



# Article Communication Factors Affecting Tourist Adoption of Social Network Sites

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**Abstract:** Smart tourism technologies (STTs) are technological media that tourists apply in various stages of the tourism decision-making process. The purpose of this study was to explore how the communication elements of social network sites (SNSs), as a part of STTs, enhance tourists' motivation and usage intention. A structural framework based on communication elements and the uses and gratification theory with regard to SNSs usage was developed and investigated. An online survey was employed for the data collection, and structural equation modeling was used in the hypotheses analysis. The findings indicated that Internet self-efficacy, information quality, and systems quality trigger the information-seeking motive. The information-seeking motive, entertainment motive, relationship maintenance motive, and Internet self-efficacy positively influence the intention to use SNSs for trips. New findings were found in terms of the relationship between the motives. The information-seeking motive and relationship maintenance motive influence the entertainment motive. Moreover, the relationship maintenance motive influences the information-seeking motive.

**Keywords:** smart tourism technology; social network site; uses and gratifications theory; communication elements; behavioral intentions; decision-making process

# 1. Introduction

As a result of the rapid advancement in communication technologies, many industries including the tourism industry have adopted these technologies. Moreover, because of the information intensity nature of tourism, there is now a high dependence on information and communication technologies (ICTs) [1,2]. Tourists search for information for their trips from the beginning to the end of the travel decision-making process. With massive information usage in the tourism industry, many tourist organizations have adjusted themselves by serving tourists reliance on information for their travel decision-making. As a consequence, smart tourism is a buzzword that attempts to explain this phenomenon [3]. Gretzel [4] mentioned that smart tourism is a step in ICT evolution in tourism including creating, exchanging, consuming, and sharing tourism experiences. Instead of distinctive information systems, smart tourism combines a variety of technologies as infrastructure for a real-time connection with information for the tourism decision-making processes [5].

In addition, smart tourism technologies (STTs) change tourists' behavior and provide them with special experiences, which also changes the tourism industry [6]. Huang et al. [7] stated that STTs comprise online tourism applications and information sources in all forms. Tourists take part in a smart experience, as they use the technologies to take part in tourism information creation, comments, and consumption. Tourists may also purchase tourism products or services from a smart business ecosystem in which they may interact with ICT provided by smart destinations during their trip, which can enhance their travel experience. Tourists may also gain benefits from adopting the technologies in

their travel experience. Moreover, increasing tourist satisfaction through ICT has become a tourist destination's aim [8] because tourism services in all travel stages affect tourists' evaluation [9]. Gretzel et al. [3] mentioned that ICT smart systems assist travelers in their travel decision-making processes including (1) predicting tourists' needs and providing recommendations before the trip; (2) presenting

information and services for tourists' on-site experiences; and (3) allowing tourists to share their travel experiences, which also provide other tourists with information for their decision-making processes. Furthermore, smart tourists provide information that is important for businesses who search for meaningful tourism experiences [3] because businesses can adjust themselves according to customers' needs.

However, few studies on STTs have focused on the motives to use the technologies and relationship between the motives. Due to the various combinations of ICT technologies, it may be complicated to study STTs as a whole. Thus, this study focused on social network sites (SNSs), which tourists could gather and provide travel information on the same platform. SNSs can help businesses achieve a sustainable relationship with their key customers, as they provide two-way communication, especially cultural products in which many tourism products are cultural-based. Hence, SNSs are suitable for generating the rapid circulation of cultural products on the Internet [10]. Since tourists may use social network platforms for their travel decision-making process, it is, therefore, necessary to gain a better understanding of the relationship between communication elements, tourists' motivation, and their intention to use the media for their trip. Thus, this research investigated the following research questions: (1) How do communication elements of SNSs stimulate the motives to use SNSs?; (2) How do the motives to use SNSs affect the intention to use SNSs?; and (3) how do the motives to use SNSs have an interrelationship with each other. This study explored tourists' intention to use SNSs in their travel decision-making process through the extension of the uses and gratification theory in order to understand how communication elements could influence the intention to use SNSs. The current study contributes to smart tourism technology and motive literature by incorporating SNSs communication elements with motives to find how social networks impact tourists' motives. Moreover, with the study of motives, this research extends previous studies to understand the relationship between motives. Lastly, this study contributes to tourism literature by analyzing the effects of the communication elements on the SNSs usage intention.

#### 2. Literature Review and Research Framework

## 2.1. Smart Tourism Technologies and Social Network Sites

The Internet plays an important role in tourists' decision-making, as they use it to search for travel information. Tourists use smart tourism technologies (STTs) for their trip in various stages of the travel decision-making process. Tourists found that STTs are useful during destination or product selection and process transactions [11]. According to Ukpabi and Karjaluoto [12], STTs can be divided into three parts: travel-related social network sites (SNSs), mobile applications, and websites. Websites, social networks, and mobile devices together with location-based services have reshaped travel behavior and tourism communication [13]. With websites and social networks, tourists can search for information from various sources at all times. As such, tourists utilize interactive websites due to their cognitive and affective absorption experience [14]. Mobile applications can also help tourists connect with social networks and explore new experiences [15]. Tourists can retrieve their travel information and process their bookings anywhere through mobile devices. As such, smartphones are useful for tourists to search through more destinations, get greater experiences, and satisfaction (ibid). Thus, STTs in tourism allow tourists to better communicate with service providers, information sources, and other tourists at any time.

Social network sites (SNSs) have become important tools in shaping consumers' word-of-mouth (WOM). Customers may make purchase decisions because of SNSs' referrals. SNSs allow users to collect information from other people and share their consumption experiences with others. Previous studies

found that social benefits, social enhancement, economic incentives, intriguing messages, immediate social-affective communication, and immediate information support are important factors affecting consumer mobile SNSs WOM intention [16]. Moreover, with the advancement of mobile technologies, SNSs users can share their consumption experiences faster and easier than before. The users may use mobile SNSs because of the provided social benefits (ibid). Consumption experiences SNSs users share with their online peers can be both physical products and service experiences. A study by Lin, van de Ven, and Utz [17] found that consumers shared their experiential consumption more frequently than physical products on Facebook. Traveling experiences can be categorized as experiential consumption because many tourism products and services are intangible. Tourists may share their travel experiences through SNSs. Destinations can also use SNSs to promote their cities or events; for example, using Facebook for promotion strategies [18].

## 2.2. Motivations and Uses and Gratification Theory

In tourism research areas, much research has analyzed relationships between motivation and tourists' behavior, such as satisfaction and loyalty. Fodness [19] indicated that motivation creates the driving forces behind the behavior of a person. Motivation plays a crucial role in tourism because it is an important factor for tourists when they decide to visit destinations [20]. A frequently used arrangement in tourist motivation literature is related to the push (or internal motives) and pull (or external motives) factors [21–23]. Previous studies confirm that motivations affect or stimulate satisfaction, loyalty, and behavioral intention of tourists [23–25]. Motivations were also studied along with other factors as antecedents of tourists' behavior such as risk [24], and demographics [25]. Moreover, Pearce and Lee [26] asserted that the main motivations of tourists' decision to travel are escape, gratification, relationship enhancement, and self-development. It can be said that gratification is one of the main motivations in tourism studies. Thus, this study would like to understand the role of gratification with the communication elements of SNSs toward the intention of tourists to use SNSs for trips.

Based on the mass communication field of study, the uses and gratification theory (UGT) was developed by Katz [27] and Blumler and Katz [28] to explain how media acceptance motivation gratifies users' needs. The theory attempts to explain the motives of certain media to gain specific needs [29]. It focuses on how users actively select and apply media concerning their needs. The theory perceives users as active people in communication media selection [30]. UGT explains that entertainment, information, and irritation dimensions affect the adoption of communication media [31–34]. UGT was first used in radio communication [31]. The theory was then widely used in various fields of mass communication media; such as radio and television [35]. Lately, non-traditional media has been taken into account; such as the Internet, SNSs, and so forth [16,32,34,36]. Recent research found that people use technological media because of several motives, such as information seeking, entertainment, irritation, socialization, experience, and function [34,37].

Furthermore, tourism studies have adopted UGT to understand tourists' behavioral intention in various communication media. Erawan [30] studied changes in privacy issues in mobile technology and found that informative gratification positively influenced advertising value. Yoo et al. [38] studied customer adoption patterns of gamified smart tourism applications and found that hedonic or entertainment motivation positively influences the intention to use gamified smart tourism applications. Koo et al. [6] studied the relationships between media exposure and destination travel intention and found that both mass media and social networks positively influence destination content gratification or motivation while motivation has a positive influence on the desire to travel and intention to travel to a destination. Lastly, Hur et al. [39] studied the determinants of the continuance usage intentions of travel-related social networks and information sharing intentions and found that information seeking, entertainment, and relationship motives positively influence both the continuance usage intention and information sharing intention. In brief, entertainment, information, and irritation gratification were found to induce the intention to adopt travel-related media. Thus, the information-seeking, entertainment, and relationship motives were applied in this study. Therefore, from the discussion, this study proposes the following hypotheses:

**Hypothesis 1 (H1).** *The information-seeking motive will positively influence (a) the intention to use SNSs for trips and (b) the entertainment motive.* 

**Hypothesis 2 (H2).** *The relationship maintenance motive will positively influence (a) the information-seeking motive, (b) entertainment motive, and (c) intention to use SNSs for trips.* 

Hypothesis 3 (H3). The entertainment motive will positively influence the intention to use SNSs for trips.

# 2.3. Communication Factors Affecting the Travelers Intention to Use SNSs

Behavioral intention refers to a sign to measure the efforts of users in planning to perform their behavior or the tendency of the users in determining to perform their behavior [40,41]. In consumer decision-making, individuals have steps to select products they would like to purchase. Engel et al. [42] proposed the Engel Kollat Blackwell (EKB) model of consumer behavior and defined five steps for the consumer decision-making process, which comprised problem recognition, search, alternative evaluation, purchase, and post-purchase evaluation. With the advancement of technologies and changes in consumer behavior, post-consumption evaluation, and divestment have been added to the model [43]. In terms of travel decision-making, academics have proposed four phases consisting of idea formation, information search, alternatives evaluation for a final decision, and reservation [44–46]. These processes are in line with the EKB model although the post-purchase process was not mentioned. Due to the mass information consumption nature of the tourism industry, tourists consume a lot of information about their travel in all stages of the decision-making process. STTs can assist tourists to gather their travel ideas, search for information, compare different choices, and purchase tourism products or services [7]. During the pre-trip stage, tourists consume contents for their travel decision-making [47]. Tourists use STTs for their tourism information search [48], products and service booking [49], and online travel commerce [50]. After their trips, tourists may share their experiences, products, and services by means of photos, comments, and reviews, which can be accessed by others [51].

Various studies have also explained the relationship between the antecedents and the intention to use smart technologies. Mohd Suki and Mohd Suki [52] studied the factors influencing the intention to use a flight ticket booking application on a mobile device and found that perceived usefulness was the most influential factor. Liébana-Cabanillas et al. [53] studied the antecedents of the intention to adopt m-commerce and found that customer involvement and customization were the strongest leading factors. Likewise, Hur et al. [39] studied the antecedents of the information sharing intentions of tourists through social networks and found that the information-seeking, entertainment, and relationship maintenance motives positively influenced the sharing intention.

Because of the mass communication process, people connect with media through communication elements which include information sources, information, media, and receivers [54]. Each element plays an important role to connect each side of the communication path. Media play as a mediator connecting information sources and receivers to interact with each other. Currently, media includes not only newspapers, radio, and television, but also computers, the Internet, smartphones, and applications. In addition, according to the information systems (IS) success model [55], the qualities of information systems can be divided into information, service, and system qualities. These qualities can trigger the intention to use explicit information systems. Moreover, the service quality of SNSs was found to impact the sustainable use of SNSs [56]. Thus, this research applied the information system qualities of the IS success model for the communication elements. In the perspective of STTs, media refers to tourism-related web-based services, social networks, and mobile information services. Previous studies investigated media features and their relationship with consumers. For example, the quality of website design was found to positively influence consumers' attitude towards the online purchases of tourism products [57]. Additionally, information quality is an attribute in tourism website transactions [58]; such as hotel bookings [59,60]. Chung et al. [58] examined the factors influencing

tourism destination websites continuance usage intention and found that information quality had a positive effect on tourists' destination website decision. An information receiver is a person who consumes information and uses it for a specific purpose. In the tourism industry, information receivers can be tourists, tourism organizations, and governments. However, this study focused only on tourists. This study applied Internet self-efficacy for information receivers, as it refers to the self-valuation of the capability to do Internet-related activities [61]. Finally, an information source refers to a person who shares information through media. Source credibility was also taken into account in this study because readers may believe information if the sources are reliable. Source credibility is an important feature of content credence [62]. Moreover, content from the online community plays a more persuasive role than marketer-generated contents [63]. In short, it appears that communication elements are positively related to technology adoption. Therefore, this study considers communication factors as important factors for motives and adoption intention in the context of SNSs usage in tourism, and the following hypotheses are proposed:

**Hypothesis 4 (H4).** *Internet self-efficacy will positively influence (a) the intention to use SNSs for trips and (b) the information-seeking motive.* 

Hypothesis 5 (H5). Information quality will positively influence the information-seeking motive.

Hypothesis 6 (H6). System quality will positively influence the information-seeking motive.

Hypothesis 7 (H7). Service quality will positively influence the relationship maintenance motive.

Hypothesis 8 (H8). Source credibility will positively influence the relationship maintenance motive.

# 2.4. Research Framework

Based on the above discussion, the structural model and hypotheses are shown in Figure 1. The hypotheses were developed based on the foundation knowledge from the IS success model and UGT model. The structural model investigated the influences of the SNSs communication elements on the motives and behavioral intention as well as influences of tourists' motives on their behavioral intention. The motives also encourage each other. Therefore, the hypotheses of this study were proposed as shown in Figure 1.

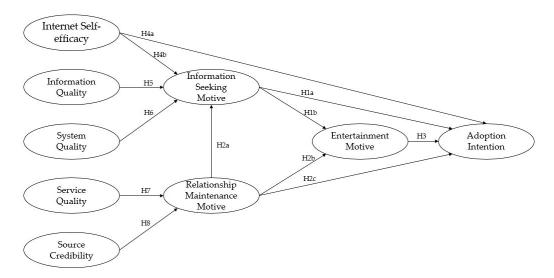


Figure 1. Research model and hypotheses.

#### 3. Methods

The study was administered as an online survey through social network sites. The survey consisted of five demographic items, two SNSs usage characteristic items, and 27 question items related to nine constructs of the research model with a seven-point Likert scale ranging from (1) strongly disagree to (7) strongly agree. Adapted from Liang et al. [64], Xu et al. [65], and Wang et al. [66], nine items of different qualities were used to measure a perceptual construct. Three items of Internet self-efficacy were adapted from Kuo et al. [67] and Venkatesh et al. [68]. Three items of source credibility were adapted from Hur et al. [39]. Nine items of motives were adapted from Hur et al. [39]. Three items of intention to use SNSs for a trip were adapted from Hur et al. [39] and Kim et al. [69]. Furthermore, to sustain the originality of the measurements, the questionnaire was designed in the English language and then translated into Thai. The translated questionnaire was checked by two Thai academics who have experience in technological marketing and tourism research to verify the mutual understanding between the English and Thai languages. A pilot test was performed with 30 travelers to assure that the questions were clear and unambiguous. No pilot test respondents participated in the final survey. Following the pilot test, the questions were revised and improved to mend their clarity.

The study used an online survey to connect with prospective respondents via Facebook. A structured questionnaire was created through Google Docs and sent to prospective respondents on a random sampling basis. This research method of data collection and sample size were in line with the research method of Hossain and Kim [56]. The final questionnaire was conducted online with Thai tourists for one month, with 475 usable surveys used for the final data analysis. The analysis was conducted using SPSS and AMOS. Table 1 shows a summary of the respondents' demographic profile of the sample population.

Characteristics	Frequency (n)	Percentage (%)	
Gender			
Male	160	33.7	
Female	315	66.3	
Age (years)			
Less 25	212	44.6	
between 26-35	211	44.4	
between 36-45	35	7.4	
More than 45	17	3.5	
Marital status			
Single	412	86.7	
Married	53	11.2	
Others	10	2.1	
Occupation			
Business owner/Self-employed	40	8.4	
Employed	210	44.2	
University students	210	44.2	
Others	15	3.1	

Table 1. Respondents'	profile $(n = 475)$ .
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## 4. Data Analysis and Results

Confirmatory factor analysis was performed to assess the validity and reliability of the measurement constructs [70], which consisted of 27 items. According to Fornell and Larcker [71], the analysis of validity comprises discriminant validity and convergent validity. As shown in Table 2, all loadings were significantly related to their latent variables in all results, which demonstrated the construct validity. The average variance extracted (AVE) by each latent variable was above the threshold of 0.50, and the composite reliability was greater than 0.70 (ibid), which predicts the suitable reliability and internal consistency of the tested constructs [70]. The smallest score was 0.900 of the Internet self-efficacy (ISE) and 0.938 of the SNSs adoption intention (INT), respectively. The model fit statistics of the measurement model suggested a good fit (X<sup>2</sup> = 810.941; degrees of freedom (df) = 288;

root mean square error of approximation (RMSEA) = 0.062; goodness-of-fit index (GFI) = 0.888; normed fit index (NFI) = 0.955, and comparative fit index (CFI) = 0.971. Thus, convergent validity was accomplished.

Construct	Indicator	Factor Loading	AVE	CR
Information quality	IQ 1: SNSs provides me with the most recent information.	0.886		
Information quality (IQ)	IQ 2: It is easy to read travel information from SNSs.	0.91	0.842	0.941
	IQ 3: SNSs provides me with all the travel information I need.	0.956		
System quality (SYSQ)	SYSQ 1: It is easy to use SNSs for my trip.	0.954		
	SYSQ 2: I find it easy to get this SNSs to do what I want it to do.	0.952	0.888	0.956
	SYSQ 3: It is easy for me to become skillful at using travel SNSs.	0.92		
Service quality	SEQ 1: SNSs are always willing to help me.	0.938		
(SEQ)	SEQ 2: SNSs have the knowledge to answer my questions.	0.935	0.868	0.955
(3EQ)	SEQ 3: SNSs understand my specific needs.	0.922		
Internet self-efficacy (ISE)	ISE 1: I could access travel information using SNSs if someone showed me how to do it first.	0.89		
	ISE 2: I can use SNSs to gather travel information.	0.957	0.751	0.9
	ISE 3: I have confident learning advanced skills within a travel SNSs program.	0.739		
Source Credibility	SC 1: The information provider from SNSs is knowledgeable	0.921		
	SC 2: The information providers in SNSs are expert	0.921	0.852	0.945
(SC)	SC 3: The information gained from SNSs is trustworthy	0.927		
Information-seeking motive (ISM)	ISM 1: I use SNSs to search for new travel information	0.97		
	ISM 2: I use SNSs to acquire helpful travel information	0.959	0.931	0.976
	ISM 3: I use SNSs to discover travel information which I am interested in	0.965		
Entertainment motive (EM)	EM 1: I use SNSs to fight with boredom	0.96		
	EM 2: I use SNSs because it is pleasurable	0.966	0.903	0.965
	EM 3: I use SNSs because it comforts me	0.924		
Relationship	RMM 1: I use SNSs to send message to friends	0.929		
maintenance motive (RMM)	RMM 2: I use SNSs to connect with my friends	0.972	0.897	0.963
	RMM 3: I use SNSs to keep in touch with people I know	0.94		
SNSs adoption	INT 1: I intend to use SNSs to plan and purchase accommodation and service for 'my next trip'	0.878		0.938
intention (INT)	INT 2: I would use SNSs to select service providers during 'my next trip'	0.948	0.834	
. ,	INT 3: I plan to share travel information in SNSs after 'my next trip'	0.913		

Table 2. Convergent validity from the confirmatory factor analysis results.

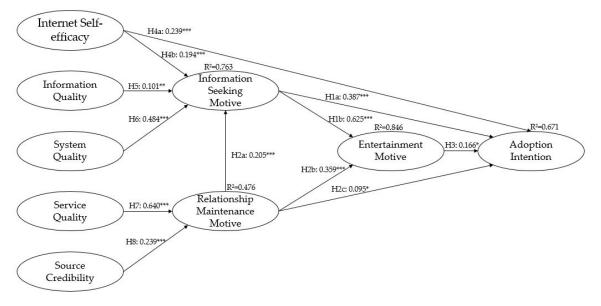
Structural equation modeling (SEM) using AMOS was employed to test the conceptual model and its hypotheses [70]. The model fit statistics of the research model indicated the acceptable fit measures ( $X^2 = 867.943$ ; degrees of freedom (df) = 302; root mean square error of approximation (RMSEA) = 0.063; goodness-of-fit index (GFI) = 0.876; normed fit index (NFI) = 0.952; and comparative fit index (CFI) = 0.968). Thus, the indicators demonstrated that the hypothesized model fitted the actual data. The model illustrated 76.3% in the information-seeking motive, 84.6% in the entertainment motive, 47.6% in the relationship maintenance motive, and 67.1% in the intention to use SNSs for travel. As shown in Table 3, the squared factor correlations between the factors were lesser than the corresponding AVE estimates. This indicated the stronger relationship of the constructs within their respective indicators than other constructs [71].

Table 3. Descriptive statistics and discriminant validity test result.

Squared Factor Correlation Matrix with the AVE on the Diagonal									
Variables	IQ	SYSQ	SEQ	SC	ISE	ISM	EM	RMM	INT
IQ	0.842	-	-	-	-	-	-	-	-
SYSQ	0.465	0.888	-	-	-	-	-	-	-
SEQ	0.412	0.81	0.868	-	-	-	-	-	-
SC	0.513	0.461	0.479	0.852	-	-	-	-	-
ISE	0.549	0.537	0.391	0.629	0.751	-	-	-	-
ISM	0.45	0.689	0.539	0.408	0.536	0.931	-	-	-
EM	0.32	0.542	0.536	0.372	0.402	0.748	0.903	-	-
RMM	0.174	0.336	0.465	0.331	0.223	0.432	0.643	0.897	-
INT	0.399	0.489	0.48	0.392	0.465	0.615	0.563	0.383	0.834

Note: Diagonals represent the AVE, and the correlations among the study variables are presented in the lower off-diagonal.

The hypothesized model presented in Figure 2 illustrates the significant structural paths. The results identified that the information-seeking motive positively affected the intention to use SNSs for trips (y61 = 0.387, t = 5.177,  $p \le 0.001$ ) and the entertainment motive (y62 = 0.166, t = 20.117,  $p \le 0.001$ ). Thus, hypotheses 1a and 1b were supported. The relationship maintenance motive positively affected the information-seeking motive (y71 = 0.205, t = 7.883,  $p \le 0.001$ ), entertainment motive (y72 = 0.359,  $t = 13.729, p \le 0.001$ , and intention to use SNSs for trips (y73 = 0.095,  $t = 2.149, p \le 0.05$ ). The empirical results provided support for hypotheses 2a, 2b, and 2c. The entertainment motive had a positive effect on the intention to use SNSs for trips (y81 = 0.166, t = 2.090,  $p \le 0.05$ ). The results supported Hypothesis 3. The results indicated that Internet self-efficacy positively affected the intention to use SNSs for trips (y11 = 0.239, t = 5.177,  $p \le 0.001$ ) and the information-seeking motive (y12 = 0.194,  $t = 4.210, p \le 0.001$ ). Hence, the results provided support for Hypotheses 4a and 4b. Information quality had a positive effect on the information-seeking motive (y21 = 0.101, t = 10.622,  $p \le 0.01$ ) while system quality had a positive effect on the information-seeking motive ( $y_{31} = 0.484$ , t = 10.622,  $p \le 0.001$ ). Therefore, Hypotheses 5 and 6 were supported. Lastly, service quality had a positive effect on the relationship maintenance motive (y41 = 0.640, t = 10.206,  $p \le 0.001$ ) while source credibility had a positive effect on the relationship maintenance motive (y51 = 0.239, t = 3.850,  $p \le 0.001$ ). The results supported Hypotheses 7 and 8.



**Figure 2.** Model and hypothesis test results. Note: \*\*\* p < 0.001, \*\* p < 0.01 \*p < 0.05.

## 5. Discussion

Smart tourism technologies (STTs) are innovative technologies that can change tourists decision-making behavior. Social networks have also become a component of smart tourism environments. The main intention of this study was to explore the influences of communication elements on the motives and adoption intention towards social network sites (SNSs) and to search for the relationship among the motives. This study proposed significant and useful findings for the tourism-related industry to implement their communication plans and strategies. Communication elements and the uses and gratification theory (UGT) based on SNSs were used to form hypothesized relationships with the online data collected from Thai tourists. The data were analyzed using SEM, and the analysis confirmed all 12 hypothesized relationships.

SNSs communication elements were applied in this study. Internet self-efficacy, information quality, and system quality had statistically significant effects on the information-seeking motive. These results confirmed the findings from Chulmo et al. [6] that social networks can trigger destination content gratification. Service quality and source credibility significantly affected the relationship

maintenance motive. These results were consistent with previous research [39] that demonstrated that source credibility creates the enhancement of the relationship maintenance motive. Moreover, Internet self-efficacy has a direct effect on the intention to use SNSs for trips. Among all relationships, a connection between service quality and the relationship maintenance motive formed the strongest power. Tourists wish to stay connected and be involved with others through SNSs, which can accommodate them while using such technologies.

The UGT was applied in this study in order to investigate the motives driving tourists' intention to use SNSs for their trip. Information-seeking, relationship maintenance, and entertainment motives had statistical effects on the intention to use SNSs for trips. These results supported the prior findings that entertainment and relationship maintenance motives affected the behavioral intention [38,39,72]. Tourists found that social networks provided them with benefits in terms of entertaining and connecting with people who had a similar interest in traveling. The results also supported prior studies [6,39] that the information-seeking motive is a considerable antecedent of the behavioral intention. Thus, tourists found that social networks could also serve their information-seeking purposes. However, the results differed from the findings of Yoo et al. [38], which found no significant effect on the intention to use. The results may relate to the characteristics of particular media, which conform to the intense information consumption of the industry. Social networks may motivate tourists' information-seeking purpose and later trigger their intention to adopt the media. In this study, the information-seeking motive was the strongest determinant in tourists' intention.

In terms of the relationships between the motives, the relationship maintenance motive significantly affected the information-seeking and entertainment motives. Moreover, the information-seeking motive significantly affected the entertainment motive. The results suggested that the information-seeking motive plays an essential role, as it not only elicits the intention to adopt SNSs, but also stimulates the entertainment motive. In other words, tourists may have pleasure while searching for useful information, which can offer them a joyous moment while reading. Additionally, the findings suggested that the relationship maintenance motive helps tourists feel for other motives. The relationship maintenance motive enables tourists to find what attaches them to the users, which leads to the way they desire to look for information from social networks and spend a delightful time with the media. For this reason, even the relationship maintenance motive may not play a big role in directly influencing the intention to adopt SNSs; it has an indirect effect on the intention through the information-seeking and entertainment motives.

#### 6. Conclusions

These results provide academic contributions. First, this study was an extension of prior research of the motivations in technology adoption intention by integrating SNSs communication elements with UGT to find how social networks influence tourists' motives. Apart from the media and information qualities, information providers and receivers were added to cover the communication elements. Second, this study drew on the relationship between the UGT motives, which fulfilled the knowledge of previous studies. Although some motives may not strongly influence behavioral intention, they can help to stimulate other motives. Third, this study aimed to understand the SNSs communication elements. Tourists are now more likely to adopt social networks in their travel decision-making process. Moreover, tourism-related businesses and governmental organizations apply social networks to complete the tourists' decision-making process. Hence, this study analyzed the SNSs usage intention based on the communication elements. This research would like to highlight the following theoretical contributions. Firstly, the results of this study shed light on some important characteristics related to the critical communication factors of SNSs. The results imply that service quality in SNSs is the most important dimension. Secondly, this study was the initial effort to examine the relationship between the UGT motives on the SNSs adoption intention. Based on the findings, the study proposes some arguments that further improve the theory. The current study proposes that the information-seeking motive and relationship maintenance motive have positive effects on the entertainment motive.

The findings also provided managerial implications for practitioners. First, tourism businesses and media providers should be cautious of the service and system quality of their implemented social network because these qualities could generate tourists' aims to search for information and stay connected with others through the media. Moreover, the credibility of information providers is important because tourists may believe information, as they trust information providers and would like to stay attached to the media. In terms of information receivers aspects, tourists' Internet self-efficacy not only affects information seeking motives, but also directly affects their intention to adopt SNSs for their trips. Second, tourism organizations and media providers should pay more attention to enhancing tourists' information-seeking motives. Among the three motives, the information-seeking motive has the strongest attachment with the intention. Tourists may consume information pre-trip, during the trip, and post-trip. Thus, well-prepared information and system quality can help tourists' desire for searching for information. Third, it is important to realize the considerable effect of the relationship maintenance motive. Although when compared to other motives, the relationship maintenance motive has a less direct effect on the intention; it stimulates the purpose to look for information and to have a pleasurable moment. Thus, practitioners should also pay attention to the relationship between users in the media.

This research illustrated the extension of the UGT and communication elements knowledge in social networks and highlighted that SNSs could promote the intention of tourists to use technologies by influencing users' gratification. However, this study experienced some limitations. First, this study only examined specific aspects of SNSs communication elements. Future studies could focus on other aspects to enhance knowledge. Second, the relationships among the selected motives were emphasized regarding SNSs characteristics. These relationships may vary regarding the media or industries. Future research could discover relationships concerning specific media or industries. Third, data from this study were gathered in Thailand. Thus, the results might not be generalized. Comparison with other contexts could be considered in future studies to explore the similarities and differences. Fourth, the intention to use SNSs for trips used in this study was developed based on the generalizability of the travel decision-making process. Future analysis in specific stages could be performed to provide a more in-depth comprehension of the results. Fifth, this study focuses only on the relationship between communication elements and motivations. The study does not address the relationship between motivations and risks as predictors of behavioral intentions. Future research can examine the effect of risks to investigate whether risks influence motivations and SNSs adoption intention of tourists. Lastly, this research is deficient of representativeness of the research. However, it is recommended that future research should examine communication factors in more diversified sample groups.

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#### References

- 1. Koo, C.; Gretzel, U.; Hunter, W.C.; Chung, N. The Role of IT in Tourism. *Asia Pasific J. Inf. Syst.* 2015, 25, 99–104.
- Law, R.; Buhalis, D.; Cobanoglu, C. Progress on Information and Communication Technologies in Hospitality and Tourism. *Int. J. Contemp. Hosp. Manag.* 2014, 26, 727–750. [CrossRef]
- Gretzel, U.; Sigala, M.; Xiang, Z.; Koo, C. Smart Tourism: Foundations and Developments. *Electron. Mark.* 2015, 25, 179–188. [CrossRef]
- Gretzel, U. Intelligent Systems in Tourism: A Social Science Perspective. Ann. Tour. Res. 2011, 38, 757–779. [CrossRef]
- Washburn, D.; Sindhu, U. Helping CIOs Understand "Smart City" Initiatives; Forrester Res. Inc.: Cambridge, MA, USA, 2010; Volume 17, p. 17.

- Koo, C.; Joun, Y.; Han, H.; Chung, N. A Structural Model for Destination Travel Intention as a Media Exposure: Belief-Desire-Intention Model Perspective. *Int. J. Contemp. Hosp. Manag.* 2016, 28, 1338–1360. [CrossRef]
- 7. Huang, C.D.; Goo, J.; Nam, K.; Yoo, C.W. Smart Tourism Technologies in Travel Planning: The Role of Exploration and Exploitation. *Inf. Manag.* **2017**, *54*, 757–770. [CrossRef]
- 8. Buhalis, D.; Amaranggana, A. Smart Tourism Destinations Enhancing Tourism Experience Through Personalisation of Services. In *Information and Communication Technologies in Tourism* 2015; Inversini, A., Ed.; Springer International Publishing: Cham, Switzerland, 2015; pp. 377–389.
- Neal, J.D.; Uysal, M.; Sirgy, J.M. The Effect of Tourism Services on Travelers' Quality of Life. J. Travel Res. 2007, 46, 154–163. [CrossRef]
- 10. Lee, E.E.; Kang, H.; Ahn, H.J. Word-of-Mouth of Cultural Products through Institutional Social Networks. *Sustainability* **2017**, *9*, 917. [CrossRef]
- 11. Xiang, Z.; Wang, D.; O'Leary, J.T.; Fesenmaier, D.R. Adapting to the Internet: Trends in Travelers' Use of the Web for Trip Planning. *J. Travel Res.* **2015**, *54*, 511–527. [CrossRef]
- 12. Ukpabi, D.C.; Karjaluoto, H. Consumers' Acceptance of Information and Communications Technology in Tourism: A Review. *Telemat. Inform.* **2017**, *34*, 618–644. [CrossRef]
- 13. Gretzel, U.; Fesenmaier, D.R.; O'Leary, J.T. The Transformation of Consumer Behaviour. In *Tourism Business Frontiers*; Buhalis, D., Costa, C., Eds.; Elsevier: Oxford, UK, 2006; pp. 9–18.
- 14. van Noort, G.; Voorveld, H.A.M.; van Reijmersdal, E.A. Interactivity in Brand Web Sites: Cognitive, Affective, and Behavioral Responses Explained by Consumers' Online Flow Experience. *J. Interact. Mark.* **2012**, *26*, 223–234. [CrossRef]
- 15. Wang, D.; Park, S.; Fesenmaier, D.R. The Role of Smartphones in Mediating the Touristic Experience. *J. Travel Res.* **2012**, *51*, 371–387. [CrossRef]
- Lin, Y.H.; Hsu, C.L.; Chen, M.F.; Fang, C.H. New Gratifications for Social Word-of-Mouth Spread via Mobile SNSs: Uses and Gratifications Approach with a Perspective of Media Technology. *Telemat. Informatics* 2017, 34, 382–397. [CrossRef]
- 17. Lin, R.; van de Ven, N.; Utz, S. What Triggers Envy on Social Network Sites? A Comparison between Shared Experiential and Material Purchases. *Comput. Hum. Behav.* **2018**, *85*, 271–281. [CrossRef] [PubMed]
- 18. Yoon, S.-W.; Chung, S.W. Promoting a World Heritage Site through Social Media: Suwon City's Facebook Promotion Strategy on Hwaseong Fortress (in South Korea). *Sustainability* **2018**, *10*, 2189. [CrossRef]
- 19. Fodness, D. Measuring Tourist Motivation. Ann. Tour. Res. 1994, 21, 555-581. [CrossRef]
- 20. Richards, G. Tourism Attraction Systems: Exploring Cultural Behavior. *Ann. Tour. Res.* **2002**, *29*, 1048–1064. [CrossRef]
- 21. Dann, G.M.S. Anomie, Ego-Enhancement and Tourism. Ann. Tour. Res. 1977, 4, 184-194. [CrossRef]
- 22. Crompton, J.L. Motivations for Pleasure Vacation. Ann. Tour. Res. 1979, 6, 408–424. [CrossRef]
- 23. Antón, C.; Camarero, C.; Laguna-García, M. Towards a New Approach of Destination Loyalty Drivers: Satisfaction, Visit Intensity and Tourist Motivations. *Curr. Issues Tour.* **2017**, *20*, 238–260. [CrossRef]
- 24. Olya, H.G.T.; Han, H. Antecedents of Space Traveler Behavioral Intention. J. Travel Res. 2019. [CrossRef]
- 25. Olya, H.G.T.; Lee, C.-K.; Lee, Y.-K.; Reisinger, Y. What Are the Triggers of Asian Visitor Satisfaction and Loyalty in the Korean Heritage Site? *J. Retail. Consum. Serv.* **2019**, *47*, 195–205. [CrossRef]
- 26. Pearce, P.L.; Lee, U.-I. Developing the Travel Career Approach to Tourist Motivation. *J. Travel Res.* **2005**, *43*, 226–237. [CrossRef]
- 27. Katz, E. Mass Communications Research and the Study of Popular Culture: An Editorial Note on a Possible Future for This Journal. *Stud. Public Commun.* **1959**, *2*, 1–6.
- 28. Blumler, J.G.; Katz, E. *The Uses of Mass Communications: Current Perspectives on Gratifications Research*; Sage Publications, Inc: Beverly Hills, CA, USA, 1974.
- 29. Al-Jabri, I.M.; Sohail, M.S.; Ndubisi, N.O. Understanding the Usage of Global Social Networking Sites by Arabs through the Lens of Uses and Gratifications Theory. *J. Serv. Manag.* **2015**, *26*, 662–680. [CrossRef]
- 30. Erawan, T. Tourists' Intention to Give Permission via Mobile Technology in Thailand. *J. Hosp. Tour. Technol.* **2016**, *7*, 330–346. [CrossRef]
- 31. Huang, E. Use and Gratification in E-Consumers. Internet Res. 2008, 18, 405–426. [CrossRef]
- 32. Ko, H.; Cho, C.-H.; Roberts, M.S. INTERNET USES AND GRATIFICATIONS: A Structural Equation Model of Interactive Advertising. *J. Advert.* **2005**, *34*, 57–70. [CrossRef]

- Liu, C.L.E.; Sinkovics, R.R.; Pezderka, N.; Haghirian, P. Determinants of Consumer Perceptions toward Mobile Advertising—A Comparison between Japan and Austria. J. Interact. Mark. 2012, 26, 21–32. [CrossRef]
- 34. Luo, X. Uses and Gratifications Theory and E-Consumer Behaviors. J. Interact. Advert. 2002, 2, 34–41. [CrossRef]
- 35. Ruggiero, T.E. Uses and Gratifications Theory in the 21st Century. *Mass Commun. Soc.* **2000**, *3*, 3–37. [CrossRef]
- Cudmore, B.A.; Bobrowski, P.E.; Kiguradze, T. Encouraging Consumer Searching Behavior on Healthcare Web Sites. J. Consum. Mark. 2011, 28, 290–299. [CrossRef]
- 37. Walsh, G.; Gwinner, K.P. Purchasing Vacation Packages through Shop-at-Home Television Programs: An Analysis of Consumers' Consumption Motives. *J. Vacat. Mark.* **2009**, *15*, 111–128. [CrossRef]
- 38. Yoo, C.; Kwon, S.; Na, H.; Chang, B. Factors Affecting the Adoption of Gamified Smart Tourism Applications: An Integrative Approach. *Sustainability* **2017**, *9*, 2162. [CrossRef]
- Hur, K.; Kim, T.T.; Karatepe, O.M.; Lee, G. An Exploration of the Factors Influencing Social Media Continuance Usage and Information Sharing Intentions among Korean Travellers. *Tour. Manag.* 2017, 63, 170–178. [CrossRef]
- 40. Ajzen, I. The Theory of Planned Behavior. Organ. Behav. Hum. Decis. Process. 1991, 50, 179-211. [CrossRef]
- 41. Ajzen, I.; Fishbein, M. Understanding Attitudes and Predicting Social Behaviour; Prentice-Hall: Englewood Cliffs, NJ, USA, 1980.
- 42. Engel, J.F.; Kollat, D.T.; Blackwell, R.D. Consumer Behavior; Dryden Press: Hinsdale, IL, USA 1978.
- 43. Blackwell, R.D.; Miniard, P.W.; Engel, J.F. *Consumer Behavior*; Harcourt College Publishers: San Diego, CA, USA, 2001.
- 44. Bargeman, B.; van der Poel, H. The Role of Routines in the Vacation Decision-Making Process of Dutch Vacationers. *Tour. Manag.* **2006**, *27*, 707–720. [CrossRef]
- 45. Hyde, K.F. Information Processing and Touring Planning Theory. *Ann. Tour. Res.* 2008, 35, 712–731. [CrossRef]
- Smallman, C.; Moore, K. PROCESS STUDIES OF TOURISTS' DECISION-MAKING. Ann. Tour. Res. 2010, 37, 397–422. [CrossRef]
- Tsao, W.C.; Hsieh, M.T.; Shih, L.W.; Lin, T.M.Y. Compliance with EWOM: The Influence of Hotel Reviews on Booking Intention from the Perspective of Consumer Conformity. *Int. J. Hosp. Manag.* 2015, 46, 99–111. [CrossRef]
- 48. Lin, C.-T. Examining E-Travel Sites: An Empirical Study in Taiwan. *Online Inf. Rev.* **2010**, *34*, 205–228. [CrossRef]
- 49. Kucukusta, D.; Law, R.; Besbes, A.; Legohérel, P. Re-Examining Perceived Usefulness and Ease of Use in Online Booking. *Int. J. Contemp. Hosp. Manag.* **2015**, *27*, 185–198. [CrossRef]
- 50. Kim, H.; Kim, T.; Shin, S.W. Modeling Roles of Subjective Norms and ETrust in Customers' Acceptance of Airline B2C ECommerce Websites. *Tour. Manag.* **2009**, *30*, 266–277. [CrossRef]
- 51. Ho, C.I.; Lee, P.C. Are Blogs Still Effective to Maintain Customer Relationships? An Empirical Study on the Travel Industry. *J. Hosp. Tour. Technol.* **2015**, *6*, 5–25.
- 52. Mohd Suki, N.; Mohd Suki, N. Flight Ticket Booking App on Mobile Devices: Examining the Determinants of Individual Intention to Use. *J. Air Transp. Manag.* **2017**, *62*, 146–154. [CrossRef]
- 53. Liébana-Cabanillas, F.; Marinković, V.; Kalinić, Z. A SEM-Neural Network Approach for Predicting Antecedents of m-Commerce Acceptance. *Int. J. Inf. Manag.* 2017, 37, 14–24. [CrossRef]
- 54. McQuail, D.; Windahl, S. *Communication Models for the Study of Mass Communications*; Routledge: Abington-on-Thames, UK, 2015.
- 55. DeLone, W.H.; McLean, E.R. The DeLone and McLean Model of Information Systems Success: A Ten-Year Update. *J. Manag. Inf. Syst.* 2003, *19*, 9–30.
- 56. Hossain, M.A.; Kim, M. Does Multidimensional Service Quality Generate Sustainable Use Intention for Facebook? *Sustainability* **2018**, *10*, 2283. [CrossRef]
- 57. Wen, I. An Empirical Study of an Online Travel Purchase Intention Model. *J. Travel Tour. Mark.* 2012, 29, 18–39. [CrossRef]
- Chung, N.; Lee, H.; Lee, S.J.; Koo, C. The Influence of Tourism Website on Tourists' Behavior to Determine Destination Selection: A Case Study of Creative Economy in Korea. *Technol. Forecast. Soc. Chang.* 2015, 96, 130–143. [CrossRef]

- Kim, W.G.; Ma, X.; Kim, D.J. Determinants of Chinese Hotel Customers' e-Satisfaction and Purchase. *Tour. Manag.* 2006, 27, 890–900. [CrossRef]
- 60. Ryan, C.; Rao, U. Holiday Users of the Internet—Ease of Use, Functionality and Novelty. *Int. J. Tour. Res.* **2008**, *10*, 329–339. [CrossRef]
- 61. Eastin, M.S.; LaRose, R. Internet Self-Efficacy and the Psychology of the Digital Divide. *J. Comput. Commun.* **2006**, *6*. [CrossRef]
- 62. Ayeh, J.K. Travellers' Acceptance of Consumer-Generated Media: An Integrated Model of Technology Acceptance and Source Credibility Theories. *Comput. Human Behav.* **2015**, *48*, 173–180. [CrossRef]
- 63. Sparks, B.A.; Browning, V. The Impact of Online Reviews on Hotel Booking Intentions and Perception of Trust. *Tour. Manag.* 2011, 32, 1310–1323. [CrossRef]
- 64. Liang, H.; Xue, Y.; Zhang, Z. Understanding Online Health Information Use: The Case of People with Physical Disabilities. J. Assoc. Inf. Syst. 2017, 18, 433–460. [CrossRef]
- 65. Xu, J.; Benbasat, I.; Cenfetelli, R.T. Integrating Service Quality with System and Information Quality: An Empirical Test in the E-Service Context. *MIS Q.* **2013**, *37*, 777–794. [CrossRef]
- 66. Wang, W.; Wang, Y.; Liu, E. The Stickiness Intention of Group-Buying Websites: The Integration of The Commitment-Trust Theory and E-Commerce Success Model. *Inf. Manag.* **2016**, *53*, 57. [CrossRef]
- 67. Kuo, Y.C.; Walker, A.E.; Schroder, K.E.E.; Belland, B.R. Interaction, Internet Self-Efficacy, and Self-Regulated Learning as Predictors of Student Satisfaction in Online Education Courses. *Internet High. Educ.* **2014**, *20*, 35–50. [CrossRef]
- 68. Venkatesh, V.; Thong, J.Y.L.; Chan, F.K.Y.; Hu, P.J.H. Managing Citizens' Uncertainty in e-Government Services: The Mediating and Moderating Roles of Transparency and Trust. *Inf. Syst. Res.* **2016**, *27*, 87–111. [CrossRef]
- Kim, D.Y.; Park, J.; Morrison, A.M. A Model of Traveller Acceptance of Mobile Technology. *Int. J. Tour. Res.* 2008, 10, 393–407. [CrossRef]
- 70. Hair, J.F.; Black, W.C.; Babin, B.J.; Anderson, R.E. *Multivariate Data Analysis*, 7th ed.; Prentice Hall: Englewood Cliffs, NJ, USA, 2009.
- 71. Fornell, C.; Larcker, D.F. Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *J. Mark. Res.* **1981**, *18*, 39. [CrossRef]
- 72. Wu, J.; Zeng, M.; Xie, K.L. Chinese Travelers' Behavioral Intentions toward Room-Sharing Platforms: The Influence of Motivations, Perceived Trust, and Past Experience. *Int. J. Contemp. Hosp. Manag.* **2017**, *29*, 2688–2707. [CrossRef]



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