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Impact of Perceived Risk and Source Credibility on Intention to Use of Consumer Generated Contents for Travel Planning

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ABSTRACT

In recent years, potential travellers still hesitate to adopt consumer-generated contents (CGC) websites as their main source of information for travel planning purposes. This study investigates the effects of source credibility on risk perceived by social media users to facilitate the use of CGC by potential travellers. Technology acceptance model is used and extended with perceived risk as the antecedent of perceived usefulness and ease of use. Further, two dimensions of source credibility theory namely trustworthiness and expertise are added to the model as determinants of perceived risk. Collected data from 211 Iranian online tourists were analysed using SmartPLS to understand the effect of perceived risk on tourists' behavioural intention to use CGC for future travel planning purposes. The findings of the study showed negative effect of source credibility on risk perceived by potential online tourists. The results has shed more lights on the effects of risk perceived by online tourists on their CGC adoption intention in the context of tourism. It can boost the general understanding of CGC adoption by online tourists for travel planning purposes.

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INTRODUCTION

Social media has been recognized as a powerful online networking tool while it's penetrating into everyday social and economic life of people (Zeng and Gerritsen, 2014). Social media is affecting destinations and businesses in the tourism industry in an unprecedented manner (Munar and Jacobsen, 2014).

Considering the fact that potential tourists refer to social media for searching travel-related information (Edwards *et al*., 2017) and given the experiential nature of tourism, Consumer-generated contents (CGC) has a significant impact on the process of travel-related decision making (Yoo and Gretzel, 2016). CGC websites have become a major information source for potential travellers. eMarketer (2017) estimated that around 71% of the Internet users will use social networking sites on a regular basis.

Harrigan *et al*. (2017) and Kim *et al*. (2017) have studied the usage of CGC websites in the context of tourism and they confirmed the fact that both potential tourists and service providers utilize CGC websites for different purposes. These studies revealed that individuals adopt CGC websites to discuss and exchange information about products and services and make informed decisions. Tourism products and service providers also use these websites to monitor tourists' activities in the online environment and interact with them so they can optimize their marketing activities (Költringer and Dickinger, 2015).

Despite all, the reliability of the CGC has been questioned in recent years (Filieri *et al*., 2015) which cause in the perception of risk in CGC websites users. This kind of perception toward CGC websites is due to the fact that the source of information on these websites is mostly anonymous. CGC websites users should evaluate the contents of these websites and confront with the risk of applying other users' opinion in their travel planning process. The question here is how to lower the risk perceived by potential tourists when they are using CGC websites to encourage the usage of these websites for travel planning purposes?

Primary objective of this study is to investigate the factors that drive behavioural intention of potential tourists regarding the use of CGC websites and to what extent trust perception affects the perceived risk of the potential tourist while they are searching for online information on CGC websites.

REVIEW OF LITERATURE

Information Gathering and CGC

The distribution of travel-related information has changed with the emergence of online platforms. The advent of web technologies such as online communities and social networking sites (SNSs) has affected the process of searching for travel information and choice of a destination by providing platforms for social interactions and sharing information (Hajli, 2014). Social media helps to reduce the distances by providing a platform for online sharing of experiences, recommendations, satisfaction and disappointments with other people, freely, easily and free of any charges (Sotiriadis and van Zyl, 2013).

This wave of online information available to a wide range of potential travellers has made the Internet as the dominant mode of search for travel-related information (Xiang and Gretzel, 2010). However, being exposed to such a huge amount of information can make the process of searching for travel-related information a very scary task. One of the main sources of online information for travel products and services is online review sites which include positive and negative reviews posted by travellers. These CGC are considered more credible since they are created by other experienced travellers and not by the service providers so people usually tend to accept their opinion more easily. The fact that other consumers have already experienced a tourism product makes CGC an influential source of information for prospective travellers.

Perceived risk regarding CGC

According to researches on the topic of consumer behaviour, buying a product is always accompanied by the feeling of uncertainty about the possible consequences of a decision (Flanagin *et al*., 2014). Due to the intangible nature of tourism, hindsight regarding its products and services is only available upon the actual time of consumption (Mohammed Abubakar, 2016). This insecure feeling during the purchase process (Horner and Swarbrooke, 2016) make the prospective tourists gather pre-purchase information and for this purpose, they usually rely on other users' experience.

Consumers by referring to CGC websites try to reduce this uncertainty by reading other consumers opinion about a product or service. However, the contents of the CGC websites are not always trustworthy. Risk perception affects the adoption of social media in a way that high level of perceived risk may lead to exaggerated uncertainties on SNSs while a low level of the perceived risk may lead to underestimated danger (Chen, 2013).

There are several concerns related to the nature of CGC websites that prompts the perception of risk among users of these websites. In some cases, the CGC websites are associated with a higher level of risk perceived by users when the provided information is contradictory (Book, Tanford, Montgomery and Love, 2018). Sometimes, the possibility of faking identities in the online environment is the origin of such risk perception (Ayeh *et al*., 2013a). Another source of perceived risk is the fact that evaluating the authenticity of a source or a content is the responsibility of CGC websites user which is a complicated yet important task (Filieri *et al*., 2015).

Theory and Hypotheses

Uncertainty implied in consumer purchase decision is known as the initial concept of risk (Zhang *et al*., 2017). Bauer (1960) defined perceived risk as a combination of the uncertainty of the outcomes of a decision plus the seriousness of the outcome of a wrong decision. Further Suki (1970) defined perceived risk as the "consumer's subjective expectation of suffering a loss in pursuit of a desired outcome" (p.4).

Risk perceived by online customers is known as one of the main barriers to online activities (Wang *et al*., 2016). However, some studies define perceived risk as a state of uncertainty (Boyko *et al*., 2017), there are also a significant numbers of studies which define several dimensions for perceived risk namely economic, function, security, time, privacy, social, service, psychological (Chiu *et al*., 2014; Lee, 2017; Zhang *et al*., 2012). Nevertheless, what is evident here is that perceived risk in one way or another negatively affect human behaviour in the online environment (Radu *et al*., 2016).

The relationship between perceived risk with behavioural intention is the subject of research in various fields of study such as medical, Internet banking and online book purchase (Schnall *et al*., 2015; Tan and Leby Lau, 2016; Zhang *et al*., 2017). Therefore, it is expected that if a prospect traveller perceives a CGC website as risky to use, then the possibility of intention to use that website for travel information gathering will be negatively affected. Thus, the following hypothesis is proposed:

H1. There is a negative relationship between perceived risk and behavioural intention.

In addition, previous studies established the relationships between perceived risk with perceived ease of use and perceived usefulness (Hansen *et al*., 2018; Nguyen and Huynh, 2018). Therefore, it can be said that risk perception may affect the usefulness and ease of use of a CGC website in a way that if a user believes that a website is not secure he or she may find the website useless and difficult to use. Therefore, this study put forth the following hypotheses:

H2. There is a negative relationship between perceived risk and usefulness.

H3. There is a negative relationship between perceived risk and ease of use.

Credibility simply refers to the confidence in the trueness of the provided information to be a reflection of realities (Holm *et al*., 2018). In an early attempt, Hovland *et al*. (1953) described source credibility as the validity of a source and its content. Yoo and Gretzel (2011) indicated that credibility depends on the perception of the user of a content and cannot be considered as the intrinsic characteristic of a source. Among different dimensions proposed for source credibility (Wang *et al*., 2018; Westerman *et al*., 2014), trustworthiness and expertise seem to be the two well-established dimensions (Ohanian, 1990). Hovland *et al*. (1953), defined trustworthiness as "the degree of confidence in the communicator's intent to communicate the assertions he considers most valid" and expertise as "the extent to which a communicator is perceived to be a source of valid assertions" (Hovland *et al*., 1953, p. 21).

Credibility has a great importance when it comes to CGC websites and especially the use of CGC in the context of tourism. Due to the intangible nature of tourism, potential travellers refer to the online environment to gather travel-related information (Balouchi *et al*., 2017). Despite the growing importance of CGC websites, there are still some concerns regarding the credibility of the content of CGC websites. The popularity of these websites is due to the contributors who have no special interest, however, this anonymity of the content creators raises some concerns regarding the genuine intention of the contributors (Wagenknecht *et al*., 2016).

The relationship between two dimensions of source credibility namely, trustworthiness and expertise with perceived risk have been validated in the different contexts such as online shopping (Nepomuceno *et al*., 2014) and food hazard (Hussain *et al*., 2017). Therefore, it is likely that the trustworthiness and expertise of the content creators in CGC websites mitigate the risk perceived by prospective tourists. As a result, this study proposes the following hypotheses:

H4. There is a negative relationship between trustworthiness and perceived risk.

H5. There is a negative relationship between expertise and perceived risk.

Furthermore, the expertise of the CGC creators may affect the trustworthiness perceived by users, meaning that if users believe that the content creator is expert in the subject he or she is reviewing, they consider that source as the most valid. Therefore, the following hypothesis has been posited:

H6. There is a positive relationship between expertise and trustworthiness.

Retrieved from Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM) is recognized as a parsimonious model which can predict and explain adoption and usage behaviour of new information technologies (Taylor and Todd, 1995). TAM is among the predominant theories (tom Dieck *et al*., 2017) and most influential information system models (Kabir *et al*., 2017) for researching the new technology acceptance behaviour.

TAM specifies that acceptance behaviour of technology users is determined by two factors of perceived usefulness and perceived ease of use of a system (Lee *et al*., 2003). Perceived usefulness is defined as "People tend to use or not use an application to the extent they believe it will help them perform their job better" and perceived ease of use is defined as "People believe that the systems are too hard to use and that the performance benefits of usage are outweighed by the effort of using the application" (Davis, 1989, p. 320). In the context of this study, perceived usefulness and perceived ease of use refer to the extent that individuals believe that using CGC websites will facilitate the process of travel planning and make it free from any efforts.

The relationship between the two main factors of TAM namely perceived usefulness and perceived ease of use with behavioural intention have been documented in the previous studies. Alalwan *et al*. (2016) and Calisir *et al*. (2015) in different contexts such as mobile banking and online learning confirmed the existence of a positive effect of perceived usefulness and perceived ease of use on the behavioural intention of information technology users. Hence, this study hypothesizes that individuals' behavioural intention of using CGC websites for travel planning purposes is influenced by their perception toward a CGC website usefulness as well as its ease of use:

H7. There is a positive relationship between usefulness and behavioural intention.

H8. There is a positive relationship between ease of use and behavioural intention.

In short, this study proposed a research model (Figure 1) to examine the relationships between trustworthiness, expertise, perceived risk, perceived usefulness, perceived ease of use and behavioural intention to adopt CGC websites for travel planning purposes.

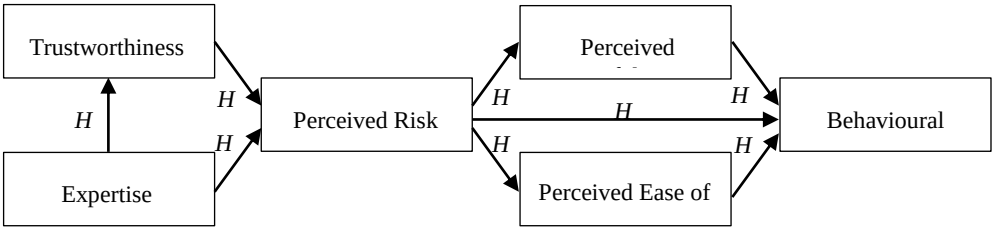

Figure 1 Proposed Research Model

RESEARCH METHODOLOGY

Data Collection

An online survey was developed and conducted via formsite.com. Web-based surveys help to minimize the cost and effort needed for the process of creating and distributing the survey (McDonald *et al*., 2017). The data was collected from online Iranian tourists whom at least one time have used CGC websites for travel planning. The chosen sampling technique of this study was Snowball sampling in which each respondent was asked to send the link of the questionnaire to those whom he or she believed that were qualified to participate in the study.

Out of 283 people who clicked on the link of the questionnaire, 241 respondents continue to answer the questions. Among the respondents, 23 were screened out since their answer to the screening question was negative, meaning that they have never used CGC websites for travelling purposes. An extra 7 responses were removed because of the missing data or outliers. In the end, 211 usable responses were yielded, resulting in 74.5 response rate.

Measurement Scale

The questionnaire for this study started with a screening question to make sure respondents only get to fill out the survey if they have ever used CGC websites to plan for their travel. The next part of the questionnaire was dedicated to the variables related questions. In this part, there were 33 items with a seven-point Likert scale (ranging from 1 = strongly disagree to 7 = strongly agree) to measure all the variables. In the last part, the demographic questions were placed to provide a better understanding of the characteristics of the respondents by asking questions regarding respondents gender, age, level of education and frequency of using the Internet.

The measurement items of the present study were adopted from the previous research. After some minor changes and necessary validations, the items were adapted to the context of this study. Table 1 summarizes the measurement items adopted and developed for the purpose of this study.

Table 1 Scales of the study

Construct	Measure	Source
Perceived Usefulness		
USE1	Using CGC websites would improve my travel planning	Davis (1989)
USE2	Using CGC websites would make it easier to plan my travel	Gefen *et al.* (2000)
USE3	Using CGC websites increase my performance in travel planning	Gefen *et al.* (2000)
USE4	Overall, I find CGC websites useful for my travel planning	Gefen *et al.* (2000)
Perceived Ease of Use		
EOU1	Learning to use CGC websites would be easy	Davis (1989)
EOU2	It is easy to find necessary information on CGC websites	Pavlou (2003)
EOU3	It is easy to use the contents of CGC websites	Davis (1989)
EOU4	It would be easy to become skilful at using CGC websites	Davis (1989)
EOU5	Overall, I find CGC websites easy to use.	Davis (1989)
Trustworthiness		Ohanian (1990)
	In my opinion tourists who write CGC websites contents are	
TRU1	Reliable	
TRU2	Honest	
TRU3	Trustworthy	
TRU4	Sincere	
Expertise		Ohanian (1990)
	In my opinion tourists who write CGC websites contents are	
EXP1	Experienced	
EXP2	Experts	
EXP3	Qualified	
EXP4	Skilled	
Perceived Risk		
RIS1	Using CGC websites is not secure	Pavlou (2003)
RIS2	Disclosing personal information on CGC websites is risky	Chang and Wu (2012)
RIS3	Too much information on CGC websites may cause tensions	Stone and Grønhaug (1993)
RIS4	CGC websites' contents may not be dependable and reliable	Stone and Grønhaug (1993)
RIS5	Overall, it is risky to use CGC websites' content	Stone and Grønhaug (1993)
Behavioural Intention		
BI1	I do not hesitate to use CGC websites for searching travel information	Gefen *et al.* (2000)
BI2	I would use CGC websites' contents to plan for my next trip	Gefen *et al.* (2000)
BI3	I plan on using CGC websites' content for my travel planning	Venkatesh *et al.* (2003)
BI4	I am very likely to use CGC websites for searching travel information	Gefen *et al.* (2000)

Data Analysis

This study, prior to estimating the structural model, employed Excel to eliminate missing and unengaged data. Later, the outliers were removed with the help of SPSS 24. This study applied the partial least squares structural equation modelling (PLS-SEM) using SmartPLS 3.2 to estimate path models with latent variables (Ringle and Sarstedt, 2016). PLS was the most suitable technique since it is preferred when the research objective is to predict and develop a theory (Ayeh *et al*., 2013b).

RESULTS

Descriptive Analysis

Table 2 demonstrates the demographic profile of the sample respondents.

Table 2 Profile of respondents

Factors		Number	Percent
Gender	Men	84	39.8
	Women	127	60.2
Age	18-29	62	29.4
	30-49	116	55.0
	50-64	30	14.2
	+64	3	1.4
Education	Undergraduate	24	11.4
	Graduate	57	27
	Post Graduate	127	60.2
	Other	3	1.4
Frequency of using internet			
	A few times a month or less	13	6.2
	A few times a week	29	13.7
	Once a day	50	23.7
	A few times a day	119	56.4

Measurement Model

The measurement model in PLS is assessed by the reliability and the validity test. The two main criteria for measuring the reliability or internal consistency of each construct are Cronbach's alpha and composite reliability (Fornell and Larcker, 1981). Convergent validity and discriminant validity need to be assessed to confirm the validity of the measurement model. For this study, as shown in Table 3, all the values were above the minimum required.

Table 3 Measurement model

Items	Loading	Composite Reliability	AVE	Cronbach's alpha
Perceived Usefulness		0.951	0.831	0.951
PU1	0.735			
PU2	0.951			
PU3	0.964			
PU4	0.975			
Perceived Ease of Use		0.965	0.848	0.965
PEOU1	0.832			
PEOU2	0.898			
PEOU3	0.981			
PEOU4	0.963			
PEOU5	0.925			
Expertise		0.913	0.724	0.914
EXP1	0.884			
EXP2	0.759			
EXP3	0.877			
EXP4	0.879			
Trustworthiness		0.927	0.763	0.927
TRU1	0.924			
TRU2	0.836			
TRU3	0.955			
TRU4	0.765			
Perceived Risk		0.964	0.844	0.964
PR1	0.890			
PR2	0.964			
PR3	0.953			
PR4	0.924			
PR5	0.859			
Behavioural Intention		0.966	0.877	0.966
BI1	0.939			
BI2	0.958			
BI3	0.917			
BI4	0.931			

Altogether, the measurement model exhibited the adequate convergent validity and discriminant validity (Table 4).

Table 4 The square root of AVE (Discriminant Validity)

	Behavioural Intention	Expertise	Ease of Use	Risk	Usefulness	Trustworthiness
Behavioural Intention	**0.937**					
Expertise	0.607	**0.851**				
Ease of Use	0.413	0.568	**0.921**			
Risk	-0.489	-0.294	-0.282	**0.919**		
Usefulness	0.670	0.684	0.446	-0.463	**0.912**	
Trustworthiness	0.617	0.658	0.504	-0.499	0.726	**0.873**

*Diagonal elements (bold) are Square root of AVEs. Off-diagonal elements are Inter-construct correlation. Square root of AVEs should exceed the Inter-construct correlation for adequate discriminant validity.

Structural Model and Hypotheses testing

Coefficient of determination (R^2) values as a criterion of model's predictive accuracy and Stone-Geisser's Q^2 value as a criterion of model's predictive relevance are the most commonly used measures for evaluating the structural model (Hair *et al*., 2016). Since all the values for R^2 and Q^2 were satisfactory, it can be concluded that the proposed model has a high predictive power (Table 5).

Table 5 Result of R2 and Q2

	R^2	Q^2
Behavioural Intention	0.501	0.398
Perceived Usefulness	0.214	0.159
Perceived Ease of Use	0.079	0.060
perceived Risk	0.251	0.182
Trustworthiness	0.433	0.274

Hypothesis testing is conducted through a bootstrap resampling procedure with 500 subsamples in Smart-PLS to make sure each path coefficient significantly differs from zero. As demonstrated in Table 6, out of 8 hypotheses, 7 are empirically supported.

Table 6 Summary of hypotheses result

Hypotheses			Hypothesized direction	Path coefficient	*t* value	Result
Perceived Risk	→	Behavioural Intention	-	-0.216	3.487**	Supported
Trustworthiness	→	Perceived Risk	-	-0.538	5.640**	Supported
Expertise	→	Perceived Risk	-	0.059	0.683*	Not Supported
Expertise	→	Trustworthiness	+	0.658	11.181**	Supported
Perceived Ease of Use	→	Behavioural Intention	+	0.123	2.360*	Supported
Perceived Usefulness	→	Behavioural Intention	+	0.515	7.327**	Supported
Perceived Risk	→	Perceived Usefulness	-	-0.463	6.079**	Supported
Perceived Risk	→	Perceived Ease of Use	-	-0.282	3.635**	Supported

** P < 0.01
* P < 0.05

The results are demonstrated in Figure 2.

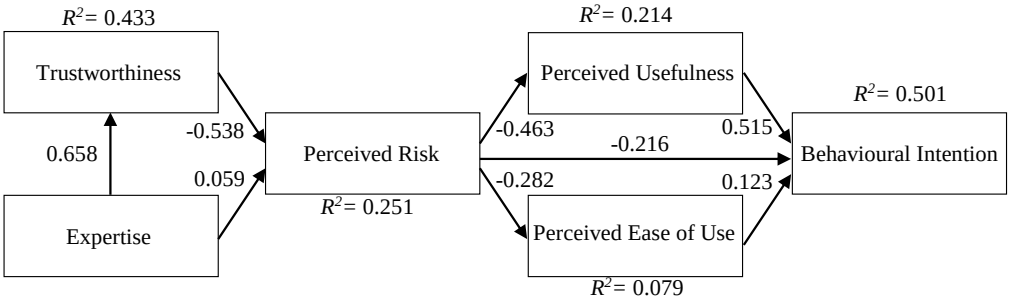

Figure 2 Structural model results

DISCUSSION AND CONCLUSIONS

This study intended to examine the effect of perceived risk on the behavioural intention of tourists in adopting CGC websites for planning their trip and to what extent source credibility may reduce the risk perceived by prospective tourists toward using these websites.

This study found significant support on the negative effect of perceived risk on TAM constructs which indicated that online tourists have more intention to use CGC websites while they believe that using a specific CGC website contain no possible risk.

Perceived risk is a key barrier for online tourists who intend to utilize CGC websites as a source of information (Chiu *et al*., 2014). On the other hand, Chen (2017) indicated that the credibility of a source will lessen the risk perceived by users. The result of this study, however, indicated that as long as CGC website users believe in the genuine intentions of the content contributors, it does not matter if the contributors are expert in the subject they are discussing.

Therefore, it can be concluded that, the more prospective travellers have confidence in the intention of content creators on CGC websites, the more likely it is that they consider these contents valid and perceive less risk. This way the intention to use a CGC website for travel planning by potential travellers will increase significantly.

Theoretical Contribution

Despite the fact that risk perceived by online users act as a major obstacle in the adoption of online platforms (Wang *et al*., 2016), the literature on this concept in regards to CGC websites is not sufficient. The findings of this study present the followings significant theoretical implications.

This paper by investigating the possible relationship between main constructs of TAM, source credibility dimensions and perceived risk adds to the body of knowledge and hereby enhances the understanding of potential online tourists' perception of risk regarding searching information on the online environment. Furthermore, this study confirmed and validated measurement items as well as the suggested relationships for the proposed factors of the study.

The results demonstrated that perceived risk on social media environment is strongly affected by trustworthiness and not expertise. Therefore, it can be concluded that the genuine intention of the person who writes a recommendation or complain is of a higher value for Iranian tourists than the content contributors level of expertise.

The fact that the CGC websites contributors are expert in the subjects that they are reviewing, does not have any significant relationship with the risk perceived by potential tourists. This can provide a valuable insight for researchers to either redefine the concept of expertise in the context of CGC websites adoption or investigate other dimensions of source credibility to help to mitigate the perceived risk.

Practical implications

This study empirically tested the risk perception among prospective Iranian tourists regarding using CGC websites prior to their travel. The results confirm the role of perceived risk, trustworthiness and two main factors

of TAM in the behavioural intention of tourists regarding to the use of CGC websites for travel planning purposes.

The results of this study contribute to the identification of potential areas in which marketing effort must be dedicated. As the results demonstrate, the trustworthiness of a source significantly reduces the risk perceived by online tourists in CGC context. In particular, if CGC websites developers can assure users that the provided contents are genuine and honest, the intention of the content creators is good and reflect their actual opinions or feelings, the possibility of using that CGC websites by prospective traveller will increase significantly.

Identifying the factors that prompt a secure search environment for potential travellers would provide a guideline on how to develop and design the CGC websites that provide a friendly environment to lessen the perception of risk. Altogether, the secure feeling will encourage the online tourists to visit a website more often and interact with other users in a more productive way.

Limitations and future research

This study has some limitations that provide opportunities for further research. The survey was conducted using Iranian online tourists who may not be representative of all online prospective travellers, therefore, the findings are limited to Iranian context and not generalizable to other populations. Thus, future studies can replicate this study in the context of other countries or conduct a cross-country comparison to gain a better understanding regarding CGC websites adoption behaviour.

The focus of this study was on the process of information gathering and travel planning meaning the pre-travel phase. Other studies can focus on the two other phases of travel meaning during and after travel. They can focus on how travellers utilize CGC websites to gather information while they are in a destination or how they share their experiences during or after their trip on CGC websites.

This study investigated the source credibility only from two dimensions of trustworthiness and expertise. It is possible that other dimensions like goodwill (Westerman *et al*., 2014) also affect the risk perception. Therefore, it is recommended that future studies look into the other dimensions of source credibility.

REFERENCES

Alalwan, A. A., Dwivedi, Y. K., Rana, N. P. P. and Williams, M. D. (2016) Consumer adoption of mobile banking in Jordan: Examining the role of usefulness, ease of use, perceived risk and self-efficacy. *Journal of Enterprise Information Management*, 29(1), pp. 118–139.

Ayeh, J. K., Au, N. and Law, R. (2013a) 'Do We Believe in TripAdvisor?' Examining Credibility Perceptions and Online Travelers' Attitude toward Using User-Generated Content. *Journal of Travel Research*. 52(4), pp. 437–452.

Ayeh, J. K., Au, N. and Law, R. (2013b) Predicting the intention to use consumer-generated media for travel planning. *Tourism Management*. 35, pp. 132–143.

Balouchi, M., Aziz, Y. A., Hasangholipour, T., Khanlari, A., Abd Rahman, A. and Raja-Yusof, R. N. (2017) Explaining and predicting online tourists' behavioural intention in accepting consumer generated contents. *Journal of Hospitality and Tourism Technology*, 8(2).

Bauer, R. A. (1960) 'No Title', in American Marketing Association (ed.) *Consumer behavior as risk taking*. Proceedings of the 43rd National Conference of the American Marketing Assocation, June 15, 16, 17, Chicago, Illinois, 1960.

Book, L. A., Tanford, S., Montgomery, R. and Love, C. (2018) Online Traveler Reviews as Social Influence: Price Is No Longer King. *Journal of Hospitality and Tourism Research*. 42(3), pp. 445–475.

Boyko, V., Rudnichenko, N., Kramskoy, S., Hrechukha, Y. and Shibaeva, N. (2017) An Improved Particle Swarm Optimization Algorithm with Repair Procedure Á Swarm intelligence. pp. 1–16. doi: 10.1007/978-3-319-45991-2.

Calisir, F., Gumussoy, C. A., Bayraktaroglu, A. E. and Karaali, D. (2015) Predicting the Intention to Use a Web-Based Learning System : Perceived Content Quality , Anxiety , Perceived System Quality , Image , and the Technology Acceptance Model. 24(5), pp. 515–531. doi: 10.1002/hfm.

Chang, M. L. and Wu, W. Y. (2012) Revisiting Perceived Risk in the Context of Online Shopping: An Alternative Perspective of Decision-Making Styles. *Psychology and Marketing*. 29(5), pp. 378–400. doi: 10.1002/mar.20528.

Chen, M. F. (2017) Modeling an extended theory of planned behavior model to predict intention to take precautions to avoid consuming food with additives. *Food Quality and Preference*. Elsevier Ltd, 58, pp. 24–33. doi: 10.1016/j.foodqual.2017.01.002.

Chen, R. (2013) Living a private life in public social networks: An exploration of member self-disclosure. *Decision Support Systems*. Elsevier B.V. 55(3), pp. 661–668. doi: 10.1016/j.dss.2012.12.003.

Chiu, C. M., Wang, E. T. G., Fang, Y. H. and Huang, H. Y. (2014) Understanding customers' repeat purchase intentions in B2C e-commerce: The roles of utilitarian value, hedonic value and perceived risk. *Information Systems Journal*. 24(1), pp. 85–114. doi: 10.1111/j.1365-2575.2012.00407.x.

Davis (1989) Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*. 13(3), pp. 319–340. doi: 10.2307/249008.

Edwards, D., Cheng, M., Wong, I. A., Zhang, J. and Wu, Q. (2017) Ambassadors of knowledge sharing. *International Journal of Contemporary Hospitality Management*. 29(2), pp. 690–708. doi: 10.1108/IJCHM-10-2015-0607.

eMarketer, 2013. eMarketer Updates Worldwide Social Network User Figures. https://www.emarketer.com/Article/eMarketer-Updates-Worldwide-Social-Network-User-Figures/1016178 (accessed 11 April 2018)

Filieri, R., Alguezaui, S. and McLeay, F. (2015) Why do travelers trust TripAdvisor? Antecedents of trust towards consumer-generated media and its influence on recommendation adoption and word of mouth. *Tourism Management*. Elsevier Ltd, 51, pp. 174–185. doi: 10.1016/j.tourman.2015.05.007.

Flanagin, A. J., Metzger, M. J., Pure, R., Markov, A. and Hartsell, E. (2014) Mitigating risk in ecommerce transactions: Perceptions of information credibility and the role of user-generated ratings in product quality and purchase intention. *Electronic Commerce Research*. 14(1), pp. 1–23.

Fornell, C. and Larcker, D. (1981) Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*. 18(3), pp. 39–50.

Gefen, D., Straub, D. W. and Boudreau, M.-C. (2000) Structural Equation Modeling and Regression : Guidelines for Research Practice. *Communications of the Association for Information Systems*. 4(October), p. 7. doi: 10.1.1.25.781.

Hair Jr, J. F., Hult, G. T. M., Ringle, C. and Sarstedt, M. (2016) *A primer on partial least squares structural equation modeling (PLS-SEM). Handbook of Market Research*. Sage Publications. doi: 10.1007/978-3-319-05542-8_15-1.

Hajli, M. N. (2014) A study of the impact of social media on consumers. *International Journal of Market Research*. 56(January), pp. 387–404. doi: 10.2501/IJMR-2014-025.

Hansen, J. M., Saridakis, G. and Benson, V. (2018) Risk, trust, and the interaction of perceived ease of use and behavioral control in predicting consumers' use of social media for transactions. *Computers in Human Behavior*. 80, pp. 197–206. doi: 10.1016/j.chb.2017.11.010.

Harrigan, P., Evers, U., Miles, M. and Daly, T. (2017) Customer engagement with tourism social media brands. *Tourism Management*. Elsevier Ltd, 59, pp. 597–609. doi: 10.1016/j.tourman.2016.09.015.

Holm, A. L., Karin, A., Arvid, B., Birkeland, K. and Severinsson, E. (2018) line nurse managers ' perceptions of the challenges involved in decision- - making when older patients ' wish to die. (June 2017), pp. 217–223. doi: 10.1002/nop2.131.

Horner, S. and Swarbrooke, J. (2016) *Consumer behaviour in tourism*. Routledge.

Hovland, C. I., Janis, I. L. and Kelley, H. H. (1953) Communication and persuasion: psychological studies of opinion change. *American Sociological Review*, pp. 355. doi: 10.2307/2087772.

Hussain, S., Ahmed, W., Jafar, R. M. S., Rabnawaz, A. and Jianzhou, Y. (2017) eWOM source credibility, perceived risk and food product customer's information adoption. *Computers in Human Behavior*. Elsevier Ltd, 66, pp. 96–102.

Kabir, M. A., Saidin, S. Z. and Ahmi, A. (2017) An extension of technology acceptance model to determine factors that influence the intention to use electronic collection system in Nigerian federal hospitals. *AIP Conference Proceedings*, 1891. doi: 10.1063/1.5005405.

Kim, S. E., Lee, K. Y., Shin, S. Il and Yang, S. B. (2017) Effects of tourism information quality in social media on destination image formation: The case of Sina Weibo. *Information and Management*. 54(6), pp. 687–702.

Költringer, C. and Dickinger, A. (2015) Analyzing destination branding and image from online sources: A web content mining approach. *Journal of Business Research*. 68(9), pp. 1836–1843.

Lee, Y. C. (2017) Adoption Intention of Cloud Computing at the Firm Level. *Journal of Computer Information Systems*. Taylor and Francis, 00(00), pp. 1–12. doi: 10.1080/08874417.2017.1295792.

Lee, Y., Kozar, K. A. and Larsen, K. R. T. (2003) The Technology Acceptance Model: Past, Present, and Future. *Communications of the Association for Information Systems*. 12(50), pp. 752–780.

McDonald, B., Haardoerfer, R., Windle, M., Goodman, M. and Berg, C. (2017) Implications of Attrition in a Longitudinal Web-Based Survey: An Examination of College Students Participating in a Tobacco Use Study. *JMIR Public Health and Surveillance*. 3(4), pp. e73. doi: 10.2196/publichealth.7424.

Mohammed Abubakar, A. (2016) Does eWOM influence destination trust and travel intention: A medical tourism perspective. *Economic Research-Ekonomska Istrazivanja*. 29(1), pp. 598–611.

Munar, A. M. and Jacobsen, J. K. S. (2014) Motivations for sharing tourism experiences through social media. *Tourism Management*. 43, pp. 46–54.

Nepomuceno, M. V., Laroche, M. and Richard, M. O. (2014) How to reduce perceived risk when buying online: The interactions between intangibility, product knowledge, brand familiarity, privacy and security concerns. *Journal of Retailing and Consumer Services*. 21(4), pp. 619–629.

Nguyen, T. D. and Huynh, P. A. (2018) Econometrics for Financial Applications. 760(December 2017). doi: 10.1007/978-3-319-73150-6.

Ohanian, R. (1990) Construction and Validation of a Scale to Measure Celebrity Endorsers' Perceived Expertise, Trustworthiness, and Attractiveness. *Journal of Advertising*. 19(3), pp. 39–52.

Pavlou, P. (2003) Consumer acceptance of electronic commerce: integrating trust and risk with the technology acceptance model. *International journal of electronic commerce*. 7(3), pp. 69–103.

Radu, A. C., Radu, A. V., Stoica, I. and Orzan, M. C. (2016) Internet users and usage. Implications and risks. *Quality - Access to Success*. 17(July), pp. 197–203.

Ringle, C. M. and Sarstedt, M. (2016) Gain more insight from your PLS-SEM results. *Industrial Management and Data Systems*. 116(9), pp. 1865–1886. doi: 10.1108/IMDS-10-2015-0449.

Schnall, R., Higgins, T., Brown, W., Carballo-Dieguez, A. and Bakken, S. (2015) Trust, perceived risk, perceived ease of use and perceived usefulness as factors related to mHealth technology use. *Studies in health technology and informatics*, pp. 467–471.

Sotiriadis, M. D. and van Zyl, C. (2013) Electronic word-of-mouth and online reviews in tourism services: The use of twitter by tourists. *Electronic Commerce Research*. 13(1), pp. 103–124. doi: 10.1007/s10660-013-9108-1.

Stone, R. N. and Grønhaug, K. (1993) Perceived Risk: Further Considerations for the Marketing Discipline. *European Journal of Marketing*. 27(3), pp. 39–50. doi: 10.2307/3149824.

Suki, N. M. (1970) An Empirical Study of Factors Affecting the Internet Banking Adoption among Malaysian Consumers? *The Journal of Internet Banking and Commerce*. 15(2), pp. 1–11.

Tan, E. and Leby Lau, J. (2016) Behavioural intention to adopt mobile banking among the millennial generation. *Young Consumers*. 17(1), pp. 18–31. doi: 10.1108/YC-07-2015-00537.

Taylor, S. and Todd, P. A. (1995) Understanding information technology usage: A test of competing models. *Information Systems Research*. pp. 144–176.

Tom Dieck, M. C., Jung, T. H., Kim, W. G. and Moon, Y. (2017) 'Hotel guests' social media acceptance in luxury hotels. *International Journal of Contemporary Hospitality Management*. 29(1), pp. 530–550.

Venkatesh, V., Morris, M. G., Davis, G. B. and Davis, F. D. (2003) User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), pp. 425–478. doi: 10.2307/30036540.

Wagenknecht, T., Teubner, T. and Weinhardt, C. (2016) The Impact of Anonymity on Communication Persuasiveness in Online Participation. in *Proceedings of the International Conference on Information Systems - Digital Innovation at the Crossroads, ICIS*, pp. 1–11.

Wang, L., Qian, D. and Zhu, L. (2018) The effect of system generated cues on microblog rewarding repost behavior - a source credibility perspective, *Journal of Electronic Commerce Research*, 19(1), pp. 104–118.

Wang, Y., Min, Q. and Han, S. (2016) Understanding the effects of trust and risk on individual behavior toward social media platforms: A meta-analysis of the empirical evidence. *Computers in Human Behavior*. 56, pp. 34–44.

Westerman, D., Spence, P. R. and Van Der Heide, B. (2014) Social Media as Information Source: Recency of Updates and Credibility of Information. *Journal of Computer-Mediated Communication*. 19(2), pp. 171–183. doi: 10.1111/jcc4.12041.

Xiang, Z. and Gretzel, U. (2010) Role of social media in online travel information search. *Tourism Management*. 31(2), pp. 179–188.

Yoo, K. H., and Gretzel, U. (2016) Use and Creation of Social Media by Travellers. in *Social media in travel, tourism and hospitality: Theory, practice and cases*, p. 189.

Yoo, K. H. and Gretzel, U. (2011) Influence of personality on travel-related consumer-generated media creation. *Computers in Human Behavior*. 27(2), pp. 609–621.

Zeng, B. and Gerritsen, R. (2014) What do we know about social media in tourism? A review. *Tourism Management Perspectives*. 10, pp. 27–36.

Zhang, L., Tan, W., Xu, Y. and Tan, G. (2012) Dimensions of Consumers' Perceived Risk and Their Influences on Online Consumers' Purchasing Behavior. *Communications in Information Science and Management Engineering*. 2(7), pp. 8–14.

Zhang, M., Zhu, M., Liu, X. and Yang, J. (2017) Why should I pay for e-books?. *The Electronic Library*. 35(3), pp. 472–493.

Zhang, Zhe, Hou and Yuansi (2017) The effect of perceived risk on information search for innovative products and services: the moderating role of innate consumer innovativeness. *Journal of Consumer Marketing*. 34(3), pp. 241–254.