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1 **What drives travelers' adoption of user-generated content? A literature**  
2 **review**

3  
4  
5 **Abstract**

6 *User-generated content (UGC) has become an important part of travel planning, as*  
7 *travelers evaluate travel products based on past reviews. However, different factors*  
8 *account for why tourists utilize UGC. The aim of this study is to review extant studies on*  
9 *UGC to identify the antecedents of UGC utilization for travel planning and the theories,*  
10 *models, and frameworks used in these studies. A total of 54 studies from 2005 to 2016*  
11 *were found. This study found that UGC adoption is determined by attributes relating to*  
12 *the user, the source, the content, and response variables. It also found distinct and*  
13 *heterogeneous theories and frameworks mainly drawn from the information systems,*  
14 *socio-psychology, and management disciplines. Among the antecedents, the average*  
15 *path coefficients of the extracted relationships show that trust predicted attitude more*  
16 *than the other variables. Implications and future research directions are provided.*

17 **Keywords:** social media, user-generated content, tourism, travel, hospitality, TAM,  
18 adoption, intention

19 **1. Introduction**

20 Recently, there has been broad interest in social media as an important platform for  
21 disseminating information on products and services (Yang, 2013; Lu and Stepchenkova,  
22 2015). Marketers use social media platforms to share information and attract traffic to  
23 their offerings (Culnan, McHugh and Zubillaga, 2010; Sigala, 2011; Aluri, Slevitch and  
24 Larzelere, 2015). Social media platforms have also become equally powerful tools for  
25 consumers to use to spread information via word of mouth (WOM). In the tourism and

26 hospitality services industries, user-generated content (UGC) has become an effective  
27 tool tourists use to gather information to make travel decisions (Ukpabi & Karjaluoto,  
28 2017a). Tsao, Hsieh, Shih and Lin (2015) found that approximately 80% of travelers  
29 claim to read reviews about a hotel before embarking on a trip, and 53% say that they  
30 will not book a hotel that has no reviews. By sharing travel experiences through text,  
31 pictures, and videos, users enhance the free information provided for potential travelers  
32 regarding new markets, new topics, and sensitive issues (Tsao et al., 2015). The  
33 importance of UGC in tourism and hospitality services is underscored by the following  
34 considerations: First, tourism is a hedonic experience; therefore, consumers want to  
35 make the best travel decisions in order to make the most of the experience, and they  
36 seek to do so by reading reviews and comments from fellow consumers (Rageh,  
37 Melewar and Woodside, 2013). Second, tourism cannot be experienced before  
38 consumption; thus, consumers rely on the knowledge and experiences of others (Zhang,  
39 Ye, Law and Li, 2010). Finally, reviews from fellow consumers are deemed honest and  
40 trustworthy, so consumers rely on them as a dependable source of information for their  
41 travel decisions (Cox, Burgess, Sellitto and Buultjens, 2009; Ukpabi and Karjaluoto,  
42 2017b).

43 Some studies have reviewed existing research on social media in the tourism industry.  
44 One of the earliest reviews, by Leung, Law, Hoof and Buhalis (2013), used content  
45 analysis to evaluate studies from 2007 to 2011 and identified two major research  
46 streams: consumer-focused and supplier-based. Consumer-focused studies primarily  
47 highlighted social media as cardinal platforms for the tourist's trip planning phase, as  
48 they provide the traveler with a huge amount of varied information relevant to the travel  
49 decision. Interestingly, however, they noted that the role of social media in evaluating  
50 alternatives or influencing purchases is rarely studied.

51 As expected, supplier-based studies focused on social media as a marketing, promotion,  
52 and research platform. While corroborating the findings of Leung et al. (2013) on the  
53 use of social media as an information source during trip planning by consumers and as a  
54 marketing tool by suppliers, Zeng and Gerritsen (2014) nevertheless contended that  
55 studies relating to social media are still in their infancy, considering the wide-ranging  
56 nature of the tourism industry. Thus, while they noted that extant studies had discussed  
57 UGC from the perspectives of the consumer, they called for future studies examining  
58 the value of UGC as a strategic tool for tourism enterprises. Finally, Lu and  
59 Stepchenkova (2015) analyzed extant studies on UGC in tourism with an emphasis on  
60 the methodological approaches and software used. They found that the majority of the  
61 studies did not report the theoretical perspectives underpinning the analyses.  
62 Additionally, the majority of the studies utilized manual data collection, and in specific  
63 instances in which software programs were used, they were self-developed applications  
64 such as spiders, crawlers, worms, or robots.

65 These reviews represent comprehensive attempts to understand the methods used in  
66 these studies. However, a review of UGC adoption in travel planning is still lacking,  
67 despite the specific call by Ayeh, Au and Law (2013a) for future studies exploring  
68 broader factors influencing UGC adoption in travel planning. Therefore, this study has  
69 been conducted to fill this gap in the literature. It aims to understand the factors that  
70 influence the adoption of UGC in travel planning through a review of existing studies.  
71 Specifically, the study objectives include (1) identifying the theories, models, and  
72 frameworks used in these studies and methodological approaches; (2) identifying the  
73 geographic coverage of the studies; (3) identifying the antecedents of UGC adoption in  
74 travel planning; and (4) analyzing the strengths of these antecedents in predicting the  
75 adoption of UGC in travel planning.

76 Against this backdrop, this study makes three key contributions to the literature. First, in  
77 line with the work of Okoli and Schabram (2010), this study will provide a solid  
78 theoretical background for subsequent research by synthesizing theories from the  
79 reviewed studies. Additionally, in line with Webster and Watson's (2002) concept-  
80 driven review methodology, this systematic review also provides the different concepts  
81 and contexts used in the reviewed studies. This will serve as a vital material for  
82 subsequent research in the field. Second, by extracting the coefficients of tested path  
83 relationships from the reviewed studies (see Appendix 1), this study provides a ready  
84 source for scholars wishing to undertake research in UGC, especially a meta-analysis of  
85 UGC in tourism. Third, the findings of this study will clarify and harmonize previous  
86 findings. For instance, while Ayeh (2012) found that perceived ease of use (PEOU) is a  
87 strong determinant of attitude and intention to use consumer-generated media, Lee,  
88 Xiong, and Hu (2012) found that PEOU had no effect on attitudes towards using  
89 Facebook to attend a festival. When such contradictions exist, a review that clarifies the  
90 findings is of immense value to future research in this field. Finally, the framework  
91 developed based on the reviewed studies will enhance understanding of the factors  
92 influencing UGC adoption during travel information searches.

93 The remainder of the study is organized as follows: section 2 provides the background  
94 information, section 3 describes the research methods, section 4 presents the results, and  
95 section 5 provides the discussion, contributions, limitations, and future research  
96 directions. In this study, adoption refers to the intention to use and use of UGC in travel  
97 information searches.

## 98 **2. Background Information**

99 Traditionally, consumers have been perceived as passive recipients of marketing  
100 messages, thus, the mono-directional communication pattern rendered consumers  
101 powerless, as they only received information deemed necessary by marketers (Bacile,  
102 Ye and Swilley, 2014). However, with WOM, consumers have been able to influence  
103 not only fellow consumers but also firms' marketing and communication programs  
104 (Groeger and Buttle, 2014). Clearly, a satisfied consumer is likely to recommend a  
105 product or service to another consumer (Chiu, Wang, Fang and Huang, 2014). The  
106 emergence of information and communications technology (ICT) and subsequent  
107 expansion into Web 2.0 radically changed how consumers communicate (Ukpabi and  
108 Karjaluoto, 2017a), and electronic word-of-mouth (eWOM) became a new vehicle for  
109 product and service recommendations among consumers (Cheung and Thadani, 2012).  
110 In order to get favorable eWOM recommendations, marketers turned to product and  
111 service quality improvement (Sigala, 2009; Sigala, 2011).

112 UGC enables other consumers to read, learn about, and share in the experiences of  
113 others (Chiu, Wang, Fang and Huang, 2014). The terms UGC and consumer-generated  
114 media (CGM) have been used interchangeably in the literature (Ayeh, Au and Law,  
115 2013b). CGM is defined as "media impressions created by consumers, typically  
116 informed by relevant experience and archived or shared online for easy access by other  
117 impressionable consumers" (Gretzel, Kang and Lee, 2008, p. 100). In the tourism and  
118 hospitality industries, consumers express their satisfaction or dissatisfaction with a  
119 product or service through UGC. Social media offers opportunities for people to  
120 socialize and form communities of interest by creating and sharing content (Chung and  
121 Koo, 2015). Consumers use UGC for a variety of reasons, such as evaluating service

122 quality and price (Liu and Lee, 2016) and identifying the best attractions, food, and  
123 destinations (Lee et al., 2012). Others search for social acceptance (Khan and Khan,  
124 2015), enjoyment (Ayeh et al., 2013b), a communal feeling (Ku, 2011), and  
125 involvement (Sotiriadis and Zyl, 2013).

126 When trip planning, consumers search for information from both marketers and fellow  
127 consumers. However, they rely more on UGC because they expect it to be sincere and  
128 honest and to convey the creators' real experiences (Wang, 2012). Tourists perceive  
129 UGC to be more influential because it reflects the performance of typical tourism  
130 products, thus making it more persuasive than marketer-generated content (Sparks and  
131 Browning, 2011). However, the authenticity of UGC has recently come under close  
132 scrutiny (Ayeh, Au and Law, 2013a). Some consumers may post reviews as a form of  
133 revenge (Sparks and Browning, 2011), and some of these are legally defamatory (Ayeh  
134 et al., 2013a). Still, many other consumers post reviews as a form of altruism (Wang,  
135 2015), and these have helped others in pre-trip planning decisions. Overall, UGC is  
136 growing in popularity because online third-party advice has proven to be a very reliable  
137 source of information for travelers (Tsao et al., 2015). Additionally, consumers'  
138 preferences for independent discussion boards, such as TripAdvisor and Lonely Planet,  
139 have allowed these sites to remain popular among travelers.

140 Focusing on these limited platforms through which consumers can obtain information  
141 from fellow consumers on tourism and hospitality services, early streams of research  
142 highlighted flow and enjoyment in online community membership (Wu and Chang,  
143 2005; Lin, 2007). As members shared information on experiences with tourism products  
144 and services, negative WOM influenced how community members perceived these  
145 services (Cheng, Lam and Hsu, 2006). Seeking advice from community members

146 became an important part of travel planning (Casalo, Flavian and Guinaliu, 2011).  
147 However, many factors influenced consumers' acceptance of such information as a  
148 determinant of choice of tourism and hospitality services. These factors include the  
149 individual consumer, the source of the information, the nature of the information, and  
150 how it was shared.

151 The demographic attributes of the consumer influences how he or she perceives UGC  
152 (Fan and Miao, 2012). For instance, younger travelers tend to evaluate reviews from  
153 many sources out of curiosity before reaching a decision, while adult travelers have  
154 limited search opportunities (Ayeh et al., 2013b). Additionally, those who derive high  
155 levels of enjoyment and involvement from online reviews are more prone to accept  
156 them than those who do not (Sotiriadis and Zyl, 2013; Chung and Koo, 2015).  
157 Acceptance of online reviews as an important element of travel planning is also  
158 predicated on the source of the information. In particular, source credibility and  
159 expertise (Sotiriadis and Zyl, 2013) are important features of the believability of such  
160 reviews. Finally, the nature of the information and how it is shared also determine  
161 acceptance. Sparks and Browning (2011) found that consumers are particularly  
162 influenced by negative reviews when such information is negatively valenced. Chen,  
163 Shang and Li (2014) also posited that consumers' perceptions of their enjoyment of  
164 travel blogs and the blogs' novelty, reliability, understandability, and interestingness  
165 influence consumers' intentions to visit a destination.

### 166 **3. Research Methods**

#### 167 **3.1 Literature Search**

168 Drawing mainly from the methodology of Shaikh and Karjaluo (2015) and the review  
169 approaches of Perea, Monsuwé, Dellaert, and De Ruyter (2004) and Cheung and



170 Thadani (2012), this study drew up a plan based on the recommendations of previous  
171 reviewers. First, we identified the keywords that would form the basis of the literature  
172 search and extraction. Second, we established the literature inclusion criteria. Based on  
173 these keywords and inclusion criteria, we used the following search terms, among  
174 others: “social media adoption in tourism”, “e-WOM in tourism and travel”, “Web 2.0  
175 adoption in tourism and travel”, “user-generated content in tourism and travel”, “social  
176 networking in tourism and travel”, “blogs in tourism and travel”, “online communities  
177 in tourism and travel”, and “virtual communities in tourism and travel”. As  
178 recommended by Shaikh and Karjaluo (2015), we conducted horizontal and vertical  
179 searches. For horizontal searches, we used Google Scholar, a key reference database  
180 that hosts a broad range of academic materials and provides easy access to relevant  
181 studies (Zeng and Gerritsen, 2014). To ensure that we captured as many relevant studies  
182 as possible, we also conducted vertical searches of specific databases, including Science  
183 Direct, SAGE, Wiley, Springer, Emerald, JSTOR, IEEE, Taylor & Francis, and  
184 Inderscience. Furthermore, as social media is a rapidly growing technological  
185 phenomenon with conferences specifically dedicated to exploring its different  
186 perspectives (Paquet-Clouston, Bilodeau and Décary-Héту, 2017), we expanded our  
187 search to include conference proceedings.

### 188 **3.2 Literature Selection**

189 In order to meet our objectives, we set both inclusion and exclusion criteria. Our  
190 inclusion criteria required that the study be consumer-based and empirical, have a  
191 defined sample size, and include measurements for independent and dependent  
192 variables. Additionally, we decided that studies to be included must contain the results  
193 of the data analysis and a solid discussion section and offer both practical and

194 managerial implications. Our exclusion criteria eliminated firm-based studies in  
195 addition to conceptual and theoretical studies. We adopted the approach of Lu and  
196 Stepchenkova (2015) by speed-reading the studies and identifying those that met the  
197 above criteria. Guided by Tranfield, Denyer and Smart (2003), who posited that  
198 inclusion is subjective based on the researcher's interests and objectives, we identified a  
199 total of 54 studies published from 2005 to 2016 for inclusion: 51 articles from 28  
200 journals, 1 conference paper, and 2 PhD dissertations.

## 201 **4. Results**

202 In the following sections, we present the results of our findings. In line with our  
203 objectives, the first part of the results section describes the identified theories, models,  
204 and frameworks. This study also analyzed the composition of the journals publishing  
205 the studies, the geographical spread of the studies, and the methodological approaches  
206 used. Furthermore, the study provides solid discussion of the antecedents of UGC  
207 adoption for travel planning and of the critical characteristics of the source, content, and  
208 the user in determining such adoption. A conceptual framework is then provided to  
209 encapsulate how the different elements fit together. The results section concludes with a  
210 discussion and computation of the strengths of the major variables in predicting UGC  
211 adoption using the path coefficients identified from the selected studies.

### 212 **4.1 Statistics**

213 The 54 reviewed studies, presented in Appendix 1, used 22 distinct and heterogeneous  
214 theories, frameworks, and models. The technology acceptance model (TAM) was used  
215 in 14 (26%) studies. The theory of planned behavior was used in five (9%) studies, the  
216 elaboration likelihood model (ELM) in three (5%) studies, and the theory of reasoned

217 action in three (5%) studies. Only one (1.8%) study used the unified theory of  
218 acceptance and use of technology. Because UGC draws from the traditional eWOM  
219 literature, most of the studies borrowed constructs from other models and used eWOM  
220 as a framework (e.g. Wang, 2012; Zhao et. al., 2015).

221 Of the 28 journals in which the reviewed studies were found, 32% (9 out of 28) were  
222 tourism-based journals, while 68% (19 out of 28) were non-tourism-based journals  
223 (Appendix II). This result further confirms that of an earlier study, which found that  
224 technology-based tourism-related studies are mostly published in non-tourism-based  
225 journals rather than traditional tourism journals (Cheng, 2016). Of the 54 studies, 35  
226 (64.8%) were conducted between 2013 and 2015. No study was published in 2008 or  
227 2009. The geographic distribution of the studies was as follows: 1 (1.8%) study in  
228 Africa, 28 (51.8%) in Asia, 2 (3.7%) in Australia/Oceania, 13 (24%) in Europe, and 11  
229 (20%) in North America. Most studies were conducted in the following countries:  
230 Taiwan with 11 (20%), the United States with 10 (18%), China with six (11%), and  
231 Spain with six (11%). In terms of data collection, as stated earlier, all of the studies  
232 were quantitative; however, two (3.7%) studies utilized an experimental approach, and  
233 one (1.8%) used panel data. Over half (63.6%) used online (web-based, email) survey  
234 methods to obtain responses, while 17 (31.5%) used field-based surveys. One study  
235 combined online and field-based methods of data collection (Zhao, Wang, Guo and  
236 Law, 2015). As indicated in Appendix 1, the majority of the studies adopted a structural  
237 equation modelling (SEM) approach. The application and popularity of SEM in social  
238 sciences is anchored in its versatility in handling multivariate statistical techniques, thus  
239 providing scholars a comprehensive tool for performing factor analysis and testing  
240 structural relationships (Xiong, Skitmore and Xia, 2015). Xiong et al. (2015) contended  
241 that the use of SEM in an emerging research stream is vital for theory development; the

242 addition of moderators and mediators often provides clues for solving complex and  
243 contentious theoretical issues. Building from the above arguments, we noted variations  
244 in the use of moderators and mediators. While some studies used and applied them in  
245 the earliest UGC research, others adopted and tested variables using direct relationships  
246 instead (Wu and Chang, 2005; Cheng, Lam and Hsu, 2006; Lin, 2007). Interestingly  
247 however, the use of moderators and mediators has become popular again in recent  
248 studies (e.g. Chung and Koo, 2015; Liu and Lee, 2016).

## 249 **4.2 Basic determinants of consumers' attitudes and intentions to adopt** 250 **UGC for travel planning**

251 This review uncovers the major antecedents of UGC adoption in tourism and travel. The  
252 various dependent variable used relate to attitude, intention, and usage. Variables such  
253 as intention, attitude, perceived usefulness, and ease of use have received considerable  
254 attention in the technology adoption literature (Lee et al., 2012). Attitude has been  
255 found to positively influence intention and usage regarding UGC in a travel planning  
256 context (Casaló et al., 2010). However, findings conflict regarding whether perceived  
257 usefulness (PU) or perceived ease of use (PEOU) better predicts attitude and intention.  
258 According to Casaló et al. (2010), while both PU and PEOU exert positive effect on  
259 attitude, PEOU exerts a stronger effect. Additionally, with the integration of social  
260 identity, the study also found that belonging to a network has a positive effect on both  
261 attitude and subjective norm, implying that group members have positive influences on  
262 the utilization of UGC among network members. However, in a hybrid of three models  
263 used to test the role of blogs, Facebook, and TripAdvisor as UGC platforms, Muñoz-  
264 Leiva, Hernandez-Mendez and Sanchez-Fernandez (2012) found that PU had a stronger  
265 effect on attitude across the three models. Similarly, though blogs have proven to be an

266 important source of information for travelers, the relationship between ease of use and  
267 intention was negative, implying that the fewer options available on blogs make them  
268 less attractive than Facebook and TripAdvisor, which contain a variety of information  
269 from other travelers.

270 Consumers' intention to use UGC for travel decisions hinges on functional, social, and  
271 hedonic benefits (Parra-Lopez, Bulchand-Gidumal, Guitierrez-Tano and Diaz-Armas  
272 2011). Regarding functional benefits, consumers seek information critical to their  
273 choice of tourism products and services. In addition, consumers may also seek  
274 information on the availability of online travel communities. These communities are  
275 especially important when a particular community promotes the consumer's interests. In  
276 some cases, consumers seek the opinion of others to reduce the risks related to their  
277 travel decisions (e.g. assess the safety of the destination) or get lower prices (Goldsmith  
278 and Horowitz, 2006).

279 Cost considerations constitute an important element of travel decisions (Parra-Lopez et  
280 al., 2011). Consequently, consumers do a comparative assessment of tourism products  
281 and services based on others' opinions. Importantly, however, there are costs related to  
282 assessing UGC on social media as well. According to Parra-Lopez et al. (2011), such  
283 costs relate to effort, difficulty of usage, and loss of privacy. Effort costs include the  
284 personal effort, monetary costs, and time spent accessing travel-related information.  
285 Difficulty of usage costs arise if the process of accessing or contributing opinions is  
286 cumbersome. Finally, privacy costs involve the risk of revealing personal information  
287 on the social media platform. If these costs are high, the consumer will be deterred from  
288 using UGC. Parra-Lopez et al. (2011) found that though consumers may be aware that

289 these costs exist, they do not constitute a hinderance to the use of social media for travel  
290 planning.

291 Furthermore, two key TAM constructs, PU and PEOU, also constitute determinants of  
292 functional benefits of using UGC for travel planning. According to Davis (1989), PU is  
293 defined as the individual's perception that using the technology will improve her or his  
294 performance. In the context of adoption of UGC for travel planning, PU relates to the  
295 individual's perception that using UGC will improve his or her chances of making the  
296 best travel decisions. Thus, Lin (2007) found that PU is a key determinant of the  
297 sustainability of virtual communities. Furthermore, Yang (2013) posited that the PU of  
298 a website has a significant effect on eWOM intentions, just as PU also significantly  
299 moderates the relationships between satisfaction/egoistic needs and eWOM intentions.

300 Consumers utilize various social media platforms for travel planning. Chung, Han, and  
301 Koo (2015) contended that PU and social relationships significantly influence travel  
302 information adoption, suggesting that the type of event and the social media platform  
303 determine the usefulness of the UGC. Their results indicate that travelers' emotional  
304 affections will be high on social media platforms with high social presence, meaning  
305 that the platform accommodates content such as pictures, video, and other graphical  
306 images that increase users' interactivity. These affections influence adoption. Thus  
307 members who are in the same network and are familiar with one another are more likely  
308 to follow the travel recommendations of members they are familiar with than those they  
309 are not. For platforms with low social presence, such as blogs, argument quality (the  
310 persuasive strength of content) is a vital element of adoption. The difference between  
311 blogs and Facebook or YouTube is that while the former should employ greater  
312 persuasion to convince readers, the latter will need to embed interactive content. Lee,

313 Xiong and Hu (2012) echoed this finding, as they found that embedding captivating and  
 314 interactive content pages such as videos and photographs on Facebook events  
 315 significantly influences attendees' perceptions of usefulness, ease of use, and  
 316 enjoyment. Thus, photographs and videos are critical to influencing travel information  
 317 seekers' enjoyment and adoption of UGC. Interestingly, these antecedents have been  
 318 applied in different contexts. Table 1 presents response and adoption antecedents,  
 319 frequency (the number of times they appeared in the systematic review), and the  
 320 different studies in which they were used.

321 Table 1. Response and adoption antecedents

<b>Construct</b>	<b>Definition</b>	<b>Frequency</b>	<b>Author(s)</b>
Perceived usefulness	The extent to which a traveler believes UGC is useful during a travel information search	13	Casaló et al., 2011; Ayeh et al., 2013; Casaló et al., 2010; Zhao et al., 2015; Lin, 2007; Chung et al., 2015; Munoz-Leiva et al., 2012; Lee et al., 2012; Ayeh, 2015; Pietro & Pantano, 2013; Ayeh, 2012; Yang, 2013; Ting, Ting, & Hsiao, 2014
Perceived ease of use	The extent to which the traveler believes using UGC is free of effort	10	Ayeh et al., 2013b; Casaló et al., 2010; Lin, 2007; Bilgihan, Barreda, Okumus, & Nusair, 2016; Munoz-Leiva et al., 2012; Lee et al., 2012; Ayeh, 2015; Pietro & Pantano, 2013; Ayeh, 2012; Yang, 2013
Attitude	The extent to which the traveler feels the UGC is beneficial in travel information searches	17	Casaló et al., 2010; Ayeh et al., 2013b; Sparks, Perkins, & Buckley, 2013; Ayeh, et al., 2013a; Jalilvand & Samiei, 2012; Hsiao et al.,

2013; Casaló et al., 2011; Wang, 2015; Zarrad & Debabi, 2015; Jalilvand, Ebrahimi, & Samiei, 2013; Munoz-Leiva et al., 2012; Albarq, 2014; Cheng et al., 2006; Lee et al., 2012; Ayeh, 2015; Ayeh, 2012; Ting et al., 2014

Intention	The traveler's expressed desire to read UGC during a travel information search	All the studies except 6	Refer to Appendix 1
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322

323 Another TAM construst that has received much attention in the literature is PEOU.

324 PEOU is defined as the individual's perception that using a new technology will be free

325 of effort (Davis, 1989). In the context of this study, we define PEOU as the individual's

326 perception that using UGC for travel planning will be free of effort. Perea et al. (2004,

327 p. 108) contended that the relationship between PU and PEOU lies in the fact that while

328 PU "referred to consumers' perception regarding the outcome of the online shopping

329 experience, 'ease of use' refers to their perceptions regarding the process leading to the

330 final online shopping outcome." In the context of our study, this means that PU shows

331 how effective using UGC is in helping tourists reach a travel decision, while PEOU is

332 how easy the tourist finds using UGC in travel planning to be. In the context of tourism

333 and travel, the first study to apply the TAM model in virtual communities (Lin, 2007)

334 found that PEOU is a key determinant of the sustainability of virtual communities. In a

335 related study, Ayeh (2012) found PEOU to be a significant predictor of online travelers'

336 perception of UGC usefulness. However, Lee et al. (2012) opined that PEOU had no

337 effect on attitude towards using Facebook to attend a festival. This is particularly of

338 interest because according to the TAM model, PEOU is especially influential in the

339 early stages of user experience, but individuals grow in their ability to easily use

340 specific systems with increasing direct contact (Davis, 1989).



341 In addition to PU and PEOU, other influences motivate consumers to adopt UGC. These  
342 factors, which either proceed from within the consumer (endogenous) or are external to  
343 the consumer (exogenous), have variously been found to affect the consumer's adoption  
344 of UGC in travel planning. This review uncovers various ways in which these factors  
345 have been integrated into original theories and models (see Appendix 1) to determine  
346 their impact on travel planning.

#### 347 **4.2.1 Source-based characteristics**

348 Source-based antecedents, factors outside the consumer that relate to the origin of the  
349 information, play a role in the consumers' adoption of UGC in travel planning. Table 2  
350 presents major source-based characteristics, their definitions, frequency (number of  
351 times used in the reviewed studies), and the studies that discussed them. In the context  
352 of tourism, these characteristics of the origin and the originators of the travel-related  
353 information posted online serve as information and guides for potential travelers.

354 Among these characteristics is source credibility. Chung, Han and Koo (2015) defined  
355 source credibility "as the extent to which an information source is perceived to be  
356 believable, competent, and trustworthy by the information recipient." The importance of  
357 source credibility in UGC adoption is underscored by the intangibility of tourism  
358 products and the inability of the consumer to experience the product or service before  
359 actual consumption. Thus, the origin and originator of the UGC are important signifiers  
360 of the believability of the content. Ayeh et al. (2013a) posited that expertise and  
361 trustworthiness comprise source credibility. Expertise "refers to the extent to which  
362 UGC contributors are perceived to be a source of valid assertions [truth]," while  
363 trustworthiness "describes the degree of confidence in the source's intent to  
364 communicate the assertions they consider most valid [true]" (p. 3). Chung et al. (2015)

365 argued that the name of the author who wrote the message, the number of messages the  
 366 author has posted, and the number of replies the content has generated accentuate  
 367 expertise. Accordingly, source trustworthiness is underpinned by the degree of  
 368 confidence the user has in the source, the website, and the information provided (Ayeh,  
 369 Au, & Law, 2013). In determining the influence of eWOM on tourists' intention to visit  
 370 a destination, Wang (2015) found that source credibility positively affected tourists'  
 371 recommendation intention but not their visit intention. Additionally, source credibility  
 372 was not found to influence tourists' attitudes towards the destination, implying that  
 373 while information sources only act as a catalyst, the actual choice is determined by the  
 374 cognitive and evaluative attributes of the destination.

375  
 376 Table 2. Source-based characteristics

<b>Construct</b>	<b>Definition</b>	<b>Frequency</b>	<b>Author(s)</b>
Source credibility	The extent to which a traveler perceives a UGC source to be believable, competent, and trustworthy	5	Filiery, Alguezaui, & McLeay, 2015; Ayeh et al. 2013a; Wang, 2015; Chung et al., 2015; Ayeh, 2015
Expertise	The extent to which UGC contributors are perceived to be a source of valid assertions	5	Ayeh et al., 2013a; Zhao et al., 2015; Sotiriadis & Zyl, 2013; Ayeh, 2015; Ayeh, 2012
Trustworthy	The extent to which the source is perceived as making valid assertions	2	Ayeh et al., 2013a; Sparks et al., 2013
Homophily	The extent to which the traveler perceives UGC contributors to be similar in some attributes	2	Ayeh, 2012; Ayeh et al., 2013a

377  
 378 Members of a group who share similarities in age, gender, education, social status,  
 379 profession, and geographical location will believe information emanating from within  
 380 the group more than information from outside it (McPherson, Smith-Lovin and Cook,  
 381 2001). Perceptual homophily, the extent to which individuals are similar in some  
 382 attributes, plays a very important role in the evaluation of content among members of a  
 383 community. In the context of tourism and travel planning, content from similar users is

384 more believable than from dissimilar users. Credibility issues related to deceptive  
 385 postings on some travel review websites has generated controversy. For instance,  
 386 TripAdvisor has faced sanctions in the UK due to postings on its websites (Ayeh et al.,  
 387 2013a). Thus, consumers have elevated their evaluative criteria of UGC. In searching  
 388 for travel information, consumers from communities usually accorded the content  
 389 credibility because the members saw themselves as belonging to the same family.

#### 390 **4.2.2 Content-based characteristics**

391 In addition to source characteristics, the nature of the information plays a role in its  
 392 adoption. Different authors have used various ways of describing the nature and  
 393 characteristics of travel information that stand out to travelers seeking information (see  
 394 Table 3). Prominent among them is content novelty, or the newness of the travel  
 395 information (Chen et al., 2014). It plays an important role in the travel information  
 396 search process because it distinguishes between what the user is familiar with and what  
 397 is new and interesting, stimulating interest. Furthermore, the direction of the valence of  
 398 UGC (either positive or negative) also impacts its adoption. Generally, UGC is posted  
 399 to express either positive feelings related to a product or service encounter or frustration  
 400 and complaint. In the context of hotel bookings, Sparks and Browning (2011) found that  
 401 exposure to positively valenced reviews increases booking intention and trust.  
 402 Additionally, Mauri and Minazzi (2013) argued that positive online comments increase  
 403 booking intention but also increase consumers' expectations. Thus, hotel managers  
 404 should continuously improve their services to match guests' expectations.

405  
 406 **Table 3. Content-based characteristics**

<b>Construct</b>	<b>Definition</b>	<b>Frequency</b>	<b>Author(s)</b>
Aesthetics	The extent to which the traveler perceives the content to be beautiful and	1	Hsiao, Lu, & Lan, 2013

	emotionally appealing		
Valence of reviews	The extent to which the traveler perceives UGC as positive or negative	5	Zhao et al., 2015; Book et al., 2015; Tsao et al., 2015; Sparks & Browning, 2011; Lee, Xiong, & Hu, 2012
Information accuracy	The extent to which the traveler perceives UGC to be correct	1	Filieri & McLeay, 2013
Argument quality	The persuasive strength of arguments embedded in the UGC	3	Chung et al., 2015; Wang, 2015; Chong & Ngai, 2013
Information relevance	The extent to which the traveler perceives UGC to be helpful and applicable	1	Filieri & McLeay, 2013
Information reliability	The degree to which the traveler perceives UGC to be believable	2	Chen, Shang, & Li 2014; Chung & Koo, 2015

407  
408 The attractiveness of UGC is also an important factor in its utilization. Aesthetics, or the  
409 balance, emotional appeal, or beauty of the content as expressed in colors, font type,  
410 music, or animation, can arouse interest in the content (Cyr, Head and Ivanov, 2006). In  
411 the context of travel information searches, blogs and video content are particularly  
412 important, as they present the opportunity to creatively add fun and enjoyment to the  
413 presentation. Hsiao et al. (2013) found that the aesthetics of storytelling travel blogs  
414 effectively increase readers' intention and positive feelings and attitudes about the  
415 destination. Moreover, argument quality, referred to "as the persuasive strength of  
416 arguments embedded in an informational message" (Bhattacharjee and Sanford, 2006,  
417 p. 811), has been studied extensively in eWOM adoption. In the context of travel  
418 information, a communication that has higher argument quality is more likely to  
419 increase adoption than one with low argument quality. Thus, helpful, valuable, and  
420 persuasive content positively influences readers' interest in and intention to visit a  
421 destination (Wang, 2015). However, Chung et al. (2015) argued that the utilization of  
422 UGC based on argument quality is moderated by social presence. Thus, argument

423 quality significantly affected perceived usefulness when there was low social presence  
424 but had less effect in situations with high social presence. Finally, in examining the  
425 factors that influence travelers' utilization of information from online reviews, Filieri  
426 and McLeay (2013) applied the ELM to understand information quality through central  
427 and peripheral routes. Central routes—information timeliness, information  
428 understandability, information relevance, information accuracy, value-added  
429 information, and information completeness—and peripheral routes—information  
430 quality and product ranking—both predicted tourists' destination choices.

#### 431 **4.2.3 User-based characteristics**

432 The consumer's characteristics, such as age, gender, income, and literacy level,  
433 influence adoption of UGC. Young and middle-aged adults are predominant users of  
434 social media for travel planning (Filieri and McLeay, 2013) because this age group,  
435 characterized by inquisitiveness and curiosity, explores different social media platforms  
436 to make friends and stay informed about trending news in politics, economy,  
437 entertainment, and sports. Additionally, many among this age group perceive exploring  
438 social media platforms as fun. Females use the internet and social media more than  
439 males (Akman and Mishra, 2010), perhaps because females are more socially cohesive  
440 than males and social media provides a platform for fulfilling the natural need to  
441 socialize with others. This also affects travel planning, as females' already-developed  
442 social media usage impacts their adoption of UGC. Consumers' income is also an  
443 important determinant of engagement in different activities. Availability of disposable  
444 income highly predisposes the consumer to purchase items such as computer gadgets,  
445 which in turn allow them to explore social media platforms. Finally, literacy levels play  
446 a major role in UGC utilization in travel planning. An individual's educational level has

447 been seen to correlate with his or her income, thereby impacting his or her use of  
 448 computer devices and allowing the exploration of social media with such devices to  
 449 become an important element of the travel decision. Table 4 presents user-based  
 450 characteristics, their definitions, the number of times they appeared in the reviewed  
 451 studies (frequency), and the studies in which they were used.

452  
 453 Table 4. User-based characteristics

<b>Construct</b>	<b>Definition</b>	<b>Frequency</b>	<b>Author(s)</b>
Involvement	The traveler's perception of the relevance of UGC to the travel information search	3	Huang, Chou, & Lin, 2010; Leung & Bai, 2013; Sotiriadis & Zyl, 2013
Perceived enjoyment	The extent to which the traveler perceives UGC to be fun and enjoyable	11	Lee et al., 2012; Aluri, Slevitch, & Larzelere, 2015; Ayeh et al., 2013b; Ku, 2011; Chen et al., 2014; Chung & Koo, 2015; Kang & Schuett, 2013; Pietro & Pantano, 2013; Ayeh, 2012; Wang, 2015; Ting et al., 2014
Experience	The traveler's knowledge and skills that enhance the use of UGC in travel information searches	3	Ku, 2011; Kang & Schuett, 2013; Filiery et al., 2015
Perceived benefit	The extent of the gains the traveler derives from using UGC in travel information searches	3	Parra-Lopez et al., 2011; Chung & Koo, 2015; Oz, 2015

454  
 455 Literature on involvement abounds in the fields of sociology, psychology, and consumer  
 456 behavior (Leung and Bai, 2013). Defined as “a person's perceived relevance of the  
 457 object based on inherent needs, values, and interests” (Zaichkowsky, 1985, p. 342),  
 458 involvement has been found to have a significant influence on the consumer's decision-  
 459 making process. In the tourism context, involvement is an important determinant of  
 460 purchase since tourism services are high-risk and cannot be evaluated before  
 461 consumption (Sotiriadis and Zyl, 2013). Thus, in travel planning, consumers explore  
 462 different sources of information, and a highly involved consumer explores travel

463 information through many social media platforms. Huang et al. (2010) found that  
464 personal involvement on travel blogs is a determinant of consumers' response to  
465 advertising.

466 Another intrinsic motivation that has received great attention is perceived enjoyment.  
467 Studies that have incorporated perceived enjoyment into the TAM model have observed  
468 varying results, depending on the context. For instance, in the utilitarian context,  
469 Venkatesh (2000) conducted experiments in which employees were introduced to an  
470 online help desk system, multimedia system, and PC environment (Windows 95) for a  
471 payroll system. The study found that enjoyment was a weaker predictor of intention and  
472 use of the new information system. In the context of tourism, using social media is  
473 perceived as a hedonic activity; however, using UGC for travel information searches is  
474 perceived as a utilitarian activity (Ayeh et al., 2013b). Studies have found perceived  
475 enjoyment to be a strong determinant of attitude and intention in travel information  
476 search (Pietro and Pantano, 2013; Aluri et al., 2015).

477 Consumer's adoption of UGC for travel planning has also been attributed to experience  
478 and knowledge (Chong & Ngai, 2013). The internet provides consumers with unlimited  
479 access to products and services without limitations imposed by geographic locations.  
480 Thus, consumers experienced and knowledgeable in computer systems and the internet  
481 will have a strong motivation to use UGC for travel information searches (Chong &  
482 Ngai, 2013). In a study of UK and Northern Ireland tourists mainly consisting of 18–35  
483 year olds, Filiery et al. (2015) suggested that user experience (knowledge and skill)  
484 influences consumer trust in UGC.

485 The benefit sought also determines consumers' intent to use and use of UGC in travel  
486 planning. In using UGC, consumers seek different types of benefits. According to Parra-

487 Lopez et al. (2011), such benefits can be functional, social, psychological, or hedonic.  
488 Functional benefits include finding the best destinations, low costs, and efficient  
489 services. Thus, consumers seeking these benefits consider using UGC to obtain relevant  
490 information. In terms of social benefits, social media provides a platform for consumers  
491 to connect and share information on common interests. The social benefits derived from  
492 such platforms include bonding, engagement, emotional support, companionship, and  
493 encouragement (Chung et al., 2015). Finally, different scholars have found that  
494 consumers' interest in and intent to use social media derives from the fun, pleasure,  
495 enjoyment, and playfulness they obtain from using it (Perea et al., 2004). Thus, in the  
496 context of travel planning, watching videos and seeing photographs of pleasing scenery  
497 in various destinations can stimulate interest in the use of UGC.

498 The fundamental assumption of WOM is that WOM episodes involve two parties: the  
499 sender and the receiver (Cheung and Thadani, 2012). Our framework on UGC adoption  
500 (Figure 1) is based on the classifications of the reviewed literature, which in turn are  
501 based on the premise that UGC adoption depends on three factors: source-based  
502 characteristics, user-based characteristics, and content-based characteristics. Source-  
503 based characteristics relate to the sender, while user-based characteristics relate to the  
504 receiver. Content-based characteristics are elements of the content.

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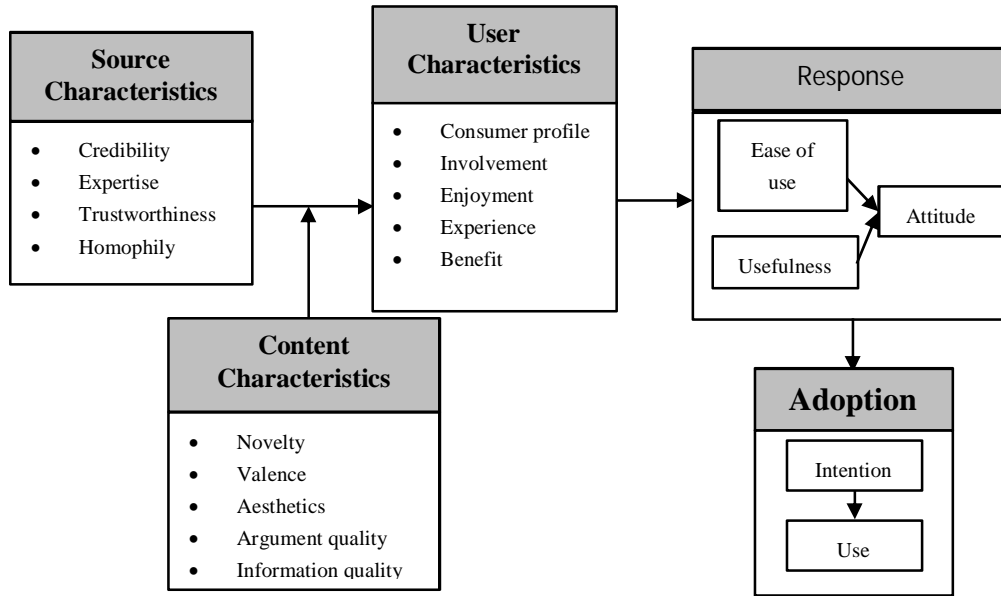


Figure 1: Determinants of UGC utilization for travel planning

### 4.3 Strengths of the antecedents in predicting adoption

An analysis of the average path coefficients' effect sizes has been conducted to explain the strengths of antecedents in predicting dependent variables (Shaikh and Karjaluoto, 2015). Shaikh and Karjaluoto analyzed the strengths of the most frequently used antecedents to explain attitude, intention to use, and usage in mobile banking. Accordingly, we analyzed the average path coefficients of the effect sizes of the R-values of the most frequently used relationships as extracted (see Appendix 1); relationships used in six or more studies were included. The results, as shown in Table 5, indicate that trust has the strongest effect on attitude, followed by perceived ease of use. Additionally, attitude has the strongest effect on intentions, which is understandable because attitude has been found to be the most commonly used antecedent. Interestingly, perceived usefulness also has a stronger influence on intentions than perceived ease of use.

535 Table 5. The average path coefficients' effect sizes of major antecedents

Constructs	Attitude	Intention
Attitude	-	.511
Perceived usefulness	.180	.432
Trust	.362	.352
Perceived ease of use	.264	.347
Subjective norm/social influence	-	.343
Enjoyment	-	.335

536

## 537 **5. Discussion**

538 The aim of our study was to provide a review of the literature on what drives travelers'  
 539 use of UGC during travel information searches. Through rigorous search criteria, we  
 540 identified 54 articles from both tourism- and non-tourism-based journals. We also  
 541 identified 22 heterogeneous and distinct theories, models, and frameworks with  
 542 different antecedents. We also analyzed the articles based on the methodological  
 543 approaches used and their geographical spread. Furthermore, critical determinants and  
 544 elements of UGC adoption relating to the source, content and receiver characteristics  
 545 were identified. Finally, we provided a framework to demonstrate how these elements  
 546 fit together and analysed the average path coefficients of the effect sizes to determinant  
 547 the strengths of the variables in predicting adoption.

548 Consumers perceive the experiences shared by fellow tourists to be sincere, believable,  
 549 and trustworthy (Sparks et al., 2013). Tourism and travel information can be shared  
 550 among members of the same social network, among those who do not belong to the  
 551 same networks, and even among those who are geographically distant (Muñoz-Leiva et  
 552 al., 2012). When content is shared by those who do not belong to the same network,  
 553 source credibility becomes an important determinant of the believability of UGC.  
 554 Source credibility includes trustworthiness and expertise (Ayeh et al., 2013a).

555 Trustworthiness implies confidence in the source and the source's reliability, while  
556 expertise implies that the source has knowledge about the destination. Tourists seeking  
557 travel information will regard the UGC of those who have similar interests to be more  
558 trustworthy and credible.

559 Travel information differs based on valence (negatively or positively framed content).  
560 Reading positive reviews can have a positive effect on travelers' inclination to visit the  
561 destination (Tsao et al., 2015). However, some studies have generated conflicting  
562 results regarding the influence of positively and negatively framed content on travelers'  
563 intentions (Sparks and Browning, 2011; Zhao et al., 2015). When tourists seek travel  
564 information, the novelty and understandability elements of UGC positively influence  
565 booking intentions (Chen et al., 2014). In a virtual world, information quality, which  
566 includes accuracy, timeliness, completeness, and relevance, seems to influence trust and  
567 booking intentions (Filiari and McLeay, 2014). In traditional social media contexts,  
568 intentions to use social media are directly influenced by perceived benefits (functional,  
569 psychological, hedonic, and social) (Parra-López et al., 2011). In the context of tourism  
570 and travel, benefit-seeking behaviors related to pursuing the best destinations,  
571 attractions, hotels, transportation, food, beverages, and prices explain the use of UGC  
572 (Öz, 2015). Most of the reviewed studies found that UGC positively influences tourists'  
573 intentions to book a hotel and visit a destination. Some studies also revealed that social  
574 influences, involvement, enjoyment, and experience are important determinants of UGC  
575 adoption for travel and tourism (Chung and Koo, 2015).

## 576 **5.1 Contributions of the study**

### 577 **5.1.1 Implications for research**

578 First, our study found that UGC adoption for travel planning depends on three factors:  
579 source-based characteristics, user-based characteristics, and content-based  
580 characteristics. The identification of trust as having the strongest effect on attitude is in  
581 line with earlier studies that identified trust as an important criterion for using UGC  
582 because those who use social media are unknown to one another (Parra-López et al.,  
583 2011; Ayeh et al., 2013). Second, geographical analyses of previous work on  
584 information and communication technology found that the majority of the studies were  
585 carried out in North America, Europe, East Asian regions (China, South Korea, Hong  
586 Kong and Taiwan), and the Middle East, with no studies in South Asia or Africa  
587 (Shaikh & Karjaluoto, 2015). In this study however, no study was conducted in the  
588 South Asian regions (comprising India, Pakistan, Bangladesh, Nepal and Bhutan) and  
589 only one study in Africa.

590 Third, of the 22 different theories, frameworks, and models our systematic review  
591 uncovered (see Appendix 1), the TAM was the most used (26%). Though the TAM was  
592 originally developed at the organizational level, its use and application at the consumer  
593 level are well-noted in literature (Muñoz-Leiva et al., 2012). However, the identified  
594 weaknesses of the TAM in predicting technology adoption at the individual level (Chau  
595 and Hu, 2001) required some studies to combine the theory with other models (e.g.  
596 Casaló et al., 2011) and to extend the theory by adding other constructs (Ayeh et al.,  
597 2013b). Similarly, in a review of literature on the drivers of consumers to shop online,  
598 Perea et al. (2004) extensively highlighted the TAM and its constructs in consumers'  
599 online shopping

600 Fourth, the identified theories and the antecedents with their path coefficients from  
601 different studies (see Appendix 1) provide a solid theoretical background for subsequent

602 research (Okoli and Schabram, 2010); thus, this work provides a ready source for  
603 scholars wishing to undertake research, especially a meta-analysis of UGC in tourism.  
604 Fifth, the contributions of scholars from the information systems field are growing, and  
605 not only within the domain of management science, as evidenced by the higher  
606 inclusion of research on social media in tourism and travel in non-tourism based  
607 journals.

### 608 **5.1.2 Implications for practice**

609 Our systematic review generates some implications for practice. First, the pervasiveness  
610 of ICT has transformed consumers from passive recipients of marketing messages to  
611 active participants in brand building and product and service co-creation. Social media  
612 and, by extension, UGC provide a platform for this. Interestingly, availability of free  
613 access to the internet is a significant contributor to consumers' satisfaction with a given  
614 tourism service, so managers should ensure that consumers have unhindered and  
615 unlimited access to the internet. In a study evaluating customers' ratings of hotels,  
616 Bulchand-Gidumal, Melián-González and Lopez-Valcarcel (2013) found that hotels  
617 offering free wifi received higher scores and patronage than others. To accentuate the  
618 importance of internet to consumers, airlines have started providing internet access to  
619 airborne passengers (Medina, Hoffmann, Rossetto and Rokitansky, 2010), which was  
620 previously unavailable.

621 Second, customers' evaluations of satisfaction/dissatisfaction arise from two pillars:  
622 core services and relational factors. Core services include basic expectations related to  
623 room size and cleanliness, toilet facilities, meal types and availability, lighting,  
624 furnishings, and fittings. Relational factors primarily relate to customer service  
625 performance. Excellent delivery of these services typically generates positive UGC, and

626 this raises the expectations of prospective visitors. Therefore, managers should continue  
627 to improve their services in order to continuously match visitors' expectations.

628 Third, while information provided by fellow consumers is important, the actual decision  
629 to visit still resides with the consumers, who base their choices on the cognitive and  
630 evaluative attributes of the destination. Thus, managers should not completely give up  
631 based on reviews and comments about their services. Consumers still take additional  
632 steps to evaluate services and products and do not necessarily make decisions based on  
633 reviews.

634 Finally, our study also found that the utilization of social networks is very germane for  
635 festival and event managers. Importantly, such forums provide the opportunity for  
636 previous attendees to share their experiences, questions asked, and feedback obtained.  
637 While traditional web pages may contain very limited information about such activities,  
638 Lee, Xiong, and Hu (2012) found that Facebook is an influencing medium that not only  
639 provides information but also allows managers to have real-time chat sessions with  
640 consumers. Event organizers must therefore be sure to provide exciting experiences that  
641 will generated positive UGC. The sharing of such experiences on Facebook pages will  
642 influence those who read such content to visit.

## 643 **5.2. Limitations and Future Research Directions**

644 One of the limitations of the study is that it was based on quantitative studies; therefore,  
645 it did not incorporate qualitative research. Second, the review was based on UGC and  
646 did not incorporate marketer-generated media. Marketer-generated media could offer  
647 more insights into the utilization of online content for trip planning. Third, the review  
648 only covered the period from 2005 to 2016. Relevant studies that were published before  
649 this period could impact the review.

650 Among the emerging markets, only China and Taiwan were substantially reflected, with  
651 one study in Africa. Thus, we recommend studies be conducted in important emerging  
652 markets such as India and countries in Africa and South America that have witnessed  
653 rapid rates of internet subscription and social media adoption. Additionally, Facebook  
654 and Twitter were the most commonly studied social media platforms. Platforms such as  
655 YouTube, Delicious, Digg, and Lonely Planet are also very important for travel and  
656 tourism; further research should seek to incorporate these networks into the UGC  
657 literature. Importantly, all the reviewed studies merely listed the sample profile, none  
658 took a deeper step towards weighting the sample characteristics in UGC adoption in  
659 travel planning. This is an interesting area of study, especially in the emerging markets.

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