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## **The Impact of Information Quality in DMOs' Facebook Pages on the Formation of Destination Image in the Silk Road: The Case of Almaty, Kazakhstan**

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# **The Impact of Information Quality in DMOs' Facebook Pages on the Formation of Destination Image in the Silk Road: The Case of Almaty, Kazakhstan**

This study analyses the impact of content (value-added, relevance, timeliness, completeness, and interestingness) and non-content (information quantity) cues of information quality in destinations marketing organizations' (DMOs') Facebook pages on destination image formation in the context of the Silk Road. Empirical analyses suggest that interestingness, value-added and completeness affect cognitive and/or affective images of the destination, which also contribute to the formation of the conative image. However, interestingness and value-added have a positive influence, while completeness has a negative influence. The results of this study enhance our understanding of the role played by the quality of tourist information on Facebook.

Keywords: tourism information quality; destination image; destination marketing organization; Facebook; Kazakhstan; Silk Road

## **Introduction**

Tourism organizations and destinations marketing organizations (DMOs) manage different types of social media (e.g. Facebook, Twitter, YouTube) to improve their images as tourist destinations (Kim, Lee, Shin & Yang, 2017). The image of tourist destination plays a key role in tourists' decision-making process to select a destination, as well as in their behavior regarding future visits (Baloglu & McCleary, 1999; Chen & Tsai, 2007; Gallarza, Saura, & García, 2002).

One of the factors influencing the formation of tourist destination images is information quality (IQ) in DMO's social media (Kim et al., 2017). From a consumer perspective, IQ can be defined as the characteristic of information that meets consumers' expectations (Kahn, Strong & Wang, 2002) and, among IQ dimensions studies, Wang and Strong's (1996) conceptual framework of IQ has been adopted in

different research settings. In order to identify the factors of tourism IQ that influence a social media context, Kim et al. (2017), on the basis of a discussion on Wang and Strong's (1996) IQ framework, focus on the contextual dimension of IQ (value-added, relevance, timeliness, completeness, and information quantity). However, these authors also add another contextual factor (interestingness) and a representational factor (webpage design on social media). The contextual dimension highlights the requirements determined in the context of the task at hand, while the representational dimension points out that the system must present information in such a way that it is interpretable, easy to understand, and is represented concisely and consistently (Wang & Strong's, 1996). Thus, high-quality information should be contextually appropriate for the task and clearly represented. These factors, following Chaiken's (1980) heuristic-systematic model, can also be recategorized as content (i.e., systematic: value-added, relevance, timeliness, completeness, and interestingness) and non-content (i.e., heuristic: information quantity and webpage design on social media) cues. The heuristic-systematic model, a representative theory among information processing theories, assumes that the human brain generally processes information in two ways: systematic and heuristic. Systematic processing implies a thorough and analytic examination of relevant information, while heuristic processing, relying on non-content cues, requires a minimum cognitive effort to reach conclusions (Chen & Chaiken, 1999). Thus, in a social media context, when users receive and process tourist information, they will usually consider both content and non-content cues. Kim et al. (2017) surveyed a series of users of Sina Weibo (Chinese social media) and examined their destination image of the province of Gyeonggi (South Korea). They found that value-added, relevance, completeness, interestingness and web page design are the factors of tourism IQ that affect cognitive and/or affective images of the destinations,

which according to Gartner's (1993) destination image formation theory also contribute to the formation of the conative image.

Considering the call for research by Kim et al. (2017) to investigate other social media platforms (e.g. Facebook) from different countries, this study is focused on examining factors (contextual factors, based on the Wang and Strong's (1996) IQ framework, or content/non-content cues, based on the Chaiken's (1980) heuristic-systematic model) of tourism IQ on Facebook that, according to Gartner's (1993) destination image formation theory, influence on the formation of the tourist destination image of Almaty (Kazakhstan), destination associated to the Silk Road.

Both Wang and Strong's (1996) IQ framework and heuristic-systematic model provide a useful framework to explain what tourism IQ factors in social media affect tourists' destination image formation. Following Wang and Strong's (1996) IQ framework, our research focuses on the contextual dimension of IQ because this dimension best describes the different information requirements that potential tourists need when they search, find, read and evaluate tourism information in social media. Thus, contextual factors are more important than representational factors in influencing the destination image formation (Kim et al., 2017).

On the other hand, Facebook is a social media platform different from Sina Weibo. Facebook is a social-networking site, while Sina Weibo is a microblog, with messages limited to 140 characters, and features more similar to Twitter.

Finally, Almaty, in particular, and Kazakshstan in general, are very different from East Asian countries, such as South Korea or China. Unlike East Asia, Kazakhstan is characterized, among other things, by having a traditional nomadic culture, and having been part of the Islamic world. The cultural differences can be seen in the Hofstede's cultural dimensions analysis at the national level (Hofstede, 2017). The election of

Almaty as a context to carry out this research allows this paper to make a unique contribution to the literature on destination image, as well as to the study of the Silk Road. On the one hand, literature on destination image has focused mainly on Western contexts (Kim et al., 2017, Pike, 2002). However, when literature focuses on Asian contexts, it does it mainly on East Asia (Stepchenkova & Mills, 2010). And, on the other hand, there is an increasing academic interest in studying destinations related to the Silk Road (Koh & Kwok, 2017). Almaty, one of the most ancient cities in the Central Asia, became one of the trade, craft and agricultural centers on the Silk Road.

According to the review of the literature, a research model was developed, and the following hypotheses (H) were tested (Figure 1):

H1: Content cues of tourism information on Facebook have a positive influence on the cognitive image of a destination.

H2: Content cues of tourism information on Facebook have a positive influence on the affective image of a destination.

H3: Non-content cues of tourism information on Facebook have a positive influence on the cognitive image of a destination.

H4: The cognitive image has a positive influence on the affective image of a destination on Facebook.

H5: The cognitive image has a positive influence on the conative image of a destination on Facebook.

H6: The affective image has a positive influence on the conative image of a destination on Facebook.

Take-in-Figure-1

The results of this study will enhance our understanding of the role played by the quality of tourist information on social media.

## **Methods**

A questionnaire was designed for Facebook users who are potential tourists and fans or followers of the official website of Tourist Information Centre of Almaty, one of the DMOs in Kazakhstan funded by the city of Almaty. The Facebook page managed by DMO of Almaty has more over 36000 fans and over 37000 followers. Facebook is the main social media in Kazakhstan.

The questionnaire was designed from Kim et al.'s (2017) study, but adapted to the context of this study. A 7-point Likert scale was used for all the 9 constructs (1=strongly disagree; 7=strongly agree). The questionnaire was published on the Facebook webpage managed by the DMO of Almaty, and 107 valid surveys were obtained from potential tourists. A total of 60.7% of the respondents were women. Most of the participants were in their 20s (35.5%) or 30s (55.1%), and were undergraduate (34.6%) or graduate or more (40.2%). Moreover, 90.7% of the respondents were from Kazakhstan, and 96.3% of the participants had been in Almaty at least once. Finally, most of the respondents (76.6%) access social media at least two or three times a day.

## **Results**

### ***Model estimation***

A two-step procedure was used to test the model.

### ***Measurement model***

In the reliability analysis of the indicators, all of them showed loading values greater than the recommended threshold, 0.707 (Table 1). Composite reliability values, higher than 0.7, confirmed internal consistency for each construct. Convergent validity was confirmed both by the value of the average variance extracted (AVE), higher than 0.5,

and Cronbach's alpha coefficient, higher than 0.7. Moreover, as the AVE square root for each construct was higher than the correlations between the construct and the rest of constructs, discriminative validity was confirmed.

Take-in-Table-1

### ***Structural model***

Figure 2 shows the results of the model analysis. The cognitive image presents an  $R^2$  of 0.298. However,  $R^2$  results of 0.20 are considered high in disciplines such as consumer behavior (Hair et al., 2011). The affective and conative images present a moderate-substantial  $R^2$  (0.653 and 0.534, respectively). According to the path significance analysis, hypotheses H1 and H2 are partially supported, H3 is not supported, and H4, H5 and H6 are supported.

Take-in-Figure-2

The results show that different aspects of tourism IQ on Facebook have a significant impact on different types of destination image about Almaty. But these results differ from Kim et al.'s (2017) in the context of the social media Sina Weibo and a province of South Korea. Regarding the content cues, our findings shows that interestingness has a positive impact on the cognitive image ( $\beta=0.310$ ) (H1 is partially accepted), instead of relevance and completeness. As in the previous study by Kim et al. (2017), our results reveal a positive association of the affective image with the value-added factor ( $\beta=0.383$ ) (H2 is partially accepted), but not with relevance and interestingness. Moreover, our results show a negative association between the affective image and completeness ( $\beta=-0.328$ ). This means that comprehensive and detailed information on Facebook not only does not affect the formation of the cognitive image, but it hinders the formation of the most affective side of the destination image among Facebook users.

Furthermore, the factor of timeliness does not have an impact on the formation of the destination image in both studies. Our study, however, shows that relevance does not have a significant influence on any type of image either, while the previous study stated that relevance is a factor affecting both cognitive and affective images. In this case, people may take for granted that tourism information shown on a Facebook webpage managed by a DMO is relevant for travelling due to the nature of the webpage – as it is focused on tourism.

Concerning non-content cues, both studies show that information quantity is not significantly associated to the cognitive image, regardless the fact that Sina Weibo only allows 140 characters per message and Facebook does not have a limit on the number of characters.

Finally, Gartner's (1993) model of destination image formation was confirmed in the context of tourists visiting a Facebook webpage managed by a DMO of Almaty, a destination associated to the Silk Road. Just like the study by Kim et al. (2017), our results suggest that the cognitive image has a stronger association with the affective image ( $\beta=0.639$ ) than with the conative image ( $\beta=0.372$ ). It is thus more explanatory the indirect cognitive-affective-conative process of the formation of the destination image than the direct cognitive-conative process. In this light, in order to provide tourists with effective tourism information on Facebook it is necessary to understand the role of the different aspects of information on this social media regarding cognitive and affective images.

## **Conclusions**

Up to our knowledge, this research is one of the first studies that provide empirical evidence to support the idea that the quality of tourism information in Facebook (one of the most important social media at the global level) has a direct influence on the process



of tourists' destination image formation. Moreover, when analyzing the destination image formation of Almaty, this paper contributes to the literature about destination image, as well as to the study of the Silk Road.

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Table 1. Evaluation of the measurement model.

	Mean	Standard deviation	Loading	Cronbach's alpha	Composite reliability	AVE
<b>Value-added</b>				<b>0.964</b>	<b>0.977</b>	<b>0.933</b>
Effective for planning a trip	4.037	1.135	0.945			
Useful for planning a trip	4.084	1.169	0.976			
Helpful for planning a trip	4.037	1.159	0.977			
<b>Relevance</b>				<b>0.932</b>	<b>0.967</b>	<b>0.935</b>
Relevant to my travel	4.514	1.195	0.976			
Related to the purpose to travel	4.355	1.170	0.957			
<b>Timeliness</b>				<b>0.886</b>	<b>0.929</b>	<b>0.814</b>
Quite new	4.336	1.168	0.903			
Continuously updated	4.290	1.077	0.914			
Necessary information for the trip quickly provided	4.009	1.164	0.889			
<b>Completeness</b>				<b>0.928</b>	<b>0.954</b>	<b>0.875</b>
Sufficiently deep	3.991	1.180	0.919			
Specific	3.944	1.101	0.962			
Accurate	4.000	1.144	0.924			
<b>Interestingness</b>				<b>0.948</b>	<b>0.967</b>	<b>0.906</b>
Fun	4.430	1.112	0.921			
Attractive	4.299	1.178	0.970			
Interesting	4.421	1.152	0.964			
<b>Amount of information</b>				<b>0.912</b>	<b>0.945</b>	<b>0.846</b>
Small in quantity-Large in quantity	5.149	1.317	0.915			
Insufficient-Sufficient	5.103	1.191	0.927			
Inappropriate-Appropriate to read	4.925	1.295	0.918			
<b>Cognitive image</b>				<b>0.943</b>	<b>0.953</b>	<b>0.744</b>
Friendly and receptive residents	5.028	1.106	0.862			
Good restaurants & gastronomy	5.149	1.101	0.905			
Good value for money	4.963	1.135	0.864			
Good shopping opportunities	4.972	1.180	0.857			
Interesting cultural events	5.047	1.045	0.872			
Good accommodation	4.411	1.013	0.804			
Interesting natural heritage	5.514	1.044	0.871			
<b>Affective image</b>				<b>0.901</b>	<b>0.938</b>	<b>0.835</b>
Pleasant	5.561	0.867	0.948			
Stimulating	5.159	1.015	0.873			
Interesting	5.505	0.970	0.919			
<b>Conative image</b>				<b>0.929</b>	<b>0.955</b>	<b>0.876</b>
Intention to visit Almaty	5.486	1.105	0.894			
Willingness to speak positively about Almaty	5.402	1.013	0.961			
Intention to recommend Almaty	5.439	1.016	0.951			

Figure 1. Proposed model.

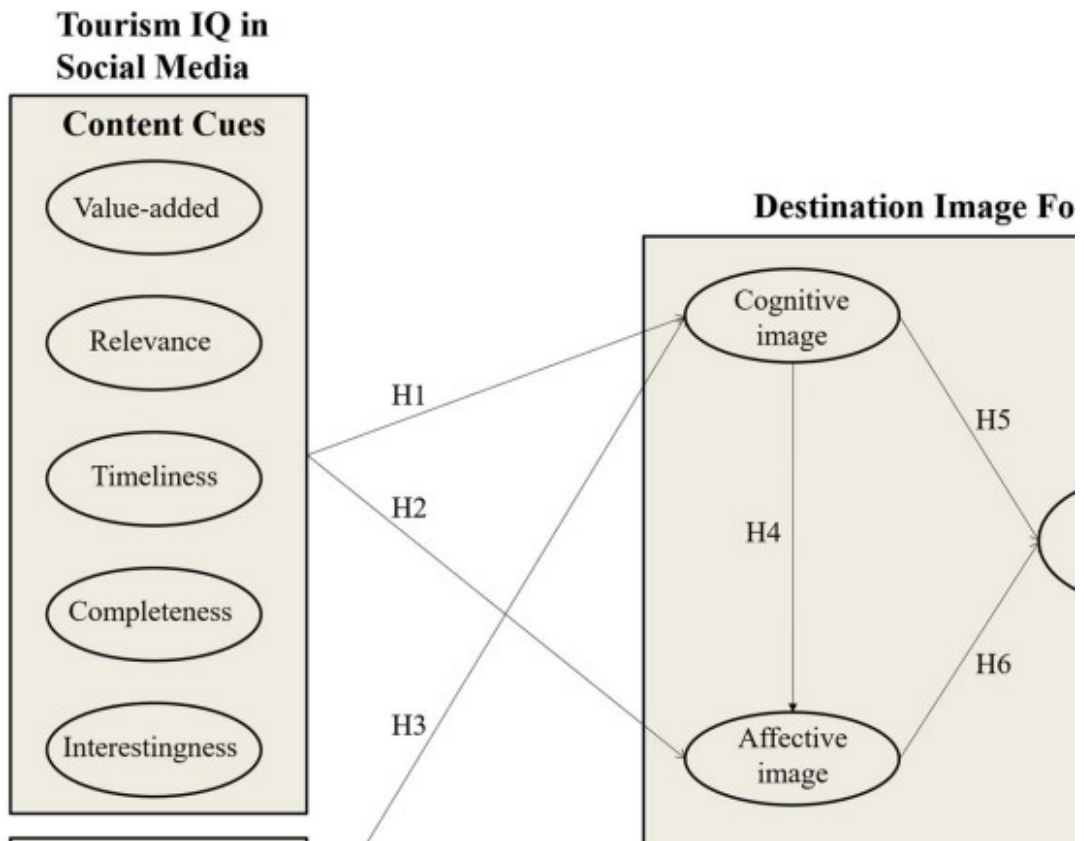


Figure 2. Results of the PLS analysis.

