active tourism-related Sina Weibo page operated by a South Korean DMO, so most postings are already very up-to-date and timeliness of information does not make much impact on destination image formation. However, the *relevancy* of tourism information in social media has a considerable impact on both cognitive and affective images. This result suggests that the degree to which tourism information about users' travel destination (provided by social media) is relevant to ones' purpose of trips plays an important role for users in processing the information, eventually forming both cognitive and affective destination image. The *interestingness* of tourism information is significantly associated with affective image formation only and not with cognitive image formation. This is a plausible result as interestingness seems to be more related to a person's feeling and emotion (emotional factor) rather than her/his destination knowledge (cognitive factor). While *completeness* is positively associated with cognitive image formation, *value-added* tourism information is positively associated with affective image formation in social media, suggesting that complete information helps users form more cognitive side of destination image, such as what to do and where to find things; moreover, value-added information helps users form more affective aspect of destination image, such as how tourists will feel about visiting the destination.

Second, for noncontent cues of tourism information, only web page design influenced cognitive destination image formation. Although we hypothesize that web page design is positively associated with both cognitive and affective destination image formation, we originally expected web page design would have a stronger relationship with affective image than with cognitive image because web design involves color, layout, and the entire graphical appearance in social media, which seems to be more related to affective factors; however, our finding is counterintuitive. We can interpret this result that a well-designed social media page by DMOs with trendy and attractive graphical images reinforces cognitive aspects of tourism information posted in social media by enhancing the trustworthiness of the contents in the web page [90]; in addition, the influence of web page design on affective aspects of image formation is indirect through cognitive destination image formation. On the other hand, the amount of information did not have a significant relationship with cognitive image. In fact, Sina Weibo only allows 140 characters, similar to Twitter, that limits the amount information considerably compared to other social media outlets. Our research findings show that such limited availability of information sharing or posting can barely influence destination image formation particularly on a cognitive side.

Finally, the destination image formation model proposed by Gartner [25] was reconfirmed with our empirical data analysis in the context of Chinese tourists visiting a social media page run by a South Korean DMO. This result emphasizes that tourists' motivations, such as intention to visit or intention to recommend, are higher when they learn many aspects of tourist attractions in destination (cognitive image) and have pleasant feelings toward the destination (affective image). In addition, our results suggest that cognitive image is more significantly associated with affective image than with conative image. That is, overall, the indirect process of cognitive-affective-conative destination image formation is found to be more accountable than the direct process of cognitive-conative destination image formation because a person develops various intentions for their behaviors based on not only cognitive factors but also affective factors. This result implies that it is necessary to understand the role of various aspects of information in social media on both cognitive and affective images to provide tourists with effective tourism information in social media.

6.2. Theoretical implications

This study has several implications for theory in the following ways. First, our study contributes to the understanding of tourism IQ in social media by identifying influencing factors based on Wang and Strong's [23] conceptual framework of IQ and Chaiken's [24] HSM in the context of tourism destination. More specifically, our selection of five factors (i.e., value-added, relevancy, timeliness, completeness, and amount of information) from the contextual dimension of Wang and Strong's [23] conceptual framework and two other factors (i.e., interestingness as another factor of contextual dimension and web page design as the only factor of representational dimension of IQ) is noteworthy as IQ features influencing tourism destination image formation, drawing on prior literature [55,89]. We also found that seven factors from Wang and Strong's [23] framework can be recategorized as content cues (i.e., value-added, relevancy, timeliness, completeness, and interestingness) and noncontent cues (i.e., website design and amount of information) of tourism information based on Chaiken's [24] HSM. Therefore, this study seeks to investigate empirically how the content and noncontent ques of tourism IQ in social media influence tourists' destination image formation.

Second, to the best of our knowledge, this study is among the first studies that provide empirical evidence to support the notion that tourism information in social media and its quality directly influences the destination image formation process. Extant studies either provided some conceptual arguments on the relationship between tourism information in social media and destination image formation (e.g., [21,74]) or investigated only the relationship between a few aspects of IQ in social media and tourist's intention to visit or recommend, without discussing their roles in destination image formation (e.g., [55]). This study proposes a more comprehensive list of IQ factors as a set of content cues posted in social media as well as web page design and the amount of information as noncontent cues. Further, our research findings provide empirical evidence on examining which factors among content and noncontent cues are more related with either cognitive or affective destination image formation. On the basis of our research findings, we claim that our research model has potential to be applicable in terms of the role of content and noncontent cues in social media users' destination image formation in the context of other travel communications such as TripAdvisor.com for future research. Those prospective empirical findings with our research model in other contexts of social media or online communities, combined with the findings from this study, will eventually contribute to the literature on IQ in social media. Therefore, identified factors of IQ and their relationships with destination image formation will contribute to the body of knowledge on the role of social media on tourism industry.

Finally, this study contributes to the literature regarding destination image formation process. After Gartner's [25] proposal, the process of destination image formation has been examined as an interesting subject in the tourism research field. However, if we look at the literature on destination image formation in the context of social media, most of the extant studies have confined themselves to conceptual studies without any empirical validation. Moreover, the majority of empirical studies have focused only on the research context from Western cases. Our study fills this research gap by assessing Chinese users' destination image formation in Sina Weibo. As mentioned, Chinese travelers account for the largest proportions of travelers

in the world, and Sina Weibo is the most popular microblog service in China. Our findings on the relationships among those three types of destination image formation in a Chinese context would strengthen the theoretical perspective on destination image formation by adding empirical evidence. The results from our empirical test support that three components of destination image formation (i.e., cognitive, affective, and conative image) are related as suggested by Gartner's [25] conceptual work, and our findings are also in line with other findings from Western contexts [60,66,67]. Therefore, this study also contributes to the literature on destination image formation in the context of social media.

6.3. Practical implications

Today, as tourism destinations are facing severe competition, numerous tourism organizations and DMOs are looking for effective marketing tools to attract more tourists to their destinations. Therefore, it is important for destination marketers to gain better understanding about what factors influence tourists' behavior of visiting a certain destination and recommending the destination to others. In fact, many extant studies have already discussed that destination image formed by various tourism information is the key antecedent for destination decisions, tourists satisfaction, and future behavior (e.g., [103,20]). Therefore, providing empirical evidence on what leads to various types of destination image formation would provide managerial insights to tourism destination marketers in the following ways.

First, this study validates that, in general, tourism information provided by DMOs through social media has a positive impact on tourists' destination image formation process. Indeed, many DMOs operate a variety of social media as a means of delivering high-quality information about their tourism destinations without verifying their effectiveness. The result of this study demonstrates that providing tourists with high-quality contents in well-designed social media is an effective destination marketing effort to affect users' different aspects of destination image. More specifically, this study answers the following question: *"what do we mean by high-quality information for social media web pages of DMOs, which possibly improves potential tourists' destination image formation?"* In other words, it validates the impacts of different aspects of IQ on two different types of destination image formed by potential travelers: cognitive and affective images. According to our results, *relevant* and *complete* information contents posted on a *well-designed* social media web page are positively associated with users' *cognitive* image formation about the destination, whereas *value-added, relevant,* and *interesting* contents are positively associated with their affective image formation. Our results can provide important implications for the managers of DMOs who want to focus on either a cognitive or affective destination image, or both. According to extant studies, well-formed destination images are positively associated with travelers' satisfaction and behavioral intention to visit the destination [18], so knowing which dimensions of IQ of the contents posted in a DMO's social media web page will lead to effective destination marketing effort.

Second, by investigating the phenomenon of Chinese tourists who follow one of DMOs' web page in a social media site, Sina Weibo (the most popular microblog-based social media in China), this study provides an important insight about social media marketing to the marketers who serve Chinese tourists, accounting for the biggest market in the world tourism industry. As shown in Table 1, over 80% of Chinese tourists had experience in using social media to find information about tourism destinations. Moreover, our empirical findings suggest that providing Chinese travelers with value-added, relevant, interesting, and complete information in social media is important, and well-designed social media websites enforce Chinese tourists' cognitive information processing to form destination image based on contents posted in social media websites. The recent survey from Chinese tourists supports our findings in that their major purpose of traveling is to entertain themselves. More importantly, aligning with our research purpose, exploring enjoyable attraction sites and shopping are key motivators of outbound traveling [104]. Such motivators are due to the increasing number of passport holders from 4% (2014) to 12% (2015) and the rapid growth of middle class groups in urban areas of China. Because other countries (e.g., Japan) are becoming serious competitors to South Korea, our research findings offer strategic and managerial points, particularly in the context of social media use for collecting destination information. For example, because the South Korean government and many private sectors have increased tourism capacity (e.g., constructing a new airport terminal and building new hotels), the high quality of information is necessary to absorb tourist inflow. We believe that our study contributes to provide an insight into how to prepare upcoming tourists and retaining them for future.

Finally, we argue that insights from this study might be applied not only to the tourism sector but also to other sectors. All companies are trying to create and manage an attractive image with regard to their products or services by utilizing various social media. Today, social media are recognized as one of the most powerful marketing media in most industries, and numerous companies have their own accounts and communicate with their customers through them. When they provide information about products or services to potential customers or when they construct new business models or strategies related with social media, it is quite helpful to understand the relationship between IQ in social media websites of particular products and services and image formation processes.

6.4. Limitations and future research

This study has limitations and provides some directions for future research. First, this study did not consider the effect of users' previous experience visiting the focal destination. Even though a great amount of the latest tourism information was provided through social media, the destination image formation process may differ depending on whether they have an experience visiting the destination or not. For example, multiple experiences of the same traveling sites or destinations may differently influence tourist's perceptions compared to their first visit to the site because it enables travelers to feel more comfortable with surrounding areas. Therefore, in future research, it is required to include users' experience of visiting a particular destination to the proposed research model, possibly as a moderating variable.

Second, this study surveyed Chinese social media (i.e., Sina Weibo) users and investigated their destination image about Gyeonggi province in South Korea. Therefore, it may be problematic to generalize the proposed model to other regions. Although our findings can provide tourism marketers with important insights about the role of IQ in social media in forming Chinese tourists' destination image, to increase the objective validity of research model, it is recommended that future research should investigate other social media platforms (e.g., Facebook and TripAdvisor), possibly from various countries.

Finally, as it is known, conducting an online survey has some limitations in terms of the representativeness of our samples. Although the method is efficient and convenient for data collection, sample composition may be limited to young people because of older generations' accessibility issues. Notably, more than 90% of our sample respondents were people in their 20s and 30s. Although the majority of the survey respondents represent the target population of our research, we should acknowledge the

limitation of this study, i.e., the findings of this study may not be generalized over and above the case of Chinese tourists (and Sina Weibo users) who visit South Korea. Nowadays, the age range of social media users could be widened because web accessibility has been enhanced by mobile applications. Therefore, a future study is suggested to investigate a greater variety of age groups through both online and offline surveys including a field survey at the travel site to strengthen the generalizability of the research model. One of the solutions to overcome generation bias in studies may include clustering sampling from different age groups integrating both paper-based and online surveys together.

7. Conclusion

This study mainly aimed to provide a deeper insight into the components of tourism information influencing the formation of tourism destination image in social media. Providing tourists with tourism information in social media has received increasing attention from tourism researchers. Nevertheless, very little empirical evidence has been provided about the relationship between tourism IQ and destination image formation in social media. By analyzing and examining tourism IQ in social media, we found interesting results that value-added, relevancy, completeness, interestingness, and web page design are tourism IQ factors, which affect tourists' destination image formation. Therefore, this study will contribute to the literature on the role of social media in the tourism industry and on IQ. Moreover, it strengthens our knowledge regarding the impacts of IQ and website design on the process of destination image formation by tourists, providing variable insights to tourism marketers.

Acknowledgments

This work was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2016S1A3A2925146).

Appendix A. Survey Questionnaire

*The following questions ask you about your thoughts regarding Gyeonggi Province as a tourism destination. Please check the number that best describes your thoughts with respect to each item below.

1. Conative Image

I have . . .
(1) An intention to visit Gyeonggi Province.
(2) A willingness to speak positively about Gyeonggi Province.
(3) An intention to recommend Gyeonggi Province.

2. Cognitive Image

Gyeonggi Province will offer . . .
(1) Friendly and receptive residents
(2) Interesting cultural heritage
(3) Interesting cultural events
(4) Good restaurants & gastronomy
(5) Good value for money
(6) Good shopping opportunities
(7) Good accommodation

3. Affective Image

Travelling Gyeonggi Province will be . . .
(1) Pleasant
(2) Stimulating
(3) Interesting

4. Tourism Information Quality in Social Media

Tourism information provided by Gyeonggi Province Weibo is . . .	
Relevancy	(1) Relevant to my travel (2) Relevant to my intention to follow Gyeonggi Province on Weibo (3) In accordance with my purpose to travel
Timeliness	(1) Quite new (2) Continuously updated (3) Quickly provided necessary information for the trip
Completeness	(1) Of sufficient depth (2) Specific (3) Accurate
Interestingness	(1) Funny (2) Attractive (3) Interesting
Value-added	(1) Effective for planning a trip (2) Useful for planning a trip (3) Helpful for planning a trip

Web page design of Gyeonggi Province Weibo is . . .	
Web page design	(1) Attractive (2) Brand new (3) Trendy

Amount of information	(1) Tourism information provided by Gyeonggi Province on Weibo is . . .	Small in quantity ① ~⑦ Large in quantity
	(2) Amount of tourism information provided by Gyeonggi Province on Weibo is . . .	Insufficient ① ~⑦ Sufficient
	(3) Amount of tourism information provided by Gyeonggi Province on Weibo is . . .	Inappropriate to read ① ~⑦ Appropriate to read

References

[1] Hotels.com, Chinese International Travel Monitor 2016, (2016) Retrieved 16 September 2016, from: https://assets.documentcloud.org/documents/2994781/Hotel.pdf.
[2] Gadling Staff, Travel Trends: The Rise of the 'Free Independent Traveler' (FIT), (2010) Available from http://gadling.com/2010/05/12/travel-trends-free-independent-traveler-fit/.
[3] Gentlemen in China, Top 5 Trends of Chinese Outbound Travel Market for 2016, (2016) . http://marketingtochina.com/top-5-trends-chinese-outbound-travel-market-2016/.
[4] eMarketer, By 2016, Most Digital Travel Bookers Will Use Mobile Devices, (2015) . http://www.emarketer.com/Article/By-2016-Most-Digital-Travel-Bookers-Will-Use-Mobile-Devices/1013248.
[5] UNWTO, UNWTO Tourism Highlights 2015 Edition, (2015) Available from: http://www.e-unwto.org/doi/pdf/10.18111/9789284416899.
[6] Z. Xiang, U. Gretzel, Role of social media in online travel information search, Tour. Manag. 31 (2) (2010) 179–188.
[7] S. Kemp, Digital in 2016, (2016) Available from http://http://wearesocial.com/special-reports/digital-in-2016.
[8] Facebook, Statistics, (2016) . Accessed 28 May http://newsroom.fb.com/Key-Facts.
[9] B. Zeng, R. Gerritsen, What do we know about social media in tourism? A review, Tour. Manag. Perspect. 10 (2014) 27–36.
[10] N. Chung, C. Koo, The use of social media in travel information search, Telematics Inf. 32 (2) (2015) 215–229.
[11] G. Akehurst, User generated content: the use of blogs for tourism organisations and tourism consumers, Serv. Bus. 3 (1) (2009) 51–61.
[12] W. Lu, S. Stepchenkova, User-generated content as a research mode in tourism and hospitality applications: topics, methods, and software, J. Hosp. Mark. Manag. 24 (2) (2015) 119–154.
[13] A. Királová, A. Pavlíčeka, Development of social media strategies in tourism destination, Procedia Soc. Behav. Sci. 175 (2015) 358–366.
[14] E. Noti, Web 2.0 and its influence in the tourism sector, Eur. Sci. J. 9 (20) (2013) 115–123.

[15] J.K. Ayeh, D. Leung, N. Au, R. Law, Perceptions and strategies of hospitality and tourism practitioners on social media: an exploratory study, in: M. Fuchs, F. Ricci, L. Cantoni (Eds.), Information and Communication Technologies in Tourism 2012, Springer-Verlag, Wien, 2012 Proceedings of the international conference in Helsinborg, Sweden, January, 25–27.
[16] A.M. Munar, Social media strategies and destination management, Scand. J. Hosp. Tour. 12 (2) (2012) 101–120.
[17] S. Baloglu, K. McCleary, A model of destination image formation, Ann`. Tour. Res. 25 (1999).
[18] C.F. Chen, D. Tsai, How destination image and evaluative factors affect behavioral intentions? Tour. Manag. 28 (4) (2007) 1115–1122.
[19] M.G. Gallarza, I.G. Saura, H.C. Garcı'a, Destination image: towards a conceptual framework, Ann. Tour. Res. 29 (1) (2002) 56–78.
[20] T.H. Lee, A structural model to examine how destination image, attitude, and motivation affect the future behavior of tourists, Leisure Sci. 31 (3) (2009) 215–236.
[21] R.M. Ghazali, L. Cai, Social media sites in destination image formation, in: A. M. Munar, S.L. Gyimóthy Cai (Eds.), Tourism Social Media: Transformations in Identity, Community and Culture (Tourism Social Science Series, Volume 18), Emerald Group Publishing Limited, 2014, pp. 73–86.
[22] Y.R. Li, Y.C. Lin, P.H. Tsai, Y.Y. Wang, Traveller-generated contents for destination image formation: mainland China travellers to Taiwan as a case study, J. Travel Tour. Mark. 32 (5) (2015) 518–533.
[23] R.Y. Wang, D.M. Strong, Beyond accuracy: what data quality means to data consumers, J. Manag. Inf. Syst. 12 (4) (1996) 5–33.
[24] S. Chaiken, Heuristic versus systematic information processing and the use of source versus message cues in persuasion, J. Pers. Soc. Psychol. 39 (5) (1980) 752.
[25] W.C. Gartner, Image formation process, J. Travel Tour. Mark. 2 (2–3) (1993) 191–215.
[26] S. Aghaei, M.A. Nematbakhsh, H.K. Farsani, Evolution of the World Wide Web: from Web 1.0 to Web 4.0, Int. J. Web Semant. Technol. 3 (1) (2012) 1–10.
[27] N. Lianto, Social Media Marketing: Why is Social Media One of the Most Important Marketing Tools? (2014) Available from https://www.quora.com/Why-is-social-media-one-of-the-most-important-marketing-tools.
[28] Q. Luo, D. Zhong, Using social network analysis to explain communication characteristics of travel-related electronic word-of-mouth on social networking sites, Tour. Manag. 46 (2015) 274–282.
[29] G. Foux, Consumer-generated media: get your customers involved, Brand Strategy 8 (2006) 38–39.
[30] H.W. Kim, S. Gupta, J. Koh, Investigating the intention to purchase digital items in social networking communities: a customer value perspective, Inf. Manag. 48 (6) (2011) 228–234.
[31] W.G. Mangold, D.J. Faulds, Social media: the new hybrid element of the promotion mix, Bus. Horiz. 52 (4) (2009) 357–365.
[32] M. Risius, R. Beck, Effectiveness of corporate social media activities in increasing relational outcomes, Inf. Manag. 52 (7) (2015) 824–839.
[33] S. Hudson, M.S. Roth, T.J. Madden, R. Hudson, The effects of social media on emotions, brand relationship quality: and word of mouth: an empirical study of music festival attendees, Tour. Manag. 47 (2015) 68–76.
[34] U. Gretzel, Y. Yuan, D. Fesenmaier, Preparing for the new economy advertising strategies and change in destination marketing organizations, J. Travel Res. 39 (2000) 149–156.
[35] E. Michopoulou, D. Buhalis, Information provision for challenging markets: the case of the accessibility requiring market in the context of tourism, Inf. Manag. 50 (5) (2013) 229–239.
[36] A.M. Munar, J.K.S. Jacobsen, Motivations for sharing tourism experiences through social media, Tour. Manag. 43 (2014) 46–54.
[37] Y. Wang, Y. Quaehee, D. Fesenmaier, Defining the virtual tourism community: implications for tourism marketing, Tour. Manag. 23 (2002) 407–417.
[38] M.B. Traylor, Product involvement and brand commitment, J. Advertising Res. (1981) Available from http://gadling.com/2010/05/12/travel-trends-free-independent-traveler-fit/.
[39] D. Leung, R. Law, H. Van Hoof, D. Buhalis, Social media in tourism and hospitality: a literature review, J. Travel Tour. Mark. 30 (1–2) (2013) 3–22.
[40] H.K.S. Özgen, M. Kozak, Social media practices applied by city hotels: a comparative case study from Turkey, Worldw. Hosp. Tour. Themes 7 (3) (2015) 229–241.
[41] C. Dellarocas, The digitization of word of mouth: promise and challenges of online feedback mechanisms, Manag. Sci. 49 (10) (2003) 1407–1424.
[42] S. Hays, S.J. Page, D. Buhalis, Social media as a destination marketing tool: its use by national tourism organisations, Curr. Issues Tour. 16 (3) (2013) 211–239.
[43] S. Hudson, K. Thal, The impact of social media on the consumer decision process: implications for tourism marketing, J. Travel Tour. Mark. 30 (1–2) (2013) 156–160.
[44] Y. Huang, C. Basu, M.K. Hsu, Exploring motivations of travel knowledge sharing on social network sites: an empirical investigation of US college students, J. Hosp. Mark. Manag. 19 (7) (2010) 717–734.
[45] J. He, H. Liu, H. Xiong, SocoTraveler: travel-package recommendations leveraging social influence of different relationship types, Inf. Manag. (2016) in press.
[46] W.H. DeLone, E.R. McLean, The DeLone and McLean model of information systems success: a ten-year update, J. Manag. Inf. Syst. 19 (4) (2003) 9–30.
[47] Y.W. Lee, D.M. Strong, B.K. Kahn, R.Y. Wang, AIMQ: a methodology for information quality assessment, Inf. Manag. 40 (2) (2002) 133–146.
[48] K.-T. Huang, Y.W. Lee, R.Y. Wang, Quality Information and Knowledge, Prentice Hall, New Jersey, 1999.
[49] B.K. Kahn, D.M. Strong, R.Y. Wang, Information quality benchmarks: product and service performance, Commun. ACM 45 (4) (2002) 184–192.
[50] N. Agarwal, Y. Yiliyasi, Information quality challenges in social media, International Conference on Information Quality (ICIQ 2010), Little Rock, Arkansas, 2010.
[51] L.L. Pipino, Y.W. Lee, R.Y. Wang, Data quality assessment, Commun. ACM 45 (4) (2002) 211–218.
[52] B. Klein, When do users detect information quality problems on the world wide web? AMCIS 2002 Proceedings (2002) 152.
[53] S.A. Knight, J.M. Burn, Developing a framework for assessing information quality on the World Wide Web, Informing Sci. Int. J. Emerg. Trans Discipline 8 (5) (2005) 159–172.
[54] F.F. Emamjome, A.A. Rabaa'i, G.G. Gable, W. Bandara, Information quality in social media: a conceptual model, Proceedings of the Pacific Asia Conference on Information Systems (PACIS 2013), AIS Electronic Library (AISel), 2013.
[55] Y.C. Chen, R.A. Shang, M.J. Li, The effects of perceived relevance of travel blogs' content on the behavioral intention to visit a tourist destination, Comput. Hum. Behav. 30 (2014) 787–799.
[56] S. Chen, S. Chaiken, The heuristic-systematic model in its broader context, Dual-Process Theor. Soc. Psychol. (1999) 73–96.
[57] W. Wirth, T. Böcking, V. Karnowski, T. Von Pape, Heuristic and systematic use of search engines, J. Comput. Mediated Commun. 12 (3) (2007) 778–800.
[58] K.Z. Zhang, S.J. Zhao, C.M. Cheung, M.K. Lee, Examining the influence of online reviews on consumers' decision-making: a heuristic-systematic model, Decis. Support Syst. 67 (2014) 78–89.
[59] S. Pike, Destination image analysis: a review of 142 papers from 1973 to 2000, Tour. Manag. 23 (5) (2002) 541–549.
[60] A. Beerli, J.D. Martin, Factors influencing destination image, Ann. Tour. Res. 31 (3) (2004) 657–681.
[61] D. Agapito, P. Oom do Valle, J. da Costa Mendes, The cognitive-affective-conative model of destination image: a confirmatory analysis, J. Travel Tour. Market. 30 (5) (2013) 471–481.
[62] C.Y. Wang, M.K. Hsu, The relationships of destination image, satisfaction, and behavioral intentions: an integrated model, J. Travel Tour. Mark. 27 (8) (2010) 829–843.
[63] H. Zhang, X. Fu, L.A. Cai, L. Lu, Destination image and tourist loyalty: a meta-analysis, Tour. Manag. 40 (2014) 213–223.
[64] E.Y.T. Chew, S.A. Jahari, Destination image as a mediator between perceived risks and revisit intention: a case of post-disaster Japan, Tour. Manag. 40 (2014) 382–393.
[65] C. Tseng, B. Wu, A.M. Morrison, J. Zhang, Y.C. Chen, Travel blogs on China as a destination image formation agent: a qualitative analysis using Leximancer, Tour. Manag. 46 (2015) 347–358.
[66] M. Li, L. Cai, X. Lehto, J. Huang, A missing link in understanding revisit intention: the role of motivation and image, J. Travel Tour. Mark. 27 (4) (2010) 335–348.
[67] E. Stern, S. Krakover, The formation of a composite urban image, Geogr. Anal. 25 (2) (1993) 130–146.
[68] P.C. Fakeye, J.L. Crompton, Image differences between prospective, first-time, and repeat visitors to the Lower Rio Grande Valley, J. Travel Res. 30 (2) (1991) 10–16.
[69] S. Baloglu, A path analytic model of visitation intention involving information sources, socio-psychological motivations, and destination image, J. Travel Tour. Mark. 8 (3) (2000) 81–90.
[70] C.K. Lee, Y.K. Lee, B. Lee, Korea's destination image formed by the 2002 World Cup, Ann. Tour. Res. 32 (4) (2005) 839–858.
[71] G. Prayag, Tourists' evaluations of destination image, satisfaction, and future behavioral intentions—the case of mauritus, J. Travel Tour. Mark. 26 (8) (2009) 836–853.
[72] C. Gunn, Vacations Cape: Designing Tourist Regions, Taylorand Francis, Washington, DC, 1972.
[73] J. Hanlan, S. Kelly, Image formation, information sources and an iconic Australian tourist destination, J. Vacat. Mark. 11 (2) (2005) 163–177.
[74] A. Tham, G. Croy, J. Mair, Social media in destination choice: distinctive electronic word-of-mouth dimensions, J. Travel Tour. Mark. 30 (1–2) (2013) 144–155.
[75] R. Camprubí, J. Guia, J. Comas, The new role of tourists in destination image formation, Curr. Issues Tour. 16 (2) (2013) 203–209.
[76] A. Alizadeh, R.M. Isa, The use of social media in destination marketing: an exploratory study, Turizam: znanstveno-stručničasopis 63 (2) (2015) 175–192.
[77] X.R. Li, B. Pan, L.G. Zhang, W.W. Smith, The effect of online information search on image development: insights from a mixed-methods study, J. Travel Res. 48 (1) (2009) 45–57.
[78] D.M. Frias, M.A. Rodriguez, J.A. Castañeda, Internet vs. Travel agencies on pre-visit destination image formation: an information processing view, Tour. Manag. 29 (1) (2008) 163–179.
[79] S. Choi, X.Y. Lehto, A.M. Morrison, Destination image representation on the web: content analysis of Macau travel related websites, Tour. Manag. 28 (1) (2007) 118–129.
[80] S. Um, J.L. Crompton, Attitude determinants in tourism destination choice, Ann. Tour. Res. 17 (1990) 432–448.
[81] J.A. Burgess, Image and Identity. Occasional Papers in Geography, 23, University of Hull Publications, 1978.

[82] G.A. Vich-i-Martorell, The internet and tourism principals in the Balearic Islands, Tour. Hosp. Res. 5 (1) (2003) 25–44.
[83] K.Y. Lee, S.B. Yang, The role of online product reviews on information adoption of new product development professionals, Internet Res. 25 (3) (2015) 435–452.
[84] H. Assael, Consumer Behavior and Marketing Action, Kent Pub. Co., Boston, MA, 1984.
[85] R. Filieri, F. McLeay, E-WOM and accommodation an analysis of the factors that influence travelers' adoption of information from online reviews, J. Travel Res. 53 (1) (2014) 44–57.
[86] C.M. Cheung, M.K. Lee, N. Rabjohn, The impact of electronic word-of-mouth: the adoption of online opinions in online customer communities, Internet Res. 18 (3) (2008) 229–247.
[87] K.L. Xie, C. Chen, S. Wu, Online consumer review factors affecting offline hotel popularity: evidence from Tripadvisor, J. Travel Tour. Mark. 33 (2) (2016) 1–13.
[88] C. Sullivan, Marketing the web in other media, Editor Publisher 132 (9) (1999) 30.
[89] C. Ranganathan, S. Ganapathy, Key dimensions of business-to-consumer web sites, Inf. Manag. 39 (6) (2002) 457–465.
[90] D. Cyr, Modeling web site design across cultures: relationships to trust, satisfaction, and e-loyalty, J. Manag. Inf. Syst. 24 (4) (2008) 47–72.
[91] Korea Tourism Organization, 2014 International Visitor Survey, (2015) Published February, 2015, from: http://kto.visitkorea.or.kr/kor/notice/data/statis/tstatus/forstatus/board/view.kto?id=424410&rnum=1.
[92] Korea Tourism Organization, Greater China Tourism Consumer Market Research and Marketing Studies (China, Hong Kong, Taiwan Mainly), (2013) December, 2013, Available from http://kto.visitkorea.or.kr/kor/notice/data/report/org/board/view.kto?id=421110&rnum=43.
[93] Korea Tourism Organization, Korea, Monthly Statistics of Tourism, (2016) . http://kto.visitkorea.or.kr/eng/tourismStatics/keyFacts/KoreaMonthlyStatistics.kto.
[94] K. Chai, V. Potdar, T. Dillon, Content quality assessment related frameworks for social media, Computational Science and Its Applications–ICCSA 2009, Springer, Berlin Heidelberg, 2009, pp. 791–805.
[95] C.M. Ringle, S. Wende, J.-M. Becker, SmartPLS 3, SmartPLS, Hamburg, 2014.
[96] W.W. Chin, P.R. Newsted, Structural equation modeling analysis with small samples: using partial least squares, in: R.H. Hoyly (Ed.), Statistical Strategies for Small-Sample Research, Sage, Thousand Oaks, CA, 1996.
[97] J.F. Hair, C.M. Ringle, M. Sarstedt, PLS-SEM: indeed a silver bullet, J. Mark. Theory Pract. 19 (2) (2011) 139–151.
[98] J. Henseler, M.R. Christian, R.S. Rudolf, The use of partial least squares path modeling in international marketing, Adv. Int. Mark. 20 (1) (2009) 277–319.
[99] W.M. Trochim, J.P. Donnelly, Research Methods Knowledge Base, (2001) .
[100] C. Fornell, D.F. Larcker, Structural equation models with unobservable variables and measurement error: algebra and statistics, J. Mark. Res. 18 (3) (1981) 382–388.
[101] R.P. Bagozzi, Y. Yi, L.W. Phillips, Assessing construct validity in organizational research, Adm. Sci. Q. 36 (3) (1991) 421–458.
[102] P.M. Podsakoff, D.W. Organ, Self-reports in organizational research: problems and prospects, J. Manag. 12 (4) (1986) 531–544.
[103] J.E. Bigne, M.I. Sanchez, J. Sanchez, Tourism image, evaluation variables and after purchase behavior: interrelationship, Tour. Manag. 22 (6) (2001) 607–616.
[104] S. Kawano, J. Lu, T. Tsang, J. Liu, The Chinese Tourist Boom, Goldman Sachs, The Goldman Sachs Group Inc., 2015, pp. 1–69.

Sung-Eun Kim works for Gyeonggi Tourism Organization, Korea. He received his Master's degree in International Studies from Ajou University, Korea. His research interests include smart tourism, travel behavior, destination marketing, and international studies.

Kyung Young Lee is an Associate Professor in the Rowe School of Business at Dalhousie University, Canada. He received his PhD in Management Information Systems from the Desautels Faculty of Management, McGill University. His research interests include smart tourism, online word-of-mouth (product reviews), knowledge management in knowledge teams, online communities, firm's use of social media, and IT innovation. His research has been published in *Information & Management, Computers in Human Behavior, and Internet Research*.

Soo Il Shin is an Assistant Professor of Management Information Systems and statistics for the Austin E. Cofrin School of Business at the University of Wisconsin – Green Bay. He earned his PhD in Management Information Systems from Auburn University in 2014. His research interests are in the areas of smart tourism, computer-mediated communication, social media and its business use, virtual community, and trust concerns in the context of e-media. He has authored a number of conference proceedings and journal papers, and his works have been presented at prestigious national and international MIS/IS conferences.

Sung-Byung Yang is an Associate Professor in the School of Management at Kyung Hee University, Korea. He received his PhD from KAIST. He was a research fellow in the Desautels Faculty of Management at McGill University. His research interests include smart tourism, business value of IT, online communities, social media and networks, knowledge management, and customer relationship management. His research has been published in *MIS Quarterly, Information Systems Research, Computers in Human Behavior, Electronic Markets, Internet Research, International Journal of Information Management*, and many other journals.