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Supply chain management for water tourism in northeast Thailand

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This research aimed to study the factors affecting the supply chain efficiency of water tourism entrepreneurs in the Northeast provinces of Thailand around the Mekong River Basin. A questionnaire was distributed to and subsequently collected from 246 samples in 7 provinces including Loei, Nong Khai, Bueng Kan, Nakhon Phanom, Mukdahan, Ubon Ratchathani, and Amnat Charoen by proportional allocation and convenience sampling using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) by ADANGO. According to the results, it was found that customer orientation directly affected the supply chain efficiency of water tourism. Knowledge management directly affected the supply chain efficiency of water tourism and supply chain marketing implementation capability as a transmission factor for the supply chain efficiency of water tourism. For these reasons, water tourism entrepreneurs should focus mainly on customer orientation with full-service efficiency. Internal management should be planned as well, e.g., communication training, service training and cultural revitalization of communities around tourist attractions through cooperation with involved agencies, which will enhance the supply chain efficiency of water tourism.

1. Introduction

Tourism in Thailand has gained enormous interest from visitors, especially in some particular areas. This can be seen through the perspective of nature-based tourism as a necessary activity to drive the national economy. The popularity of nature-based tourism results in a larger number of tourists but should also include awareness of environmental conservation. Thus, there are various tourism patterns per visitor. The top nature-based tourist activities in Thailand include trekking and rafting (Madhyamapurush, 2009). Water tourism is a tourism activity that facilitates travel by water to admire places around rivers or do activities related to water (Kinsella, 2023). Since 2017, Northeast Thailand has been an area with a larger number of visitors, comprising roughly 30.3% of all tourists in Thailand. One of the most favorite activities is ecotourism. The Northeast contains ecotourism as a very popular tourism trend, particularly boat sightseeing. Water tourism is also a unique activity in terms of its characteristics and services (Nodthaisong, 2017). In addition, it can be seen that the main water tourism in the Northeast includes the cluster of provinces adjoining the Mekong River Basin, including Loei, Nong Khai, Bueng Kan, Nakhon Phanom, Mukdahan, Ubon Ratchathani, and Amnat Charoen (Fig. 1), some of which have territories adjoining Lao PDR. According to water tourism in the Mekong River Basin of Thailand, activities connected to the Mekong River, the border between Thailand and Lao PDR, are very popular e.g., bamboo rafting, boat sightseeing, and rowing long boats. These activities linked beliefs and way of life among community inhabitants. These activities also promote contact with nature, possibly because of the physical features of the provinces possessing natural sources of water suitable for rafting in different tributaries, e.g., Songkhram River, Mun River, and Kam River, which ultimately flow into the Mekong River. The natural features of the Mekong River create unique fascination and attract tourists to admire sceneries on both sides of the river. However, water tourism is a type of service activity that requires connections to other activities before efficient services for tourists or passengers. Thus, good supply chain management for water tourism is needed. As a result, an indispensable key of

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water tourism is rafting drivers, who must coordinate with entrepreneurs and tourists as well as in relations between service users and service providers. This makes supply chain management necessary for water tourism because it requires implementation plans for efficient services and the highest satisfaction for tourists.

Fig. 1: Map of Northeast Thailand (Lesniewski, 2017)

Consequently, the supply chain efficiency is necessary for the implementation of water tourism activities. Because of the larger number of tourists in the upper Northeast enjoying water tourism activities, particularly in the areas adjoining the Mekong River. Thus, entrepreneurs, particularly in the water tourism business group, should provide good supply chain management for business efficiency. In the meantime, studies on the supply chain efficiency of water tourism in the Northeast still contain spatial limitations. Thus, there should be additional studies on the factors affecting the supply chain efficiency of water tourism for rafting businesses in the Northeast area near the Mekong River Basin, which will lead to plans for water tourism entrepreneurs to set their supply chain management procedures and water tourism strategies. They can also be guidelines for business planning by rafting entrepreneurs and involved in water tourism activities.

2. Related concepts and Theories

2.1 Concepts of the tourism supply chain

Supply chain refers to a process that combines the different systems of an agency, e.g., humans, technologies, activities, information, and resources to relocate products or services from suppliers to consumers/service users for their highest satisfaction. It includes the purchase of materials, production, storage, distribution, and even transportation. All stages are all related to one another for supply chain efficiency (Thai Winner, 2020). Tourism itself implements the tourism supply chain by efficiency measurement (Performance SCOR Model) in 2 targets, i.e., (1) external customers (External Focus) to create benefits for most external customers, and (2) internal customers (Internal Focus) to create organizational connective benefits. There are 5 key indicators as follows.

(1) Supply chain reliability (RL) refers to the capability of correct and on-time delivery under suitable conditions.
(2) Supply chain responsiveness (RS) refers to the duration and velocity of supply and products as well as service preparation for customers.
(3) Supply chain agility or flexibility (AG) refers to the capability to support changing market needs in terms of higher or lower needs in a short time by measuring the adaptation of upstream and downstream supply chain flexibility.
(4) Supply chain cost (CO) refers to implementation costs for the supply chain, as measured by the total cost for responsiveness to needs.
(5) Supply chain asset management (AM) reveals the efficiency/effectiveness of organizational asset management for customer service as measured by the cash conversion cycle (CCC), return on assets (ROA), and investment.

2.2 Related research

Cheunkamon et al. (2021) studied service quality and its key role in the tourism industry in order to develop a model for the perceived service quality of the tourism supply chain by exploratory factor analysis (EFA). A total of 7 factors were found, i.e., 1) CRM, 2) purchase management, 3) implementation, 4) inventory management, 5) demand management, 6) sustainable management, and 7) data and information management. These factors affected the perceived service quality of the tourism supply chain in Thailand. According to tourist perspectives, it usually refers to quality measurement at a certain service point.

A special characteristic of the tourism supply chain is customer flow, which is different from a production supply chain (Piboonrungroj & Disney, 2015). The final product of the tourism supply chain is produced and delivered to customers throughout the journey (Jasina & Firmansyah, 2023). Thus, the tourism supply chain gives precedence to service in all stages of supply chain because service providers must supply quality services for continuous delivery, and for reflecting their supply chain marketing planning capability (Lisa, Wendy, and Corey, 2006) related to delivery as well as distribution process and customer satisfaction. Service quality directly affects customer satisfaction under service quality in complicated tourism businesses based on their characteristics and activities during delivery (Soler and Gemar, 2019) in accordance with the patterns of tourism businesses and services.

The study of Sumardi et al. (2017) tested and analyzed the influences of quality, flexibility, and responsiveness on supply chain efficiency. It was found that quality and efficiency had an enormous influence on supply chain efficiency. Likewise, the studies of Balouei et al. (2022) set goals in the supply chain process for supply chain efficiency and sustainable tourism development under the conceptual framework starting from planning, implementation, examination, and post-examination practice. Moreover, Sutono (2019); examined the roles of supply chain marketing planning capability and supply chain marketing implementation capability to increase the efficiency of hotel and tourism businesses in Indonesia. It was found that both capabilities are mostly necessary for the improvement of hotel supply chains and tourism industry performance. The researchers also found the factors affecting supply chain marketing implementation capability, i.e., knowledge management (Pewpan et al., 2018; Siriworasakul & Intaprom, 2016). The factor affecting the implementation capability of supply chain marketing was customer orientation (Heskett et al., 1994). As for measuring such implementation capability, it referred to systematic implementation as planned. Also, the study of Boon-Itt et al. (2017) developed indicators of supply chain management capability in service businesses from research, including the Q-sort method. According to a review of the literature, they were brought for setting the conceptual framework, as in Fig. 2.

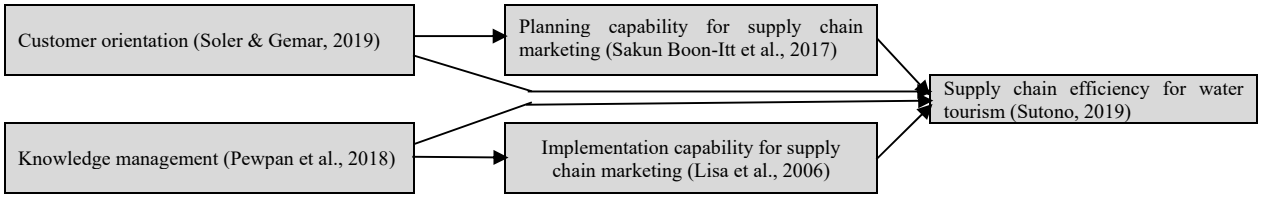

Fig. 2: Conceptual framework of the research

3. Methodology

3.1 Population and samples

For rafting entrepreneurs in the upper Northeast of Thailand in the 7 provinces around the Mekong River Basin, including Loei, Nong Khai, Bueng Kan, Nakhon Phanom, Mukdahan, Ubon Ratchathani, and Amnat Charoen, the exact number of entrepreneurs remains unknown, though there is a small population of them. Thus, the samples were calculated by the formula for unknown population size. In the case of the acknowledged small population, 246 samples were obtained. Convenience sampling was used to fix sampling divided by the population size of local inhabitants. The samples obtained are as follows.

Table 1
Sample proportions

Province	Population*	Proportion	Sample size
Loei	638,732	13.06	32
Nong Khai	516,843	10.57	26
Bueng Kan	421,995	8.63	21
Nakhon Phanom	717,040	14.66	36
Mukdahan	351,484	7.19	18
Ubon Ratchathani	1,868,519	38.20	94
Amnat Charoen	376,350	7.69	19
Total	4,890,963	100.00	246

Source: Citizen Database 2021 (National Statistical Office, 2022)

3.2 Data collection

A questionnaire was used as the instrument for data collection. The questions were divided into 4 parts, i.e., general data of the respondents, levels of opinions toward the indicators for the supply chain efficiency of water tourism, opinion levels toward the factors of supply chain efficiency of water tourism, and other suggestions. Index of item-objective congruence (IOC) was collected before questionnaire collection, and the value of IOC obtained was over 0.85 (Rovinelli & Hambleton, 1997 as cited in Nonthapot &d Wongsiri 2019), tested by 5 experts. Then, 30 sets of questionnaires were brought for trial

using non-sample entrepreneurs in Nong Bua Lam Phu, which was not the target area, in order to test the questionnaire and establish reliability. Cronbach's alpha was over 0.7 for the entire questionnaire. Next, real data was collected and analyzed.

3.3 Data analysis

Quantitative analysis was used to examine the general data of the respondents, together with quantitative analysis to analyze means. Regarding explanatory factor analysis (EFA), SPSS was used by Varimax for variable categorization. After that, the data were analyzed by structural equation modeling (SEM) and exploratory factor analysis (CFA) to examine the construct validity of latent variables, as well as to analyze IOC of the model, as in Fig. 3, with the following hypotheses.

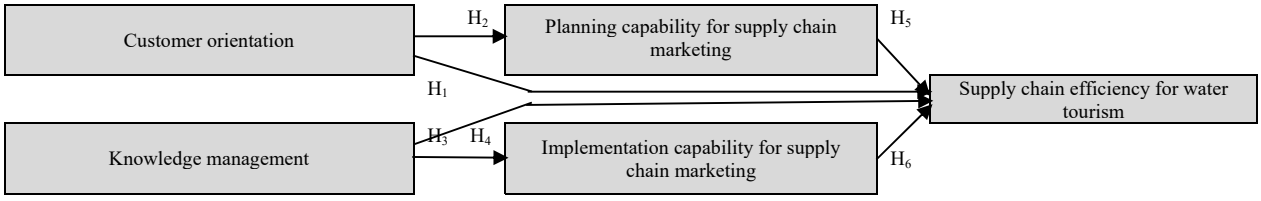

Fig. 3: Research model

where

H_1: *Customer orientation affects the supply chain efficiency of water tourism.*
H_2: *Customer orientation affects the planning capability for supply chain marketing.*
H_3: *Knowledge management affects the supply chain efficiency of water tourism.*
H_4: *Knowledge management affects the implementation capability of supply chain marketing.*
H_5: *Planning capability for supply chain marketing affects the supply chain efficiency of water tourism.*
H_6: *Implementation capability for supply chain marketing affects the supply chain efficiency of water tourism.*

Other than these, the considered suitability of SEM also contained the model measurement, as in Table 3.

Table 3
Model Measurement Criteria

Value	Index	Criteria
Convergent Validity	Average variance extracted (AVE)	Fornell &Larcker (1981) Hair, Black, Babin, and Anderson (2010, p.107) Bagozzi and Yi (1988) suggested AVE > 0.5.
Discriminant Validity	Discriminant validity of the declared variables	AVE of each latent variable should be over the correlation of latent variables (Fornell & Larcker, 1981). HTMT to for discriminant validity measurement should be less than 1 (Henseler, Ringle, and Sarstedt, 2015).
Internal Consistency	Cronbach's Alpha Dijkstra-Henseler's rho (ρ_A) Jöreskog's rho (ρ_c)	Should be over 0.70 according to Hair et al. (2010, p.107). Should be over 0.70 according to Henseler et al. (2016). Should be over 0.70 according to Henseler et al. (2016).
Indicator Reliability	Reliability of the indices	Should be over 0.5according to Henseler et al. (2016). Indicator reliability = Loading^2. Thus, loading must be over 0.700.
Coefficient of Determination R^2	Precision of prediction	According to Chin (1998), 0.19 = small, 0.33 = medium, and 0.67 = large.
Effect Size, f^2	Effect size of prediction between latent variables	According to Cohen (1988), 0.02 = small, 0.15 = medium, and 0.35 = large.
Path Coefficient	Path coefficient or direct effect of path analysis	According to Hair et al. (2010, p.107), size > 1.96 = plus sign, with statistical significance.

Source: Modified from Henseler, Ringle, and Sinkovics (2009)

4. Analysis Results

According to the study, it was found that most respondents (114 or 45.6%) were long-boat tourism providers and most of them were male (177 or 70.8%). In terms of age, 122 (48.8%) were between 41-50 years old, while 89 (35.6%) had graduated with a diploma/bachelor's degrees, 177 (70.8%) were merchants or entrepreneurs, 169 (67.6%) had incomes ≥ 15,000 baht, and 154 (61.6%) had between 6 and 10 years of experience being water tourism providers.

For EFA of the factors affecting supply chain efficiency of water tourism, it was found that KMO = 0.467, Bartlett's test of sphericity = 5551.79, and df = 231, with the significance level < 0.001; implying data suitability (Hair et al., 2010, p.107) as in Table 4.

Table 4
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.467
Bartlett's Test of Sphericity	**Approx. Chi-Square**	5551.79
	df	231
	Sig.	0.000

Source: By calculation

Then, eigenvalues were considered by Varimax rotation, with 5 values higher than 1.00 found, as in Table 5, implying that the indicators of water tourism supply by rafting could be categorized into 5 factors.

Table 5
Total Variance Explained

Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	5.575	25.341	25.341	5.575	25.341	25.341
2	3.546	16.116	41.457	3.546	16.116	41.457
3	2.845	12.933	54.390	2.845	12.933	54.390
4	1.967	8.942	63.332	1.967	8.942	63.332
5	1.877	8.531	71.863	1.877	8.531	71.863
6	0.954	4.339	81.715			
7	0.829	3.769	85.485			
…	…	…	…			
22	0.011	0.049	100.000			

Source: By calculation

The loading of each variable that affected the different factors was also considered. Each variable had to be over 0.500 to show categorization. It was found that X_1-X_5 were categorized as Factor 1, X_6-X_9 were categorized as Fac. 2, X_{10}-X_{14} were categorized as Fac. 3, X_{15}-X_{18} were categorized as Fac. 4, and X_{19}-X_{22} were categorized as Fac. 5, as in Table 6.

Table 6
Rotated Component Matrix

Variable	Component				
	1	2	3	4	5
Communication training for service providers (boat drivers or rafters) (X_1)	0.500				
Finding sources of efficient suppliers, e.g., boats, rafts, lifebuoys, Bai Sri, garlands to respond to tourists (X_2).	0.564				
Training on services or prompt responsiveness (X_3).	0.745				
Knowledge management of rafting, boats, water tourism, and first aid (X_4)	0.534				
Cultural revitalization of communities around tourist attractions (X_5)	0.612				
Tourism data management for tourist service (X_6)		0.624			
Revisit intention because of services from employees (X_7)		0.710			
Inventory management process, e.g., purchase of sufficient materials as well as equipment for tourists (X_8)		0.765			
Service providers applying technology for tourists (X_9)		0.627			
Various payment methods (X_{10})			0.539		
Listening to suggestions or feedback from tourists about services for further improvement (X_{11})			0.576		
Training on responsiveness (X_{12})			0.599		
Service implementation for higher profits (X_{13})			0.745		
Relationship management of members or organizations for long-term cooperation (X_{14})			0.694		
Measurement of employee satisfaction toward services (X_{15})				0.548	
Loyalty toward organizations/member groups for service mind (X_{16})				0.631	
Prediction of customer needs or the number of tourists for suitable responsiveness (X_{17})				0.687	
Planning for employee aptitude or capability management for suitable services (X_{18})				0.636	
Quality of rafting or water tourism services (X_{19})					0.524
Flexibility (X_{20})					0.606
Responsiveness to customer needs (X_{21})					0.578
Supply chain management efficiency (X_{22}					0.511

Source: By calculation

According to Table 6, naming the factors was required to consider factor categorization based on the conceptual framework (Fig. 2) for the meanings of variables as follows.

Factor 1: Knowledge management (KM) included 1) communication training for service providers (boat drivers or rafters), 2) finding sources of efficient suppliers, e.g., boats, rafts, lifebuoys, Bai Sri, garlands to respond to tourists, 3) training on services or prompt responsiveness, 4) knowledge management of rafting, boats, water tourism, and first aid, and 5) cultural revitalization of the communities around tourist attractions.

Factor 2: Planning capability for supply chain marketing (Sp) included 1) tourism data management for tourist service, 2) revisit intention because of services from employees, 3) inventory management process, e.g., purchase of sufficient materials as well as equipment for tourists, and 4) service providers applying technology for tourists.

Factor 3: Implementation capability for supply chain marketing (Si) included 1) various payment methods, 2) listening to suggestions or feedback from tourists about services for further improvement, 3) responsiveness capability, 4) service implementation for higher profits, and 5) relationship management of members or organizations for long-term cooperation.

Factor 4: Customer orientation (Co) included 1) measurement of employee satisfaction toward services, 2) loyalty towards organizations/member groups for service mind, 3) prediction of customer needs or the number of tourists for suitable responsiveness, and 4) planning for employee aptitude or capability management for suitable services.

Factor 5: Supply chain efficiency of water tourism (SCM) included 1) quality of rafting or water tourism services, 2) flexibility, 3) responsiveness to customer needs, and 4) efficiency of supply chain management.

For the study on the factors affecting the supply chain efficiency by CFA using ADANCO, the observed variables were analyzed to test the reliability and discriminant validity of each index, of which loading must be over 0.7, as in Table 7.

Table 7
Loading Analysis Results

Index	Knowledge management (Km)	Supply chain marketing planning capability (Sp)	Supply chain marketing implementation capability (Si)	Customer orientation (Co)	Supply chain efficiency of water tourism (SCM)
X_1	0.860				
X_2	0.700				
X_3	0.847				
X_4	0.700				
X_5	0.700				
X_6		0.700			
X_7		0.858			
X_8		0.739			
X_9		0.765			
X_{10}			0.828		
X_{11}			0.898		
X_{12}			0.745		
X_{13}			0.700		
X_{14}			0.700		
X_{15}				0.864	
X_{16}				0.847	
X_{17}				0.710	
X_{18}				0.700	
X_{19}					0.866
X_{20}					0.901
X_{21}					0.910
X_{22}					0.929

Source: By calculation

For AVE analysis, the values were between 0.5061-0.8129, which were over 0.5 for all factors (Hair, et al., 2010, p.107). Dijkstra-Henseler's rho (ρ_A) of all factors were between 0.7636-0.9444 (Henseler, Hubona & Ray, 2016). Jöreskog's rho (ρ_c) were between 0.7952-0.9455, and Cronbach's alpha were between 0.7139-0.9241. All of these values were over 0.7, and thus considered suitable (Hair et al., 2010, p.107), as shown in Table 8.

Table 8
Statistics of the structural suitability measurement model

Construct	AVE	Dijkstra-Henseler's rho (ρ_A)	Jöreskog's rho (ρ_c)	Cronbach's Alpha (α)
SCM	0.8129	0.9444	0.9455	0.9241
Co	0.5061	0.7963	0.7952	0.7139
Km	0.5372	0.8757	0.8501	0.7931
Sp	0.5772	0.7636	0.8441	0.7584
Si	0.5548	0.8557	0.8581	0.7956

Source: By calculation

Next, the discriminant validity of each structure (Latent Variable) was shown. Fornell and Larcker (1981) suggested that the AVE of each latent variable should be higher than the correlations of the latent variables. According to the study, it was found that the values of AVE were higher than the correlations of the latent variables. To clarify, they were between 0.5061-0.81299, as seen in Table 9, which indicated that this model was reliable and could be used to form conclusions.

Table 9
Discriminant Validity: Fornell-Larcker Criterion

Construct	SCM	Co	Km	Sp	Si
SCM	0.8129				
Co	0.2558	0.5061			
Km	0.0449	0.0081	0.537		
Sp	0.0572	0.2384	0.0248	0.5772	
Si	0.0004	0.1287	0.2389	0.0938	0.5548

Statistics of the structural suitability measurement model.

Table 10
Coefficient of Determination

Construct	Coefficient of determination (R^2)	Adjusted R^2
SCM	0.4007	0.3910
Sp	0.2384	0.2354
Si	0.2389	0.2358

Source: Calculation

When estimation was tested for its reliability, the estimation results were revealed. The results of structural model analysis were considered. Coefficient of determination for supply chain efficiency of water tourism could be used in supply chain marketing planning. Supply chain marketing planning capability = 0.4007, 0.2384 and 0.2389, respectively, as in Table 10 (Chin, 1998). Consideration of path coefficient referred to direct effects, as in Fig. 4 and Table 11. The factor affecting the supply chain efficiency of water tourism was customer orientation, which directly affected the supply chain efficiency of water tourism per H_1. It also affected the planning capability for supply chain marketing per H_2. However, planning capability for supply chain marketing did not affect the supply chain efficiency of water tourism, so H_5 was rejected as a result. Knowledge management directly affected the supply chain efficiency of water tourism per H_3, and affected implementation capability for supply chain marketing per H_4. This factor also caused an indirect effect through the transmission factor. To clarify, implementation capability for supply chain marketing affected the supply chain efficiency of water tourism per H_6.

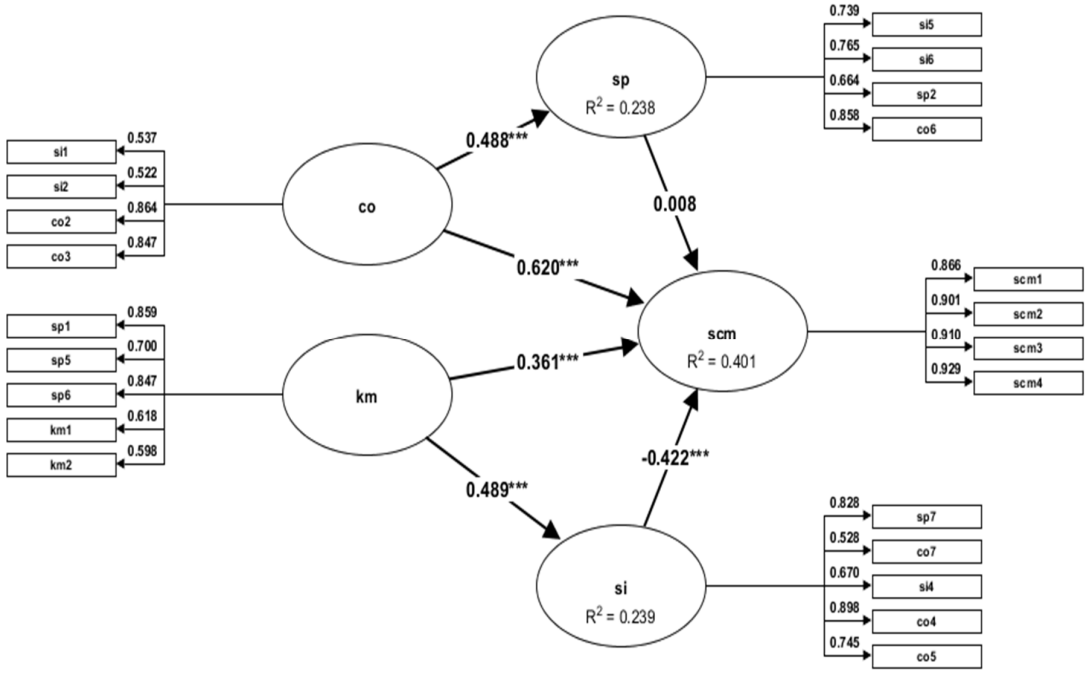

Fig. 4. Estimation Results

Table 11
Direct Effects Inference

Effect	Original coefficient (β)	Standard error	t-value	p-value	Meaning
co ↔ scm	0.6245	0.0581	10.6866	0.0000	Accept H_1
co ↔ sp	0.4883	0.0398	12.2613	0.0000	Accept H_2
km ↔ scm	0.3610	0.0478	7.5436	0.0000	Accept H_3
km ↔ si	0.4888	0.0455	10.7412	0.0000	Accept H_4
sp ↔ scm	0.0085	0.0435	0.1946	0.8458	Reject H_5
si ↔ scm	-0.4216	0.0600	-7.0308	0.0000	Reject H_6

Source: Calculation

Table 12
Effect Overview

Effect	Beta	Indirect effects	Total effect	Cohen's f^2
co → scm	0.6245***	0.0041	0.6245	0.4515
co → sp	0.4883***	-	0.4883	0.3131
km → scm	0.3610***	-0.2060	0.1549	0.1631
km → si	0.4888***	-	0.4888	0.3139
sp → scm	0.0085	-	0.0085	0.0001
si → scm	-0.4216***	-	-0.4216	0.1936

Source: Calculation
Notice: *** = 99% reliability

In addition, the path with the highest total effect was from customer orientation to the supply chain efficiency of water tourism when considering Table 12 that revealed the analysis results of influence from indirect effect and total effect. Planning capability for supply chain marketing did not affect the supply chain efficiency of water tourism.

5. Conclusions and Discussion

According to data analysis, the components of supply chain efficiency for water tourism could be categorized into 5 groups, i.e., 1) Knowledge management, 2) supply chain marketing implementation capability, 3) supply chain marketing planning capability, 4) customer orientation, and 5) supply chain efficiency of water tourism. This conformed to the study of Sutono (2019), which focused on supply chain efficiency because of supply chain marketing planning and implementation capabilities, internal knowledge management, and customer orientation. These factors were related to one another. Customer orientation affected the planning capability for supply chain marketing. Knowledge management also affected implementation capability for supply chain marketing. According to the study on the factors affecting the supply chain efficiency of water tourism, the factor that had the most effect was customer orientation. It involved taking services into consideration to impress customers, which could lead to their revisit because of services from employees who predicted customer needs or the number of tourists for suitable responsiveness. This conformed to the study of Soler and Gemar (2019), which found that service quality directly affected customer satisfaction, which could in turn increase competitive advantage and supply chain efficiency. Customer orientation also affected planning capability for supply chain marketing but had no indirect effect on the supply chain efficiency of water tourism because the related studies might not cover water tourism businesses that possess unique characteristics.

Knowledge management directly affected the supply chain efficiency of water tourism. This means entrepreneurs who wanted to increase supply chain efficiency had to provide suitable knowledge management and internal capability management. It also affected implementation capability for supply chain marketing. However, marketing implementation resulted in the opposite condition. This conformed to the study of Sutono (2019), but contradicted with Lisa et al. (2006), who found that marketing implementation capability affected supply chain efficiency, i.e., product delivery, distribution, and customer service. Nonetheless, this research asked for opinions from water service providers around the Mekong River, mainly in the areas of Thailand. Thus, it was shown it affected supply chain marketing implementation in terms of wasted time and too many expenditures, finally resulting in the different study results.

Water tourism entrepreneurs should focus mainly on customers and service mind, which are all reflected in customer satisfaction towards employees. Service providers should also plan employee aptitude/skill management for suitable customer service. They should predict customer needs and the number of customers in each phase for correct and suitable responsiveness. Internal knowledge management should be provided as well, e.g., communication or service training, training on aiding for tourists, searching for sources of suitable suppliers as needed, and cultural revitalization of the communities around tourist attractions. There should also be guidelines on building cooperation with involved agencies, e.g., Marine Department or local administrative organizations in order to enhance water tourism services, which will finally lead to better supply chain efficiency for water tourism.

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