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# Effects of Information Quality of Online Travel Agencies on Trust and Continuous Usage Intention: An Application of the SOR Model

Seul Ki LEE<sup>1</sup>, So Ra MIN<sup>2</sup>

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## Abstract

The purpose of this study was to investigate the relationship between information quality, Online Travel Agency (OTA) trust, and continuous usage intention provided by OTA through the application of the SOR (Stimulus-Organism-Response) model. To achieve the purpose of the study, 234 responses were used for analysis, and the hypotheses were tested through the SPSS v.21 program and AMOS v.21 programs. The research results can be classified into the following three categories. First, it was determined that accuracy, timeliness, and usefulness among the factors for information quality had a significant positive effect on OTA trust and continuous usage intention. Second, it was determined that OTA trust was found to have a significant positive effect on continuous usage intention. Third, it was determined that OTA trust had an indirect effect on the relationship between accuracy, timeliness, usefulness, and continuous usage intention among the factors for information quality. This study looked at the lower dimension of information quality, which was insufficient in the field of OTA. This study can be used as basic data to, in practice, build a user-centered informational provision environment by identifying the factors that promote the continuous usage intention of consumers, which is linked to the revenue of online travel agencies.

**Keywords:** Online Travel Agency, Information Quality, Trust, Continuous Usage Intention

**JEL Classification Code:** L15, L83, L86, M15

## 1. Introduction

The main section of an article should start with an introductory section which provides more details about the paper's purposes, motivation, research methods, and findings. The introduction should be relatively nontechnical, yet clear enough for an informed reader to understand the manuscript's contribution.

The development of information and communication technology has changed consumer behavior in the tourism sector. One of the changes that must be noted is the fact that the product search channel has expanded from offline to online. As the use of mobile devices becomes more

common, the Internet can be used anytime, anywhere. It has therefore become possible to easily search for information related to tourism and to establish a plan (Xiang et al., 2015). As a result, online search engines have become very powerful means of accessing tourism products (Xiang et al., 2008). As a result, the use of online travel agencies (OTA) has increased, and traditional travel agencies that have only secured offline channels have also created online platforms (Min & Lee, 2020).

The term "online travel agency" refers to a company that provides travel information, accommodation, transportation services, food and beverage services, and local activity products through an online platform based on an information system (Skalska, 2017). Typical examples include Agoda, Expedia, Hotels.com, Booking.com, and Trip.com. Online travel agencies have the advantage of providing information on tourism products with characteristics of experience goods in various forms that are difficult to evaluate before experiencing them directly (Tan & Wu, 2016; Yu & Sun, 2019). In such a situation, information quality has been suggested as a factor that positively affects consumer attitude, such as the perception of value or satisfaction with online travel agencies (Pham & Nguyen, 2019; Kaushik et al., 2017).

<sup>1</sup>First Author. Lecturer, Faculty of Business Administration, Sangmyung University, Seoul, Korea. Email: sklee4286@gmail.com

<sup>2</sup>Corresponding Author. Assistant Professor, Department of Airline Service, Osan University, Korea [Postal Address: 45, Cheonghak-ro, Osan-si, Gyeonggi-do, 18119, Korea] Email: srmin@osan.ac.kr

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In the study of online platform-based services, information quality is organized in multiple dimensions and research is currently being conducted (Lee & Levy, 2013). However, in the tourism field, a number of studies have set information quality as a single dimension. For this reason, it is not possible to present specific results on which factors of information quality have an effect. Recent attempts have been made to approach information quality through multiple dimensions (Ko & Lee, 2019; Zhu & Kim, 2019). However, studies examining the relationship between consumer attitude and behavior are insufficient. Therefore, this study utilized the SOR model to analyze the external stimuli that affected the internal state and behavioral response of consumers. The intent of this study was to determine the effect of the information quality of online travel agencies on the attitude and behavioral response of consumers.

Continuous usage intention has presently drawn attention as being a factor that can predict consumer behavioral responses related to information system-based services (Tso & Law, 2005). This is because the benefit to the company only occurs when consumers continue to use the information system-based service. It is also because of the possibility of additional investment (Bhattacharjee, 2001). In other words, it can be said that continuous use by consumers is essential for the success of an information system-based online travel agency in a competitive market. Therefore, in order to grasp the continuous usage intention of consumers using an online travel agency, it is necessary to understand the relationship with the information provided by the travel agency. In accordance with Bagozzi's (1981) logic that positive attitudes lead to positive behavioral intentions, trust in online travel agencies was set as an attitude variable for the study. This was decided upon because online transactions are one of the most important factors that influence purchasing behavior, rather than trust in people, as transaction characteristics that define purchases made in a non-face-to-face manner (Albayrak et al., 2020). Therefore, the purpose of this study was to investigate the relationship between information quality, online travel agency trust, and continuous usage intention provided by online travel agencies.

## 2. Literature Review

### 2.1. SOR (Stimulus-Organism-Response) Model

The SOR model is a concept that was extended from the S-R model in which the consumer behavioral response (R) is induced from the external environmental stimulus (S). This theory states that an internal state of the consumer, the organism (O), exists between the external environmental stimulus (S) and the consumer's behavioral response (R) (Xiao et al., 2019; Mehrabian & Russell, 1974). In other words, although the stimulus does not directly affect the

consumer's behavioral response, it can induce behavioral responses through emotional responses.

Stimulus refers to an external factor that is involved in consumer decision making. This includes information related to products provided by companies, information delivered by word-of-mouth, brand, advertisements, and price (Kim & Lennon, 2008; Jacoby, 2002). Organism refers to the inner state of the consumer, which means an emotional state such as experience, emotion, thought, or feeling (Vieria, 2013). Finally, response refers to behavioral response and is the final result according to the stimulus and internal state of external factors (Sherman et al., 1997).

In this study, the external stimulus was set as the quality of information provided by online travel agencies while trust in OTAs that consumers who use online travel agencies feel was set as the organism factor. Lastly, response was set as the online travel agency's continuous usage intention as it refers to the final action according to the online travel agency's stimulus. As online travel agency consumers have different levels of continuous usage intention, it was expected that they would respond differently according to the stimulus of external environmental factors such as information.

### 2.2. Information Quality

Information quality refers to the level of value perceived by the consumer in regard to information. The more helpful the information is for consumer decision making, the better (Zhu & Kim, 2019; Negash et al., 2003). Information is provided in a variety of formats such as sound, pictures, text, and video, and the quality of information is determined through the characteristics (Tarute et al., 2017). In online transactions, consumers are highly dependent on information quality to reduce uncertainty and make the most desirable purchase decision (Chen & Chang, 2018). For this reason, information quality is known to be one of the main driving forces that promote the online transaction process (Cai et al., 2004). Therefore, as information providers, companies need to look at the dimension of information quality that affects purchase decisions in order to provide information in a direction that will help consumers make those decisions.

The constituent factors of information quality are different depending on the researcher and are measured by configuring the factors appropriate to the research situation. First, in online commerce, information quality is the consumer's perception of information provided by things such as a mobile app or website. It also includes diversity and usefulness of content (Phuong & Dai Trang, 2018; Chen & Chang, 2018; Shin & Cho, 2019). Along with this, accurate and up-to-date information must be provided to promote consumer purchase intentions (Ali, 2016). As the types of data that can provide information are diversified, enjoyment or playfulness have been suggested as constituent factors of information quality (Choi et al., 2018).

Looking at the research related to online travel agencies, Filieri et al. (2015) suggested that timeliness, accuracy, and usefulness of information were all factors of information quality while Dutta et al. (2017) measured information quality with relevance and being up to date. Shin and Cho (2019) presented being up-to-date, accuracy, usefulness, and diversity as factors, and Zhu and Kim (2019) composed the factors of information quality as reliability, timeliness, ease, fidelity, liveliness, and playfulness. Therefore, among the sub-factors of information quality which have been widely studied in related previous studies, this study focused on the following: accuracy, timeliness, usefulness, diversity and playfulness.

### 2.3. OTA Trust

In general, trust means the willingness to depend on someone or something (Chung & Kwon, 2009). Trust in the exchange relationship in which a transaction takes place is the belief that exists when there is confidence in the other party. It refers to the belief that the company will meet the expectations of the consumer in regard to a transaction made between the two parties (Morgan & Hunt, 1994). Trust in online transactions refers to the positive belief that consumers voluntarily place in online sellers after learning the characteristics of online transactions (Pavlou, 2003). When it comes to business-to-consumer transactions (B2C) or business-to-business transactions (B2B), trust is important because it is an essential element that enables the sustained friendly relationship between business partners (Wang, 2009; Morgan & Hunt, 1994).

If the consumer does not trust the platform on which the online transaction takes place, the consumer will not complete the transaction (Kim et al., 2012). Because of this, online companies must strive to obtain customer trust (Jun et al., 2019). Therefore, companies have focused on identifying the factors that influence the formation of the trust perceived by consumers. Website service quality has been suggested as the representative research item for online travel agencies. Sub-factors of website service quality include website design, information quality, ease of use, usefulness, security, responsiveness, interactivity, possibility, and rewards (Albayrak et al., 2020; Thinh et al., 2019; Niu & Lee, 2018; Dutta et al., 2017; Fu Tsang et al., 2010). Different studies have shown different results for sub-factors that affect website service quality. However, information quality appeared as a common factor that affected trust formation.

According to a study on TripAdvisor, an online travel agency, conducted by Filieri et al. (2015), information quality measured by timeliness, accuracy, and usefulness of information was shown to have a strong influence on building trust in a website. In the study conducted by Dutta et al. (2017) on online travel agency consumers in India, information

quality was measured by being up-to-date and appropriate. These factors were confirmed to have a significant effect on OTA trust. Shin and Cho (2019) showed that information provisions including up-to-date information, accurate information, useful information, and variety of information all had a significant effect on trust in utilizing hotel deals online. Through this, it was determined that the higher quality the consumer perceived the information provided in the online platform-based tourism product transaction, the higher the level of trust. Therefore, it was inferred that the information quality of an online travel agency affected the trust in the online travel agency. The following hypothesis was derived based on this.

*H1: OTA information quality will have a significant positive effect on OTA trust.*

*H1-1: Accuracy will have a significant positive effect on OTA trust.*

*H1-2: Timeliness will have a significant positive effect on OTA trust.*

*H1-3: Usefulness will have a significant positive effect on OTA trust.*

*H1-4: Diversity will have a significant positive effect on OTA trust.*

*H1-5: Playfulness will have a significant positive effect on OTA trust.*

### 2.4. Continuous Usage Intention

Continuous usage intention refers to a consumer's intention to use a particular product or service for the first time (Bhattacharjee, 2001). Companies have used continuous usage intention as a key factor in predicting the likelihood that consumers will repeatedly use their products or services in the future (McDougall & Levesque, 2000). As continuous usage intention affects word-of-mouth activities such as talking positively to others or recommending a service (Li & Liu, 2014), it becomes a more important factor in the competitive online market (Kim & Son, 2009; Nguyen, 2020). For this reason, behavior intention has been assumed to be the best variable for predicting actual behavior in the research area related to online travel product transactions (Moital et al., 2009).

There are various factors that lead to continuous use of online services. However, through the SOR model, these factors can be seen as external stimulus factors and internal state factors of the stimulated organism. First, as an external stimulus, there is information provided on the online platform. Talwar et al. (2020) studied why consumers use online travel agencies in terms of consumption value, one of which is information value. In a study conducted by Fu Tsang et al. (2010) on Hong Kong online travel agency consumers, it was confirmed that information quality had a significant effect on the intention of reuse. In the study conducted by

Yip and Mo (2020), it was found that information quality had a significant effect on product purchase intention of people who had experience using online travel agencies through a mobile device.

However, information quality did not always have a positive effect on continuous usage intention. A study conducted by Sam Mohd and Tahir (2009) confirmed that information quality did not have a statistical effect when considering the prerequisites of purchasing a ticket through a website. A study conducted by Pham and Nguyen (2019) on Vietnamese online travel agency consumers also found that information quality did not affect the consumer's intention to reuse. The difference in research results may have resulted from the difference in measurement tools that constitute information quality. Therefore, in this study, the following hypothesis was set to examine the differential influence on continuous usage intention by composing information quality in multiple dimensions.

**H2:** *OTA information quality will have a significant positive effect on continuous usage intention.*

**H2-1:** *Accuracy will have a significant positive effect on continuous usage intention.*

**H2-2:** *Timeliness will have a significant positive effect on continuous usage intention.*

**H2-3:** *Usefulness will have a significant positive effect on continuous usage intention.*

**H2-4:** *Diversity will have a significant positive effect on continuous usage intention.*

**H2-5:** *Playfulness will have a significant positive effect on continuous usage intention.*

On the other hand, among the reasons for the continuous use of tourism-related online services, trust was placed as the variable related to the internal state of consumers (Choi et al., 2019). Trust is closely related to a consumer's follow-up behavior such as word-of-mouth and recommendation, reuse, and the action of voluntarily giving feedback to the company (Al-Msallam & Alhaddad, 2016; Dam, 2020). Kim et al. (2013) showed that trust had a strong influence on repurchase intentions for those who had purchased travel products such as online hotel reservations, airline tickets, and other local transportation purchases. In the study conducted by Jeon et al. (2017) that verified users who had purchased travel-related products on an online travel agency website, it was also found that trust in the online travel agency had a significant effect on repurchase intention. The study by Choi et al. (2018) conducted through interviews with travel-related app users, trust was suggested as a major prerequisite for continuous usage intention. Based on these previous studies, the following hypothesis was derived.

**H3:** *OTA trust will have a significant positive effect on continuous usage intention.*

Finally, according to the fundamental logic of the SOR model, external stimuli affect the internal state of an organism, and the internal state stimulated by external factors can trigger or reinforce behavioral responses (Mehrabian & Russell, 1974). Taking a study related to online travel as an example, Li and Liu (2014) showed that the perceived benefit in online tourism service influenced the emotional state of satisfaction, and that satisfaction affected continuous usage intention. The study conducted by Thinh et al. (2019) used information quality covered in the study as an external stimulus variable and found that information quality had a significant effect on trust formation. It was found that trust had a positive effect on the intention to make a purchase again through an online travel agency. Although it was difficult to find a study that directly examined the mediating effect of trust, the following hypothesis was derived through the direct influence relationship between the SOR model and variables.

**H4:** *OTA trust will mediate the relationship between OTA information quality and continuous usage intention.*

### 3. Research Methods

#### 3.1. Research Model

This study established a research model as shown in Figure 1 based on the hypotheses derived through theoretical consideration.

#### 3.2. Operational Definition and Measurement of Constructs

Operational definitions and measurement items for each concept constituting the research model were borrowed from previous studies and are shown in Table 1. All items, with the exception of demographic items, used the Likert 5-point scale (1 point: extremely unlikely, 5 points: extremely likely).

#### 3.3. Sample Design and Analysis Method

The subject of this study was consumers who had purchased travel products more than once through an OTA within the last six months. Sample responses were obtained through a non-probability sampling method of convenient sampling. An online survey was conducted using Google Survey for roughly one month from January 06, 2020 to January 31, 2020. A total of 250 copies were collected. 234 copies were used for the final analysis, excluding 16 copies that contained poor responses. Frequency analysis, validity and reliability analysis, and path analysis were conducted through the SPSS v.21 and AMOS v.21 programs.



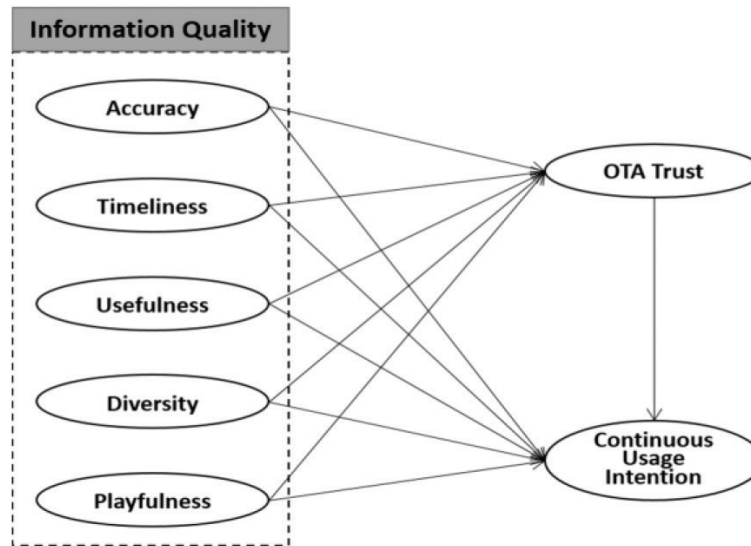


Figure 1: Research Model

Table 1: Operational Definition of Constructs and Measurement Items

Constructs	Operational Definition	Measurement Items	Source
Accuracy	Vividness and accuracy of information provided through travel products	<ul style="list-style-type: none"> <li>• Vivid information about the destination</li> <li>• Accurate information consumers can trust</li> <li>• Overall reliable information</li> </ul>	Zhu and Kim (2019), Shin and Cho (2019), Dutta et al. (2017), Filieri et al. (2015), Nicolaou and McKnight (2006)
Timeliness	Level of timely delivery of the latest information through continuous updates	<ul style="list-style-type: none"> <li>• Latest information is provided</li> <li>• Continuous product information updates</li> <li>• Timely provision of information requested by consumers</li> </ul>	
Usefulness	Usefulness of information to help you select travel products effectively	<ul style="list-style-type: none"> <li>• Can find desired information in an effective manner</li> <li>• Information worth using</li> <li>• Useful information for choosing a travel package</li> </ul>	
Diversity	Variety of the amount and type of information provided through travel products	<ul style="list-style-type: none"> <li>• Variety of travel products</li> <li>• Sufficient amount of information</li> <li>• Variety of information about the destination</li> </ul>	
Playfulness	Level of information that creates interest and enjoyment for travel	<ul style="list-style-type: none"> <li>• Information that arouses interest</li> <li>• Information that is entertaining</li> <li>• Time flies while searching for information</li> </ul>	
OTA Trust	Belief that the OTA will provide services that meet the needs and desires of consumers	<ul style="list-style-type: none"> <li>• Belief that the company will not provide false information</li> <li>• Belief that the company will keep promises about products</li> <li>• OTA is generally reliable</li> </ul>	Dutta et al. (2017), Nicolaou and McKnight (2006)
Continuous Usage Intention	Intent to continually use an OTA	<ul style="list-style-type: none"> <li>• Intention to obtain tourism information through the OTA in the future</li> <li>• Intention to use the OTA in the future</li> <li>• Intention to purchase products through the OTA in the future</li> </ul>	Kim et al. (2013), Bhattacharjee (2001)

## 4. Results

### 4.1. General Characteristics of the Sample

This The gender percentage of the respondents was 26.5% for men and 73.5% for women. The composition of age showed that those in their 30s accounted for the largest proportion at 47.4%. Next, it was confirmed that the number of times a consumer purchased products using an OTA within the last six months was 54.7%, which accounted for more than half of the responses. As for the types of products that were mainly purchased, accommodation products accounted for the largest proportion at 84.2% (see Table 2).

### 4.2. Construct Validity and Reliability

The construct reliability (C.R.) and average variance extracted (AVE) of the constituent concept were calculated through confirmatory factor analysis. The focus and discriminant validity were then examined. Both indices served as criteria for confirming focus validity. C.R. should be 0.7 or more, and AVE should be 0.5 or more (Bagozzi & Yi, 1988). As a result of calculating the index for each constituent concept, it appeared that there was a secure concentration validity, as shown in Table 3.

**Table 2:** General Characteristics of Respondents ( $n = 234$ )

Division		<i>n</i>	%
Gender	Male	62	26.5
	Female	172	73.5
Age	20s	74	31.6
	30s	111	47.4
	40s	38	16.2
	50s or older	11	4.7
Number of OTA Product Purchases	3 times or less	48	20.5
	4–6 times	128	54.7
	7–9 times	36	15.4
	10–12 times	9	3.8
	13 times or more	13	5.6
Main Use Product	Accommodation products	197	84.2
	Flight tickets	27	11.5
	Rental car/Transportation pass	2	0.9
	Admission ticket	3	1.3
	Other(s)	5	2.2

Discriminant validity was then examined by comparing the AVE square root of the constituent concept and the correlation coefficient between the constituent concept. If the square root of the AVE of the constituent concept was greater than the correlation coefficient between the constituent concept, it was considered that the discrimination validity is secured. Table 4 shows that the judgment criteria were satisfied. Finally, Cronbach's  $\alpha$  coefficient was 0.825–0.903, which confirmed that there was no problem in reliability (see Table 4).

### 4.3. Hypotheses Test

A structural equation model analysis was performed to investigate the purpose of this study. First, it was found that the fitness index for the model exceeded the standard value as follows: CMIN/df = 1.394, RMR = 0.027, GFI = 0.915, NFI = 0.930, TLI = 0.974, CFI = 0.979, RMSEA = 0.041. This confirmed that there was no unreasonableness in the path analysis. As a result of testing the hypotheses, seven out of 11 hypotheses were adopted while four were rejected (see Table 5).

First, Hypothesis 1 that stated the information quality of OTA will have a significant positive effect on OTA trust was partially adopted. Among the five sub-factors, [H1-1] accuracy ( $\beta = 0.277, t = 3.197$ ), [H1-2] timeliness ( $\beta = 0.351, t = 4.612$ ), and [H1-3] usefulness ( $\beta = 0.406, t = 5.819$ ) were statistically significant. However, [H1-4] diversity ( $\beta = 0.007, t = 0.111$ ) and [H1-5] playfulness ( $\beta = 0.004, t = 0.075$ ) had no statistically significant effect and were rejected. Second, Hypothesis 2 that stated the information quality of OTA will have a significant positive effect on the intention to continue use was also partially adopted. [H2-1] accuracy ( $\beta = 0.303, t = 3.911$ ), [H2-2] timeliness ( $\beta = 0.145, t = 1.981$ ), and [H2-3] usefulness ( $\beta = 0.255, t = 3.423$ ) appeared to be statistically significant. However, [H2-4] diversity ( $\beta = -0.012, t = -0.234$ ) and [H2-5] playfulness ( $\beta = 0.068, t = 1.422$ ) did not appear to have a statistically significant effect and were rejected. Finally, Hypothesis 3 ( $\beta = 0.335, t = 3.032$ ) that stated OTA trust will have a positive effect on the intention to use was statistically significant. The higher the confidence in the OTA, the more likely it would be that the consumer would continue to use the service. Therefore, it is possible to interpret that a higher confidence in an OTA will lead to a higher chance of a consumer intending to use the service again.

Next, bootstrapping verification was performed to analyze whether OTA trust had a mediating effect on the relationship between OTA information quality and continuous usage intention. Whether or not there was a mediating effect through bootstrapping verification was judged to exist if 0 was not included in the 95% confidence interval. In this

**Table 3:** Results of Confirmatory Factor Analysis

Division		Items	Standardized Estimate	S.E.	<i>t</i>	C.R.	AVE	$\alpha$
OTA Information Quality	Accuracy	Accuracy 3	0.843			0.942	0.844	0.897
		Accuracy 2	0.860	0.067	16.133			
		Accuracy 1	0.889	0.064	16.898			
	Timeliness	Timeliness 3	0.830			0.920	0.793	0.866
		Timeliness 2	0.795	0.072	13.364			
		Timeliness 1	0.850	0.074	14.413			
	Usefulness	Usefulness 3	0.791			0.897	0.744	0.811
		Usefulness 2	0.704	0.086	10.545			
		Usefulness 1	0.832	0.085	12.258			
	Diversity	Diversity 3	0.828			0.875	0.700	0.826
		Diversity 2	0.749	0.078	10.984			
		Diversity 1	0.769	0.083	11.195			
	Playfulness	Playfulness 3	0.893			0.926	0.807	0.907
		Playfulness 2	0.862	0.058	17.283			
		Playfulness 1	0.869	0.058	17.485			
OTA Trust	Trust 3		0.767			0.915	0.783	0.833
	Trust 2	0.814	0.095	12.556				
	Trust 1	0.793	0.095	12.210				
Continuous Usage Intention	Continuity 3		0.838			0.936	0.830	0.882
	Continuity 2	0.855	0.064	15.890				
	Continuity 1	0.841	0.063	15.503				

$C_{MIN}/df = 1.488$ ,  $RMR = 0.027$ ,  $GFI = 0.906$ ,  $NFI = 0.925$ ,  $TLI = 0.967$ ,  $CFI = 0.974$ ,  $RMSEA = 0.046$ .

**Table 4:** Discriminant Validity

Constructs	Mean	S.D	1	2	3	4	5	6	7
1. Accuracy	4.12	0.67	(0.919)						
2. Timeliness	3.97	0.67	0.566**	(0.891)					
3. Usefulness	4.08	0.62	0.454**	0.354**	(0.863)				
4. Diversity	3.93	0.71	0.416**	0.338**	0.210**	(0.837)			
5. Playfulness	3.53	0.81	0.369**	0.336**	0.100	0.260**	(0.898)		
6. OTA Trust	4.21	0.59	0.620**	0.601**	0.596**	0.324**	0.262**	(0.885)	
7. Continuous Usage Intention	4.07	0.64	0.706**	0.615**	0.622**	0.352**	0.334**	0.726**	(0.911)

Note: \*\* $p < 0.01$ , ( ) square root of AVE.

**Table 5:** Summary of Hypotheses Test Results

Path		Estimate		<i>t</i>	<i>P</i>	Result
		<i>B</i>	$\beta$			
H1-1	Accuracy → OTA Trust	0.258	0.277	3.197	0.001**	Adopted
H1-2	Timeliness → OTA Trust	0.320	0.351	4.612	***	Adopted
H1-3	Usefulness → OTA Trust	0.406	0.412	5.819	***	Adopted
H1-4	Diversity → OTA Trust	0.006	0.007	0.111	0.912	Rejected
H1-5	Playfulness → OTA Trust	0.003	0.004	0.075	0.941	Rejected
H2-1	Accuracy → Continuous Usage Intention	0.296	0.303	3.911	***	Adopted
H2-2	Timeliness → Continuous Usage Intention	0.139	0.145	1.981	0.048*	Adopted
H2-3	Usefulness → Continuous Usage Intention	0.265	0.255	3.423	***	Adopted
H2-4	Diversity → Continuous Usage Intention	−0.010	−0.012	−0.234	0.815	Rejected
H2-5	Playfulness → Continuous Usage Intention	0.053	0.068	1.422	0.155	Rejected
H3	OTA Trust → Continuous Usage Intention	0.353	0.335	3.032	0.002**	Adopted

Note: \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ .

**Table 6:** Results of Mediating Effect Test

Path	Bootstrap Estimate		95% CI		Result
	<i>B</i>	S.E.	Lower	Upper	
Accuracy → OTA Trust → Continuous Usage Intention	0.091	0.052	0.012	0.236	Partial mediation
Timeliness → OTA trust → Continuous Usage Intention	0.113	0.058	0.013	0.263	Partial mediation
Usefulness → OTA trust → Continuous Usage Intention	0.143	0.069	0.031	0.316	Partial mediation

process, the diversity and playfulness of OTA information quality did not affect either the parameter or the dependent variable. Diversity and playfulness were therefore excluded from the verification of the parameter effect. As shown in Table 6, OTA trust was found to be statistically significant in the relationship between OTA information quality and continuous usage intention.

## 5. Conclusion

This study aimed to investigate the effect of OTA information quality on OTA trust and continuous usage intention by focusing on consumers who had purchased travel-related products within the last year through online travel agencies (OTA). The summary of the research results is as follows. First, among the sub-factors of OTA information quality, accuracy, timeliness, and usefulness were found to have a significant positive effect on OTA trust. However, diversity and playfulness were found to have no effect. This was different from the research results of Nicolaou and McKnight (2006), which showed that information quality did

not have an effect on trust. Second, among the sub-factors of OTA information quality, accuracy, timeliness, and usefulness had a significant positive effect on continuous usage intention, but diversity and playfulness did not. Next, OTA trust appeared to have a statistically significant positive effect on continuous usage intention, which was consistent with many studies. (Choi et al., 2018; Jeon et al., 2017; Kim et al., 2013). Finally, OTA trust played a role as a partial mediator in the relationship between OTA information quality (accuracy, timeliness, and usefulness) and continuous usage intention.

Based on the research results, the following implications can be presented. The academic implications are as follows. First, it is meaningful that the depth of the study was added by the composition of five factors such as accuracy, timeliness, usefulness, diversity, and playfulness through theoretical consideration of the information quality that was verified as a single dimension in the research area for online travel agencies. In the existing research area targeting OTA, information quality has been mainly studied as a single dimension, more precisely as a sub-factor of the quality or characteristics of OTA such as system quality,



service quality, and information quality. However, with the advancement of technology and the expansion of services, the use of OTA has increased further as accommodation, airlines, and local tickets can be used one-stop. In addition, the importance of the information provided by the OTA has increased further as it is possible to obtain information on the travel destination as well as information on the product itself through OTA products. For this reason, this study aims to clarify the information quality of OTA, which has been mainly studied in a single dimension, into five factors and to test the differential influence. Therefore, there is a difference from existing studies.

Second, there is significance in that the scope of the study was expanded by applying the SOR model to determine the mechanism by which the information quality provided by online travel agencies reinforced the consumer's continuous usage intention. In previous studies, rather than deriving the preceding factors for OTA continuous usage intention based on a specific theory, research was conducted based on prior research related to the direct influence relationship between constituent concepts. However, this study explained that through the SOR model used for predicting consumer behavior, the external stimulus of information quality affects the user's inner state, forming trust in OTA, and finally showing the intention to continue usage as a behavioral response. In this respect, academic implication can be found.

The practical implications are as follows. First, it was confirmed that only accuracy, timeliness, and usefulness for information quality had an effect on improving the reliability and continuous usage intention of an OTA. It can be inferred that the more a consumer perceived that the information provided by the OTA was accurate, up-to-date, and worth using, the more reliable the OTA appeared, therefore leading to an increase in continuous usage intention. Therefore, the OTA product manager must create a plan to maximize accuracy, timeliness, and usefulness. When periodically updating vivid information on travel products, it is necessary to specify the date and manage information on travel destinations using data such as videos. It is recommended to use a personalized recommendation service based on the consumer's past usage history so the consumer can effectively acquire the desired information and perceive that it is worth using. In addition, it is possible to set the type and price of the product the user wants, and to receive product information in a timely manner through an app notification when a transaction for a product that meets the conditions is activated.

Second, it was confirmed that diversity and playfulness among OTA information quality were factors that did not significantly affect trust in the OTA or continuous usage intention. This can be presumed that diversity and playfulness of information were not factors that consumers considered to be as important as accuracy, timeliness, and usefulness when

purchasing products based on the information obtained by searching for travel products through an OTA. In addition, as the main products of an OTA used by the respondents were concentrated in accommodation, it can be predicted that the aspect of providing accurate and useful information in a timely manner was a more important attribute. According to the research results of Zhu & Kim (2019), it was found that the enjoyment of information did not affect practical satisfaction, but hedonic satisfaction. Through this, it can be confirmed that the enjoyment of the information quality is related to the hedonic aspect rather than the practical aspect. Therefore, it can be seen that it did not have a direct effect on trust, which is difficult to see in terms of hedonic.

Third, in the fiercely competitive online market, in a situation where the user's continuous usage intention is attracting attention as a predictive tool for sustainability management, trust in OTA must first be established in order to strengthen the continuous usage intention. Consumers are more willing to trade when uncertainty is reduced through the evaluation of information provided by OTA and trust is built (Kim et al., 2013). Since the trust in an OTA perceived by a consumer includes the belief that the OTA will not provide false information and will keep the stated content of the product, it is necessary to display conditions that represent this. For example, companies can provide confidence to consumers by using an evaluation through the development of measurement tools that enable companies to voluntarily identify the level of consumer confidence and disclosure of information.

Despite the above implications, this study had its limitations, and the following directions for further research have been proposed. First, as the goal of the study was to grasp the importance of information quality provided by an OTA, it is unreasonable to say that all of the characteristics of the products purchased by respondents were reflected. For example, the priority of information that respondents wanted to know may be different for accommodation facilities located in South Korea or abroad, and the evaluation criteria for information quality may be different. Therefore, it is necessary to examine whether there are any differences in subsequent studies by including the characteristics of travel products in the scope of the study. Second, on the online platform, the reviews of actual users provided hints that could influence the decision-making of potential consumers. Accordingly, the information quality provided by product sellers was important, but the quality of reviews left by existing consumers was also important. Therefore, in the future, it will be necessary to study information according to the reviews of actual consumers. More meaningful studies can be expected if discriminatory results are derived through comparisons with basic information provided by product sellers.

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