วารสารเศรษฐศาสตร์ประยุกต์และกลยุทธ์การจัดการ Journal of Applied Economics and Management Strategy
ปีที่ 11 ฉบับที่ 1 มกราคม-มิถุนายน 2567 Vol. 11, No. 1, January-June 2024

Impact of OTAs' Digital Services on Customer Satisfaction in Thailand

Panjamapon Pholkerd[1], Mallika Thamnarong[2] and Pitipat Nittayakamolphun[3]

Received: December 20, 2023
Revised: March 20, 2024
Accepted: April 4, 2024

ABSTRACT

The availability of digital technology has prompted many adaptations in the hotel industry, particularly among online travel agents (OTAs). Better services provided by OTAs might improve customer satisfaction. This research aims to examines the effect of OTAs' Digital Services (DS), electronic service quality (ESQ), and electronic recovery service quality (ERSQ) on consumer satisfaction (CSAT). To better understand customer satisfaction via online booking, research survey of 415 persons in Thailand who have used OTAs to book hotels was conducted. For data analysis, structural equation modeling (SEM) was used. The study covers the metrics and conditions that could lead to consumer satisfaction. According to the study's findings, ESQ and ERSQ are the factors that would directly affect consumer satisfaction while DS can rather effect consumer satisfaction indirectly. Based on the findings, OTAs service providers should enforce quality and simplicity on their platforms, such as swift booking transactions, precise booking detail, and booking experience when searching for rooms. Customer satisfaction would progressively spread information, lowering marketing costs while increasing reliability.

Keywords: Digital Service, Satisfaction, OTAs

[1] Lecturer, Faculty of Management Science, Buriram Rajabhat University, E-mail: panjamaporn.ph@bru.ac.th

[2] Independent Scholar, E-mail: poo.dtc@gmail.com

[3] Corresponding Author, Assistant Professor, Faculty of Management Science, Buriram Rajabhat University, E-mail: pitipat.ni@bru.ac.th

Background and Significance of the Research Problem

The presence of digital usage urged many signs of progress in all sectors. Likewise, hotel & tourism had transformed themselves into digital platforms to tackle customers' interest and engagement. Services offering via digital platforms is the promotion activity of products and services through various well known digital platforms (Khmiadashvili, 2019). Famous practitioners of digital services are the online travel agencies (OTAs), with unexpected growth, have an extreme increase in the online market competition (Sharma et al., 2020). The OTAs benefitted a lot from the circumstances while using digital service platform to provide service quality, such as information disposal, support transactions, privacy, and security assistance, and create customer engagement with hotel service providers on various topics. Many bookings often take place on platforms and applications with the help of electronic devices. The global number of users via mobile devices is three billion monthly (McDonald, 2018). This implies a people-technology interaction, for instance, people would find extensive quality from the standard booking service (Parasuraman et al., 2005) such as quick response, easy usage website, the pool of information, etc. without neglecting customers' privacy and security. Also, service quality is the expected determinants from customers that OTAs should be able to provide (Nunkoo et al., 2020). This could be a good reason for OTAs to participate in digital services to create advantages and enhance customer satisfaction as well as to handle customers' responses about electronic recovery service quality for security reasons.

While customers are dwelling in digital societies, their expectations of products and services quality increase and ultimately reflected in customer satisfaction this can lead to repeat purchase and a likely recommendation for OTAs (Tran & Vu, 2019). Therefore, the benefits of digital services and marketing along with electronic service quality to serve customer satisfaction can encourage tremendous remuneration. Although, Thailand may have acquired the least set of standard digital literacy when compared to other countries in the Arab States and Europe (Sukman et al., 2018). However, when it comes to online hotel booking, consumption of online services is quite varied. Thailand's tourism and hospitality segment generated up to 20% of country's GDP (Inthasang et al., 2021) and the survey by Statista (2022) on the comparison between offline and online hotel booking in Thailand revealed that 79.3% had booked their accommodation online while only 20.7% had booked their accommodation offline. Thailand's preferred booking platforms that earned the highest remuneration in 2021 are Booking.com, Agoda, Hotels' website, Expedia Group, and Hotelbeds respectively (Thansettakit, 2022).

Referring to these conditions, OTAs applied digital services on electronic platforms to improve transaction activities (Rahayu & Saodin, 2021) to serve the highest level of customer satisfaction. The business of OTAs have grown to be platforms that provide hotels with a digital marketplace to showcase their properties and allow customers to make direct bookings via their platforms. Hotel sales are significantly influenced by bookings made through OTAs. Chubchuwong (2019) mentioned that leisure travelers, business travelers and government official segments have gradually and increasingly turned to using OTAs due to the more competitive accommodation prices they offer. Thus, customer satisfaction via OTAs platforms could gradually affect booking and revenue as well as room distribution of the hotel sector.

Measuring customer satisfaction is essential. Despite past studies about measuring satisfaction across many countries with expectations, convenience, interactivity, and reliability (Nunkoo et al., 2020). While the hospitality sector in Thailand still finds room to grow in a near future, it is essential to oversee the influence of digital services through electronic service quality and electronic recovery service quality on customer satisfaction to provide a broader view to the practitioners. There are past studies on hospitality segment in Thailand which focused only on online booking process, uses of OTAs, digital marketing on hotel performance, and online purchase intention (see, e.g. Chubchuwong, 2019; Wongkhajornpaibul & Sornsaruht, 2019; Inthasang et al., 2021; Chubchuwong, 2022; Phumpa et al., 2022) but the discussion on customer satisfaction derive from digital services by OTAs are still neglected. Thus, the growth of Thailand's hospitality services reveals a research gap in terms of what aspects may contribute to customer satisfaction during the hotel booking process. The study would be contributed to hotel management and particularly OTAs, who could then push more straightforward digital services to satisfy customers and match their expectations. During the measurement of customer satisfaction, we can also contradict on the homogeneity of dimensional influence across gender, age, income, devices used, and platforms. Therefore, we propose a study to understand the impact of OTAs' digital services on customer satisfaction and compare the different effects on the above dimension. Specifically, we develop Structural Equation Modelling (SEM) and the f-test to explain the above contradiction and hypothesis.

Research Objective

This research aims to study the effect of OTAs' digital services on customer satisfaction.

Scope of Research

The target of our research was Thai consumers with prior experience booking hotels online via online travel agencies (OTAs) and other hotel booking platforms. The age group demographics was up to 60 years old.

Literature Review

Customer Satisfaction (CSAT)

An increase in level of loyalty and retention may be adopted by a cumulative conceptualization and operationalization towards customer satisfaction (Nunkoo et al., 2020). Satisfaction is the level of expectation of service with during the ordering process until service is gained making customers feel satisfaction, dissatisfaction, disappointment, or excitement (Surya & Saragih, 2020). Customer satisfaction (CSAT) plays basic importance to all businesses which also include online travel agencies (OTAs). The business of OTAs relies on online services, marketing, and transactions. The digital technology can act to support process of services to generate, communicate, and provide value to clients and stakeholders, satisfaction is the level of expectation of such service. When that level of service expectation is met, the customer experiences contentment, discontent, disappointment, or exhilaration (Taufik et al., 2021). Customer satisfaction is consumers' anticipation from goods and services, it is an evaluation of feelings that has been used frequently across the time (Raza & Umer, 2020; Rahayu & Saodin, 2021). Study by Woodside et al. (1989) pointed that customers' judgement affects customer satisfaction with the service encounter does satisfaction appear to be a moderating variable of service quality. In the context of the study, customer satisfaction is the expectation and judgment toward digital services that successfully provides a pleasurable level of service experience.

Digital Services (DS)

Digital services enabled online travel agencies (OTAs) to conduct customer marketing and selling activities on their platforms (Sharma et al., 2020). Maintaining the quality of online services and customer satisfaction while using the platform is essential. Lee et al. (2008) explained OTAs, as service providers and digital service implementers, should identify the customers' expectations which sophisticated, individual, knowledgeable, and technologies familiarity to handle customer satisfaction. Several benefits are promised by digital services provided. Thai consumers, primarily between the ages of 20-40, heavily choose online platforms

for their leisure time, approximately 60% of these customers are inclined to make online purchases across a wide range of items and services (Pholkerd & U-un, 2022). With the existence of digital service platforms, consumers can evaluate and contrast various service providers, enabling them to make decision based on what appears to be the most efficient and suitable option which would gradually bring satisfaction. Past study from Hao et al. (2015) stated about consumers' evaluation on OTAs platform for various criteria such as information quality, site design, security, and information sharing. In the digital communication, the conversation spreads positively and adversely far too quickly. Consumers who are pleased with their service experience will enthusiastically recommend them to other customers, whereas those who are not pleased would act differently (Weitzl & Hutzinger, 2017). When digital services can take place quickly through various platforms enabling customers to experience and evaluate their expectation immediately. Hence, OTAs as digital service providers requires assistance from electronic service quality to seize interaction and produce customer satisfaction. Thus, the above description could propose the following hypothesis.

H1: DS has a direct effect on CSAT

Electronic Service Quality (ESQ)

Customer satisfaction is contingent upon service quality (Nunkoo et al., 2020). The statement was conceptualized by Parasuraman (1985) that customers intellectually evaluate service performance attributes, which affects their total service experience to be an ultimate satisfaction. In the presence of technological assistance electronic service quality can help determine the quality of website and various platforms of the OTAs, which has a big impact on how well online booking works. According to Mick and Fournier (1995), about how customers interact and evaluate technology-based products, explained that customer satisfaction is a highly complex and long-term process, and the process may differ across various customer segments and satisfaction in such contexts is not always a function of pre-consumption comparison standards. As it supports and enables online activities of customers and business sectors itself, the quality of electronic service quality becomes a key factor in determining whether a business succeeds or fails (Rahayu & Saodin, 2021). Many scholars have contributed to different dimensions to measure electronic service quality. Dabholkar (1996) contributed to the study to examine expectations on technology-based self-service quality and suggested five main attributes of electronic service quality: speed of delivery, ease of use, reliability, enjoyment, and control. A website needs to offer a lot of information in a user-friendly, well-designed structure (Taufik et al., 2021). Additionally, Jedin and Ranjini (2017) also contributed

that accessibility, pricing, review accountability, and customer service are the key factors that affect customer satisfaction with the usage of OTA. The common approach was conducted by Parasuraman et al. (1985) for customers' perceptions of service quality, it is essential to examine the work of electronic service quality and the tools used for the measurement are system availability, efficiency, fulfillment, and privacy (Parasuraman et al., 2005). Based on the research that is currently available, we predict that digital services could affect electronic service quality and ultimately electronic service quality would further affect customer satisfaction. Thus, we are proposing the following hypotheses.

H2: DS has a direct effect on ESQ.

H3: ESQ has a direct effect on CSAT.

Electronic Recovery Service Quality (ERSQ)

The concept of service quality is closely related to customer satisfaction (Nunkoo et al., 2020). Every hotel and its service providers would strive to make the greatest use of the resources at their disposal to achieve client satisfaction. With limited resources, it is crucial that every hotel utilize those scarce resources as efficiently as possible. Although the internet offers the best cost and service delivery results, its effectiveness should be assessed based on how well it is used to pursue customer satisfaction. In this research, we attempt to study the impact of digital services on customer satisfaction through electronic services by scaling those services into electronic service quality and electronic recovery service quality. Electronic recovery service quality is a subset of electronic service quality introduced by Parasuraman et al. (2005) and is homogeneously used to comprehend service quality provided to customers. While electronic service quality is relevant to the entire customer's service base, electronic recovery service quality is notable for recovery services experiences which service providers compensate customers for any problem that might occur. Electronic recovery service quality is used to assess the electronic service quality of customers who occasionally encounter with hotel booking platforms and other online activities. There are three dimensions of the electronic recovery service quality scale, i.e., responsiveness, compensation, and contact (Ulkhaq et al., 2019). Thus, we are proposing the following hypotheses referring to the above literature.

H4: DS has a direct effect on ERSQ.

H5: ERSQ has a direct effect on CSAT.

Based on the literature review, we developed a conceptual framework (see Figure 1) and suggested study hypotheses to determine the influence of digital services (DS) through

electronic service quality (ESQ) and electronic recovery service quality (ERSQ) on customer satisfaction (CSAT) which comprises the research model's variables.

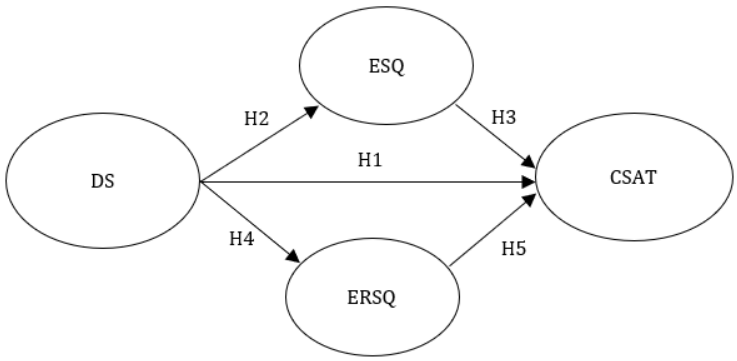

Figure 1 A Proposed Research Framework

Source: Authors' Study

Research Methodology

Participants

The study analyzes the observed variables using the approach of Schumacker and Lomax (2010), thus, one observed variable for 20 samples. There are 14 observed variables in the study, the minimum sample size was 280 samples. The descriptive survey was sent in an online approach via, email invitation and spreading links on the Facebook community groups to 1,500 samples in Thailand and a receipt of 415 responses were completed and valid. Therefore, sample size for this study is 415. Survey distribution was done through out May to September 2022.

Instruments

The questionnaire consisted of 6 sections including general data viz., gender, age, occupation, education, status, income, device use for hotel booking, and choice of OTAs. In the section 2 to 5 were the measurement questions of the study variables and section 6 was suggestion. All variables in the questionnaire used 5 points Likert's scale measurement (Likert, 1932) and the questions are presented in table 2. The tryout of 30 samples was done before actual distribution and the Cronbach's alpha indicated 0.95 which is above 0.80. Index of item objective congruence (IOC) was evaluated by 3 experts and indicated 0.92 which is acceptable. Structural Equation Modelling (SEM) was used to construct conceptual framework and explain relationship between digital service (DS), electronic service quality (ESQ) and electronic recovery service quality (ERSQ) that reflect customer satisfaction (CSAT). SEM is a statistical method used to test the relationships between observed and latent variables and a technique that illustrates

the nature of hypothesis covariate relationships between the observed and the latent variables, as indicated in the measurement and structural models (Hair et al., 2017). In this study, verification of SEM was applied to determine the coherence of the model obtained from the literature review with the empirical data. To ensure good fit of the model, model testing should present several values thus, Comparative fit Index (CFI) and Root Mean Squared Error of Approximation (RMSEA).

Results

Descriptive Statistics

The descriptive statistics represented number of female respondents (63.9%) was the highest of all genders (Male 34.5% and not identify 1.7%). The largest age group was between 21–30 years old (65.3%) and majority of income rate was between THB 10,001–20,000 (46%). The top three most preferred OTA were Booking.com (38.6%), Agoda (28%) and Traveloka (10.1%), respectively.

Impact of Digital Service on Customer Satisfaction

The result of measurement model (Table 1) displays the factor loading of each construct. All the constructs showed an acceptable value of more than 0.6 (Hair et al., 2006) which indicates all factors met the proper criteria. The reliability test shows Cronbach's Alpha value for all constructs is higher than 0.8 which is also acceptable. The average variance extracted (AVE) and composite reliability (CR) values for different constructs exceed 0.050 and 0.70, respectively (Fornell & Larcker, 1981), which confirmed the discriminant validity.

Table 1 The Result of Measurement Model

Construct	Item Wording	Mean	SD	FL	Cronbach's Alpha	AVE	CR
Digital Services (DS)					0.892	0.679	0.864
Service Content	SC1	4.23	0.69	0.64	0.81		
	SC2	4.16	0.74	0.66			
	SC3	4.32	0.72	0.71			
Site Design	SD1	4.30	0.69	0.72	0.88		
	SD2	4.33	0.67	0.74			
	SD3	4.20	0.76	0.66			
	SD4	4.20	0.73	0.70			

Table 1 (Continued)

Construct	Item Wording	Mean	SD	FL	Cronbach's Alpha	AVE	CR
Site Design	SD5	4.18	0.72	0.70			
Information	IS1	4.38	0.70	0.72			
Support	IS2	4.33	0.72	0.70	0.86		
	IS3	4.39	0.72	0.69			
Electronic Service Quality (ESQ)					0.934	0.788	0.937
Efficiency	EFF1	4.36	0.67	0.77			
	EFF2	4.27	0.67	0.73	0.87		
	EFF3	4.29	0.71	0.76			
System	SA1	4.26	0.69	0.74			
Availability	SA2	4.16	0.77	0.75	0.86		
	SA3	4.18	0.74	0.72			
Fulfillment	FUL1	4.27	0.70	0.80			
	FUL2	4.23	0.75	0.74	0.87		
	FUL3	4.20	0.75	0.76			
Privacy	PRI1	4.22	0.76	0.76			
	PRI2	4.24	0.74	0.77	0.92		
	PRI3	4.23	0.75	0.78			
Electronic Recovery Service Quality (ERSQ)					0.92	0.779	0.913
Responsiveness	RESP1	4.25	0.74	0.80			
	RESP2	4.21	0.75	0.77			
	RESP3	4.32	0.71	0.79	0.91		
	RESP4	4.32	0.72	0.76			
	RESP5	4.32	0.71	0.78			
Compensation	CP1	4.22	0.76	0.73	0.86		
	CP2	4.20	0.76	0.74			
Contact	CONT1	4.26	0.72	0.77			
	CONT2	4.20	0.77	0.77	0.89		
	CONS3	4.22	0.74	0.78			

Table 1 (Continued)

Construct	Item Wording	Mean	SD	FL	Cronbach's Alpha	AVE	CR
Customer Satisfaction (CSAT)					0.93	0.805	0.925
Satisfaction	SAT1	4.32	0.65	0.78			
	SAT2	4.31	0.67	0.78			
	SAT3	4.27	0.70	0.75	0.93		
	SAT4	4.25	0.68	0.78			
	SAT5	4.27	0.67	0.77			
e-WOM	WOM1	4.23	0.67	0.70			
	WOM2	4.23	0.68	0.74	0.87		
	WOM3	4.24	0.69	0.72			
Re-purchase	REI1	4.24	0.74	0.79			
Intention	REI2	4.22	0.75	0.77			
	REI3	4.25	0.71	0.77	0.92		
	REI4	4.23	0.72	0.80			
	REI5	4.12	0.79	0.71			

Source: Authors' Study

Confirmatory Factor Analysis was used to examine the measurement model to eliminate the measurement errors. We examined the key factors thus, Digital Services (DS), Electronic Service Quality (ESQ), Electronic Recovery Service Quality (ERSQ), and Customer Satisfaction (CSAT). The model fit indices (Table 2) shows that the model met the criteria for a good fit. Value of χ^2/df is 1.328 which is less than 2.00, while CFI and GFI are 0.991 and 0.965 respectively which is more than 0.95, value of RMSEA and SRMR are both less than 0.05 which are 0.028 and 0.016 respectively. Therefore, the model is consistent with the empirical data.

The findings of the hypothesis test as well as direct and indirect effect are shown in Table 2. The magnitude to which independent variables influence dependent variables is represented by the coefficient values, and the size and significance of the coefficients establish the hypotheses between the variables. Also, the significant of p-value should not be higher than 0.10. As a result, all the hypotheses are accepted, and all the coefficients are positive.

The study on impact of OTAs' digital services on customer satisfaction indicated the effects of independent variables on dependent variables which have positive responses to the hypotheses. The finding for H1 showed that digital services (DS) have a direct effect on customer satisfaction (CSAT). The quality of service content, site design, and information support significantly affect the level of customer satisfaction, while surfing for hotel information and promotion. The finding for H2 DS showed the highest direct effect on electronic service quality (ESQ) and is positively significant. H3 indicated that ESQ has a direct effect on CSAT. ESQ has a positive and significant impact on CSAT in several dimensions such as information, interactivity, ease of use, and site design.

The result of H4 indicated that DS directly affect ERSQ with statistical significance. The level of web efficiency, responsiveness, and contact ability via the website is the dimension that affects ERSQ. The last finding for H5 indicated that ERSQ has a direct effect on CSAT with statistical significance. Additionally, the influence of digital services through electronic service quality and electronic recovery service quality on customer satisfaction can be depicted using SEM (Figure 2). It shows that DS has a significant influence on ESQ (0.92), with DS having an influence on ERSQ (0.88), ERSQ having an influence on CSAT (0.72), DS having an influence on CSAT (0.15), and ESQ having an influence on CSAT (0.60).

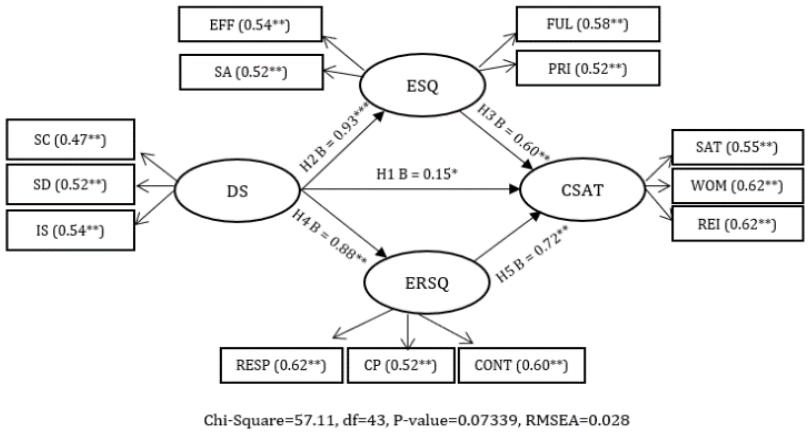

Figure 2 Structural Model

Source: Authors' Study

Additionally, our study has analyzed the effect of OTAs' digital services on customer satisfaction and the result reveals acceptance of all hypotheses. Nevertheless, digital services (DS) merely show slight significant effect on customer satisfaction (CSAT) directly, but Electronic Service Quality (ESQ) and Electronic Recovery Service Quality (ERSQ) show greater effect towards

CSAT than DS alone. Therefore, we can conclude that OTAs digital services can impact customer satisfaction when it works together with Electronic Service Quality and Electronic Recovery Service Quality.

Table 2 The Result of the Impact of Digital Services on Customer Satisfaction

Variables	DS		ESQ		ERSQ		R^2
	DE	IE	DE	IE	DE	IE	
ESQ	0.93***	-	-	-	-	-	0.87
ERSQ	0.89***	-	-	-	-	-	0.78
CSAT	0.15*	0.69***	0.60**	-	0.72***	-	0.81
χ^2/df = 1.328, CFI = 0.991, GFI = 0.965, AGFI = 0.940, RMSEA = 0.028, SRMR = 0.016							

Note: *** p < 0.01, **p < 0.05, *p < 0.1

Source: Authors' Study

Table 3 Comparison of Demographic Dimension and Study Variables.

Demography	Variables	F-statistic
Gender	Digital Services (DS)	2.97*
	Electronic Service Quality (ESQ)	5.13***
	Electronic Recovery Service Quality (ERSQ)	9.15***
	Customer Satisfaction (CSAT)	10.28***
Age	Digital Services (DS)	1.48
	Electronic Service Quality (ESQ)	2.65**
	Electronic Recovery Service Quality (ERSQ)	0.87
	Customer Satisfaction (CSAT)	1.56
Income	Digital Services (DS)	0.74
	Electronic Service Quality (ESQ)	0.81
	Electronic Recovery Service Quality (ERSQ)	0.68
	Customer Satisfaction (CSAT)	0.52
OTA platform	Digital Services (DS)	1.50
	Electronic Service Quality (ESQ)	0.73
	Electronic Recovery Service Quality (ERSQ)	1.01
	Customer Satisfaction (CSAT)	0.88

Note: * p < 0.10, **p < 0.05, ***p < 0.01

Source: Authors' Study

To look at the demography closely, we decided to test the significance between the demographic dimension and the study variables. We applied the f-test ANOVA (see Table 5) to explain the additional comparison. The findings revealed thus, gender has statistically significant to all variables and age has a significance on electronic service quality (ESQ) only. It indicates that gender differences could affect the use of digital services (DS), electronic service quality (ESQ), electronic recovery service quality (ERSQ), and level of customer satisfaction (CSAT) differently. Additionally, age differences affect the use of ESQ in a different story. Nevertheless, there is no other significance between demography and variables.

Discussion

The study showed that digital services have a direct effect on customer satisfaction (H1) which is consistent with the study in Pakistan, Hong Kong, and Indonesia (Raza & Umer, 2020; Sharma et al., 2020; Taufik et al., 2021; Rahayu & Saodin, 2021). The quality of service content, site design, and information support significantly affect the level of customer satisfaction, while surfing for hotel information and promotion are consistent with Ranjbarian (2012). The hotel occupancy situation and timely responses can also affect the level of customer satisfaction (Andaç et al., 2016). Additionally, by surfing through the booking platform alone still not yet encourage the satisfaction until the transaction takes place. Thus, consistent with the study in Vietnam (Hao et al., 2015) which suggested that digital services have an indirect influence towards customer satisfaction through electronic recovery service quality under the financial transaction and booking security. Whilst digital services in terms of social media feedback can indirectly influence customer satisfaction (Ashley & Tuten, 2015). The digital service has direct effect on electronic service quality (H2). There are past studies whose results are consistent with the study in Iran (Soleimani & Einolahzadeh, 2018) and Vietnam (Tran & Vu, 2019). The study indicated the effectiveness of online services in the travel and tourism industry. Consumers today can have unlimited, immediate access to a wide variety of online services offered by agencies.

Electronic service quality has a direct effect on customer satisfaction (H3) in several dimensions such as information, interactivity, ease of use, and site design which correspond with the study of Surya and Saragih (2020) in Indonesia. The findings are also consistent with other several scholars in India (Das et al., 2019) and Pakistan (Rahayu & Saodin, 2021; Raza & Umer, 2020). However, there is a contradiction to Taufik et al. (2021) whose study focused on online marketing in Indonesia and the result revealed that electronic service quality has no significant

effect on customer satisfaction. Nevertheless, in the hospitality industry we can conclude that electronic service quality, particularly by OTAs, can affect customer satisfaction due to their usage in hotel booking.

The findings also showed that digital services directly affect electronic recovery service quality (H4). The level of web efficiency, responsiveness, and contact ability via the website is the dimension that affects electronic recovery service quality which is consistent with the study in Jordan (Al-dweeri et al., 2017) and Indonesia (Ulkhaq et al., 2019). Digital services could affect the volume of queries, transactions, and online reviews which ultimately affect the performance of electronic recovery service quality, this finding is consistent with the study in Georgia (Khmiadashvili, 2019). The last finding indicated that electronic recovery service quality has a direct effect on customer satisfaction (H5) and is consistent with Surya and Saragih (2020) and Ulkhaq et al., (2019) whose finding in Indonesia had contributed that electronic recovery service quality positively and significantly affect the customer satisfaction. The study in Turkey by Akinci et al. (2010) revealed the same findings that responsiveness, compensation, and contact can be taken as the underlying dimensions of electronic recovery service quality. Also, collided with the approach by Parasuraman et al. (2005). The result from f-test ANOVA showed a connection with structural equation modeling (SEM) in terms of age and gender as customer segments have diverse viewpoints and satisfaction levels (Hao et al., 2015). The SEM result showed digital services plays slight significant effect on customer satisfaction, likewise, digital services also presented smallest significant on gender differences.

In the contemporary landscape of hospitality study online travel agencies (OTAs) have emerged essential intermediaries connecting customers with lodging accommodations via OTAs platforms. Central to their operations are the digital services they provide, which have significantly reshaped the dynamics of customer interaction and satisfaction within the realm of travel and hospitality. OTAs' digital platforms serve as comprehensive repositories of information, offering customers unparalleled access to a vast array of lodging options, amenities, and pricing structures. Research indicates that the availability of such extensive and easily accessible information enhances customer decision-making processes, enabling them to make more informed choices tailored to their preferences and budgetary constraints (Chubchuwong, 2022). Consequently, the provision of relevant content and responses through electronic service quality provided by OTAs fosters a sense of empowerment among customers, thereby amplifying their satisfaction with the booking process (Surya & Saragih, 2020). Moreover, the functionality of OTAs' digital services extends beyond mere information dissemination to encompass features facilitating seamless transactional experiences. The

electronic service quality enables ability to compare prices, view real-time availability, and complete bookings with a few clicks, improving consumer convenience and speeding up the reservation process (Chubchuwong, 2019; Nunkoo et al., 2020). Furthermore, OTAs' digital services play an essential role in customer satisfaction by addressing concerns related to security, support, and prompt response (Akinci et al., 2010; Weitzl & Hutzinger, 2017). Electronic recovery service quality by OTAs integrates secure payment gateways, encryption protocols, and robust customer support systems encourage confidence among users, assuring them of the safety and reliability during transactions (Das et al., 2019). Moreover, the responsive nature of digital customer service channels enables timely resolution of queries, complaints, or issues encountered during the booking or post-booking stages, thereby fostering satisfaction on customers.

Conclusion

In the present online booking rivalry, customers would anticipate enhanced consistency in terms of value and satisfaction from using online travel agencies (OTAs). Thus, we aimed to study the effect of OTAs' digital services on customer satisfaction. Today's OTAs must be able to provide customers with quick, individualized service whenever they need it. Therefore, it is crucial to understand the influence of digital services through electronic service quality and electronic recovery service quality on customer satisfaction. The result indicated the model fit and all hypotheses were accepted with positive significance. The influence of digital services on electronic service quality presented the highest level. It indicates that customers are concerned about the content of the OTAs platform, the information provided, and ease of use while visiting for their online booking. Moreover, efficiency, privacy, system availability, and fulfillment are the dimension that customers would expect. The measurement of electronic service quality and electronic recovery service quality, which has the second highest direct effect, are responsiveness, compensation, and contact ability. The influence of digital services through electronic service quality and electronic recovery service quality on customer satisfaction reveals a positive significance. Measurements of customer satisfaction are re-purchase intention, electronic word-of-mouth (e-WOM), and overall satisfaction.

OTAs' success depends on customer satisfaction. Supporting customers with user-friendly platforms may help OTAs evaluate consumer satisfaction. OTAs' digital offerings can benefit customers. Customers rely on web page, site, application engagement and efficacy during their online booking as well as contentious electronic recovery service quality which depends on the OTAs rapid response and contact support during customers' issues. Therefore, customer

satisfaction must be associated with electronic service quality and electronic recovery service quality as they offer customer support prior to, during, and after the booking, and must be very effective in several areas, including information, transactions, efficiency, and privacy protection. In addition, OTAs may facilitate currency transactions for foreign bookings, as most direct booking websites demand host country currency. According to the study, OTAs should prioritize hotel room and service information, quality, and security during bookings. OTAs may need a digital services plan with accurate information, current vacancy information, and an easy-to-use platform. OTAs can also use the data to track customer and guest online transaction behavior, improve, and make informed choices. The study found that consumer satisfaction depends on security and convenience, therefore OTAs may verify transaction security.

Suggestions

This study can show Thailand's digital literacy situation. The result shows that customers may expect digital services to meet their satisfaction. The ability to obtain the least digital literacy may affect intimate expectations, which showed that customers expect more from electronic service quality and electronic recovery service quality and are satisfied with OTAs when they are good with their service at the time of booking. The nature of Thai customers is sensible. They demand accurate information and service before booking, during decision-making, and after booking along with privacy and security. Our findings can help OTAs plan and insist on service-related information to support customer expectation.

Apart from our findings, limitation of the study must be addressed. First, this study only covers Thailand. Although, data were acquired from samples, we cannot apply the findings to all Thai customers. Second, the study focusses on Thai customers, therefore, finding and explanation is limited to one region. OTA customers are global thus, their expectations are diverse. Recent customer experience may be compared to customer satisfaction in future discussions. Customer satisfaction, similar to the study, is important for assessing OTAs' success, but customer experience may set boundaries or provide knowledge that helps OTAs and other service providers adapt differently and rapidly to serve them in the future.

References

Akinci, S., Atilgan-Inan, E., & Aksoy, S. (2010). Re-assessment of E-Serv-Qual and E-RecS-Qual in a pure service setting. *Journal of Business Research, 63*(1), 232–240.

Al-dweeri, R. M., Obeidat, Z. M., Al-dwiry, M. A., Alshurideh, M. T., & Alhorani, A. M. (2017). The impact of e-service quality and e-loyalty on online shopping: moderating effect of E-Satisfaction and E-Trust. *International Journal of Marketing Studies, 9*(2), 92-103.

Andaç, A., Akbiyik, F., & Karkar, A. (2016). Customer satisfaction factor in digital content marketing: Isparta province as an example. *International Journal of Social Science Studies, 4*(5), 124-135.

Ashley, C., & Tuten, T. (2015). Creative strategies in social media marketing: an exploratory study of branded social content and consumer engagement. *Psychology and Marketing, 32*(1), 15–27.

Chubchuwong, M. (2019). Benefits and problems of using online travel agencies (OTAs): A study of independent hotels in Thailand. *APHEIT International Journal, 8*(2), 20-33.

Chubchuwong, M. (2022). Factors Affecting Online Direct Hotel Booking: A Study in Bangkok. *APHEIT International Journal, 9*(1), 32-47.

Dabholkar, P. A. (1996). Consumer evaluations of new technology-based self-service options: an investigation of alternative models of service quality. *International Journal of Research in Marketing, 13*(1), 29–51.

Das., H. R., Rao, P. S., Kamath, G. B., & Prasad, S. H. C. (2019). Influence of e-marketing strategy on customer satisfaction. *International Journal of Innovative Technology and Exploring Engineering, 8*(9S3), 289-292.

Fornell, C., & Larcker, D.F. (1981). Structural equation models with unobservable variables and measurement error: algebra and statistics. *Journal of Marketing Research, 18*(3), 382–388.

Hair, J. F., Babin, B. J., & Krey, N. (2017). Covariance-based structural equation modeling in the Journal of Advertising: review and recommendations. *Journal of Advertising, 46*(1), 163–177.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis.* 6th Edition. New Jersey: Prentice Hall.

Hao, J. X., Yu, Y., Law, R., & Fong, D. K. C. (2015). A genetic algorithm-based learning approach to understand customer satisfaction with OTA websites. *Tourism Management, 48*(1), 231-241.

Inthasang, C., Khotsombat, S., & Ketchompu, D. (2021). Influence of Digital Marketing on Firm Performance of Hotel Businesses in Thailand. *Journal of Humanities and Social Sciences Nakhon Phanom University, 110*(3), 83-98.

Jedin, M. H., & Ranjini, K. (2017). Exploring the key factors of hotel online booking through online travel agency. In *4th International Conference on e-commerce (ICoEC) 2017* held in Malaysia.

Khmiadashvili, L. (2019). Digital marketing strategy based on hotel industry study in Tbilisi. *IJASOS- International E-Journal of Advances in Social Sciences, 5*(14), 922-927.

Lee, J. J. Y., Sung, H. H., Defranco, A. L., & Arnold, R. A. (2008). Developing, operating, and maintaining a travel agency website. *Journal of Travel & Tourism Marketing, 17*(2-3), 205-223.

Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology, 22*(140), 1-55.

McDonald, N. (2018). *We are social* [Online forum]. Retrieved June 18, 2022 from https://wearesocial.com/us/blog/2018/01/global-digital-report-2018.

Mick, D. G., & Susan F. (1995). *Technological Consumer Products in Everyday Life: Ownership, Meaning, and Satisfaction.* Cambridge: Marketing Science Institute.

Nunkoo, R., Teeroovengadum, V., Ringle, C. M., & Sunnassee, V. (2020). Service quality and customer satisfaction: the moderating effects of hotel star rating. *International Journal of Hospitality Management, 91*(1), 1-15.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing, 49*(4), 41.

Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-Serv-Qual: a multiple-item scale for assessing electronic service quality. *Journal of Service Research, 7*(3), 213–33.

Pholkerd, P., & U-un, V. (2022). The Digital Marketing Determinants that Affect Skincare Purchase Behavior of Consumers in Bangkok Metropolis and Vicinity. *Journal of Research and Development Buriram Rajabhat University, 17*(1), 9-17.

Phumpa, P., Satchapappichit, S., & Phanniphong, K. (2022). The Impact Of Digital Marketing On Hospitality Industry Performance In Thailand During COVID-19: Eastern Economic Corridor. *Journal of Positive School Psychology, 6*(9), 1995-2004.

Rahayu, K. S., & Saodin, S. (2021). E-Serv-Qual on e-trust, e-satisfaction and online repurchase intention. *Review of International Geographical Education (RIGEO), 11*(4), 1426-1439.

Ranjbarian, B., Fathi, S., & Rezaei, Z. (2012). Factors influencing on customers' e-satisfaction: a case study from Iran. *Interdisciplinary Journal of Contemporary Research in Business, 3*(9), 1496-1511.

Raza, S. A., & Umer, A. (2020). Internet banking service quality, e-customer satisfaction and loyalty: the modified e-SERVQUAL model. *TQM Journal, 32*(6), 1443-1466.

Schumacker, R. E., & Lomax, R. G. (2010). *A Beginner's Guide to Structural Equation Modeling.* 2nd Edition. New York: Routledge.

Sharma, A., Sharma, S., & Chaudhary, M. (2020). Are small travel agencies ready for digital marketing? Views of travel agency managers. *Tourism Management, 79*(1), 1-10.

Soleimani, A. G., & Einolahzadeh, H. (2018). The influence of service quality on revisit intention: the mediating role of WOM and satisfaction (Case study: Guilan travel agencies). *Cogent Social Sciences, 4*(1), 1-14.

Statista. (2022). *Share of internet users for hotel and accommodation booking in Thailand in 2020, by channel* [Online forum]. Retrieved March 17, 2024 from https://www.statista.com/statistics/1181186/thailand-share-of-users-hotel-accommodation-booking-by-channel/

Sukman, S., Sukkamart, A., Pimdee, P., Sodbhiban, P., & Klinhom, L. (2018). Comparison of digital literacy standard between Thailand and other countries. *International Journal of the Computer, the Internet and Management, 26*(3), 93-97.

Surya, E. D., & Saragih, M. G. (2020). Analysis of e-service quality to customer satisfaction with perceived value as intervening variable. *International Journal for Innovative Research in Multidisciplinary Field, 6*(2), 228-234.

Taufik, E. R., Listiawati, L., Khairusy, M. A., Nurjaya, N., Salam, R., Setiawati, N. P. A., Ilham, D., Wulansari, R., Sunarsi, D., & Purwanto, A. (2021). The effect of online marketing and e-service quality on purchase decisions: an empirical study on online shop. *Turkish Journal of Physiotherapy and Rehabilitation, 32*(3), 2373-2382.

Thansettakit. (2022). *Site minder reveals 12 highest-grossing hotel booking platforms of 2021, with entrepreneurs adapting to more holistic trading strategies* [Online forum]. Retrieved June 18, 2022 from https://www.thansettakij.com/business/512615

Tran, V. D., & Vu, Q. H. (2019). Inspecting the relationship among e-service quality, e-trust, e-customer satisfaction and behavioral intentions of online shopping customers. *Global Business & Finance Review, 24*(3), 29-42.

Ulkhaq, M. M., Rabbani, M., Rachmania, B. A., Wibowo, A. T., & Ardi, F. (2019). Integrating importance-performance analysis into ES-QUAL and E-RecS-QUAL scales for assessing electronic service quality. *IOP Conference Series: Materials Science and Engineering, 598,* 012002.

Weitzl, W., & Hutzinger, C. (2017). The effects of marketer- and advocate-initiated online service recovery responses on silent bystanders. *Journal of Business Research, 80*(1), 164-175.

Wongkhajornpaibul, K., & Sornsaruht, P. (2019). An analysis of online purchase intention of Thai hostel accommodations. *African Journal of Hospitality, Tourism and Leisure, 8*(5), 1-17.

Woodside, A. G., Frey, L. L., & Daly, R. T. (1989). Linking service quality, customer satisfaction, and behavioral intention. *Journal of Health Care Marketing, 9*(4), 5-17.

Acknowledgement

We would like to express our gratitude to the three anonymous reviewers for their constructive comments and suggestions.