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Understanding the influence of user-generated content on tourist loyalty behavior in a cultural World Heritage Site

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ABSTRACT

The emergence of social media has revolutionized tourists' decision-making processes and behaviours. This study focuses on the effect of user-generated content (UGC) on tourist loyalty behaviour by examining structural relationships between destination image, satisfaction, revisit intention, and word-of-mouth (WOM) publicity. Data were collected from domestic tourists to Gulangyu, a World Heritage Site in China. The findings of this study reveal that UGC indirectly affects tourist loyalty behaviour by influencing destination image and satisfaction. Moreover, the results demonstrate that factual UGC and emotional UGC positively affect tourists' perceived value of the destination, with emotional UGC having a greater influence.

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User-generated content; social media; tourist loyalty behaviour; destination image; tourist satisfaction

Introduction

Traditionally, research into tourist destination loyalty focused on how the destination relates to tourists and establishes a lasting relationship (Akhoondnejad, 2016; Keshavarz & Jamshidi, 2018). With the advent of social media, retaining tourist-destination relationships can no longer be achieved by simply creating a better product or service. Growth of internet user-generated content (UGC) has effected a major change in the flow of information that has permeated and influenced consumer behaviour in the tourism and hospitality sectors (Kim & Kim, 2020; Leung et al., 2013).

One of the major trends in the tourism industry is that individual travellers increasingly rely on UGC to make travel decisions (Amatulli et al., 2019; Oliveira & Casais, 2019),thus the entire tourist decision-making process, pre-travel, during travel and post-travel (Nezakati et al., 2015), is extensively influenced by UGC. At the pre-travel stage, UGC is a source of information for tourists to review travel products and destinations, create expectations (Wang et al., 2016), develop travel plans (Xiang & Gretzel, 2010) and assist in making travel decisions. During the trip, UGC enables tourists to evaluate tourism products and services. At the post-evaluation stage, some studies have explored the impacts of UGC on tourist satisfaction (Narangajavana et al., 2019). In this respect, UGC on social media can help to minimize the gap between experience and expectations, thereby indirectly increasing tourist satisfaction (Narangajavana et al., 2017). Thus, understanding how travellers have adapted to these changes and established their loyalty relationships becomes important for tourism marketers to improve destination competitiveness and develop effective communication strategies.

While UGC can enhance favourable tourist experience and lead to desirable behavioural intentions (Narangajavana et al., 2017; Narangajavana et al., 2019), the influence of UGC usage at the pre-travel stage on destination loyalty lacks empirical attention. Some studies have used content-analysis of travel websites to access tourist perceptions and satisfaction of a tourism destination (Költringer & Dickinger, 2015; Tham et al., 2013), but these studies did not interview actual tourists and so were unable to examine the causal relationship between UGC impacts, tourist destination image, satisfaction and loyalty behavioural intention. Another group of researchers has examined the impacts of online information on consumer loyalty behaviour, such as online repurchase intention (Bulut & Karabulut, 2018; Matute et al., 2016) and intention to revisit (Setiawan et al., 2014). These studies have contributed valuable points to our understanding of the influence of online information as a whole in tourist behaviour. However, when UGC are used by tourists in the travel

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plan, different types of UGC convey different destination attributes to tourists in different ways. Specifically, UGC not only provides tourists with basic factual information about travel products and destinations, increasing tourist knowledge about a destination; but the travel photographs or videos shared on social media can also affect a tourists' emotion towards a destination. This raises the question as to the effect that different types of UGC have on tourist's loyalty behaviour. The degree of influence of different types of UGC on destination loyalty formation is not at all clear.

This study aims to fill these research gaps by empirically investigating how UGC influences tourist loyalties, identifying the different types of UGC and exploring their influence on tourist behaviour. The objectives of this study are as follows: (1) to develop a predictive model (see Figure 1) of how UGC affects tourist perceptions of destination, satisfaction, revisit intention and the likelihood of recommending a product or service to others (word-of-mouth) (WOM); (2) to empirically test the validity of the predictive model; (3) to distinguish the relative influence on tourists of two types of UGC: factual information and emotional information.

The World Heritage Site of Gulangyu, a well-known heritage tourism destination in southeast China, is used as a case study to provide empirical evidence to elucidate the role of UGC in enhancing tourist satisfaction and tourist destination loyalty. This study contributes to tourism literature by exploring how the different types of UGC in social media trigger desired behavioural responses of Chinese visitors to a site of cultural heritage. The results are of potential value to destination managers of heritage sites for enhancing their understanding of factors influencing the choices of Chinese visitors. In addition, the findings of this study can also assist destination marketers and tourism policy makers to enhance leverage on UGC to strategically position tourism-based products and service at heritage sites.

Following this introduction, the article begins with a literature review. Then, the methodology and results are presented in the next section. Finally, conclusion and discussion were presented with practical implications and limitations of the current study's findings for future studies.

Literature review

Tourist loyalty behaviour

In the marketing literature, customer loyalty is recognized as a deep commitment to buying a product or service again in the future (Oliver, 1999). Recognizing the unique features of tourism (e.g. intangible and heterogeneity), destination loyalty means tourists' commitment toward a destination (Chen & Gursoy, 2001; Chi & Qu, 2008), and it can be described as the behavioural intentions of tourists to revisit and make positive recommendations about a particular destination to others through word-of-mouth (Almeida-Santana & Moreno-Gil, 2018).

There are three fundamental reasons offered as a rationale for continued examination of destination loyalty in the marketing and tourism literature. First, loyal customers are less sensitive to prices, showing a greater willingness to pay (Alegre & Juaneda, 2006). Second, loyal customers not only important in increasing revenue in destinations, but also act as channels of information that spread positive word-of-mouth to other potential travellers to a destination (Almeida-Santana & Moreno-Gil, 2018; McMullan & Gilmore, 2008). Third, since tourist consumption may be driven by constraints of time and a range of other factors (Thurnell-Read, 2017), destination loyalty is harder to obtain than general customer loyalty, so greater marketing efforts are required (Lv & McCabe, 2020).

Due to the practical importance of destination loyalty, numerous studies have been made to examine the antecedents that are likely to influence destination loyalty. These studies show the causes of loyalty or behaviour intentional include motivations (Lee & Hsu, 2013; Yoon & Uysal, 2005), service quality (Keshavarz & Jamshidi, 2018), destination image (Chiu et al., 2016), satisfaction (Keshavarz & Jamshidi, 2018; Lee et al., 2011) and visit intensity (Antón et al., 2017). For example, Kim (2018) found that memorable tourism experiences influence destination loyalty both directly and indirectly through destination image and tourist satisfaction. Similar findings were also reported by Moon and Han (2019) and Sharma and Nayak (2018) discovered significant effects of tourists' emotional responses in predicting destination image, satisfaction and destination loyalty.

Although a number of explanations have been proposed to explain tourist loyalty formation, a common assumption from the accumulated research is that when tourists perceive a positive destination image, they exhibit a higher level of satisfaction, which then leads to revisit or recommend intentions. However, research concerning the effects of social media on tourist loyalty formation process is scarce and the relationship between UGC and loyalty behaviour is still not clear. Therefore, this study proposes a theoretical destination loyalty formation model that builds on findings of previous studies (destination image→satisfaction→loyalty) by integrating UGC influences into the model.

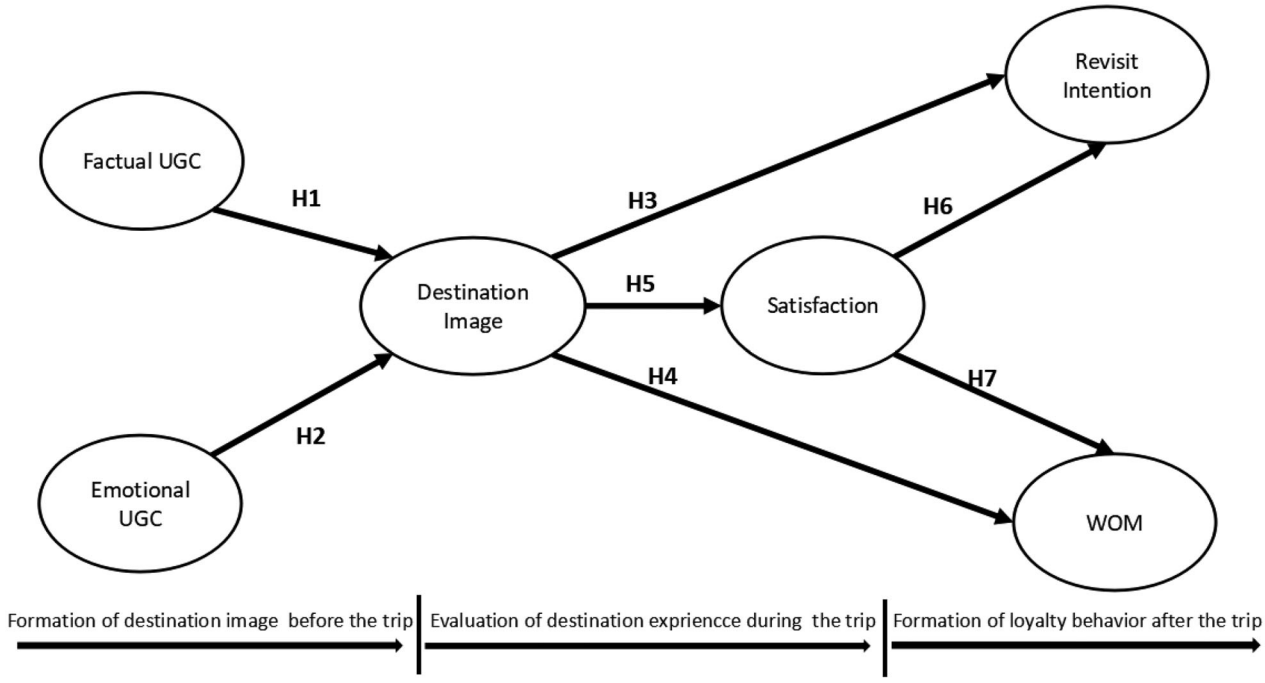

Figure 1. The proposed research model.

UGC sources in social media

User-generated content (UGC) refers to media content created or produced by the general public primarily distributed on the Internet (Daugherty et al., 2008). The growth of UGC in social media has had a significant influence on travellers' decision-making and tourism operations and management. However, UGC research is still in its early stages and there are some aspects that still need to be explored, such as the sources of UGC (Zeng & Gerritsen, 2014). UGC impacts on tourist behaviour have been investigated for Twitter (Liu et al., 2017; Sotiriadis & Van Zyl, 2013), Tripadvisor (Amaral et al., 2014; Guo et al., 2017) and YouTube (Mir & Ur Reham, 2013). Narangajavana et al. (2019) classified UGC sources based on UGC contributors. However, there are few studies on how UGC influences tourist perception and behaviour.

In tourist psychology studies, much empirical research supports the premise that the formation of destination image is composed of two dimensions: cognitive process and affective process (Crompton, 1979). Cognitive process refers to the knowledge about a destination, mainly focusing on tangible physical attributes and characteristics (Baloglu & McCleary, 1999; Pike & Ryan, 2004); while affective process is represented by an individual's feelings and emotions towards the tourist destination (Chen & Uysal, 2002; Kim & Richardson, 2003). Phelps (1986) proposed that destination images could be categorized into primary and secondary types: the first is based on the actual visit and the second is based on external information.

UGC has gained popularity among travellers (Ayeh et al., 2013), since it empowers consumers to easily obtain up to date information on destinations and services reported by other tourists, such as popular tourist attractions, local transportation, and travel tips. Furthermore, this aggregated information also includes photographs, videos and stories, all of which may positively influence tourist feelings and emotions towards the destination. As such, UGC is not only an information base for tourism purchasing decisions but also supporting information that plays a formative role in developing perceptions of a destination (Luo & Zhong, 2015). In this study, the types of UGC related tourism are categorized as factual UGC and emotional UGC. Factual UGC is tourist-generated factual information about a destination, such as ticket price, transportation routes, events information and relevant interpretation information of scenic spots, which give basic facts to the tourists and affects their cognitive perception towards the destination (Li et al., 2008). Emotional UGC refers to any form of information, such as famous music and films mentioned in online UGC, which may trigger a tourist's imagination and affect emotional perceptions of a destination (Hadinejad et al., 2019; Kim, 2012). To create a hypothetical example, when describing their travel experience to the United Kingdom, tourists who are fans of Harry Potter may insert clips of Harry Potter films and put photographs of filming locations in their

travel blogs. Emotions stimulated by film clips and photographs may influence the choice of travel destinations are here regarded to be emotional UGC.

Destination image

Destination image is commonly conceptualized as a mental or attitudinal construct consisting of the sum of beliefs, ideas and impressions that a tourist holds about a destination (Fakeye & Crompton, 1991). Tourists' perceived image of destination is dynamic (Lee et al., 2014) and it can be shaped and shared by groups of people (Jenkins, 1999).

In the literature, scholars have distinguished between different types of images formed during specific stages (i.e. pre-visit, during a visit and post-visit) of the tourism experience (Lee et al., 2014; Xu & Ye, 2018). Pre-visit images are formed before experiencing a destination and thus influence tourist intention to visit and their ultimate destination choice (Baloglu & McCleary, 1999). It is also influenced by secondary information sources (Martín-Santana et al., 2017). In contrast, post-visit images are formed during a trip and acquired through on-site recreation experiences (Beerli & Martin, 2004; Bigne et al., 2001). However, the majority of studies on destination images have only examined tourists' pre-visit or post-visit images. For example, earlier studies have explored post-visit image perceptions and their relationship with post-trip evaluations, such as satisfaction level (Assaker & Hallak, 2013; Lee et al., 2014) and intention to recommend (Papadimitriou et al., 2015; Prayag et al., 2017). Therefore, by exploring UGC impacts on tourist perception towards the destination, this study aims to empirically examine the influence of dynamic destination images on tourists' overall satisfaction and behavioural intentions.

Tourist satisfaction

In the consumer market literature, scholars define satisfaction as a consumer's fulfilment response (Oliver, 1977). The process of tourist satisfaction formation is typically explained by Oliver's expectancy disconfirmation paradigm (Oliver, 1980), which states that a customer's overall satisfaction results from the comparison between expectation and outcome performance. When perceived performance is equal to, or greater than the expected performance, tourists will be satisfied. Otherwise, the tourist may be dissatisfied.

However, some scholars have criticized the disconfirmation model because there is no conclusive evidence that expectations lead to satisfaction or dissatisfaction, particularly when tourists have a lower expectation (Barsky & Labagh, 1992). According to the disconfirmation paradigm, low expectation improves the chances of satisfaction, which means a tourist will be satisfied if she or he expects or receives less performance. However, LaTour and Peat (1979) noted that low expectations rarely translate into satisfaction in practice. To avoid this weakness of the disconfirmation model, this study will assess visitor satisfaction using a global measurement (Assaker et al., 2011; Olsen, 2007; Vaske et al., 1986; Williams, 1989), which is a method to evaluate overall satisfaction that does not compare the gap between actual performance and expectation in questionnaire design.

Research hypotheses development

The effect of UGC

The importance of UGC in forming a destination image is recognized by both academics and practitioners (Burgess et al., 2011; Stankov et al., 2010). Marchiori and Cantoni (2015) found UGC increased tourist positive beliefs about a destination, especially those related to value for money and weather; and an experiment with more than 190 participants highlighted the effectiveness of UGC on tourist cognitive formation of destination image (Amaral et al. 2014).

Additionally, a few scholars have also positively explored the usefulness of UGC in affecting tourists' feelings and emotions towards destinations. For example, Serna et al. (2016) found that underlying emotions generated by UGC had a powerful effect in the formation of tourist perception. After investigating how photographs posted in travel blogs affected tourists' perceptions of Russia as a travel destination, Kim and Stepchenkova (2015) discovered that photographs failed to encourage tourists to visit the destination, but they did produce an impression to tourists that Russia was a clean, safe and friendly country.

On social media platforms, the shared experience by tourists includes not only knowledge-related aspects, such as facts about destination attributes (e.g. product price, weather condition and related tourist attraction information), but also includes communication about emotions, imagination and fantasies about features of a destination.

Based on the theoretical backgrounds, the following hypotheses are proposed:

H1: Factual UGC are positively correlated with destination image.

H2: Emotional UGC are positively correlated with destination image.

The effects of destination image

Prior studies have investigated both direct and indirect influences of destination image on behavioural intentions (Chen & Tsai, 2007; Lee et al., 2014; Wang & Hsu, 2010). Researchers have found that destination image directly contributes to tourist intention to visit and willingness to recommend the tourism products to others (Agapito et al., 2013; Hallmann et al., 2015; Kock et al., 2016). For example, after examining a destination image model in a destination hosting sporting events, Chen and Funk (2010) suggested that destination image is a significant predictor of revisit intention. Moreover, Bigne et al. (2001) found a positive relationship between destination image and willingness to recommend. In support of these previous findings, Kock et al. (2016) identified the significant influence of destination image on willingness to visit and WOM recommendation. Thus, the following hypotheses are developed:

H3: Destination image is positively correlated with revisit intention.

H4: Destination image is positively correlated with WOM intention.

Existing studies also report an indirect impact of destination image on tourist behavioural intentions, particularly through satisfaction (Assaker et al., 2011; Chi & Qu, 2008; Prayag & Ryan, 2012). For example, Suhartanto and Triyuni (2016) proposed a shopping destination loyalty model that includes the destination image. Assaker et al. (2011) suggested that the influence of destination image on destination loyalty is mediated by the overall satisfaction of tourist experience. Therefore, the following hypothesis is formed regarding the impact of destination image on overall satisfaction:

H5: Destination image is positively correlated with overall satisfaction.

The effects of satisfaction

Satisfaction plays an important role in successful destination marketing because it is considered one of the most powerful drivers of tourist behavioural intentions (Oliver, 1999), such as destination chosen and decision to revisit (Chen & Gursoy, 2001). Studies examining tourist satisfaction have confirmed the positive association between satisfaction and loyal behaviour (i.e. revisit intentions and WOM publicity) (Prayag et al., 2017; Rajesh, 2013). McDowall (2010) reported that the satisfaction of international tourists visiting Bangkok has significant impacts on their intention to recommend. Hui et al. (2007) further noted that overall satisfaction is a key determinant of WOM publicity among other factors. After interviewing European visitors to Mediterranean destinations, Assaker and Hallak (2013) found tourist satisfaction positively influenced tourists' revisit intentions. Based on the preceding discussion, the following hypotheses are developed:

H6: Overall satisfaction is positively correlated with revisit intention.

H7: Overall satisfaction is positively correlated with WOM intention.

Methodology

Study site

Gulangyu (also called Kulangsu), located in the southwest of Xiamen city, is a tiny island of 1.88 square kilometres famous for its architecture, unique history and large piano museum. As a place of residence for Westerners during Xiamen's colonial past, many colonial-style mansions, churches, and hospitals were established throughout the island. Gulangyu is an outstanding example of cultural fusion, with a mixture of various architectural styles including the Traditional Southern Fujian Style, Western Classical Revival Style and Veranda Colonial Style. In 2017, Gulangyu, was officially listed as a World Heritage Site (WHS) in recognition of its international cultural and historical importance.

Gulangyu Island was chosen as a case study to examine the effect of UGC on tourist loyalty behaviour for two reasons. Firstly, Gulangyu has long been a popular domestic tourist destination, and is recommended by a large number of travel bloggers, attracting between 25,000 and 65,000 visitors per day (XiamenDaily, 2014). In Mafengwo.com ('马蜂窝' in Mandarin), the most popular online tourism community in China, the number of UGC about Gulangyu are more than 50,000. Secondly, as a well-known cultural heritage site, Gulangyu has a wide range of various types of attractions in addition to historical buildings. On the island, tourists can visit world-class museums, experience the unique classical music tradition, enjoy romantic beaches and sample the local seafood restaurants and fresh tropical fruits. International musical events, such as the Gulangyu Piano Festival and the Gulangyu Four-Season Music Week are held on the island during holiday periods.

Data collection and sampling

Data were collected on both weekdays and weekends between June and August 2018 as the summer holiday

is one of the two peak travel times of the year for Gulangyu. The sample for this study was travellers in Gulangyu who used UGC to plan their trips. Surveyors approached tourists at the entrances and exits of tourist attractions in Gulangyu and asked screening questions (e.g. if they had read relevant UGC travel information in social media before their trips). Only tourists who had used UGC travel information in social media were invited to participate in this survey. It took approximately 20 min to complete the questionnaire. Ten research assistants administered the on-site questionnaire survey, all of whom were trained to understand the procedure and etiquette of the questionnaire survey. Interpretation of the question items was given to the respondents if they asked for clarification. In total, 500 respondents were approached and 439 valid questionnaires were obtained, resulting in an 87.8% response rate.

Measurement scales

The survey questionnaire (See Appendix I) included multi-item scales to measure each construct in this study. A five-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (5), was used.

The measures for the factual UGC and emotional UGC were developed for this study based on an extensive literature review (Chung & Koo, 2015; Crouch, 2011; Ellison et al., 2007; Gretzel & Yoo, 2008; Vengesayi, 2008; Xiang & Gretzel, 2010). Descriptions of factual UGC and emotional UGC were collected and adapted from the literature to generate the questions. Factual UGC refers to the information reflecting factual attributes of the destination that doesn't involve tourists' personal feelings towards the destination. Emotional UGC refers to any form of information affecting tourists' personal feelings towards the destination, and was captured using six questions (See Table 3).

The item for tourist perceived destination image towards Gulangyu was adopted from its Outstanding Universal Value (OUV) on the basis of the UNESCO designation (Kulangsu Wanshi Scenic Management office, 2018). The original purpose of establishing World Heritage sites is to identify, protect and present attractions of OUV, which is considered as 'a concept of value based on human perceptions' (Buckley, 2018). This study examines if the World Heritage Site's OUV mirrors tourists' perceived cultural value (Buckley, 2018).

The WOM construct was adapted and slightly modified from the recommendation intention derived from different tourism products (Papadimitriou et al., 2018), such as: 'I would like to recommend some worth-visiting scenic spots on Gulangyu to others'; 'I would like to recommend the good hotels where I have stayed in during this trip to others'; and 'I would like to recommend the delicious food that I have tried on this trip to others'.

Four question items were included to measure the satisfaction of tourists which were derived from Bigné et al. (2005); and a further four items were adapted from Castro et al. (2007) to evaluate the revisiting intention of visitors to Gulangyu.

Data analysis

A standard descriptive analysis was carried out to test the normality of all variables before testing the measurement and structural models. The normality assumption for each item was met, as all absolute skewness values were less than 2 and all absolute kurtosis values less than 7 (West et al., 1995).

An exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA) were then conducted to verify the dimensionality of the UGC. Structural equation modelling (SEM) was used to empirically test the effects of factual UGC and emotional UGC on tourists' perceived destination image and their future loyalty behaviour using Analysis of Moment Structure (AMOS) 21.0 statistical software with maximum likelihood method of estimation.

Results

Respondents' profile

The profile of the participants is shown in Table 1. There were slightly more females (59.9%) than males. The majority of respondents were below 40 years old (90%) with the 18–30-year-old class being the largest group (73.4%). Approximately 81.3% of respondents had attained an undergraduate degree or higher. Fewer had only a senior secondary level of education (13.4%), and only 5.3% had a junior secondary level. The majority of the respondents were in employment (71.3%), followed by students (24.8%). In terms of income, 36.7% of the respondents had monthly incomes of 3001–6000 RMB, followed by 3000 RMB and below (27.6%) and 6001–9000 RMB (19.1%). Only 8.2% of respondents had a monthly income of more than 12000 RMB. The majority of the respondents are non-local Xiamen residents (94.1%).

Measurement model

The skewness statistics of all variables of each construct ranged from −0.869 to −0.012, and kurtosis statistics ranged from −0.115 to −2.3, which indicated that the

Table 1. Profile of survey respondents.

Variables	n (439)	%	Variables	n (439)	%
Gender			**Occupation**		
Male	176	40.1	Student	109	24.8
Female	263	59.9	Unemployed	7	1.6
Age			Employed	313	71.3
18-30	322	73.4	Retired	10	2.3
31-40	73	16.6	**Monthly Income (RMB)**		
41-50	34	7.7	<3000	121	27.6
51-60	8	1.8	3001–6000	161	36.7
61 and above	2	0.5	6001–9000	84	19.1
Education Level			9001–12000	37	8.4
Primary School and below	3	0.7	12001–15000	14	3.2
Junior Secondary School	20	4.6	>15000	22	5.0
Senior Secondary School	59	13.4	**Place of residence**		
Undergraduate	328	74.7	Xiamen local residents	26	5.9
Postgraduate	29	6.6	Non-local residents	413	94.1

Note: RMB = CNY = Chinese Yuan; 1 RMB/CNY ≈ 0.15 USD (United States Dollar) in April 14, 2021.

data did not violate the normality assumption (Kline, 2011).

Exploratory factor analysis (EFA) was carried out to derive the underlying dimensions of the UGC sources. A principal component method with varimax rotation was adopted. To control the number of factors extracted, a minimum eigenvalue of one was used. Items with factor loadings lower than 0.4 and items with cross-loadings greater than 0.4 on more than one factor were excluded (Hai et al., 1998; Hair et al., 2010), because items with these characteristics failed to prove pure measures of a specific construct. The Kaiser-Meyer-Olkin value was 0.91, indicating the sampling adequacy, and Bartlett's test of sphericity was 2855.68 (df = 66, $p < 0.001$), supporting the factorability of the data (Hair et al., 1995). Two underlying dimensions of UGC, corresponding to factual UGC and emotional UGC, were identified. These two factors explained 61.01% of the variance in UGC sources. Two items were removed from the analysis because their factor loadings were below 0.4.

Afterward, a confirmatory factor analysis (CFA) was conducted to evaluate the overall measurement model including all latent constructs, and its adequacy was assessed. The findings indicated an acceptable model fit: $X^2 = 1107.70$, df = 449, comparative fit index (CFI) = 0.93, Tucker–Lewis index (TLI) = 0.92, root mean square error of approximation (RMSEA) = 0.58, t-values for the standardized factor loadings of items were significant ($p < 0.001$), suggesting that they are significant indicators of their respective constructs.

Table 2 displays the average variance extracted (AVE) and the composite reliability (CR) scores for each construct. Results showed that all of the AVE values approached to 0.5 and CR scores were greater than the commonly recommended level of 0.7 (ranging between 0.78–0.94) respectively. Therefore, convergent validity was supported (Fornell & Larcker, 1981). Discriminant validity was also supported (See Table 3), as the square root of AVE for each construct is greater than its relation with other factors (Fornell & Larcker, 1981).

Structural model and hypothesis testing

The hypothesized relationships were tested and structural equation modelling (SEM) was employed to verify the relationships among factual UGC and emotional UGC, destination image, satisfaction, recommendation (WOM) and intention to revisit. The fit indices of the structural equation model demonstrated that the model fitted the data well ($x^2 = 1231.682$, df = 457, CFI = 0.906, TLI = 0.898, RMSEA = 0.066) (Hair et al., 2010).

Table 4 and Figure 2 present findings of the main effects. Both factual and emotional UGC were significantly and positively correlated with destination image (β1 = 0.076; β1 = 0.520), supporting H1 and H2. UGC explained 37% of the variance in tourist perceived destination image ($R^2 = 0.37$). Significant paths emerged between destination image and revisit intention (β3 = 0.325), destination image and WOM (β4 = 0.413), destination image and satisfaction (β5 = 0.325). Thus H3, H4 and H5 were accepted. Destination image explained 40% of the variance in tourist satisfaction. Hypothesis 6, proposing a relationship between destination image and revisiting intention, was also supported (β6 = 0.910). Together, satisfaction and destination image predicted 52% of tourist revisiting intention. Finally, as hypothesized, the relationships between satisfaction and WOM was positive and significant (β7 = 0.396). Destination image and satisfaction explained 48% variance in intention to recommendation.

Conclusion and discussion

Although tourism research acknowledges the importance of UGC impacts on tourist behaviours (Cox

Table 2. Results for overall measurement model

Constructs and Indicators	Mean	Standard Deviation	Factor Loading	AVE	Composite Reliability
Factual UGC	**3.60**				
Let me know that Gulangyu is the world's cultural heritage site	3.61	0.83	0.83	0.55	0.78
Let me know more about the history of Gulangyu	3.62	0.80	0.82		
Let me know the latest activities and events in Gulangyu (e.g. UGC provide me more information related to the musical and cultural activities on the island)	3.57	0.84	0.53		
Emotional UGC	**3.84**				
Let me feel that Gulangyu is very beautiful	4.05	0.72	0.72	0.61	0.92
Let me feel that Gulangyu Island has a great sense of history	3.88	0.78	0.74		
Let me be deeply attracted by its beautiful natural scenery and historical buildings	3.82	0.78	0.81		
It makes me think that I like Gulangyu very much	3.85	0.76	0.84		
It inspires my interest in travelling to Gulangyu	3.69	0.79	0.78		
It inspires my interest in visiting the historical and cultural buildings in Gulangyu	3.76	0.82	0.77		
It makes me feel that it should be worth travelling to Gulangyu	3.84	0.78	0.79		
Destination Image	**3.70**				
Gulangyu has outstanding universal values	3.58	0.73	0.62	0.47	0.86
Gulangyu is a prominent example of Chinese cultural diversity	3.68	0.75	0.67		
Gulangyu is part of the most unique culture of China	3.68	0.77	0.66		
Gulangyu has had a great impact on the people of the world.	3.56	0.81	0.69		
The international community has a responsibility to protect this heritage	3.99	0.75	0.72		
Gulangyu is very important to China and the world	3.86	0.81	0.73		
This is a place where 'you must visit"	3.58	0.90	0.69		
Tourist Satisfaction	**3.86**				
Generally, I am satisfied with the experience of Gulangyu	3.87	0.70	0.79	0.72	0.91
I felt very happy with this trip to Gulangyu	3.85	0.71	0.88		
I felt relaxed during my trip to Gulangyu	3.85	0.75	0.84		
I enjoyed my trip to Gulangyu	3.86	0.74	0.88		
Word of Mouth	**3.85**				
I would like to recommend Gulangyu to my family and friends	3.94	0.723	0.79	0.48	0.88
I would like to recommend some worth-visiting scenic spots on Gulangyu to others	3.97	0.68	0.83		
I would like to recommend the good hotels where I have stayed in during this trip to others	3.69	0.86	0.61		
I would like to recommend the delicious food that I have tried on this trip to others	3.91	0.78	0.75		
I would like to recommend souvenirs bought on Gulangyu to my family and friends	3.70	0.81	0.70		
I would like to share travel tips with others	4.03	0.71	0.70		
After this trip, I would like to share my travel experience on the Internet	3.71	0.88	0.52		
Revisiting Intention	**3.63**				
I intend to visit Gulangyu Island again	3.66	0.92	0.92	0.79	0.94
I have plans to visit Gulangyu again	3.52	0.93	0.90		
I hope I can visit Gulangyu again	3.61	0.90	0.92		
I may visit Gulangyu Island again	3.74	0.87	0.80		

Note: AVE = Average variance extracted: N/A = not applicable.
In AMOS, one loading has to be fixed to 1; therefore, not-statistic can be computed for this item.

Table 3. Inter-construct Correlations

	FUGC	EUGC	DI	TS	WOM	RI
1. Factual UGC (FUGC)	**0.74**					
2. Emotional UGC (EUGC)	0.60***	**0.78**				
3. Destination Image (DI)	0.40***	0.59***	**0.69**			
4. Tourist Satisfaction (TS)	0.38***	0.58***	0.61***	**0.81**		
5. Word of Mouth (WOM)	0.46***	0.62***	0.68***	0.73***	**0.69**	
6. Revisiting Intention (RI)	0.26***	0.43***	0.54***	0.71***	0.66***	**0.89**

Note: AVE = Average variance extracted. The square root of AVE is shown on the diagonal of the matrix in boldface; interconstruct correlation is shown off the diagonal.
***Significant at the 0.001 level.

Table 4. Estimated results for the main effects

	Std. Estimates	t value	Conclusion
H1. Factual Information→Destination image	0.076	2.415*	Supported
H2. Emotional Information →Destination image	0.520	9.288***	Supported
H3. Destination image →Revisiting Intention	0.774	0.325**	Supported
H4. Destination image→Word of Mouth	0.413	6.122***	Supported
H5. Destination image →Tourist Satisfaction	0.325	9.967***	Supported
H6. Tourist Satisfaction →Revisiting Intention	0.910	10.527***	Supported
H7. Tourist Satisfaction→Word of Mouth	0.396	7.290***	Supported

Note: R^2Tourist Perception = 0.37; R^2Revisit Intention = 0.52; R^2Satisfaction = 0.40; R^2Word of Mouth = 0.48.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

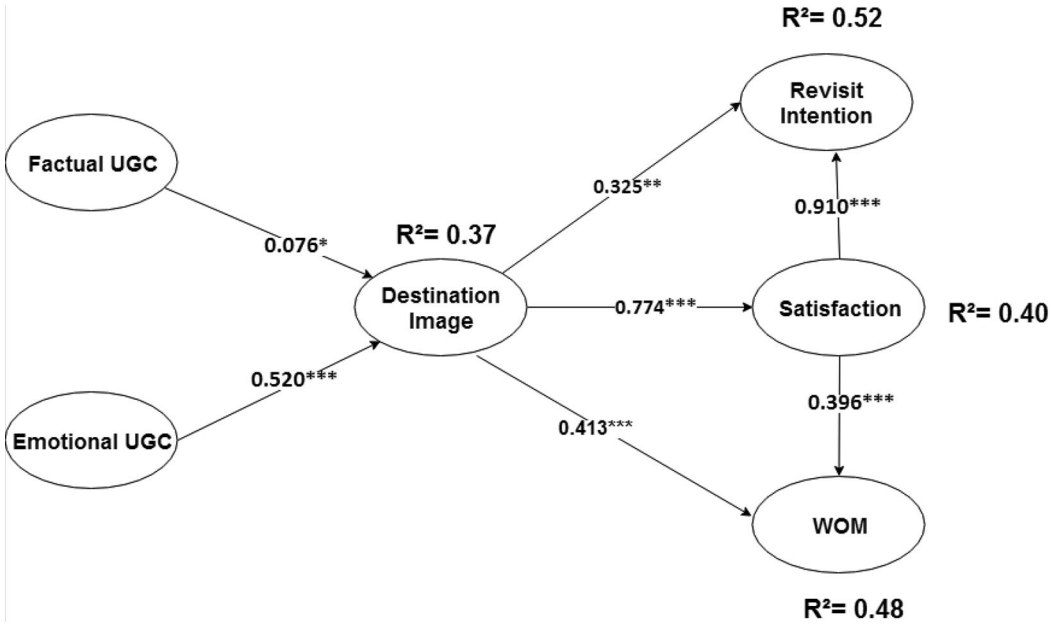

Figure 2. Results of the estimated equation structural model.
Note: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

et al., 2009; Lu & Stepchenkova, 2015), direct and indirect effects of UGC on loyalty behaviour are still in need of elucidation. The main objective of this study is to examine the relationship between factual UGC, emotional UGC, destination image, satisfaction and loyalty behaviour (WOM and revisit intention). The study demonstrates the predictive power of UGC in the pre-trip period, which in turn affects tourists' loyalty behaviour at the post-trip stage. This result contributes to existing theory and is congruent with research on marketing in three ways (Almeida-Santana & Moreno-Gil, 2018; Nisar & Whitehead, 2016; Prayag et al., 2017; van Asperen et al., 2018).

Firstly, this research divided traveler-generated contents in social media into factual UGC and emotional UGC. The empirical results show that both factual and emotional UGC are positively associated with destination image, which supports H1 and H2. To date, marketing scholars have distinguished between cognitive and affective aspects of destination image because tourists' destination image formation processes tend to simultaneously be influenced by their cognition and emotion. When tourists used UGC to plan their vacation, the virtual contents act as a cue in forming users' destination image. This study is among the first attempts to distinguish and empirically demonstrate that two different types of UGC are both conceptually and empirically meaningful in predicting destination image formation. The results reveal that factual UGC helps to increase tourists' knowledge of the destination, such as attractions, costs, transportation, history, indicating that tourists can clearly perceive the destination image if they are able to obtain sufficient destination information before their trip. The results also suggest that emotional UGC significantly affects tourists' psychological attitudes towards the destination, indicating that tourists better perceive the cultural value of the destination if they look through, and accept more, e-WOM information on social media.

Unlike physical products, tourism services cannot be experienced before they are purchased (Gursoy & McCleary, 2004). However, contrary to a prior study (Jani & Hwang, 2011), this study found that the magnitude of the impact of factual UGC on destination image formation ($\beta = 0.076$, $p < 0.05$) is relatively weak when compared with that of emotional UGC ($\beta = 0.520$, $p < 0.001$), implying that emotional information is the most significant determinant of destination image during the pre-trip stage.

Secondly, the results of this study show that a favourable image of a particular destination could produce repeat visits as well as positive WOM effects to potential tourists, adding further evidence that UGC could indirectly influence tourist destination loyalty through destination image, thus, H3 and H4 were supported. Theoretically, there is no consensus in the literature on the magnitude and direction of the relationships between different components of destination image (cognitive and affective) and tourists' destination loyalty (Zhang et al., 2014). Although destination image is found to have direct and positive impacts on destination loyalty (Chi & Qu, 2008; Yoon & Uysal,

2005), that is not a necessary predictor of loyalty. One argument holds that tourists are often motived by novelty seeking, so even though they hold a clear and positive image of a destination, they may not make repeat visits. (Pearce & Lee, 2005). However, the results of this study indicate that destination image is positively associated with intention to return and willingness to recommend, reconfirming the important role of UGC in both cognitive and affective destination image formation and predicting loyal outcomes. One possible reason for these findings is that detailed and updated UGC help tourists to explore diverse dimensions of the destination, and this may be of particular relevance to cultural heritage sites with museums and concerts. For example, tourists who have visited the destination may visit again, because the information relevant to new exhibitions and events of the destination is updated by other tourists. Thus, UGC may inspire tourists to revisit the same destination, but acquire different travel experiences. In this respect, UGC significantly enhances tourist destination loyalty behaviour.

Thirdly, this study found that in addition to enhancing tourists' intention to return and to recommend destination in the future, destination image can also influence destination loyalty, indirectly through the mediating variable, satisfaction; thus, H5, H6 and H7 were supported. When tourists perceive the value of the destination and tend to develop a positive destination image, they exhibit a higher level of satisfaction and are more likely to promote the destination to others and also revisit. This implies that tourists' satisfied travel experience can maximized tourist retention and have a greater chance fostering positive WOM. The findings support the idea broadly suggested and verified in tourism that satisfaction is a key antecedent of destination loyalty (Assaker et al., 2011; Lee & Hsu, 2013; Prayag & Ryan, 2012). Hence, it would be worthwhile for destination managers to consider the role tourist satisfaction played in developing destination loyalty and make greater investments in their tourism destination resources, in order to continue to enhance tourists' experiences and increase their satisfaction.

Practical implications

This study may provide interesting and important implications for practitioners and managers for maintaining and developing destination competitiveness within social media settings.

The results highlight that both emotional UGC and factual UGC positively affect tourists' evaluation of destination image, with emotional UGC having a greater influence. The concomitant recommendation is that destination managers should enhance marketing and promotion strategies to take this into account. Factual UGC can be regarded as an effective pre-trip interpretation, which may serve as a realistic image builder for tourists who are planning to visit the destination, destination marketers should provide more updated information and immersed experience for pre-tourists; for example, using 360-degree images to provide online virtual tours on the official website. This enables potential tourists to have clearer cognition of the destination, so they are better placed to perceive the cultural value of the heritage sites. On the other hand, destination advertising should not only stress the major attractions and facilities a destination can offer, since this provides no incentive for tourists who have already familiar with them. Rather, destination managers should promote a holistic image based on specific emotions a destination elicits. Marketing campaigns can enhance tourists' involvement in sharing more emotional experiences via pictures and videos that can be evoked by the destination (such as a historical and artistic image). To instigate an emotional appeal, many tourist destinations have successfully demonstrated sophisticated imagery and music in their advertising. For example, Sri Lanka encourages tourists to create visual content (i.e. photos and microfilms) about tea plantation and children smiling on social networks and destination managers promote the destination with corresponding slogans, such as 'Aroma of tea, across the Pacific' and 'Smile in the Indian Ocean'. This approach has successfully opened a Chinese tourist market.

Further, visitors' satisfaction reflects a dynamic balance between the demand (expectation) and the supply (delivery) (Kandampully & Suhartanto, 2000). In the context of this study, satisfaction represents the quality of heritage tourism experiences that tourists perceived. As found in this study, visitors who are able to perceive the cultural value of the heritage site will develop high levels of satisfaction and destination loyalty. Therefore, destination managers should investigate how each destination image scale items will be evoked and triggered by a destination's offerings and subsequently develop a marketing programme that consists of setting up those expectations that positively affect tourists to visit the destination.

Finally, the results of this study provide destination management with an improved understanding of the indirect influence of UGC on revisiting and WOM intentions through destination image and satisfaction. Our analysis confirmed the need to consider UGC as contemporary key sources of a destination's image. As individuals formulate destination images from the secondary information source (Beerli & Martin, 2004), this practice

will push individual tourists to formulate positive destination images before their visit and have a chance to inspire individuals to spread positive e-WOM back to the social media platform, which creates a virtuous perception. Therefore, destination managers should be advised to establish strategies to encourage and guide their tourists to actively share their travel experience with rich and high-quality information on the websites, increasing destination visibility and attracting more visitors.

Limitations and future research

Although this study provides valuable insights into the combined influences of emotional UGC, factual UGC, destination image, and satisfaction on loyalty behaviours, several limitations should be mentioned. First, this study focused on individual visitors to Gulangyu. Young people are more likely to use UGC to plan their trips, so the sample used in this study largely consisted of young travellers from China. Future researchers could extend this study to other cultural groups and age ranges. Second, this study is only based on a single WHS, Gulangyu. Future research could test the proposed model at other WHS either in China or other countries in order to extend its conclusions and compare the results. Finally, the measures of factual UGC and emotional UGC are recently developed, and their applicability should be reexamined in the future.

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