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**The effects of the quality of information in social media on cognitive destination image:
Case study of Tunisia**

Abstract

The current paper chiefly aims to supply a deeper insight into the components of tourism information, which impact the cognitive image of tourism destination in Social Media. Empirical analysis have been utilized to validate the conceptual model put forward. Two major techniques of data analysis were used: exploratory factor analysis (EFA) and confirmatory factor (CFA). All in all, the outcomes confirm our hypotheses. The findings show that the quality of information on Facebook web pages has an impact on the cognitive image. This paper has a theoretical contribution by identifying the role of tourism information quality in Facebook by providing empirical evidence on cognitive tourist destination image. It also helps tourism managers build their marketing strategies to promote and attract more tourists through social media.

Key words: Tourism information quality; Destination image; Information quality; Cognitive image; Social media

Introduction

Basically, tourism is considered as one of the largest universal economic sectors and a weighty contributor to many national and regional economies. According to the World Travel and Tourism Council (2019), travel and tourism generated almost 10.4% of global GDP, and 319 million jobs in 2018. Likewise, tourism in Tunisia is considered to be among the largest revenue sources and the most important economic activities because it contributes by around 7% to GDP in 2017 (TNTO 2019). However, there was a decline in tourism income from 3,500 million to 1,900 million in 2018 (NTO). The first publication on marketing in tourism destination was in 2007, which explained the social media impact on the tourism industry (Leung et al., 2013). Despite the outstanding boom, there is a lack of empirical data depicting social media role in terms of virtual travel information quests (Xiang & Gretzel, 2010). Nevertheless, Benxiang and Rolf (2014) mentioned, "*The social media in tourism is still in its infancy*". The literature also revealed that there is a deficiency of information and studies on the issue of the impact of social media platforms in tourism especially in the MENA region. Benxiang and Rolf (2014) mentioned that only leading regions which have pioneering the research on social media in tourism, were mainly in Europe, Asia and North America, bearing in mind that the world's 10 largest social platforms are Facebook, Google+, Youtube, Twitter, LinkedIn, Instagram, Pinterest, Myspace, Tumblr and Badoo (Bullas, 2013, as cited by Benxiang and Rolf, 2014). However, those platforms are not well used in the Middle East and Africa, which have almost 50 million users or 2.5% of the total users in the world. Having mentioned that, little is known about the effect of social media on tourism destination, as it has not received much attention in the literature (Benxiang & Rolf, 2014). According to Ghazali and Cai (2014), most papers studying the relationship between social media and the destination image are conceptual ones, or they explain only the conative image, which is behavioral intention. Nevertheless, the issue of the formation of tourists' destination image in social media has not yet been sufficiently investigated, primarily in

an empirical approach (Chen et al., 2014). The paper reported here begins to fill that gap. The originality of this study lies in the fact that it attempts to uncover the role of tourism information in social media in the cognitive tourist destination image. This study aims to answer the following question: *"What are the effects of quality information on social media platforms on the cognitive image of tourist destination?"*

To address this problem, we have established two research questions:

- What are the factors in which tourism information quality in social media is embedded?
- What are the repercussions of those information quality factors on the cognitive image of tourist destination in social media?

1. Theoretical background

1.1- Social media in tourism

The majority of previous studies have looked at the impact of social media on travel information search (Chung and Koo, 2015) and on destination image (Kim et al., 2017). Furthermore, Icoz et al. (2018) mentioned that *"social media is an effective tool for marketing especially in the field of tourism"*. Social media has become an information source especially for tourists who are seeking information on a particular destination (Zivkovic et al., 2014 and Mukherjee & Nagabhushanam, 2016). As affirmed by Chung and Koo (2015) defined 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"*. However, social media platforms have existed in order to provide people with information they aspire to find, and have facilitated its sharing via its interactive sites and applications (Chung & Koo, 2015). In spite of the value of tourism information in social media as it is highlighted in literature, there is not enough understanding of the details of quality of tourism information in those media (Kim et al., 2017). Having mentioned that, not much is known about which IQ dimensions in social media relate the most to the context of tourism, or about which factors remarkably impact the decision-making process among customers as far as the cognitive image of tourist destination is concerned.

1.2- Tourism information quality

Chen et al. (2014) defined IQ as the characteristics of information that meets the customer's needs and aspirations. We can explain the information quality as the usefulness of available information about travel product attributes in order to help tourists evaluate the product. We summarize the categories of the dimensions of information quality (Accessibility IQ, Representative IQ, Intrinsic IQ and Contextual QI) in the following table 1.

Table 1: The different factors for each quality dimension

Intrinsic Quality	Contextual Quality	Representational Quality	Accessibility Quality
-Believability -Accuracy -Objectivity -Reputation	-Value-added -Relevancy -Timeliness -Completeness -Amount of information	-Interpretability -Ease of understanding -Representational consistency -Conciseness representation	-Accessibility -Access security

Source: Wang & Strong (1996)

1.3- Destination image

Image seen as an intangible product, can motivate consumers or tourists to choose a specific place, country or destination. Kim et al. (2017) defined destination image as "*the sum of impressions, perceptions, feelings, and beliefs that people have about a destination*". It is the raw material of the destinations trying to complete the whole tourism area: it helps the destination in positioning itself, reaching its target, and becoming recognized. It is more cognitive and affects subjective knowledge with regard to a place (e.g. expensive, urban, cold).

1.4- Cognitive image

The cognitive image refers to the beliefs and knowledge about the destination, what is known about a destination and it is connected to "*the constituents of a destination that lure tourists such as landmarks to be seen, the environment to be admired, and experiences to recall, underlying the cognitive layout of the destination image*" (Wang & Hsu, 2010).

2. Research model and hypotheses

On the basis of our previous research, we propose the tourism destination image formation model as our research model (**Figure 1**). Few factors of tourism information quality identified in our previous study and the cognitive destination image is proposed as dependent variables.

The relationship between tourism information quality and cognitive destination image

Several empirical studies such as those conducted by Frias et al. (2008) found that the determinants of information quality, the amount of information, reliability, etc, are very important determinants for users' destination image formation. In fact, Chen et al. (2016) defined reliability of content as "*the degree to which the blog's content about the destination is perceived to be true, accurate, or believable*". According to Hwang and Fesenmaier (2011), travelers are highly motivated for choosing among different places to plan their trip; that's why, in the same logic, travelers try to obtain information reliability via an in-depth information search. Straight forward access to diverse information sources in social media can be attained steadily from travelers' word of mouth, peers' craft, or from resources shared by tourism agencies and suppliers. Tourists-to-believe that the experiences of travelers are credible and believable, and they agree about this; that is why, they are interested in it and still read Facebook pages, Twitter, and so on. Potential tourists interact with its suggestions, and then destination image will be created (McKnight & Kacmar, 2006). Having said that, tourism bodies are not at all in control over the deeds of social media users or over the kind of travel information and experiences the latter upload on their sites across social media. Thus, with these findings, we recognize that the reliability of content is associated with the cognitive image of a destination (**H1**). Second, "*Amount of information*" refers to the degree to which the quantity or amount of available information is appropriate to the task at hand (Wang & Strong, 1996). The development of the cognitive component is presented as a function of the variety (amount) of information sources to which tourists are exposed. Still more, Baloglu and McCleary (1999) provided empirical evidence that the appropriate amount of information has a positive impact on cognitive destination image formation. The good amount of information presented on Facebook pages, such as "*on a mangé pour vous*", "*on a voyagé pour vous*", will help tourists form a cognitive image about what to do in the destination. Then, the amount of tourism information in social media is associated with the cognitive image of a destination (**H2**). Hence, "*interestingness*" refers to the degree of fascination and attraction one feels from reading the content of social media pages; it is the perceived fun, pleasure, and amusement one gains from other users of social media pages (Chen et al., 2014). Interest fosters

exploratory behavior (Kashdan & Silvia, 2009), so if the experiences appearing on a Facebook page, Twitter, Instagram, etc are seen as interesting, people are likely to spare more time to read about them (Kashdan & Silvia, 2009). Chen et al. (2014) experimentally demonstrated that content interestingness in travel blogs favourably impacts the intention to head to a tourism destination. As far as destination image formation is concerned, posting material of interest on a social media page will persuade users to carry out information processing and envision their future use of the information (cognitive image formation). Then, the interestingness of tourism information in social media is associated with the cognitive image of a destination (**H3**).

3. Research methodology & Results' analysis

A quantitative method will be implemented to test the relationship between the three aspects of information quality in social media concerning the cognitive image of tourist destination. To validate our research model empirically, we developed a survey instrument, targeting for tourists who have never been in Tunisia as well as who are Facebook users, asking them to follow the Discover Tunisia Facebook page. We administered an online survey and collected 310 usable survey responses (**Table 2**). We used measurement items from extant studies to fit them into the context of this study (**Table 3**). With the exception for some demographic variables, all constructs were measured on a seven-point Likert scale.

We start first by conducting an exploratory factor analysis (EFA) on an initial sample of 53 respondents, trying to purify the scale items and then a second data collection on the final sample of 310 respondents carried out by SPSS 20, in order to verify the relevance of the chosen solution. Some items were eliminated because of the quality of representation (<0.5). In this way, after the elimination of items with weak, we get a good value of Bartlett's test of Sphericity and an acceptable value of KMO as well as Cronbach's Alpha more than 0.6, which explains a good level of reliability. It is appropriate to examine the normality of the data distribution, before conducting a confirmatory factor analysis, Mardia's test of multivariate normal distribution were inspected prior to performing maximum likelihood estimation (MLE) and should be less than $|3|$ (Roussel et al., 2002). This precautionary measure allows us to deal with problems of violation of multi-normality. We checked the reliability and the validity of our scales, and we obtained satisfactory results (**Table 4**). The factor analysis performed on our scales shows an acceptable quality of fit, the absolute, incremental and parsimony indices are excellent. The indices GFI, AGFI, TFI, NFI and CFI converge to 1, which exceeds the cut-off value of 0.9, as recommended by Roussel et al. (2002) and Evrard et al. (2003). The RMR and the RMSEA are less than 0.1 and are very close to 0. All our hypotheses were validated and the obtained results are presented in **Table 5**.

4. Results discussion and theoretical contributions

This research sheds the light on relationship between the cognitive destination image and tourism IQ factors in social media. The results propose that different features of tourism IQ in social media are related with cognitive destination image. Some basic findings have contributed to our knowledge concerning the getting known about a tourist destination, in our case Tunisia. According to our demographic survey results, most of respondents had travel experience using social media, which is considered as an influential source for obtaining tourism information. First of all, our empirical results has indicated that the reliable (H1), a great amount of information (H2) as well as an interesting content (H3) are very important determinants for cognitive image;

in the same vein, Frias et al. (2008) also leads to the same conclusion. Infact, information produced by tourists can be considered as believable information than information generated by private sector businesses. This information help tourists to know about a destination. This finding is consistent with results from the literature of Litvin et al. (2008) as well as Aarsal, (2008) and Wheeler, (2009) in Myunghwa & Micheal (2014). Indeed, we hypothesize that amount of information influence destination image formation particularly on a cognitive side (H2). The amount of information has a significant relation with cognitive image formation; we can conclude that the amount of information can help tourists to know what to do and where to find things about a destination. Hence, the conformity of this result can be seen in the literature of Baloglu and McCleary (1999); and Gartner (1993). Moreover, our empirical data analysis shows that the interestingness of tourism information is associated only with cognitive image formation (H3). This is a satisfying result as interestingness might be related to the cognitive image (person's destination knowledge). This results support this proposition goes in the same direction as the result of Chen et al. (2014). This paper has some implications for theory in the following ways. First, to the best of our knowledge, this paper is among the first researches that used empirical evidence to examine the link between the tourism information in Facebook page and its quality directly influences the cognitive destination image. Previous papers either used several conceptual arguments on the link between tourism information in social media and destination image formation (Ghazali & Cai, 2014) or examined only the link between some IQ's components in social media and the tourist's behavioral intention to visit (Chen et al., 2014). Having mentioned that, the majority of previous papers have focused only on their conceptual researches without any empirical validation. The current paper fills this gap by assessing cognitive destination image of tourists in Facebook. Therefore, this study also contributes to the literature on cognitive destination image in the context of social media. Moreover, the proposed conceptual framework contributes to the improvement of our understanding about the direct relationships between QI and cognitive destination image. This framework can be employed in the context of other travel communications likewise booking.com for future study. Second, 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.

5. Implication, limitation and future research

Beyond its theoretical interest, this topic has attracted managerial interests. The current paper is a contribution for companies to establish effective marketing tools so as to lure more tourists towards their destinations. The findings help marketers to build new marketing strategies, and tactics to boost the business and attract more tourists through social media, as well as promoting Tunisia. This paper has some limitations and as well future research. Firstly, the use of convenience sampling method raises the problem of result generalization, despite the fact that this method is often accepted and recommended in the context of academic research. Therefore, it is wise to generalize_ but with attentiveness _the results obtained to the entire population involved. It goes without saying that conducting an online survey has some limitations in as far as the representativeness of our samples is concerned. In spite of the method being efficient and convenient for data collection, sample composition could be limited to young people due to accessibility issues among older generations. Principally, nearly 80% of our sample respondents were under 34-year-olds. Even if the majority of the survey respondents represent the target population of our research, we should admit the limitation of this study, which is to say that the findings of the current study may not be generalized over and above the case of tourists who have

the intention to visit Tunisia (and Facebook users). Consequently, a further study is suggested to look into a greater variety of age groups through both online and offline surveys including a field survey on the travel site to consolidate the generalizability of the research model. One of the remedies to overcome generation bias in studies could be the insertion of the clustering of sampling from different age groups integrating both paper-based and online surveys. Last but not least, this paper surveyed Facebook users and looked into their destination image about Tunisia as a whole. As a consequence, the generalization of the proposed model to the regions could be controversial. Even if our findings can provide tourism marketers with important insights about the role of social media IQ in cognitive destination image, it is recommended that future research should investigate other social media platforms (e.g., Instagram, TripAdvisor), along with Facebook web pages, in order to both increase the objective validity of the research model and to generalize the findings. It goes without saying that the current study can be replicated in another industry or country.

References

- Baloglu, S., & McCleary, K. (1999). A model of destination image formation. *Journals of Tourism Research*, 26(4), 868-897.
- Benxiang, Z., & Rolf, G. (2014). What do we know about social media in tourism? A review. *Tourism Management Perspectives*, 10, 27-36
- Chen, C.-C., Lai, Y.-H. (Rebecca), Petrick, J. F., & Lin, Y.-H. (2016). Tourism between divided nations: An examination of stereotyping on destination image. *Tourism Management*, 55, 25-36.
- Chen, Y. C., Shang, R. A., & Li, M. J. (2014). The effects of perceived relevance of travel blogs' content on the behavioral intention to visit a tourist destination. *Computers in Human Behavior*, 30, 787-799.
- Chung, N., & Koo, C. (2015). The use of social media in travel information search. *Telematics and Informatics*, 32(2), 215-229.
- Evrard, Y., Pras, B., & Roux, E. (2003). *Market: Études et recherches en marketing*. 3ème édition. Dunod, Paris.
- Frias, D. M., Rodriguez, M. A., & Castañeda, J. A. (2008). Internet vs. Travel agencies on pre-visit destination image formation: An information processing view. *Tourism Management*, 29(1), 163-179.
- Gartner, W. C. (1993). Image formation process. *Journal of travel & tourism marketing*, 2(3), 191-215.
- Ghazali, R. M., & Cai, L. (2014). Social media sites in destination image formation. *Tourism Social Media: Transformations in Identity, Community and Culture*, 18, 73-86.
- Hwang, Y.H., & Fesenmaier, D.R. (2011). Unplanned tourist attraction visits by travelers. *Tourism Geogr.* 13 (3), 398-416.
- Icoz, O., Kutuk, A., Icoz, O. (2018). Social media and consumer buying decisions in tourism: The case of Turkey. *Revista de Turismo y Patrimonio Cultural*, 16 (4), 1051-1066
- Kashdan, T. B., & Silvia, P. (2009). Curiosity and interest: The benefits of thriving on novelty and challenge. *Handbook of positive psychology*, 2nd edition. Oxford, UK.
- Kim, S.-E., Lee, K. Y., Shin, S. I., & Yang, S.-B. (2017). Effects of tourism information quality in social media on destination image formation: The case of SinaWeibo.

Information & Management, 54(6), 687-702.

- Leung, D., Law, R., Van Hoof, H., & Buhalis, D. (2013). Social media in tourism and hospitality: A literature review. *Journal of Travel and Tourism Marketing*, 30 (2), 3-22.
- Litvin, S. W., Goldsmith, R. E., & Pan, B. (2008). Electronic word-of mouth in hospitality and tourism management. *Tourism Management*, 29(3), 458-468.
- McKnight, H., & Kacmar, C. (2006). Factors of information credibility for an Internet advice site. In *Proceedings of the 39th Hawaii international conference on system sciences*.
- Mukherjee, A. Nagabhushanam, M. (2016). Role of Social Media in Tourism Marketing, *International Journal of Science and Research*, 5 (6), 2026-2033.
- Myunghwa, K., & Micheal, A. S. (2014). Determinants of sharing travel experience in social media. *Journal of Travel and Tourism Marketing*, 30, 93-107.
- Roussel, P., Durrieu, F., Campoy, E., & El Akremi, A. (2002), *Méthodes d'équations structurelles: Recherches et applications en gestion*, Edition Economca, Paris.
- Wang, C. Y., & Hsu, M. K. (2010). The relationships of destination image, satisfaction, and behavioral intentions: An integrated model. *Journal of Travel & Tourism Marketing*, 27(8), 829-843.
- Wang, R. Y., & Strong, D. M. (1996). Beyond accuracy: What data quality means to data consumers. *Journal of Management Information Systems*, 12(4), 5-33.
- Xiang, Z., & Gretzel, U. (2010). Role of social media in on line travel information search. *Tourism management*, 31(2), 179-188.
- Zivkovic, R., Gajic, J. & Brdar, I. (2014). The Impact of Social Media on Tourism, *Singidunum Journal of Applied Sciences Supplement*, 758-761.

Appendices:

Figure 1. Research Model

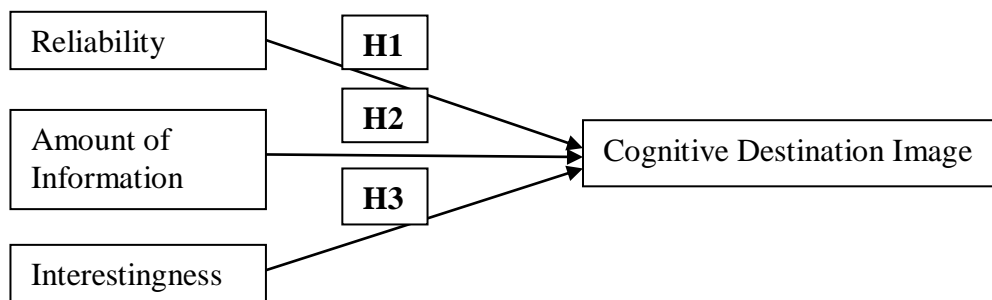


Table 2. Interviewees' Profiles

Variable	Value	Frequency	Percentage
Gender	Female	170	54.8%
	Male	140	45.2%
Age	Under 24 years	105	33.9%
	Between 25 and 34 years	135	43.5%
	Between 35 and 44 years	55	17.7%
	Between 45 and 54 years	5	1.6%

	Over 55 years	10	3.2%
Level of Education	Primary or secondary school	5	1.6%
	High school	10	3.2%
	Higher education	270	87.1%
	Others	25	8.1%
Occupational category	Student	115	37%
	Employee	105	33.9%
	Self-employed	65	20.9%
	Housewife	10	3.2%
	Job Search	5	1.6%
	Retired	5	1.6%
Household monthly income (\$)	Up to 1,000	75	24.1%
	1,000–3,000	110	35.4%
	More than 3,000	125	40.3%

Table 3. The Selected Measurement Scale

Variable	Auteurs	Items
Cognitive	Kim et al. (2017)	Friendly and receptive residents Interesting cultural heritage Interesting cultural events Good restaurants and gastronomy Good value for money Good shopping opportunities Good accommodation
Amount of information	Used by Kim et al. (2017) in the same context and developed by Chai et al. (2009)	Small in quantity - Large in quantity Insufficient - Sufficient Inappropriate to read - Appropriate to read
Reliability	Xu and Chen (2006)	Inaccurate-Accurate Inconsistent- Consistent Unreliable - Reliable

Interestingness	Kim et al. (2017)	Unpleasant - Attractive Unfunny - Fanny Uninteresting - Interesting
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Table 4. Scales' Reliability and Convergent Validity

Variables	RHO VC	RHO JORESK
Cognitive	0.529	0.818
Reliability	0.684	0.866
Amount of information	0.737	0.893
Interesting	0.557	0.791

Table 5. Hypotheses' Verification

Hypotheses	Estimate	S.E	C.R	P	Results
H1: Cognitive<---Reliability	0.299	0.093	2.795	0.005	Supported
H2: Cognitive<---Amount of information	0.183	0.086	2.003	0.045	Supported
H3: Cognitive<---Interesting	0.347	0.083	4.056	0.000	Supported