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Water tourism demand in the Mekong River basin

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ABSTRACT

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This research aimed to explore the influences of water tourism demand on tourists' revisit intention. The data were collected by a questionnaire from a sample group of Thai and foreign tourists who used a water transportation service on the Mekong River in Luang Prabang, Lao PDR. The random sampling method was used as a convenience sampling technique by quota sampling and classified by ports that served tourists in the Luang Prabang area. Then, the data were analyzed by confirmatory factor analysis (CFA) using the ADANCO software program to verify the structural validity of the latent variables and analyze the model's consistency. The study found that factors affecting the demand for water tourism consisted of two components: (1) Tourism factors and (2) water transportation factors on the Mekong River. Considering the factors that affected the demand for water tourism, it was found that the most influential factor was the water transportation of the Mekong River, especially the creation of a service product for tourists with the purpose of leisure and the type of water transportation service. Simultaneously, demand for water tourism was found to be one of the main factors reflecting the influence of tourists' revisit intention, especially water tourism on the Mekong River. According to the study, factors affecting the demand for water tourism in the Luang Prabang area greatly affected the demand for water tourism; in addition, the demand for water tourism affected the tourists' revisit intention as well. Therefore, entrepreneurs in water tourism should pay attention to water transportation, and whether it would be the type or design of the water transportation, standards of the water transportation, security measures, and setting a clear service schedule. etc., so that tourists could make their own travel plans to be more appropriate. Furthermore, the Lao government and the private sector should adopt common and unified policies for developing water tourism and promoting publicity and tourism marketing for the effectiveness of Luang Prabang's water tourism activities.

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1. Introduction

The Mekong River is an international river of significant importance in Southeast Asia. With a length of 4,350 kilometers, it ranks as the 12th longest river globally and the seventh longest in Asia. The river traverses six countries: Myanmar, Thailand, Lao PDR, Cambodia, Vietnam, and China (Fig. 1) (Nonthapot, 2020). The interconnectedness of these nations in the region reflects the cultural, traditional, and religious ties that bring them closer. This has led to collaborative economic development efforts, as evident in measures to boost cross-border economies, facilitate international trade of goods and services, and particularly promote tourism development due to the diverse tourism resources in the area. As such, each country has placed importance on its tourism sector, and the regions adjacent to the Mekong River are characterized by abundant natural resources that significantly contribute to the economic development of the tourism sector. This, in turn, has led to the emergence of

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various tourism activities, thus shaping the tourism economy of each country. Moreover, the study of border tourism has yielded mutual benefits in terms of enhanced mutual understanding between the two bordering countries.

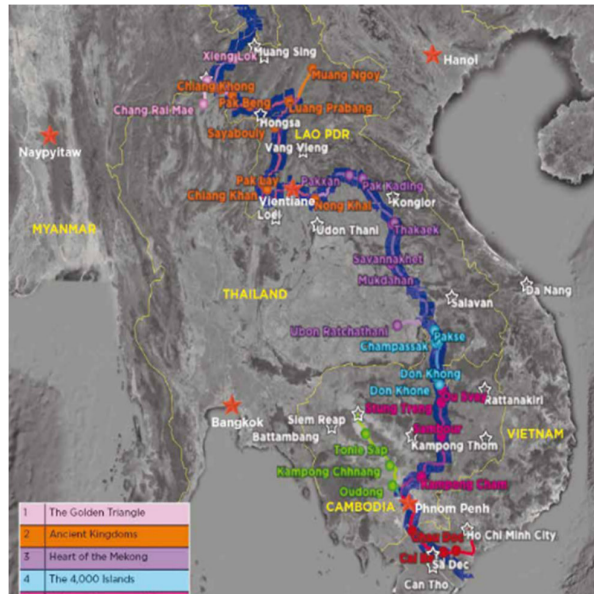


Fig. 1. The Mekong River route crossing all six countries. (Mekong River-Based Tourism Product Development, 2016)

When considering the contribution of travel and tourism to the gross domestic product (GDP) of the five countries; namely, Myanmar, Thailand, Lao PDR, Cambodia, and Vietnam, within the Mekong River Basin, it was evident that in 2020, the average total contribution of travel and tourism to the GDP was 4.88%. However, in 2021, amidst the COVID-19 pandemic, this average value decreased to 3.62% (World Travel and Tourism Council, 2022). This noticeable decline reflected a significant economic change. This was due to the ongoing situation of the COVID-19 pandemic at that time, which had not yet eased, and the country closures. Therefore, this resulted in a decrease in the total contribution of travel and tourism to the GDP. Nevertheless, despite this situation, tourism in the Mekong River Basin has continued to be popular, especially water tourism activities, which remain favored at the present time (Chiauwchankitjakarn, 2010).

Water transportation is a distinct form of water tourism that allows for tailored travel routes catering to the relaxation and enjoyment of tourists' preferences (Waiyawet & Nonthapot, 2023). Water tourism, particularly along the Mekong River, holds great potential and significance for economic growth and influences the way of life for those residing in the vicinity of the Mekong River. Tourism activities along the Mekong River, include the boat journey from Chiang Khong District, Thailand to Luang Prabang, Lao PDR. This route encompasses both transportation and water tourism, thereby connecting the two countries, and involves a two-day travel itinerary with an overnight stay in Pakbeng, Udomxai Province, Lao PDR. As a result, this offers an engaging tourism experience while encountering the natural surroundings during the journey. For these reasons, this route has emerged as an activity with substantial potential and significance for the tourism sector of the Mekong River in the vicinity of Luang Prabang and the surrounding areas. Furthermore, water tourism in the Mekong River Basin can be found in various forms. Predominantly, the most popular forms of water tourism include leisurely boat rides, traditional long-tail boats, luxury boats, and speedboats (Fig. 2). Therefore, it could be asserted that Luang Prabang serves as a central hub for captivating water tourism, which would be marked by its significant economic establishments contributing to the river tourism sector. Consequently, this prominence would extend to various tributaries of the Mekong River.



Fig. 2. Types of service boats (The researcher)

Due to its location connecting various rivers, Luang Prabang has become a hub for transportation and water tourism activities that link cultures and water tourism experiences together. This has led to a significant influx of both domestic and international

tourists visiting Luang Prabang numbering more than 100,000 to 200,000 people per year. After being designated as a UNESCO World Heritage Site in 1995, the Tourism Development Department, Lao PDR (2021) anticipated that the number of foreign tourists traveling to Luang Prabang would increase from 135,010 in 2022 to 238,759 by 2025. This growth could be attributed to the development and promotion of tourism by the Lao government by driving a positive trend of increasing tourism demand in the future. Furthermore, under the transportation development plan of Lao PDR, in 2022, the high-speed railway service between Lao PDR and China was introduced. This led to an increase in tourist travel to Luang Prabang from various regions of China through the high-speed rail network. As a result, it created a desire for Mekong River tourism not only in the Luang Prabang area, but also in the surrounding regions. This activity also supported the tourism economy by contributing to its development within the regional economy. Simultaneously, Luang Prabang's recognition as a UNESCO World Heritage Site since 1995 has added to its appeal potentially influencing the interest in water tourism in the area. However, within the scope of studying the demand for water tourism in Luang Prabang, there are limitations, and there have been no additional studies on the topic of repeated visits by cross-border tourists within this region. Therefore, the objective of this research was to explore the factors contributing to the demand for repeated water tourism by foreign visitors in Luang Prabang, Lao PDR. This would serve as a guideline for planning and supporting strategies in the development of water tourism in Luang Prabang and in areas that shared similar contextual backgrounds, such as Thailand and Cambodia. In addition, this would potentially lead to the expansion of the water tourism sector and contribute to the future economic growth of the region.

2. Literature Review

2.1 *Research on Water Tourism Demand*

Phiansang (2013) studied the economic analysis of travel demand along rivers for domestic tourism in Thailand. The analysis was conducted using structural equation modeling (SEM). The research discovered that tourism-latent variables, such as entertainment, care, preferences, leisure time, seasons, and expenses at the tourist destination significantly influenced the travel demand along rivers for domestic tourists. This study aligned with the research conducted by Nonthapot and Wattanakul (2013). Moreover, the study measured the tourism demand based on factors like the duration of travel, the frequency of past travels, the desire to travel, and expenses on goods and services. Similarly, Uiprasert (2013) undertook a study on the tourism demand of international tourists in Northern Thailand. Therefore, tourism operators and the relevant organizations should develop tourism strategies that would align with tourists' preferences and enhance the promotion of various tourism activities. They should also support diverse tourism options, ensure their quality, and effectively meet tourists' needs for improved efficiency. Furthermore, the study of international tourism demand between countries for tourists who had previously visited India by Rangaswamy, Chaiboonsri and Chaitip (2008) found that travel costs, satisfaction, and tourism-related products influenced the choice of the destination for tourists. Therefore, it would be important for government bodies or the relevant agencies to promote and publicize the destination's image, improve the accessibility of the transportation infrastructure, and instill a sense of conservation to attract an increasing number of tourists to visit the destination every year.

Likewise, Ripplinger, Mattson and Peterson (2011) explored the travel patterns of tourists in small rural towns in the North Dakota region encompassing the northwestern parts of the Central Region and the northwestern areas of Minnesota, USA. The study highlighted the significance of factors, such as time, service flexibility, and transportation convenience. This led to the need for government bodies and the relevant organizations to intensify their efforts in developing and prioritizing intercity transportation.

2.2 *Research on Repeat Tourism*

The intention to revisit holds significant importance for the sustainable development of tourism destinations. Drawing repeat tourists would lead to increased value and higher profits compared to attracting new customers by approximately fivefold (Han & Hyun, 2015; Li et al., 2010). Previous studies have identified two predictive categories for the intention to revisit. Firstly, the characteristics of the tourist destination, such as service quality (Han and Hyun, 2015; Um, Chon and Ro, 2006), destination image (Afshardoost & Eshaghi, 2020; Li et al., 2010; Stylos et al., 2016), diverse tourism offerings, tourism infrastructure (Bonn, Cho, Lee, and Kim 2016), and destination safety (Kim, 2014). The second category is stimuli and tourists' attitudes, including motivation (Huang and Liu, 2017), seeking novelty, satisfaction, and well-being (Han and Hyun, 2015; Lin, 2014).

Puspitasari et al. (2019) conducted a study on the factors influencing tourists' intention to revisit. Their research revealed that factors affecting the intention to revisit included the perceptions of quality, perceptions of value, and satisfaction. This intention to revisit was measured by tourists praising or speaking positively about the tourist destination, as well as by planning to return for another trip in the future. This finding also aligned with the studies by Han Min, Sawittree, and Sivlean (2015) and Tantipatdi (2022), both of which examined the motivating factors behind repeat tourism. Both studies found that factors, such as satisfaction, motivational factors, and accessibility contributed to the decision to engage in repeat visits. Consequently, the related tourism businesses or organizations should focus on enhancing convenience for tourists and increasing activities to stimulate further growth in repeat tourism.

Ayusuk and Autchariyapanitkul (2017) focused on the factors influencing tourists' decision-making in revisiting Pha Ngan Island in Surat Thani Province, Thailand. They found that factors affecting the decision to revisit were price and promotions that induced tourists' desire to travel, which subsequently influenced their intention to revisit. This led to the promotion of strategies in tour package sales for tourists and also advertising activities through various channels. This corresponded with the findings of Chuamunagphan et al. (2020) regarding tourism demand in Nakhon Pathom Province, Thailand, which also influenced repeat visits. In particular, the study highlighted the significance of development within the province. Similarly, Chancharat and Nakornthab (2013) discovered that repeat visits to Chiang Khan District, Loei Province, Thailand were driven by tourism demand and identified through factors, such as travel expenses, environmental conditions, culture, local lifestyles, service quality, as well as the diversity of activities available during travel. All these factors contributed to the creation of tourism activities that effectively catered to the preferences and needs of tourists.

2.3 Conceptual Framework

Based on a review of the relevant theoretical concepts and research, a conceptual framework for water tourism demand was established by using SEM. The water tourism demand arose from the observed variables derived from previous related research studies with distinct clarity. These included factors related to tourism and water transportation (Phiansang, 2023; Waiyawet and Nonthapot, 2023). Importantly, the water tourism demand also served as a contributing factor to the recurrence of service utilization (Ayusuk and Autchariyapanitkul, 2017; Chuamunagphan, et al., 2020; Chancharat and Nakornthab, 2023) (Fig. 3).

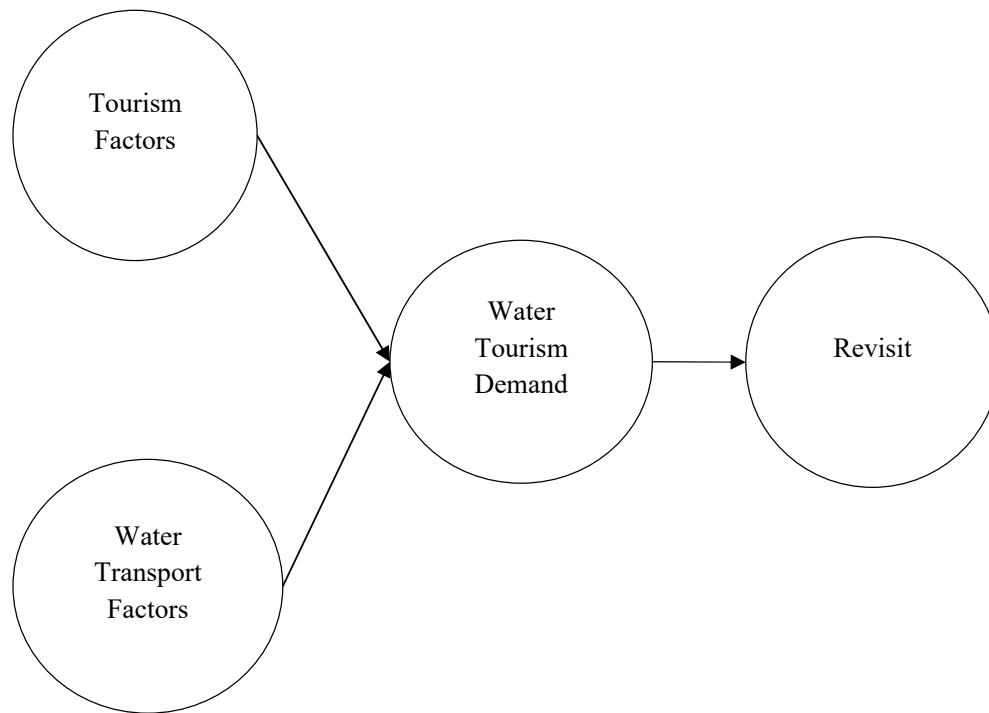


Fig. 3. Contributing factors to the recurrence of service utilization

3. Research Methodology

3.1 Data and Data Sources

This research was conducted as a quantitative study utilizing the collection of the data through questionnaires administered to a sample group of Thai and foreign tourists, who utilized boat services on the Mekong River within Luang Prabang, Lao PDR.

3.2 Population and Sample Group

3.2.1 Population

The population for this research included Thai and foreign tourists who used boat services on the Mekong River within Luang Prabang, Lao PDR.

3.2.2 Determination of the sample group

The sample group was calculated based on both Thai and foreign tourists who utilized boat services on the Mekong River within Luang Prabang, Lao PDR along the Huay Sai-Luang Prabang route. Due to the lack of precise population figures, the sample group was determined using the formula for unknown population sizes. In cases where the exact population size would be unknown with a confidence level of 95%, the formula developed by Cochran (1977) would be used to calculate the sample size. Hence, this resulted in a sample size of 386 participants for this study. The researchers, however, collected data from a total of 400 participants, which aligned with the studies conducted by Nonthapot (2019) and Sihabutr and Nonthapot (2021). These studies were consistent with the reports from the Ministry of Information, Culture and Tourism of Lao PDR, which indicated that in 2022, more than 56% of the tourists visiting Lao PDR were Thais. Luang Prabang did not differentiate between international tourists by country. Therefore, the sample size was determined proportionally based on the overall number of foreign tourists traveling to Lao PDR. In this study, the sample group was defined as shown in Table 1.

Table 1

Sample size allocation proportions.

Tourist Group	Number of International Tourists in Lao PDR*	Proportion	Sample Size
Thai tourists	364,515	56.5	226
Other foreign tourists (excluding Lao nationals)	280,241	43.5	174
Total	644,756	100.0	400

Source: *From the calculations.

Once the sample size proportions were determined, the subsequent step involved defining the areas for data collection. This was achieved by categorizing them based on the ports that offered services to tourists. The proportions were computed for each port within Luang Prabang. Subsequently, the sample size was allocated based on the proportion of the number of tourists, which was acquired from data gathered through inquiries at the Navigation Office of Luang Prabang. This distribution is depicted in Table 2.

Table 2

Proportional sample size allocation by collection areas.

Port	Proportion of Tourist Count (Percentage)	Sample Size	
		Thai Tourists	Other Foreign Tourists (excluding Lao nationals)
Ban Don Port	10	23	17
Wat Chiang Thong Port	40	90	70
Wat Nong Port	30	68	52
Old Pier	20	45	35
Total	100	226	174

Source: Calculated from summarized reports obtained through inquiries at the Navigation Office of Luang Prabang.

Once the sample sizes to be collected were determined, a convenient sampling method was employed. In this approach, questionnaires were distributed to volunteer respondents at the port area. The researchers informed the volunteers about the focus of the interview and upon completion, collected the questionnaires from the volunteers themselves. Prior to conducting each round of the data collection, the researchers sought permission from the port authority at Luang Prabang in advance.

3.3 Research Tools

3.3.1 Questionnaire

A questionnaire was employed for data collection. The questionnaire was designed in both Thai and English versions, divided into five parts, totaling 33 questions. Part 2 to part 4 are designed as likert-5scales (Vagias, 2006). The details of the questionnaire are as follows.:

Part 1: Respondent's General Information

Part 2: Opinion Level Regarding Factors Influencing Water Tourism Demand in the Mekong River Basin

Part 3: Opinion Level Regarding Factors Determining Water Tourism Demand

Part 4: Questionnaire Pertaining to Tourists' Intention to Revisit for Water Tourism

Part 5: Recommendations

3.3.2 Tool testing

Before collecting the actual data, the researchers conducted a test to assess the content validity index (CVI), which was found to be $0.95 > 0.8$ (Davis, 1992; Grant and Davis, 1997; Polit and Beck, 2004; Waltz et al., 2005) based on the evaluations of

five experts. Subsequently, a quantitative research sample of 30 sets was utilized in Nakhon Phanom Province, Thailand to examine the reliability of the questionnaire using Cronbach's alpha coefficient, which yielded a value exceeding 0.7, thus indicating the questionnaire's reliability (Cronbach, 1990: 204). Following this, the instrument was refined and modified, and then employed to gather data from a real sample group in Luang Prabang, Lao PDR.

3.4 Analysis

3.4.1 Quantitative data analysis

Quantitative analysis was conducted to analyze the general data from the respondents in Part 1 of the questionnaire. This involved frequency distribution and percentage. Subsequently, data from Parts 2 to 4 of the questionnaire were subjected to confirmatory factor analysis (CFA) using the ADANCO software program. The purpose was to examine the construct validity of the latent variables and analyze the model's consistency. Key criteria included the construct reliability, convergent validity, discriminant validity, and coefficient of determination (R^2). Chin (1998) specified 0.19 as small, 0.33 as medium, and 0.67 as large. Furthermore, the study considered the effect size between the latent variables denoted as Effect Size, f^2 , which should be at a medium level or greater than 0.15, according to Cohen (2013). These concepts were used to formulate the model employed in the study (Fig. 4).

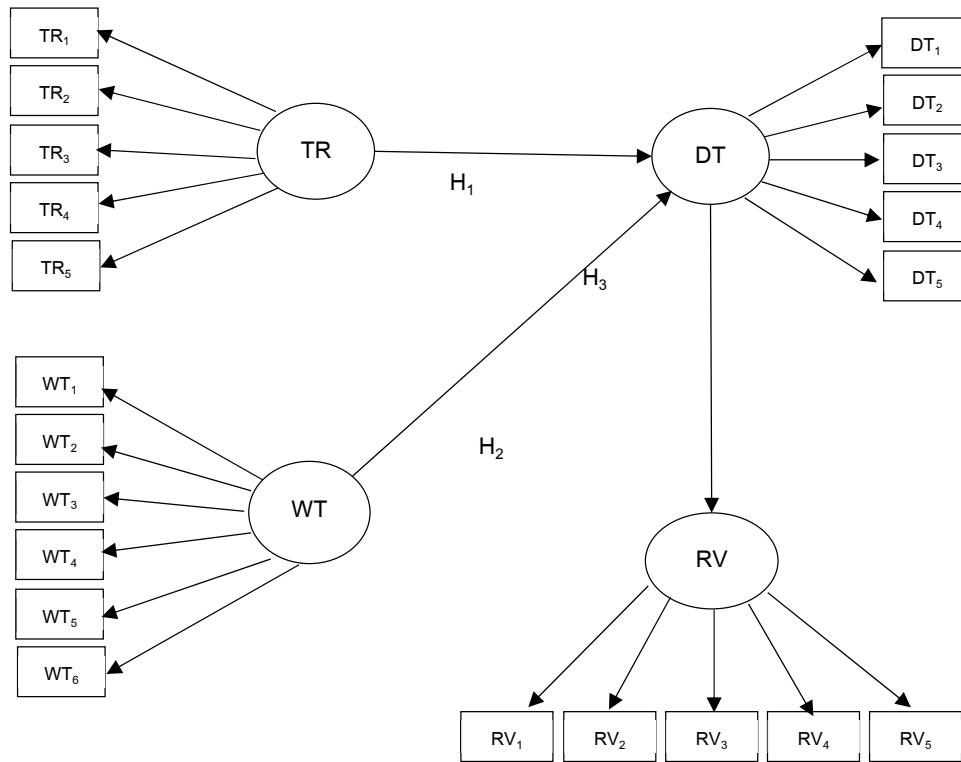


Fig. 4. Study model.

where:

- TR refers to tourism factors.
- TR₁ refers to the activities during water tourism and service provision.
- TR₂ refers to personal preferences in choosing water tourism characteristics.
- TR₃ refers to normal leisure time, e.g., weekends and holidays.
- TR₄ refers to seasonal preferences for water tourism, e.g., summer or winter.
- TR₅ refers to the expenses incurred from water tourism.
- WT refers to the water transportation factors on the Mekong River.
- WT₁ refers to the objectives of water tourism.
- WT₂ refers to the income of tourists traveling for water tourism.
- WT₃ refers to the characteristics and safety of the provided boats.
- WT₄ refers to the accessibility of the boat landing points or piers.
- WT₅ refers to the duration or time spent during water tourism.
- WT₆ refers to the timing of water tourism, e.g., morning or afternoon.
- DT refers to the water tourism demand.

- DT₁ refers to the duration of water tourism.
 DT₂ refers to past experience with water tourism.
 DT₃ refers to the intention for water tourism influenced by the information about locations and/or water tourism.
 DT₄ refers to the costs of renting long-tail boats, rafts, luxury boats, or speed boats.
 DT₅ refers to the expenditure during water tourism (e.g., food, beverages, and equipment rentals like life vests).
 RV refers to the intention to revisit water tourism activities.
 RV₁ refers to the intention to revisit water tourism activities on the Mekong River.
 RV₂ refers to the intention to revisit water tourism in the future under changing economic conditions.
 RV₃ refers to the intention to recommend water tourism activities to family and others.
 RV₄ refers to the intention to review and rate water tourism experiences.
 RV₅ refers to the intention to share information about water tourism activities, news, etc. on online platforms like Facebook Fan pages.

From Fig. 4, the hypotheses were formulated as follows:

H₁: Tourism factors have a direct effect in the same direction as the water tourism demand.

H₂: Water transportation factors in the Mekong River have a direct effect in the same direction as the water tourism demand.

H₃: Water tourism demand has a direct effect in the same direction as the intention to revisit water tourism activities.

4. Results

4.1 Results of the General Tourist Analysis

Table 3 shows the demographic data of the participants.

Table 3

General tourist data.

General Data	Thai Tourists		Foreign Tourists	
	Quantity	Percentage	Quantity	Percentage
Gender				
Male	99	44.8	84	48.3
Female	127	56.2	88	50.6
Other	0	0	2	1.1
Age (Years)				
18-20	11	4.9	26	14.9
21-30	31	13.7	90	51.7
31-40	48	21.2	23	13.2
41-50	54	23.9	14	8.0
51-60	58	25.7	7	4.0
Above 60	24	10.6	14	8.0
Education Level				
Elementary school	9	4.0	4	2.3
Secondary/equivalent	22	9.7	38	21.8
Diploma/Bachelor's degree	122	54.0	66	37.9
Postgraduate degree	73	32.3	66	37.9
Occupation				
Government/state enterprise employee	98	43.4	24	13.8
Company employee	25	11.1	52	29.9
Business owner	60	26.5	29	16.7
General employee	3	1.3	20	11.5
Student	15	6.6	34	19.5
Other	25	11.1	15	8.6
Average Monthly Income (THB)				
Less than 10,000	17	7.5	20	12.0
10,001-20,000	23	10.2	10	6.0
20,001-40,000	52	23.0	25	15.0
40,001-60,000	57	25.2	26	15.6
60,001-100,000	57	25.2	45	26.9
Above 100,000	20	8.8	41	24.6
Purpose of Tourism				
Relaxation	146	64.6	131	75.3
Cultural experience	47	20.8	35	20.1
Field trip	19	8.4	2	1.1
Business/conference	8	3.5	1	0.6
Spiritual	2	0.9	0	0.0
River viewing	4	1.8	1	0.6
Other	0	0.0	4	2.3
Experience in Water Tourism				
Experienced	197	87.2	140	80.5
Not Experienced	29	12.8	34	19.5

Source: From the calculations.

4.2 Results of the Component Analysis

The study of the components defined for water tourism demand and revisit to Luang Prabang, analyzed using the ADANCO software, revealed that all components, including the intention to revisit water tourism activities (RV), tourism factors (TR), water transportation factors in the Mekong River (WT), and water tourism demand (DT), had a loading greater than 0.5 (Table 4).

Table 4

The results of the factor loadings

Components	Intention to Revisit Water Tourism (RV)	Water Transportation (TR)	Factors in the Mekong River (WT)	Water Tourism Demand (DT)
TR1		0.69		
TR2		0.72		
TR3		0.66		
TR4		0.69		
TR5		0.58		
WT1			0.57	
WT2			0.65	
WT3			0.70	
WT4			0.70	
WT5			0.79	
WT6			0.73	
DT1				0.69
DT2				0.63
DT3				0.75
DT4				0.73
DT5				0.68
RV1	0.75			
RV2	0.76			
RV3	0.76			
RV4	0.75			
RV5	0.74			

Source: From the calculations.

Upon considering the constructs, the next step involved assessing the measurement model's criteria. As shown in Table 5, all the AVE values surpassed 0.5. Furthermore, Dijkstra-Henseler's rho (ρ_A), Jöreskog's rho (ρ_C), and the Cronbach Alpha all exceeded 0.7, thus signifying their appropriateness (Hair, Black, Anderson and Tatham, 2010; Henseler, Hubona and Ray, 2016; Henseler et al., 2009).

Table 5

Criteria

Construct	AVE	Dijkstra-Henseler's rho (ρ_A)	Jöreskog's rho (ρ_C)	Cronbach Alpha (α)
RV	0.57	0.81	0.87	0.81
TR	0.50	0.70	0.80	0.70
WT	0.50	0.70	0.84	0.78
DT	0.50	0.74	0.83	0.74

Source: From the calculations.

Considering the discriminant validity of each construct (latent variable), Fornell and Larcker (1981) suggested that the AVE of each construct should be greater than the correlations between the constructs. As shown in Table 6, it could be observed that the correlations between the constructs were greater than the AVE for a single sample. Nonetheless, Henseler et al. (2014) proposed considering the Heterotrait-monotrait (HTMT) ratio of correlations as presented in Table 7. This table presents the matrix of the AVE values along the diagonals and the correlations among the latent variables, which directly measured the discriminant validity with all values being less than 1. Therefore, this led to supporting the appropriateness of estimating the effect values according to the proposed model and presenting the estimated coefficient results as shown in Table 8.

Table 6

Discriminant validity: Fornell-Larcker criterion.

Construct	RV	TR	WT	DT
RV	0.56			
TR	0.19	0.45		
WT	0.18	0.28	0.48	
DT	0.25	0.256	0.36	0.49

Table 7

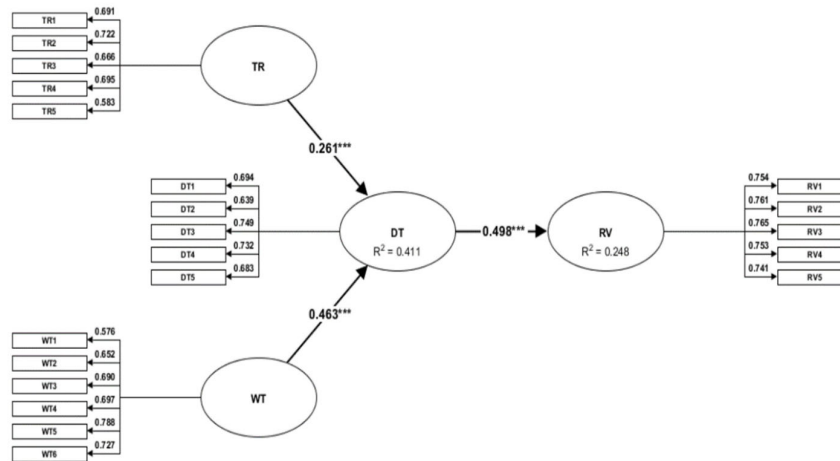
Discriminant validity: Heterotrait-monotrait (HTMT) ratio of correlations.

Construct	RV	TR	WT	DT
RV				
TR	0.66			
WT	0.65	0.80		
DT	0.73	0.78	0.86	

Table 8

Direct effects inference.

Effect	Original coefficient (β)	Standard Error	t-value	p-value	Accept Reject
TR \rightarrow DT	0.26	0.0492	5.3104	0.0000	Accept
WT \rightarrow DT	0.46	0.0510	9.0735	0.0000	Accept
DT \rightarrow RV	0.49	0.0463	10.7645	0.0000	Accept

**Fig. 5.** Final model.**Table 9**

Effect overview

Effect	Beta	Indirect Effects	Total Effect	Cohen's f^2
TR \rightarrow RV	-	0.13	0.23	-
TR \rightarrow DT	0.26	-	0.46	0.08
TR \rightarrow DT	-	0.23	0.40	-
WT \rightarrow DT	0.46	-	0.46	0.26
DT \rightarrow RV	0.50	-	0.50	0.33

The analysis of the structural model primarily focused on the path coefficient. This entailed considering the direct effects, which are depicted in Figure 5 and presented in Table 9, and also encompassing the indirect effects and the total effects. The R^2 values of the latent variables ranged from 0.23 to 0.50, thus indicating the influence of the tourism factors (TR) and water transportation factors on the Mekong River (WT) on the water tourism demand (DT) and subsequently on the intention to revisit water tourism (RV), which had a moderate level (Chin, 1998) with a confidence level of 99%. It should be noted that the analysis of the direct influence based on the hypothesized direct effects or path coefficients revealed that the path with the highest total effect originated from the water transportation factors on the Mekong River (WT), which significantly affected the water tourism demand (DT) and the intention to revisit water tourism (RV). This was evident from the total effect values, which demonstrated a substantial effect with a value of 0.5 and a Cohen's f^2 value of 0.33.

5. Conclusion and Discussion

From the study results, it could be concluded that the components of water tourism demand were influenced by several factors. These factors included 1) the duration of water tourism, 2) past experience with water tourism, 3) intention for water tourism influenced by information about the locations and/or water tourism, 4) costs of renting long-tail boats, rafts, luxury boats, or speedboats, and 5) expenditure during water tourism (e.g., food, beverages, and equipment rentals like life vests). Additionally, the factors affecting the water tourism demand consisted of two components: (1) tourism factors comprising 1) water tourism activities and service provision, 2) personal preferences in choosing water tourism characteristics, 3) normal leisure time of the tourist and family members, 4) seasonal preferences for water tourism, and 5) expenses incurred from water tourism, and (2) water transportation factors comprising 1) objectives of water tourism, 2) income of tourists traveling for water tourism, 3) characteristics and safety of the provided boats, 4) accessibility of the boat landing points or piers, 5) duration

or time spent during water tourism, and 6) timing of water tourism. The water tourism demand led to revisits in water tourism activities, which included 1) the desire to engage in water tourism activities in the Mekong River Basin, 2) the intention of tourists to revisit water tourism, 3) the intention to recommend water tourism activities, 4) the intention to review and rate water tourism experiences, and 5) the intention to share water tourism information. Hence, the aforementioned criteria unveiled the demand for water tourism reflecting the foundational demand theories in defining factors, such as price and income.

When analyzing the factors that would influence the water tourism demand, it was evident that the most significant factor was the transportation component related to the Mekong River. This factor had a coefficient value of 0.46, thus underscoring that the primary driver for the water tourism demand was in the importance of the aspects of water transportation. This emphasis was particularly significant in the development of service-oriented products catering to tourists seeking relaxation along with the design of the boats tailored for these services in Luang Prabang. This significance was heightened by the distinct characteristics of the boat designs offered, which varied across different locations. Moreover, the organization of the transportation system, especially concerning tourist transportation, aimed to enhance efficiency by meeting specific requirements and needs.

Furthermore, when considering the water tourism demand, it significantly affected the desire to revisit water tourism activities. This was evident from a coefficient value of approximately 0.50, which clearly demonstrated the effect of the water tourism demand. This factor represented a key driver for revisiting water tourism, particularly in the context of water tourism on the Mekong River.

Based on the study of the factors influencing the water tourism demand in Luang Prabang, it was evident that water transportation significantly affected the demand for water tourism. Therefore, water tourism operators, especially those offering river rafting, should place significant importance on water transportation. Regardless of the type of boats used for their services, they must have solid and robust structures, adhere to established standards, and implement safety measures during water tourism operations. Clear boat departure schedules should also be provided. Sánchez-Martín et al. (2020) pointed out the importance of travel time in adjusting the travel conditions for the majority of tourists who come from different regions. This would allow tourists to plan their water tourism appropriately. This observation aligned with the findings of Waiyawet and Nonthapot (2023), who emphasized the influential factors in water tourism by rafting, such as the diverse ambience of the services, styles of the raft decoration, and standardized service quality of tourist transportation. Furthermore, relevant organizations should give importance to establishing standards regarding water transportation. There should be a continuous inspection system for boats providing services by following the law and categorizing them based on the type of boat being used. Additionally, this would prevent issues and address complaints about inadequacy and safety from tourists using the services.

Simultaneously, when tourism affected the water tourism demand, business operators could consider strategies for collaborative efforts in promoting joint tourism packages. This would stimulate interest among water tourism enthusiasts, thus encouraging them to select from a wider range of travel options. These options might encompass showcasing diverse tourism activities, such as crafting banana leaves for spiritual purposes or engaging in freshwater fishing. The objective would be to develop water tourism products that would effectively captivate and satisfy the growing water tourism demand.

Furthermore, this aligned with Sánchez-Martín et al. (2020) as well as Łapko and Panasiuk (2019), who pointed out that water tourism activities and related activities in tourist areas, including activities in port areas, would affect the length of tourist stays. In this regard, relevant organizations should support various aspects, including publicity efforts to attract tourists' interest in water tourism by compiling water tourism databases and presenting water tourism activity plans for the area. Additionally, these organizations should present policies that would support establishing standards to ensure safety for business operators and tourists traveling for water tourism, thereby enhancing the confidence of water tourism enthusiasts. Furthermore, the management and preservation of natural water sources would remain a crucial issue that all sectors would need to prioritize, as inadequate management and care could lead to environmental pollution, thus potentially affecting future tourism. Typically, tourism consists of socio-economic activities that heavily depend on natural resources, consequently resulting in a significant impact on the environment (Aljerf, 2015). Moreover, to initiate the revisiting for water tourism, it could be confirmed that the water tourism demand would be one of the main determinants of the desire for repeat tourism. Therefore, if there was continuous stimulation of the water tourism demand, this would naturally lead to the retention of the number of tourists participating in water-related activities or water tourism. For this reason, both the government and the private sector should have policies aimed at jointly developing marketing campaigns and aligning efforts, as well as maintaining standards and safety in conducting water tourism activities efficiently. This would establish a lasting identity for water tourism on the Mekong River.

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