

Sequential Mediation between the COVID-19 Epidemic Situation and Reservice by Tourists in the Mekong River Basin

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Received: June 28, 2023

Revised: November 16, 2023

Accepted: February 5, 2024

Abstract

The aim of this study was to examine the interplay of service quality, satisfaction, and reservice among Thai tourists in eight provinces in Thailand and three neighboring provinces in the Lao PDR, all of which are adjacent to the Mekong River. A survey questionnaire was collected from 400 Thai tourist respondents. The study utilized convenience sampling and employed structural equation model analysis and second-order confirmatory factor analysis. The study also tested sequential mediation using the Sobel Test Formula for Sequential Mediation. The findings of the study indicated that the safety factor during the COVID-19 epidemic had a direct impact on the level of service and reservice by tourists. Additionally, the quality of service indirectly influenced the return visits of tourists by affecting their satisfaction. The results of the sequential mediation test revealed that both service quality and satisfaction served as mediator variables, which had an indirect effect on the relationship between the safety factor during the epidemic and the reservice by Thai tourists. This mediation effect was found to be moderate. The research results recommend that the government should establish standards of safety as it did during the COVID-19 pandemic and encourage businesses offering accommodation to participate in assessments for safe and sanitary practices.

Keywords: sequential mediation, Mekong River basin, service quality, reservice by tourists, COVID-19 epidemic

Introduction

The tourism industry encompasses several crucial elements, including transportation, souvenir sales, food and beverage, and tourism

businesses. However, the accommodation business lies at the heart of the tourism industry (Krungsri Bank, 2021). The value of the accommodation sector, consisting of hotels, resorts, guesthouses, and others, can total up to 1.03 trillion baht, accounting for 6.1 percent of Thailand's GDP.

Faced with the global outbreak of Covid-2019, the Department of Disease Control established an emergency operation center to address the situation. A significant epidemic was later discovered, with infections occurring in clusters. As a result, the government closed international border checkpoints, affecting several provinces with borders neighboring other countries. This had a significant impact on the eight provinces that share borders along the Mekong River. Additionally, the number of Thai tourists traveling to neighboring Lao PDR were also affected because of its location along the Mekong River.

Tourism plays a vital role in the provinces located in the Mekong River basin. However, the recent outbreak of COVID-19 significantly impacted accommodation business operators in Thailand and the Lao PDR. In response to the pandemic, tourism business operators and hotels embraced innovative approaches to sustain their operations. These include leveraging modern technology to enhance their services and analyzing the diverse needs of tourists in order to offer personalized experiences. Additionally, they have prioritized health and hygiene safety measures to ensure the safety of their guests. The quality of service provided by accommodation businesses is crucial in ensuring the satisfaction of guests and their likelihood of returning in the future. In light of the pandemic, it became crucial for service providers to prioritize safety by adhering to the Safety and Health Administration (SHA) or sanitation safety standards established by the Department of Disease Control in 2021. Compliance with these guidelines reflects the high value placed on safety measures that impacted the supply of accommodation services and ultimately affected the cost of providing them.

The service quality provided by accommodation businesses plays a critical role in ensuring customer satisfaction and influencing their decision to return and use the service again in the future across

eight provinces in Thailand along the Mekong River, as well as three provinces of the Lao PDR. Despite its significance, there is limited research available on this area. Consequently, the aim of this study was to examine the relationship between safety, service quality, satisfaction, and repeat business among Thai tourists in the Mekong River basin areas of Thailand and the Lao PDR. The findings will serve as a valuable guideline for developing and improving the service quality of accommodation businesses in the Mekong River basin.

Literature Review

Related Theories

1. Concept of service quality and satisfaction

Parasuraman, Zeithaml and Berry (1985) identified five dimensions of service quality as a driving force for consumers to be satisfied and have the intention to reservice (Baumann, Hoadley, Hamin, and Nugraha, 2017). The quality of service can be measured using the following five dimensions: tangibles of the service, reliability, responsiveness, assurance, and empathy. Penchansky and Thomas (1981) defined customer satisfaction as the ability to access the service system, which has the following four components: availability, accessibility, accommodation, and affordability. Additionally, service quality refers to the ability of a service provider to efficiently satisfy customer needs, thereby enhancing business performance (Ramya, Kowsalya and Dharanipriya, 2019).

2. The concept of reservice

Reservice refers to the attitude of customers that results from their positive experience of using a service and the satisfaction they receive from the service provider. This attitude includes customer loyalty towards the service (Taylor and Baker, 1994) and results in a favorable attitude that leads to customers returning in the future (Oliver, 1980). This concept is supported by the research of Anderson and Fornell (1994), which suggests that reservice is dependent on the consumer's initial service experience. Consumer satisfaction with the first instance of receiving service results in loyalty. Therefore, revisit intention refers to

a customer's willingness to purchase a product or service from a seller or service provider repeatedly after using the service (Anderson and Fornell, 1994). This intention may also refer to a person's willingness to return and make another purchase or utilize the service again, based on their previous experience (Hellier, Geursen, Carr, and Rickard, 2003). Additionally, a satisfied customer who has reported positive feedback about the product or service to others and returns to use it again can also demonstrate revisiting intention (Cronin, Brady and Hult, 2000).

3. Hygiene safety and cleanliness

Maintaining high standards of cleanliness and hygiene in hotels is crucial, especially in light of the COVID-19 epidemic where pathogens were mutating and spreading easily (Xinhuathai, 2021). Additionally, aerosol transmission through central air conditioning could also contribute to the spread of COVID-19 (Zhang and Ma, 2020). As noted by Gu and Ryan in 2008, maintaining cleanliness in hotel rooms is a vital element of a hotel's reputation and a key factor in guests' decision-making process. By ensuring high standards of cleanliness and hygiene, hotels can create a sense of satisfaction among their guests.

Related Research

A study conducted by Kudhinnok (2014) analyzed the service quality affecting customer satisfaction of foreign visitors and their intention of returning to 5-star hotels in Bangkok. The results indicated that service quality, reliability, customer confidence, and customer attention significantly influenced customer satisfaction. Similarly, Suasuri conducted research in 2015 on the factors affecting service quality, including trust, satisfaction, word of mouth, and revisit intention, regarding 5-star hotels in Indonesia. The study found that service quality had a positive impact on trust, and that trust and satisfaction positively influenced customer referrals and repeat visits.

A recent study conducted by Thongkum (2021) investigated the factors influencing the return of Generation Y tourists to 3- to 5-star hotels in southern Thailand. The study found that service quality and health awareness had a positive impact on the likelihood of Generation

Y tourists returning to use these services. Similarly, Pornnapa, Homboonyong Amornsittinon, Patcharapuwadol and Hamloha (2021) conducted a study of the service quality and marketing factors related to accommodation services after COVID-19 epidemic measures were relaxed. Their findings indicated that the security measures implemented during the COVID-19 epidemic have had an impact on the quality of accommodation services.

In addition, Sofiani (2020) conducted a study on the impact of hygiene and sanitation at Santika Depok Hotel in Indonesia revealing that the hygiene of staff and the service department significantly impacted customers' intention to return to the hotel. Conversely, Laowicharath (2017) found that the cleanliness of the hotel service area did not affect the purchase intention of foreign customers staying at budget hotels in Bangkok. This may be due to the fact that cleanliness is a fundamental expectation in the hospitality industry, and customers view it as a basic requirement rather than a distinguishing factor. However, in a recent study by Tangtenglam and Pongpanich (2021) on the factors affecting the selection of new normal Thai travel, safety and hygiene considerations were found to impact the intention to return and use hotel services again.

Conceptual Framework

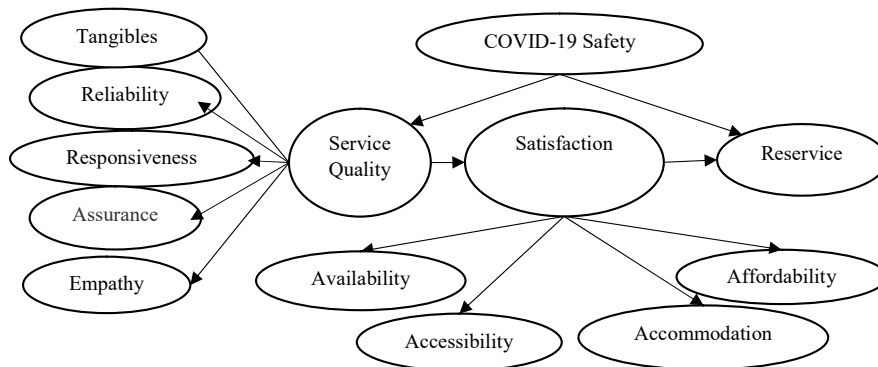


Figure 1 Conceptual framework

Research Methodology

Population and Sample

In this study the researchers used Cochran's formula (Cochran, 1977; cited in Nonthapot, 2019) to determine a confidence level of 95 percent with a sample size of 385. In line with previous studies by Nonthapot (2019) and Sihabutr and Nonthapot (2021), the researchers collected a total of 400 cases to increase the power of statistical forecasting. The sample size was divided equally between Thailand and the Lao PDR, with 200 participants traveling in However, because the data on Laos was limited. Therefore, the samples of Laos focused only three provinces, which we then targeted. It can be presented in the path analysis in Table 8. The sample was selected using simple random sampling based on the number of rooms, as shown in Table 1 and Table 2.

Table 1 Size determination of the sample in Thailand by number of rooms in 2016

Province	Number of rooms	Proportion	Sample size
Chiang Rai	11,635	37	74
Loei	3,312	11	21
Nong Khai	2,294	7	15
Buang Kan	1,545	5	10
Nakhon Phanom	2,365	8	15
Mukdahan	2,824	9	18
Amnat Charoen	948	3	6
Ubon Ratchathani	6,546	21	42
Total	31,469	100	200

Note: Based on the statistics of the number of rooms in the area (Ministry of Tourism and Sports, 2022)

Table 2 Size determination of the sample in the Lao PDR by number of rooms in 2020

Province	Number of rooms	Proportion	Sample size
Champasak	4,995	20	39
Vientiane	14,066	55	110
Luang Prabang	6,447	25	51
Total	25,508	100	200

Note: Based on the number of hotel rooms in Lao PDR, 2020 (Ministry of Information, Culture and Tourism, Tourism Development Department, 2021)

Research Tool

This study utilized a questionnaire consisting of 53 items divided into five parts as a data collection tool. The second through the fifth parts employed a Likert scale to gauge opinions, with scores ranging from one to five. The questionnaire's components are as follows:

Part 1: General information on respondents, comprising six items;

Part 2: Opinions on the accommodation's service quality, consisting of 25 items;

Part 3: Questions pertaining to respondents' satisfaction with the accommodation's services, comprising 12 items;

Part 4: Five questions on respondents' prioritization of security regarding the COVID-19 epidemic;

Part 5: Five questions regarding recipients' intentions to reuse accommodation services.

Prior to the questionnaire collection, the researchers had the content validity index (CVI) assessed by five experts with a threshold of 0.85 or higher (Rovinelli and Hambleton, 1997; cited in Nonthapot, 2019). Subsequently, 30 sets of the questionnaire were administered to assess reliability, using the Cronbach's alpha value, and it was determined that the value exceeded 0.7 for all items. Following successful reliability testing, the researchers proceeded with data collection and analysis.

Data Analysis

This research employed the following methods to analyze the data.

1. The descriptive statistics method was utilized to analyze the general data of the sample. The analysis used basic descriptive statistics to determine the percentage and frequency.

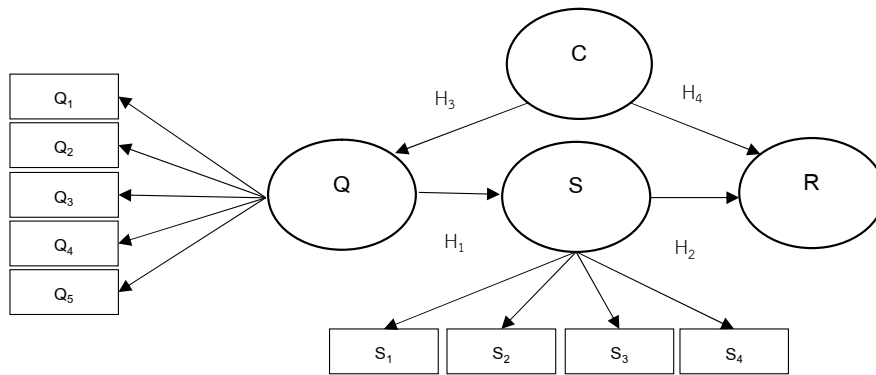
2. Quantitative analysis was conducted using the data obtained from parts 2, 3, 4, and 5 of the questionnaire. Structural equation modeling (SEM) was used to perform a confirmatory factor analysis (CFA) in order to verify the structural validity of the latent variables within the measurement model and to evaluate the consistency of the correlation model. This analysis employed the ADANCO 2.3.2 software that is suitable for development models based on SEM-variance base (Hair et al. 2010, Sihabutr and Nonthapot, 2021).

This study involved a second confirmatory factor analysis, which was divided into the following three main steps for analysis.

1) Data from parts 2 and 3 were used to analyze the first confirmatory component of the conceptual framework depicted in Figure 1. This was done in order to confirm the structural validity of the latent variables in the measurement model before proceeding to analyze the second confirmatory component.

2) The data obtained from the first analysis were used to analyze the second confirmatory component, and final model estimation was carried out to confirm the structural validity of the latent variables in the measurement model. Additionally, the consistency between the final model and the relationship model was analyzed to evaluate the model and hypothesis in the study as follows.

3) After completing the final model evaluation, the researchers conducted a Sobel Test formula for sequential mediation as per the method suggested by Matt (2020) in order to determine the extent of the impact of sequential mediation.

**Figure 2** Final Model

where	Q_1	is	tangibles
	Q_2	is	reliability
	Q_3	is	responsiveness
	Q_4	is	assurance
	Q_5	is	empathy
	S_1	is	availability
	S_2	is	accessibility
	S_3	is	accommodation
	S_4	is	affordability
	C	is	COVID-19 safety
	Q	is	service quality
	S	is	customer satisfaction
	R	is	intention to reservice

The study's hypotheses were established as follows:

- H_1 : Service quality has an impact on customer satisfaction.
- H_2 : Customer satisfaction influences willingness to reservice.
- H_3 : COVID-19 safety affects the quality of service.
- H_4 : COVID-19 safety affects intention to reservice.

Results

Behavioral Data of Thai Tourists on Both Sides of the Mekong River

Based on the results of the study, it was discovered that among the Thai tourist sample group who stayed in accommodations in the three provinces of the Lao PDR, the highest percentage (41 percent) originated

from the northeastern region. Additionally, 56 percent of the sample tourists were female, and 26 percent were in the age range of 21 to 30 years old. Moreover, 64 percent held a diploma or bachelor's degree, while 26.5 percent were engaged in trading or business ownership. A significant number of the sample tourists (39 percent) had an average monthly income exceeding 30,000 baht. In terms of the Thai tourists who traveled within the eight provinces in Thailand, the study revealed that the majority of the respondents came from the central region (39.5 percent), were female (56 percent) and were aged between 31 and 40 (27.5 percent). Furthermore, 66.5 percent of respondents held a diploma or bachelor's degree, while 29.5 percent were traders/business owners. Additionally, 49.5 percent of the respondents had an average monthly income of more than 30,000 baht/month. In addition, all quantitative data testing is between -2 and +2, which is considered acceptable according to Byrne (2010) and George and Mallery (2010). Therefore, the partial least square method implies the condition of normality in this analysis.

Relationships Among Quality of Service, Satisfaction and Reservice of Thai Tourists

To examine the correlations between service quality, customer satisfaction, and reservice among Thai tourists, the observed variables were obtained from relevant research studies and analyzed thoroughly, including service quality, customer satisfaction, COVID-19 safety, and repeat service factors for Thai tourists. The data analysis employed PLS-SEM analysis by the ADANCO 2.3 program to assess the reliability and discriminant validity of each variable. The loading value exceeded 0.7 with two steps.

1. First-order confirmatory factor analysis

The analysis revealed that all variables pertaining to service quality and satisfaction factors demonstrated loading values exceeding 0.7, as presented in Table 3.

Table 3 Analysis results of the loading values of the first-order confirmatory factor analysis

Index	Service quality (Q)					Customer satisfaction (S)			
	Q ₁	Q ₂	Q ₃	Q ₄	Q ₅	S ₁	S ₂	S ₃	S ₄
Q ₁₁	0.7337								
Q ₁₂	0.7088								
Q ₁₃	0.7688								
Q ₁₄	0.7186								
Q ₁₅	0.7511								
Q ₂₁		0.7718							
Q ₂₂		0.7876							
Q ₂₃		0.8069							
Q ₂₄		0.7978							
Q ₂₅		0.7832							
Q ₃₁			0.7550						
Q ₃₂			0.8090						
Q ₃₃			0.7845						
Q ₃₄			0.8473						
Q ₃₅			0.7774						
Q ₄₁				0.8158					
Q ₄₂				0.8296					
Q ₄₃				0.7994					
Q ₄₄				0.8158					
Q ₄₅				0.8317					
Q ₅₁					0.7962				
Q ₅₂					0.8153				
Q ₅₃					0.7638				
Q ₅₄					0.8153				
Q ₅₅					0.8084				
S ₁₁						0.8546			
S ₁₂						0.8576			
S ₁₃						0.8325			
S ₂₁							0.8826		
S ₂₂							0.8836		
S ₂₃							0.8102		
S ₃₁								0.8370	

Table 3 Analysis results of the loading values of the first-order confirmatory factor analysis (Cont.)

Index	Service quality (Q)					Customer satisfaction (S)			
	Q ₁	Q ₂	Q ₃	Q ₄	Q ₅	S ₁	S ₂	S ₃	S ₄
S ₃₂								0.8489	
S ₃₃								0.8144	
S ₄₁									0.8945
S ₄₂									0.9096
S ₄₃									0.7930

- Note : Q₁₁ = The employees maintain a neat and clean appearance.
 Q₁₂ = The atmosphere and environment are conducive to relaxation.
 Q₁₃ = The room's equipment and facilities are clean, complete, and in good order.
 Q₁₄ = Sufficient parking space is available to accommodate the number of customers using the service.
 Q₁₅ = The booking system is modern and user friendly.
 Q₂₁ = If an accommodation offers a service to the customer, it will provide the service within the specified timeframe as per the offer.
 Q₂₂ = The accommodation has a standard security system for customer safety.
 Q₂₃ = The accommodation has implemented strict measures to prevent the spread of COVID-19, fostering trust and confidence among the guests.
 Q₂₄ = The accommodation has a secure system in place to protect the personal data of guests using the service.
 Q₂₅ = The payment channels offered by the accommodation are diverse, accurate, convenient, and reliable.
 Q₃₁ = The service personnel are consistently enthusiastic and dedicated to providing helpful assistance to guests.
 Q₃₂ = The accommodation has sufficient staff to provide comprehensive customer service.
 Q₃₃ = The accommodation offers a range of services such as a spa, laundry, ironing, restaurant, coffee shop, and more.
 Q₃₄ = The duration of service provided by employees at each stage is appropriate.
 Q₃₅ = The employees provide accurate and prompt advice and resolutions regarding various customer concerns.
 Q₄₁ = The employees possess the ability to provide correct information, effectively solve customer problems, and answer their inquiries.
 Q₄₂ = The employees can provide accurate and complete advice in response to customer inquiries.
 Q₄₃ = The accommodation is on the list of well-established hotels.
 Q₄₄ = The accommodation has a reliable payment system in place for guests during their stay.
 Q₄₅ = The employees communicate clearly and accurately with customers.
 Q₅₁ = The employees have thoroughly and accurately explained the accommodation's regulations.
 Q₅₂ = The employees warmly greet customers by name and demonstrate genuine care for their needs.
 Q₅₃ = The accommodation has a system in place to provide customers with advance notice of their arrival date.
 Q₅₄ = The employees treat all customers equally and give them individual attention.
 Q₅₅ = The employees are proactive in addressing and following up on any customer problems that arise.
 S₁₁ = The accommodation has adequate staffing to cater to the needs of its customers.
 S₁₂ = The guest rooms in the accommodation are equipped with sufficient facilities to meet a customer's needs.
 S₁₃ = The services are punctual and efficient in response to customer needs.
 S₂₁ = The accommodation has well-established communication channels to ensure efficient internal communication.
 S₂₂ = The route to the accommodation is convenient and easy to navigate.
 S₂₃ = Access to the accommodation's various services, including restaurants, spas, and gyms, is easily accessible within the accommodation facility.
 S₃₁ = Contacting the accommodation is convenient, easy, and fast.
 S₃₂ = The accommodation provides ample facilities such as signposts, parking spaces, and spa rooms.
 S₃₃ = The accommodation offers a variety of spacious and clean locations that provide ample shelter and safety for guests.
 S₄₁ = The pricing of the accommodation is appropriate for the service provided.
 S₄₂ = All expenses incurred are handled in a fair manner for guests.
 S₄₃ = The payment process is designed to be convenient, modern, and user friendly.

2. The second-order confirmatory factor analysis and final model results

According to the results of the analysis, all variables, namely service quality, satisfaction, COVID-19 safety, and reservice of Thai tourists, exhibited loading values greater than 0.7, as depicted in Table 4.

Table 4 Loading analysis results

Index	Service quality (Q)	Satisfaction (S)	COVID-19 safety (C)	Reservice of Thai tourists (R)
Tangibles (Q ₁)	0.8576			
Reliability (Q ₂)	0.8891			
Responsiveness (Q ₃)	0.9022			
Assurance (Q ₄)	0.9074			
Empathy (Q ₅)	0.8747			
Availability (S ₁)		0.8747		
Accessibility (S ₂)		0.8614		
Accommodation (S ₃)		0.8922		
Affordability (S ₄)		0.8629		
The accommodation must strictly comply with disease prevention measures according to regulations. (C ₁)			0.8392	
The accommodation should clean the rooms with disinfectant spray every time they are opened for a new guest. (C ₂)			0.8488	
After rooms are thoroughly sanitized, they are equipped with necessary protective equipment, including alcohol spray for use inside the room. (C ₃)			0.8297	
The accommodation has carefully screened temperature checks before entry and verified the vaccination records of all individuals using the service. (C ₄)			0.8737	

Table 4 Loading analysis results (Cont.)

Index	Service quality (Q)	Satisfaction (S)	COVID-19 safety (C)	Reservice of Thai tourists (R)
A safety sign displaying the accommodation's compliance with safety standards, such as SHA or SAFE and CLEAN, etc., can be observed. (C ₅)			0.8063	
When traveling in the area, this accommodation is the guest's top choice. (R ₁)				0.8167
In the future, service users still intend to choose to use the service again, even if the room rates change based on economic factors. (R ₂)				0.8304
The service user intends to continue to introduce the services of the accommodation to family and others. (R ₃)				0.8274
The service user intends to review and rate the services provided by the accommodation. (R ₄)				0.8207
The service user intends to share news, activities, and advertisements through online channels such as the hotel's Facebook page with friends or others to recommend it as a place to stay. (R ₅)				0.8368

Latent variables should have an AVE value that exceeds 0.5, while the Dijkstra-Henseler's rho (ρ_A), Jöreskog's rho (ρ_c), and Cronbach's alpha values should be greater than 0.7. These values were deemed appropriate, as evidenced by the data presented in Table 5.

Table 5 Statistics of the structural suitability measurement model

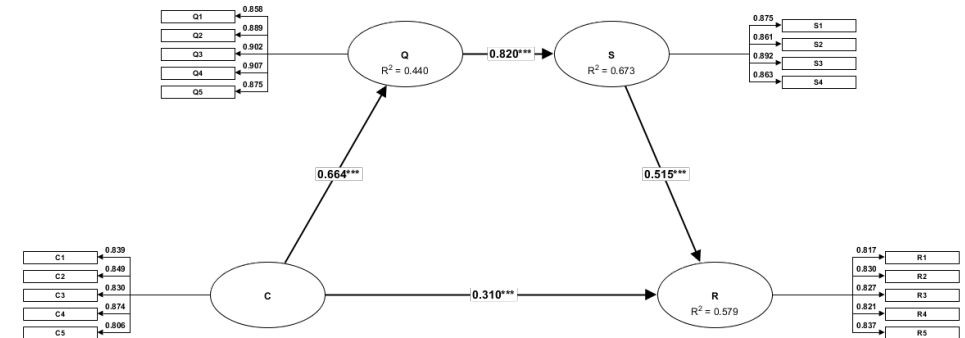
Construct	AVE	Dijkstra-Henseler's rho (ρ_A)	Jöreskog's rho (ρ_c)	Cronbach's alpha (α)
Q	0.7857	0.9322	0.9482	0.9317
S	0.7619	0.8977	0.9275	0.8959
C	0.6830	0.8845	0.9150	0.8840
R	0.7053	0.8966	0.9228	0.8954

Based on the statistical analysis presented in Table 5, the validity of the model was assessed by examining the structural suitability measurement. Hair et al. (2010, p. 107) recommend that the average variance extracted (AVE) should be greater than 0.50. The AVE values for all latent variables, namely quality of service (Q), satisfaction (S), COVID-19 safety (C), and reservice of Thai tourists (R), ranged from 0.6830 to 0.7857, indicating that they could explain the variance of the observed variables by 78.57, 76.19, 68.30, and 70.53 percent, respectively. Henseler, Hubona and Ray (2016) established an acceptable threshold for the value of Dijkstra-Henseler's rho (ρ_A) and Jöreskog's rho (ρ_c) for all variables, which must be greater than 0.70. The analysis found that the latent variables ranged from 0.8845 to 0.9322 for Dijkstra-Henseler's rho (ρ_A) and from 0.9150 to 0.9482 for Jöreskog's rho (ρ_c), which were deemed suitable values. Additionally, the Cronbach's alpha (α) value is required to be greater than 0.7. In the present study, it was indicated that all latent variables exhibited a range of 0.8840 to 0.9317, which was considered appropriate as it exceeded the standard threshold of 0.70.

Table 6 Discriminant validity: Fornell-Larcker criterion

Construct	Q	S	R	C
Q	0.7857			
S	0.6731	0.7619		
C	0.5123	0.5276	0.6830	
R	0.4404	0.4656	0.4376	0.7053

To assess the discriminant validity measurement of each latent variable, Fornell and Larcker (1981) recommended that the AVE of each latent variable should exceed the correlation between the latent variables. As per Table 6, it is evident that the correlations between the latent variables are lower than all of the AVE values.

**Figure 3** Analysis results

As seen in Figure 3, it was observed that the loading values of all 19 variables in the second confirmatory factor analysis were higher than 0.7, indicating the reliability of the model.

The structural model analysis included the coefficient of determination, which were direct and indirect effects, and total effects. The R^2 values for the latent variables were found to be 0.4404, 0.6731, and 0.5790, respectively (Chin, 1998), as indicated in Table 7. After that, it can be presented in the path analysis in Table 8.

Table 7 Coefficient of determination

Construct	Coefficient of determination (R^2)	Adjusted R^2
Q	0.4404	0.4390
S	0.6731	0.6723
R	0.5790	0.5769

Regarding the data presented in Table 8, a hypothetical influence analysis was conducted on the direct effects or path coefficients. The results indicate that the path with the highest total effect was service quality to satisfaction. This was followed by COVID-19 safety to service quality, satisfaction to reservice of Thai tourists, and COVID-19 safety to the reservice of Thai tourists. All four hypotheses of the study were found to be consistent with these findings.

Table 8 Direct effects inference

Effects	Original Coefficients (β)	Standard error	T-value	P-value	Hypothetical implications of the study
Q \rightarrow S	0.8204	0.0319	25.7083	0.0000	H ₁ Accepted
S \rightarrow R	0.5145	0.0583	8.8281	0.0000	H ₂ Accepted
C \rightarrow Q	0.6636	0.0387	17.1590	0.0000	H ₃ Accepted
C \rightarrow R	0.3104	0.0599	5.1801	0.0000	H ₄ Accepted

As shown in Table 9, it was observed that service quality had an indirect impact satisfaction, which in turn influenced the likelihood of reservice of Thai tourists. Additionally, COVID-19 safety had both a direct and indirect effect on the reservice of Thai tourists, with the latter being mediated by service quality and satisfaction to a moderate degree.

Further examination of the Cohen's f^2 values revealed that the effect of service quality on satisfaction had a large impact, as did that between COVID-19 safety and service quality. Conversely, the impact of satisfaction on reservice was moderate, while the impact of COVID-19 safety on reservice was relatively small. To validate the sequential mediation of service quality and satisfaction, a statistical tests was conducted.

To further confirm these findings, sequential mediations were statistically tested in the subsequent section to examine the relationship between service quality and satisfaction.

Table 9 Effects overview

Effects	Direct effects	Indirect effects	Total effects	Cohen's f^2
Q \rightarrow S	0.8204	-	0.8204	2.0589
Q \rightarrow R	-	0.4221	0.4221	-
S \rightarrow R	0.5145	-	0.5145	0.3360
C \rightarrow Q	0.6636	-	0.6636	0.7869
C \rightarrow S	-	0.5444	0.5444	-
C \rightarrow R	0.3104	0.2801	0.5905	0.1223

3. Sequential mediation test

As seen in Figure 3, it was confirmed through the Sobel Test Formula for Sequential Mediation (Matt, 2020) that service quality (Q) and satisfaction (S) played a sequential mediating role between COVID-19 safety (C) and the reservice of Thai tourists (R). The statistical analysis presented in Table 10 reveals that the effects of Q on C and S, of S on Q and R, and Q and S on C and Y are all significant at a 99 percent confidence level. Therefore, it can be concluded that service quality (Q) and satisfaction (S) play a sequential mediation role in this context. The indirect effects were calculated using the values presented in Table 10, which showed a moderate level of sequential mediation with a value of 0.2823 (Ivan and Shu, 2020).

Table 10 Sequential mediation test

Results	Z-Score	Effects	Standard Error	P-value
Effect of Q between C and S	14.2669	0.5444	0.0382	< 0.001
Effect of S between Q and R	8.3473	0.4221	0.0506	< 0.001
Effect of Q and S between C and Y	7.5052	0.2801	0.0373	< 0.001
Cumulative Effect	7.5052	0.2801	0.373	< 0.001

Conclusion, Discussion, and Recommendation

The first confirmatory factor analysis revealed that the service quality factor consisted of five groups, namely tangibles, reliability, responsiveness,

assurance, and empathy. Moreover, the satisfaction factor was divided into four groups, which include availability, accessibility, accommodation, and affordability.

The study indicates that COVID-19 safety measures had a significant impact on service quality. This demonstrates the importance for service providers to maintain safety standards amidst the epidemic, as it reflected the overall quality of their service. This is also crucial in ensuring the reliability of accommodation safety in response to the COVID-19, which is consistent with the findings of previous studies conducted by Sofiani (2020) as well as Tangtenglam and Pongpanich (2021). However, these results contradict that of Laowicharath (2017), which found that the cleanliness of hotel service areas did not affect customer intention to use the service. However, cleanliness remains a fundamental factor in the service industry.

Service quality has an indirect impact on the reservice of tourists, as it affects their satisfaction and ultimately their likelihood of returning. Therefore, the service provided by the accommodation plays a crucial role in reservice. Positive feedback from tourists regarding service quality leads to increased loyalty to the service provider, which convinces customers to return. This is consistent with the findings of Taylor and Baker (1994), who emphasized that paying attention is of utmost importance to service providers, as it results in return customers in the future (Oliver, 1980). Additionally, Anderson and Fornell (1994) found that recurring service use depends on customer satisfaction with service quality. Satisfied customers are more likely to exhibit loyalty and return to use the service again in the future.

Furthermore, the findings from the sequential mediation test indicate that service quality and satisfaction acted as sequential mediators, resulting as an indirect effect of COVID-19 safety and tourist reservice of approximately 0.28. This demonstrates that upholding high-quality accommodation standards plays a crucial role in generating satisfaction and promoting repeat use. Thus, ensuring that service standards and customer satisfaction are consistently met is pivotal in instilling confidence in tourists and encouraging their continued utilization of the services.

Based on the findings of the study, it is recommended that the government should maintain safety standards for COVID-19. This includes mandating thorough screening and disinfection of accommodations before opening for service. Encouraging accommodations to participate in safe and sanitary assessments and improving routes to campgrounds should also be prioritized. Additionally, service charge rates for accommodation facilities should be examined to ensure fairness for both providers and users, and promoting the tourism sector in the Mekong River basin region can support local accommodations. This approach will encourage tourists to come back to the area again.

In light of the recent COVID-19 epidemic, it is essential for entrepreneurs to continuously implement measures that ensure safety. It is also advisable to encourage language proficiency among employees, particularly since the businesses offering accommodations are situated in an international border area. With multilingual staff, customers can receive clear and concise advice.

Finally, clear signs pointing to the accommodation and ample parking space must be provided to cater to the needs of customers. It is also essential to display transparent pricing for all services offered and to communicate the rates for services within the accommodation. It is recommended that a Facebook page be established to disseminate news and reviews from previous guests. Additionally, it is essential to maintain up-to-date information on the accommodation's online contact channels.

Acknowledgements

We are grateful to the Research Administration Division of Khon Kaen University for funding support for this research. We also wish to express our appreciation for the cooperation from the Ministry of Information, Culture, and Tourism, as well as from Mr. Kingxay Chounlamounry and Mr. Lithiphonh Phanthamaly of Lao People's Democratic Republic.

References

- Anderson, E.W. and Fornell, C. (1994). A customer satisfaction research prospectus. In R.T. Rust and R.L. Oliver (Eds.). **Service Quality: New directions in theory and practice**. London: Sage Publications.

- Baumann, C., Hoadley, S., Hamin, H., and Nugraha, A. (2017). Competitiveness vis-à-vis service quality as drivers of customer loyalty mediated by perceptions of regulation and stability in steady and volatile markets. **Journal of Retailing and Consumer Services**, (36), 62-74.
- Byrne, Barbara M. (2010). **Structural equation modeling with AMOS: Basic concepts, applications, and programing**. 2th edition. New York: Taylor and Francis Group.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.). **Modern Methods for Business Research**, 7(4) 295-336.
- Cochran, W. G. (1977). **Sampling Techniques**. 3rd Edition. New York; John Wiley & Sons.
- Cronin, J. J., Brady, M. K., and Hult, G. T. (2000). Assessing the effects of quality, value and customer satisfaction on consumer behavioral intentions in service environments. **Journal of Retailing**, 76, 193-218.
- Fornell, C. and Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. **Journal of Marketing Research**, 18(1), 39-50.
- George, D. and Mallery, M. (2010). **SPSS for Windows step by step: A simple guide and reference**, 17.0 Update, 10th edition. Boston: Pearson.
- Gu, H. and Ryan, C., (2007). Chinese clientele at Chinese hotels evaluations and importance attributions: A comparison between different hotel star ratings. **Paper presented at the 13th Asia Pacific Tourism Association & 4th Asia Pacific CHRIE Joint Conference Proceeding**. Beijing International Studies University, Beijing.
- Hair, J. F., Black, B., Babin, B., Anderson, R. E., and Tatham, R. L. (2010). **Multivariate data analysis: A global perspective**. New Jersey: Pearson Education.
- Hellier, P. K., Geursen, G. M., Carr, R. A., and Rickard, J. A. (2003). Customer repurchase intention: A general structural equation model. **European Journal of Marketing**, 37(11/12), 762-1,800.
- Henseler, J., Hubona, G., and Ray, P. A. (2016). Using PLS Path Modeling in new technology research: Updated guidelines. **Industrial Management & Data Systems**, 116(1), 2-20.
- Ivan, J. A. P. and Shu, F. C. (2020). SEM-Based methods to form confidence intervals for indirect effect: Still applicable given nonnormality, under certain conditions. **Frontiers in Psychology**, 11, 1-20. DOI: <https://doi.org/10.3389/fpsyg.2020.571928>.
- Kudhinnok, N. (2014). **Service quality affecting customer satisfaction and intention of returning to 5 star-hotels of foreign visitors in Bangkok**. Thesis, Master of Business Administration, Bangkok University.
- Laowicharath, Y. (2017). **Factors positively affecting purchase intention to stay at budget hotels of foreign customers in Bangkok**. Independent study manuscript presented to the Graduate School of Bangkok University in partial fulfillment of the requirements for the degree Master of Business Administration, Graduate School, Bangkok University.
- Nonthapot, S. (2019). The impact of economic factors on street food consumer choice in Nong Khai municipality, Nong Khai province, Thailand. **Management Science Letters**, 9(13), 2337-2346.
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. **Journal of Marketing Research**, 17, 460-469.
- Parasuraman, A., Zeithaml, V. A., and Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. **Journal of Marketing**, 49, 41-50.
- Penchansky, R. and Thomas, J. W. (1981). The concept of access: Definition and relationships to consumer satisfaction. **Medical Care**, 19, 127-140.
- Pornnapa T., Homboonyong W., Amornsittinon A., Patcharapuwadol R., and Hamloha, N. (2021). Service quality and marketing factors after easing of Covid-19 protocol. **Dusit Thani College Journal**. 15(2), 68-79.
- Ramya N., Kowsalya A., and Dharanipriya. (2019). Service quality and its dimensions. **EPRA International Journal of Research and Development**. 4(2), 38-41.
- Sihabutr C. and Nonthapot S. (2021). The effects of economic factors on community-based tourism in Upper Northeast Thailand. **International Journal of Management and Sustainability**, 10(3), 79-91.
- Sofiani. (2020). Impact of hygiene and sanitation on revisit intention at Santika Depok Hotel. **Journal of Business and Entrepreneurship**, 8(1), 40-51.
- Suasuri, T. (2015). **Factors affecting the services quality towards trust, satisfaction, word of mouth, and revisit intention of the 5-star hotel**. Independent Study, Master of Business Administration, Bangkok University.
- Tangtenglam, S. and Pongpanich, A. (2021). Factors affecting the selection of new normal Thai travel. **Journal of Multidisciplinary in Humanities and Social Sciences**, 4(1), 12-24.
- Taylor, S. A. and Baker, T. L. (1994). An assessment of the relationship between service quality and customer satisfaction in formation of consumers' purchase intentions. **Journal of Retailing**, (70), 163-178.
- Thongkum, K. (2021). **Factors affecting generation Y tourists' return to use 3-5 star hotels in southern Thailand**. Master's thesis, Mahidol University.
- Xinhuaithai. (2021). **The United States reveals that 'Covid-19 mutants' are transmitted from person to person**. Retrieved on February 20, 2023, from https://www.xinhuaithai.com/high/165679_20210101

Zhang, Y and Ma, Z.F. (2020). Impact of the COVID-19 pandemic on mental health and quality of life among local residents in Liaoning Province, China: A cross-sectional study. **International Journal of Environmental Research and Public Health**. 2020 Mar 31, 17(7), 2381. doi: 10.3390/ijerph17072381. PMID: 32244498; PMCID: PMC7177660.

Websites

Department of Disease Control. (2021). **Situation of Coronavirus disease (COVID-19)**. Retrieved on June 1, 2022, from https://ddc.moph.go.th/uploads/files/2017420_210820025238.pdf

Krungsri Bank. (2021). **Hotel business- Business/Industry Trend 2021-2023**. Retrieved on February 20, 2023, from <https://www.krungsri.com/en/research/industry/Industry-Horizon/industry-summary-outlook-2021-2023>

Matt C. Ho. (2020). **Sobel Test Formula for Serial Mediation / Sequential Mediation**. Retrieved on February 20, 2023, from <https://mattchoward.com/sobel-test-formula-for-serial-mediation-sequential-mediation/>

Ministry of Information, Culture and Tourism, Tourism Development Department. (2021). **Statistical report on tourism in Laos**. Retrieved on September 19, 2022, from <https://eccil.org/wp-content/uploads/2021/06/Statistical-Report-on-Tourism-2020.pdf>

Ministry of Tourism and Sports. (2021). **Summary of international travel statistics**. Retrieved on June 10, 2022, from <https://www.mots.go.th/news/category/628>

Ministry of Tourism and Sports. (2022). **The statistics of the number of rooms in the area**. Retrieved on September 19, 2022, from https://catalog.nso.go.th/dataset/os_17_00003

Rovinelli, R.J. and Hambleton, R.K. (1976). **On the use of content specialists in the assessment of criterion-referenced test item validity**. Paper presented at the annual meeting of the American Educational Research Association: California. April 19-23, 1976)0 [Online] Retrieved on June 10, 2022, from <https://files.eric.ed.gov/fulltext/ED121845.pdf>. Retrieved Feb 3, 2018.