

# A Confirmatory Factor Analysis of Components of Sports Tourism in Songkhla Province

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## Abstract

This research aimed to perform confirmatory factor analysis of sports tourism in Songkhla Province and to test construct validity of a model and empirical data. A questionnaire was used to collect data from 420 tourists who traveled to watch or to participate in sports events in Hat Yai District and Mueang Songkhla District, Songkhla Province. Purposive sampling and

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snowball sampling methods were employed. The research instrument was a 30-question survey, and construct validity was analyzed using confirmatory factor analysis. The results of the confirmatory factor analysis of the components of sports tourism revealed that there was one major factor consisting of six indicators: tourist attractions, available packages, activities, accessibility, amenities and services, and community participation. When considering the indices, the model was fit with the empirical data, with  $\chi^2/df = 5.65$ ,  $df = 5$ ,  $\chi^2/df = 1.13$ , P-value = 0.34, RMSEA = 0.018, RMR = 0.01, CFI = 1.00, GFI = 1.00, AGFI = 0.98. Factor loading values of each index were between 0.61 and 0.89, coefficients of the observed variables ( $R^2$ ) were between 0.37 and 0.80. The indicators that had the highest weight value were amenities and ancillary services, and the least was tourist attractions. Government and private sectors could utilize the results of the current study by incorporating them in their policies and development plans to promote sports tourism activities in their provinces and to make the activities more effective in order to sustainably attract tourists to watch or participate in sports activities while traveling.

**Keywords:** sports tourism, components of sports tourism, Songkhla province

#### บทคัดย่อ

การวิจัยครั้งนี้มีจุดมุ่งหมายเพื่อวิเคราะห์องค์ประกอบเชิงยืนยันการท่องเที่ยวเชิงกีฬาของจังหวัดสงขลาและตรวจสอบความตรงเชิงโครงสร้างของโมเดลกับข้อมูลเชิงประจักษ์ เก็บข้อมูลด้วยแบบสอบถามจากนักท่องเที่ยวที่เดินทางเข้าชมและร่วมการแข่งขันมหกรรมกีฬาในอำเภอหาดใหญ่ และอำเภอเมือง

สงขลา จังหวัดสงขลา จำนวน 420 คน สุ่มตัวอย่างด้วยเทคนิคการเลือกแบบเฉพาะเจาะจง และการเลือกตัวอย่างแบบลูกโซ่ เครื่องมือที่ใช้เป็นแบบสอบถาม องค์ประกอบการท่องเที่ยวเชิงกีฬา 30 ข้อ วิเคราะห์ความตรงเชิงโครงสร้างโดยใช้การวิเคราะห์องค์ประกอบเชิงยืนยัน (confirmatory factor analysis) ผลการวิเคราะห์และตรวจสอบองค์ประกอบเชิงยืนยันองค์ประกอบของการท่องเที่ยวเชิงกีฬาประกอบด้วย 1 องค์ประกอบ 6 ตัวชี้วัด คือ สิ่งดึงดูดใจ สินค้า กิจกรรม การเข้าถึง สิ่งอำนวยความสะดวกและบริการ และการมีส่วนร่วมของชุมชนท้องถิ่น เมื่อพิจารณาค่าดัชนีความสอดคล้องกลมกลืน ประกอบด้วย  $\chi^2_2 = 5.65$ ,  $df = 5$ ,  $\chi^2/df = 1.13$ ,  $P\text{-value} = 0.34$ ,  $RMSEA = 0.018$ ,  $RMR = 0.01$ ,  $CFI = 1.00$ ,  $GFI = 1.00$ ,  $AGFI = 0.98$  แต่ละตัวชี้วัดมีค่าน้ำหนักองค์ประกอบมาตรฐานอยู่ระหว่าง 0.61 – 0.89 โดยมีค่าสัมประสิทธิ์ความเที่ยงของตัวแปรสังเกตได้ ( $R^2$ ) อยู่ระหว่าง 0.37 – 0.80 ซึ่งตัวชี้วัดที่มีค่าน้ำหนักสูงสุด ได้แก่ สิ่งอำนวยความสะดวกและบริการ และน้อยที่สุด คือ สิ่งดึงดูดใจ จากผลการวิจัยนี้ หน่วยงานภาครัฐและเอกชนสามารถนำข้อมูลเกี่ยวกับองค์ประกอบการท่องเที่ยวเชิงกีฬาไปใช้บูรณาการในการกำหนดนโยบายวางแผนพัฒนา ส่งเสริมการจัดกิจกรรมการท่องเที่ยวเชิงกีฬาของจังหวัดให้มีประสิทธิภาพ เพื่อดึงดูดนักท่องเที่ยวให้เข้ามามีส่วนร่วมในกิจกรรมกีฬาพร้อมท่องเที่ยวได้อย่างยั่งยืนต่อไป

**คำสำคัญ:** การท่องเที่ยวเชิงกีฬา องค์ประกอบการท่องเที่ยว  
จังหวัดสงขลา

## Introduction

In a general overview, Thailand has been continuously developed in line with a positive growing trend of its sports industry with an average growth rate per year of 9.9%. In 2011,

the turnover was about 81,200 million baht while the average annual growth rate of Gross Domestic Product (GDP) was about 2.8%. However, the forecast of Thailand sports industry indicated that the average annual growth rate was tending downward in the following 5 years, which was in the period of the Sixth National Sports Development Plan (2017-2021) (Ministry of Tourism & Sports, 2019). The development of the tourism industry, sports tourism, and recreational sports are key success factors to add economic value. Sports tourism is a type of travel related to partaking in various types of sports both directly and indirectly as well as formally and informally. Its purpose is to travel to take part in a sports event by watching, cheering, and visiting sports attractions (Roche et al., 2013). These sports activities generate travel activity and economic benefits for the host communities. The economic impact of sports events in 2019 revealed that sports tourism business directly added economic value of at least 21,003 million baht classified into sports events at 527 million baht, active sports tourism at 18,395 million baht, and nostalgia sports tourism, involving travel to famous sport-related tourist attractions that celebrate sports of the past or the present, at 2,080 million baht (Economics Tourism and Sports Division, 2019).

Songkhla Province is a gateway to southern Thailand visited by a large number of tourists; it borders the State of Kedah, Malaysia, where many tourists travel through the Sadao border to the province each year. According to a survey, the total number of Thai and foreign tourists traveling to Songkhla from 2017 to 2018 was 2,514,097 and 2,443,308 respectively with an increase of Thai tourists at 4.96% and Malaysian tourists 17.13% (Songkhla Provincial Office of Tourism and Sports,

2019). Songkhla Province is known as a famous tourist province, especially in Malaysia, Singapore, Indonesia, and the Philippines. Hat Yai, the largest city of Songkhla, is well known as an important center for merchandise, economics, and education, and is also visited by many tourists all year round. According to tourist statistics, the largest number of foreign tourists to Hat Yai are from Malaysia (75%) while the second largest number of foreign tourists are from Singapore and Indonesia, making the total of almost 5 million tourists per year and generating income from tourism to the Thai economy by more than 30,000 million baht (Kasikorn Research Center, 2014). Nowadays, the number of Thai and foreign tourists interested in sports tourism has increased considerably, especially running for health, bicycle touring clubs, and travel to spectatorship sports, such as league football matches and Thailand men's beach volleyball championships. Thus, sports tourism has boosted the economy, trade, and tourism in accordance with the Thailand 4.0 policy on tourism, which focuses on promoting sports tourism, preparing for future expansion of tourism, driving economic development in the sports tourism industry, emphasizing provision of services, and boosting national income. These economic strategies help build up financial stability, wealth, and sustainability.

Potential components of sports tourism can help build a strong foundation for successful economic activities. There are important issues to deal with when designing strategies and policies to help enhance the value of the tourism industry. Related literature and related studies in Thailand and other countries have identified a number of tourism components

which can affect tourists' decision making and help tourist attractions to retain their popularity. These components are:

1) *Tourist attractions* are vital and can influence sports tourists' decision to visit the places and can, as a result, maintain the popularity of the places as tourist destinations. For sports tourism, both natural and man-made sports destinations are places where tourists can attend sports activities (Boniface & Cooper, 1994; Collier & Harraway, 2006; Dickman, 1996; Pelasol et al., 2012).

2) *Amenities and services* are basic requirements for tourists. A remarkably safe and comfortable stay helps impress tourists and could make them extend their trip. Amenities and services include indicators such as clean restrooms, public utility, road signs, shopping centers, street shops, restaurants, café, tourist communication and information center, and tourist assistance center (Boniface & Cooper, 1994; Buhalis, 2000; Collier & Harraway, 2006; Page & Connell, 2020; Pelasol et al., 2012).

3) *Accessibility* is another factor affecting tourists' decision to visit tourist destinations. Good road systems, quality transportation infrastructure, and transportation hubs are significant parts to support the development of desirable destinations for travelers.

4) *Tourist activities* refer to activities that tourists can choose to do during the trip. There are several types of tourist activities catering to tourists according to their specific capabilities and interests including air, water, and land recreational activities. In addition, extreme sports are very popular for tourists who enjoy doing challenging activities,

experiencing something new, and testing their body strength. However, extreme sports like cliff diving, abseiling, parachute jumping, BB gun shooting, scuba diving, white water rafting, etc., need to be done under expert supervision (Buhalis, 2000; Page & Connell, 2020; Pelasol et al., 2012).

5) *Available packages* offered by agencies, hotels, or government agencies as a tourism campaign or promotion to boost tourism also affect tourists' decision to travel to places. Tour packages can help tourists make decisions and plan travel budgets including expenses for transport, sports events, accommodations, sports tickets, souvenirs, meals, and miscellaneous items.

6) *Community participation* is another success factor involving development of sports tourism management and benefit to local tourist communities (Limpairoj, 2011). Tourism should take into consideration environmental and cultural sustainability. Involvement of people in the community in hosting a sports event helps promote local cultures, value of local tourist attractions, build stronger bonds within neighborhoods, and preserve local tourist attractions. These increase the standard of living, raise the awareness of cultural identity in local communities, and boost the economic growth in a community.

As mentioned above, sports tourism components are significant factors showing the readiness of a tourism industry to welcome tourists or help tourists in making decisions to travel to visit tourist destinations. Although readiness of tourism does not directly affect tourists' needs, it significantly influences their decision-making in choosing a tourist destination. Thus, the

findings of the tourism components analysis will reveal the level of readiness of an area for accommodating sports tourists. Udomthanavong (2019), who investigated the influences of motivation affecting sport tourism achievement in Phuket, especially in the case of a marathon event, revealed that tourism components influenced tourists' perceived value and satisfaction, encouraging them to revisit the destination as well as recommending the destination to others.

Although Songkhla Province has much potential for attracting both foreign and domestic tourists to attend sports events, no study reports have been found, which assayed potential components of tourism in this province. The objective of the research was therefore to perform confirmatory factor analysis to test the construct validity of components of sports tourism in Songkhla Province. The focus is on developing a structural model of components of sports tourism, considering tourists traveling to watch or to participate in sports events in the province. The research was conducted based on the theory of 5A's in tourism by Dickman (1996) and research studies related to community participation (Cohen & Uphoff, 1980; Limpairoj 2011), from which six indicators were employed: tourist attractions, available packages, activities, accessibility, amenities and services, and community participation. The results of the research would be beneficial to related organizations in the government sector, private sector and local communities as they can serve as guidelines for contextualized development and promotion of sports tourism to fulfill the needs of sports tourists visiting Songkhla Province.

## **Literature Review**

Fostering the relationships among participants, community, and sports activities (Weed & Bull, 2012), sports tourism is a type of



tourism related to travel for pleasure to other places in order to take part in a sports event, watch sports, or visit tourist attractions relating to physical activities or sports (Gibson, 1998). The fundamental components to be considered when designing strategies and policies for communities in order to add value to the sports tourism industry involve the relationships among participants, community, and sports activities (Weed & Bull, 2012). Therefore, the components are used to indicate the efficiency and sufficiency of organizing a sports event which can stimulate community economic growth from registration fees, travel and accommodation expenses, and the purchase of products and services. Moreover, a sports event can influence tourists to make recommendations to friends on sports tourist destinations as well as their intentions to revisit the destinations. Based on existing concepts, theories, and related studies, there are six indicators of sports tourism to be considered: tourist attractions, available packages, activities, accessibility, amenities and services, and community participation (Cohen & Uphoff, 1980; Dickman, 1996; Limpairoj, 2011).

Tourist attractions are one of the main components of tourist destinations because they attract tourists to visit the destinations. There are different types of attractions depending on the types of tourism resources they have. Furthermore, tourism image and entrance fees for tourist sites play an important role in attracting tourists to visit the destinations. Tourist destinations, both natural and made-made attractions, are places where tourists spend time to enjoy themselves with the surroundings, seeing different things including places, people and cultures. Tourists can also do new things and try different local dishes. They can also appreciate and participate in sports activities (Buhalis, 2000; Collier & Harraway, 2006; Cooper & Boniface, 1994; Pelasol et al., 2012). For sports

tourism, some types and characteristics of sports attractions and destinations include the following: 1) venues with sports facilities, such as sports stadiums and domed stadiums; 2) sports museums, sports halls of fame; 3) sports theme parks, water parks, summer ski resorts, and bungee jump spots; 4) hiking trails, rock climbing routes; and 5) sporting goods stores.

Available packages refer to tour packages arranged by travel agents or travel companies which influence tourists' decision making (Gibson et al., 2012). They can enhance the value of travel for participating in a sports event (Rahimian et al., 2013), help plan travel budget, decrease travel expenses, and make the trip worthwhile. A package normally includes travel expenses, tourist activities, accommodations, sports tickets, souvenirs, foods, parking lots, etc. (Roche et al., 2013).

Activities refer to different types of tourist activities that sports tourists can do while traveling according to their interests and skills, such as land, air, and water activities. Adventure activities are very popular among tourists who love adventures, challenges, new and different experience exploration, and physical challenges. These activities, such as rock climbing, zip-lining, parachuting, BB gun, scuba diving, and white water rafting, require an adventure sports trainer who is responsible for leading and supervising groups and individuals while doing the sports outdoors to ensure their safety (Buhalis, 2000; Page & Connell, 2020; Pelasol et al., 2012). In addition to sports tours, spa is very popular among health and wellness tourists who are on sports tours. Moreover, various ecotourism activities can be offered like night safari, bird watching, trekking, cultural and traditional tours, bamboo rafting, etc.

Accessibility is an important indicator that influences tourists' travel decisions to visit tourist destinations, routes, or public transportation to tourist destinations (Petroman, 2015) as well as transfer stations, parking lots, railway stations, ports, and airports (Roche et al., 2013). Thus, tourist transport business is necessary for sports tourism as it can bring tourists to a tourist destination or sports event quickly, conveniently and safely. In addition, a full-service sports complex, service-minded staff (Kouzechian, 2014), and convenience in public transportation are significant for the tourism industry.

Amenities and services are a basic tourism component. This component allows tourists to create a sense of comfort, impression, and safety (Getz & Page, 2016) which make them extend their stay. Amenities and services that meet tourists' needs include clean restrooms, good infrastructure, signage, shopping centers, shops and stores, restaurants, cafes, tourist centers, connectivity, and emergency services (Roche et al., 2013). The cooperation between governments and private sectors is necessary in planning, controlling, and coordinating in order to offer amenities and services in the tourism industry (Collier & Harraway, 2006; Cooper & Boniface, 1994; Page & Connell; 2020; Pelasol et al., 2012).

Community participation is an opportunity for the community to be part of the development of tourism activities. Lifestyles, values, customs, individual attitudes, and the benefits of a destination community for promoting sustainable tourism should be considered. Each community has a unique pattern of participation depending on the level of citizen participation. In line with Cohen and Uphoff's concept (1980), this research investigated community participation in four key factors:

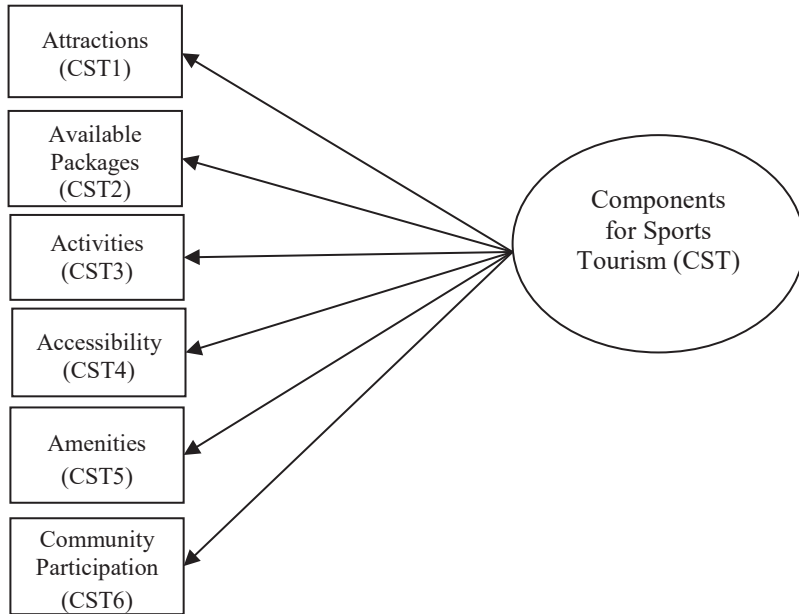
decision making, implementation, benefits, and evaluation. For community participation, the community should be involved in policy and decision making in sports tourism management with local administrators. This could help develop sustainable sports tourism, value perceived, and preserve cultural heritage within the community. In addition, organizing a sports event is normally beneficial for the youth in the community because it helps enhance leadership skills, increase their interest in sports, and decrease violence, crime, and drug use. It could also help promote the community to make it better-known.

In summary, the components of sports tourism are significant variables which reflect the readiness of the tourism industry. They play an important role in determining a tourist's choice of destinations. Although not directly serving their needs, these components influence their decision making. Thus, the analysis of components of sports tourism is crucial for setting policies and guidelines in order to enhance and develop the readiness of sports tourism to satisfy both economic and social development.

The review of previous literature and related studies brought about the concept used in the research study as shown in Figure 1.

**Figure 1**

Concept of Measurement Model of Components of Sports Tourism in Songkhla Province



## Research Methodology

This quantitative research used confirmatory factor analysis to examine component variables of sports tourism activities for tourists visiting Songkhla Province.

### 1. Ethical Considerations

The research was carried out upon the prior consent of the Ethical Committee of the Center for Social and Behavioral Sciences Institutional Review Board, Prince of Songkla University (No. PSU IRB 2020-PSU-L-009). The subjects were

informed of the objectives of the study and that they had the right to withdraw from the research study at any time without any penalty or consequences. In addition, they were informed that the information they provided would be kept strictly confidential and reported as overall results.

## **2. Participants**

The subjects were tourists who were spectators and those who participated at least once in sports events in Hat Yai District and Mueang District, Songkhla Province, organized by the Tourism and Sports Organization of Songkhla Province. The formula for determining the sample size with 99% confidence with a margin error at 0.5 (Jamornmann, 1994) was employed. The sample size estimation for the causal relationship model analysis was at least 200 subjects per variable (Hair et al., 2010). However, to prevent missing survey data, 450 copies of questionnaire, which were more than the required number, were distributed. A total of 420 copies of complete questionnaires were collected which represented 93.33% of the total. Purposive sampling and snowball sampling methods were applied. The specific target group of the study were tourists who were spectators and those who were participants in six sports events in Songkhla Province: 1) The 2020 FIFA World Cup Qualifier, Thailand vs Malaysia; 2) AFC U-2; 3) Songkhla Triathlon; 4) Songkhla International Beach Volleyball; 5) Songkhla International Marathon; and 6) Hat Yai International Marathon. Moreover, 1:1 matched-pair design was used in order to have groups with similar characteristics. Therefore, the following two criteria were used for selection of the subjects:

Criteria 1: Tourists in the same group or those who traveled together to watch or to participate in the sports event, and

Criteria 2: In the case that the subjects traveled to the sports events alone, general information of the subjects was used for pairing.

### **3. Research Instrument**

The questionnaire was divided into two sections as follows.

Section 1 comprised close-ended questions dealing with demographic data of the respondents including gender, age, education level, occupation, average monthly income, hometown, experience of sports participants or spectators, information sources of sports tourism, and types of sports participation.

Section 2 covered six major indicators of sports tourism components: tourist attractions, available packages, activities, accessibility, amenities and services, and community participation. There were 30 items with a 5-point Likert scale asking the respondents to choose only one option. To ensure that the instrument collected valid and reliable data that could provide answers to the research questions, the instrument was evaluated for content validity by three experts and the scores were 0.70-1.00. Besides, a sample of 30 participants were asked to do the questionnaire. The item-total correlation was 0.30-0.75, and the reliability using Cronbach's alpha was 0.88.

### **4. Data Collection Methods**

The researchers visited the sports event manager in order to explain what the research objectives were, how data would be collected, and when the survey questionnaire would be returned/collected. Then the researchers and five research

assistants collected data with the cooperation of Songkhla Provincial Office of Tourism and Songkhla Sports Authority of Thailand and the sports event manager. Later, all complete questionnaires were sorted out, tallied, and prepared for analysis.

## **5. Data Analysis**

The data were analyzed using LISREL (version 8.80), a statistical software package.

General information of the respondents was analyzed using descriptive statistics: frequency, means, percentage, and standard deviation.

Pearson's product moment correlation coefficient was applied in the analysis of coefficient between observed variables in the factor model in the causal relationship model of sports tourist components in Songkhla Province to obtain matrix correlation used in the confirmatory factor analysis. Then, the researchers checked whether the correlations were significantly different from zero by considering the results of the Bartlett's test of sphericity and Kaiser–Meyer–Olkin measures of sampling adequacy.

The analysis of structure validity using the confirmatory factor analysis was carried out by using the measurement model of sports tourism. Statistical methods, goodness of fit measures, and fitted residuals matrix were used in data analysis (Wiratchai, 1999).



## Findings

The results of the model of confirmatory factor analysis of components of the sports tourism in Songkhla province could be concluded as follows.

1. The results of the analysis of general information of 420 subjects who were spectators and those taking part in sports events in Songkhla Province were as follows. The median age was 31-40 years old ( $\bar{X}$  = 3.07, S.D. = 1.44), 263 males (62.60%), 154 females (36.70%), and 3 non-binaries (0.70%), and the average monthly income of the subjects was between 5,000-42,000 baht. It was also found that most subjects, 264, participated in a run-walk marathon (62.90%).

2. The overall test score result of the appropriateness of basic data on tourist components in Songkhla Province was high. The mean score was 4.09, and the standard deviation was 0.65, which could be classified according to the six indicators: tourist attractions ( $\bar{X}$  = 4.24, S.D. = 0.61), accessibility ( $\bar{X}$  = 4.13, S.D. = 0.62), amenities and services ( $\bar{X}$  = 4.09, S.D. = 0.62), community participation ( $\bar{X}$  = 4.08, S.D. = 0.62), activities ( $\bar{X}$  = 4.08, S.D. = 0.62), and available packages ( $\bar{X}$  = 3.97, S.D. = 0.58), respectively. The result of the examination of correlation among scores of each of the 6 indicators was that the correlation score was 0.37 – 0.80. The result of the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's test was 0.886 which means the sampling used for factor analysis was adequate. Moreover, the result of Bartlett was 1396.52 with the levels of significance less than 0.01 which means the null hypothesis was rejected. That is the data were appropriate for factor analysis because the value of the KMO

was larger than 0.5 and close to 1. The conclusion was that all 6 observed indicators were assumed to be related to each other and able to be used in confirmatory factor analysis (Cerny & Kaiser, 1977).

3. The results of the confirmatory factor analysis of the sports tourism in Songkhla Province revealed that there was one major tourist component and 6 indicators: tourist attractions (CST1), available packages (CST2), activities (CST3), accessibility (CST4), amenities and services (CST5), and community participation (CST6). The findings of the confirmatory factor analysis of sports tourism were as follows.

3.1 For factor loading ( $\lambda_i$ ) scores, it was found that tourist attractions (CST1), available packages (CST2), activities (CST3), accessibility (CST4), amenities and services (CST5), and community participation (CST6) were 0.61, 0.71, 0.63, 0.80, 0.89, and 0.85, respectively.

3.2 For standard error (SE), the values of factor loading of tourist attractions (CST1), available packages (CST2), activities (CST3), accessibility (CST4), amenities and services (CST5), and community participation (CST6) were considered small as they were 0.05, 0.04, 0.05, 0.04, 0.04, and 0.05, respectively.

3.3 For t-values, the test results of factor loading of tourist attractions (CST1), available packages (CST2), activities (CST3), accessibility (CST4), amenities and services (CST5), and community participation (CST6) were 13.00, 15.53, 13.57, 18.05, 21.78, and 20.50, respectively with statistical significance ( $p < .01$ ) for all indicators.

3.4 Square multiple correlation:  $R^2$  values of factor loading of tourist attractions (CST1), available packages (CST2), activities (CST3), accessibility (CST4), amenities and services (CST5), and community participation (CST6) were 0.37, 0.48, 0.39, 0.63, 0.80, and 0.72, respectively as shown in Table 1.

**Table 1**

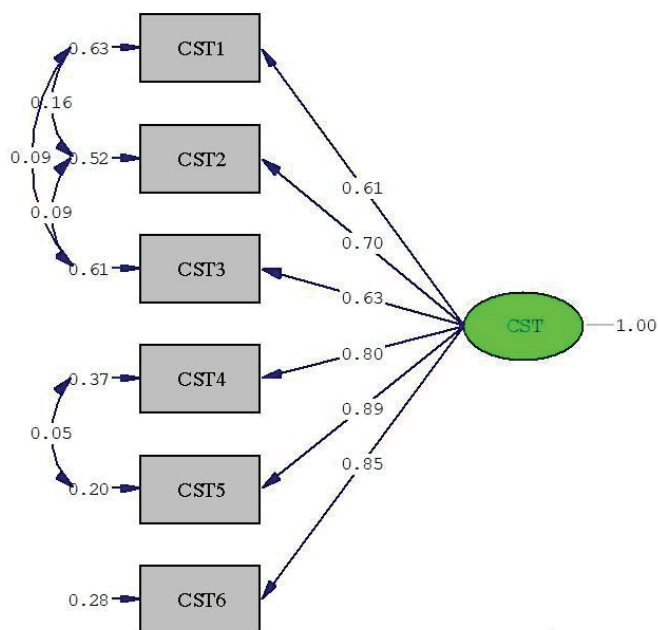
Factor Loading ( $\lambda_i$ ), Standard Error ( $SE\lambda_i$ ), Statistical Significance (t), and Square Multiple Correlation ( $R^2$ ) of Confirmatory Factor Analysis of Components of Songkhla Sports Tourism Measurement Model

Observed variables	Analysis results			
	Factor loadings	SE	t-value	$R^2$
Tourist attractions (CST1)	0.61	0.05	13.00	0.37
Available packages (CST2)	0.70	0.04	15.53	0.48
Activities (CST3)	0.63	0.05	13.57	0.39
Accessibility (CST4)	0.80	0.04	18.05	0.63
Amenities and services (CST5)	0.89	0.04	21.78	0.80
Community participation (CST6)	0.85	0.04	20.50	0.72

**\*\*** $p < .01$

**Figure 2**

**Measurement Model of Components of Sports Tourism in Songkhla Province**



Chi-Square=5.65, df=5, P-value=0.34159, RMSEA=0.018

The test of measurement model was conducted to examine goodness of fit indices of sports tourism components which consisted of one main component and 6 indicators: tourist attractions (CST1), available packages (CST2), activities (CST3), accessibility (CST4), amenities and services (CST5), and community participation (CST6). It appeared that the measurement model of sports tourism components could be used to explain reliability of all indicators or variables, and the model fit well with empirical data as shown in Table 2.

**Table 2****Model Fit Indices of Sports Tourism Components**

<b>Goodness of fit indices</b>	<b>Criteria</b>	<b>Index</b>	<b>Indicator</b>
1. Chi-square ( $\chi^2$ )	-	5.65	-
2. P-value	$p > .05$	0.34	Reasonably good
3. Relative Chi-square	$\chi^2/df < 2.00$	1.13	Good
4. Goodness of fit index	GFI $> .90$	1.00	Reasonably good
5. Adjusted goodness of fit index	AGFI $> .90$	0.98	Reasonably good
6. Root mean square residual	RMR $< .05$	0.01	Reasonably good
7. Standardized root mean square residual	SRMR $< .05$	0.01	Reasonably good
8. Root mean square error of approximation	RMSEA $< .05$	0.02	Reasonably good
9. Comparative fit index	CFI $> .90$	1.00	Reasonably good
10. Normed fit index	NFI $> .90$	1.00	Reasonably good
11. Non-normed fit index	NNFI $> .90$	1.00	Reasonably good

\* $p < .05$

**Discussion**

This research aimed to analyze and examine the confirmatory factor analysis results of the sports tourism in Songkhla Province and to test the structural validity of the model and empirical data. The results revealed that there was one main

sports tourism component and six indicators or observed variables as follows: tourist attractions, available packages, activities, accessibility, amenities and services, and community participation. Moreover, it was found that the model fit the empirical data and findings were in agreement with previous similar studies (Buhalis, 2000; Collier & Harraway, 2006; Cooper & Boniface, 1994; Limpairoj, 2011; Page & Connell, 2020; Pelasol et al., 2012; Roche et al., 2013).

The obtained factor loading scores were high and positive for all indicators, 0.61-.089, indicating the potential and readiness of tourist attractions which are worth development or improvement in order to make changes and show that the places are attractive with uniqueness that could draw a large number of tourists to visit the province. This could increase the added value of sports tourism to Songkhla Province as a host province, which is in accordance with the results of Inpongpan's (2019) study about causal factors influencing sports tourism in Thailand. The study found that most sports tourists place focus on the environment, magnificent tourist attractions, facilities, public transportation or tourist destination accessibility, tourism service providers, products and services, interesting tourist activities, modern tourist equipment and tools, and ways to offer promotion of tourism or attractive prices.

The findings of this present study are also in agreement with the results of previous similar studies. As confirmed by the studies of Kanchanakitti (2002), Limpairoj (2011), and Suwan Na Khemrat et al. (2007), and Kanchanakitti (2002), tourist attractions or tourist destinations with various tourism resources including history, cultures, and man-made tourist attractions could attract tourists to travel to take part in a sports event. Lee

et al. (2019), which examined a behavioral model of sports tourists participating in international marathons in Taiwan with 363 participants, found that the model fit with empirical data confirming that tourist attractions, sports attractions, and image of sports events were significant motivation factors for sports tourism participation, tourist satisfaction and recommendation as well as revisit intention. Furthermore, another study conducted by Newland and Aicher (2018) to explore and examine relationships of tourist destinations, sports event components, and individual sports tourist motivation for traveling and participating in running, cycling, and triathlon in the United States also revealed that components of tourist destinations played an important role in motivating athletes to attend a sports event at a statistical significance of 0.01.

## **Conclusion**

The components of sports tourism in Songkhla Province comprise one main component with six indicators: tourist attractions, available packages, activities, accessibility, amenities and services, and community participation. The results of the study revealed that the causal relationship model of sports tourism components in Songkhla Province fit well with the empirical data. Moreover, the components of sports tourism in Songkhla Province as a whole has a high level of appropriateness and the average scores of most indicators were similarly high. The research findings could be a significant body of knowledge that local government agencies, organizations in the private sector, and sports event organizers in Songkhla Province could use as a guideline for management, planning and development and offer ideas for designing sports activities

suitable for the context of sports tourism in Songkhla Province, which is suitable as venues for sports events and sports tourism to be promoted. Sports tourism can generate more income for the area as it could increase consumer spending during the event in terms of expenses for travel, accommodations, registration fees, and souvenirs. Moreover, it will not only encourage demands for goods and services but also create new jobs by engaging the community in hosting the sports event using community resources. Local products and tourist attractions are also significant factors distributing surplus in the way that can strengthen the community economy.

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## References

- Boniface, B. G., & Cooper, C. P. (1994). *The geography of travel and tourism* (2<sup>nd</sup> ed.). Butterworth-Heinemann.
- Buhalis, D. (2000). Relationships in the distribution channel of tourism: Conflicts between hoteliers and tour operators in the Mediterranean region. *International Journal of Hospitality & Tourism Administration*, 1(1), 113-139.



- Cerny, B. A., & Kaiser, H. F. (1977). A study of a measure of sampling adequacy for factor- analytic correlation matrices. *Multivariate Behavioral Research*, 12(1), 43-47.
- Cohen, J. M., & Uphoff, N. T. (1980). Participation's place in rural development: Seeking clarity through specificity. *World Development*, 8(3), 213-235. [https://doi.org/10.1016/0305-750X\(80\)90011-X](https://doi.org/10.1016/0305-750X(80)90011-X)
- Collier, A., & Harraway, S. (2006). *The New Zealand tourism industry*. Pearson Education.
- Dickman, S. (1996). *Tourism: An introductory text*. Holder Education.
- Economics Tourism and Sports Division. (2019). *Review Issues Event Sports Tourism*. [https://secretary.mots.go.th/ewtadmin/ewt/ga/download/article/article\\_20200416204701.pdf](https://secretary.mots.go.th/ewtadmin/ewt/ga/download/article/article_20200416204701.pdf)
- Getz, D., & Page, S. J. (2016). Progress and prospects for event tourism research. *Tourism Management*, 52, 593-631.
- Gibson, H. J., Kaplanidou, K., & Kang, S. J. (2012). Small- scale event sport tourism: A case study in sustainable tourism. *Sport Management Review*, 15(2), 160-170.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Prentice-Hall.
- Inpongpan, W. (2019). Factors affecting sport tourism strategy of Thailand. *Burapha Journal of Business Management*, 8(1), 43-61. [In Thai]
- Jamornmann, U. (1994). *Sampling techniques in educational research*. Funny Publishing. [In Thai]
- Kanchanakitti, K. (2002). *Potential of sports tourism in Chiang Mai* [Master's thesis, Chiang Mai University]. Chiang Mai University Intellectual Repository ( CMU IR) . [https://cmudc.library.cmu.ac.th/frontend/Info/item/dc:997\\_25](https://cmudc.library.cmu.ac.th/frontend/Info/item/dc:997_25). [In Thai]

- Kasikom Research Center. (2014, May 9). *Business trend analysis*.  
<https://kasikomresearch.com/th/analysis/kecon/business/Pages/32674.aspx>. [In Thai]
- Lee, S. S., Tseng, Y. C., Lin, Y. S., Su, Y. C., Sia, W. Y., & Lin, C. W. (2019). Constructing an international marathon participants' behavioral model in Taiwan. *African Journal of Hospitality, Tourism and Leisure*, 8(4). 1-12.
- Limpairoj, N. (2011). Implication for sport tourism development in Nakornrajsima, Thailand [Master's thesis, Khon Kaen University]. Khon Kaen University Library. [http://tourismlibrary.tat.or.th/medias/KKU0102/KKU0102\\_fulltext.pdf](http://tourismlibrary.tat.or.th/medias/KKU0102/KKU0102_fulltext.pdf). [In Thai]
- Ministry of Tourism & Sports. (2019). *Tourism statistics 2017-2019*. [https://www.mots.go.th/mots\\_en/morenews\\_new.php?cid=329](https://www.mots.go.th/mots_en/morenews_new.php?cid=329). [In Thai]
- Newland, B. L., & Aicher, T. J. (2018). Exploring sport participants' event and destination choices. *Journal of Sport & Tourism*, 22(2), 131-149.
- Page, S. J., & Connell, J. (2020). *Tourism: A modern synthesis*. Routledge.
- Pelasol, M. R., Tayoba, M. A. T., Mondero, E., Jugado, K., & Lahayhay, C. (2012). Destination in the southern part of Iloilo, Philippines. *JPAIR Multidisciplinary Research Journal*, 8(1), 1-8. <https://www.ejournals.ph/article.php?id=7511>
- Petroman, C. (2015). Typology of tourism destinations. *Scientific Papers Animal Science and Biotechnologies*, 48(1), 338-342.
- Roche, S., Spake, D. F., & Joseph, M. (2013). A model of sporting event tourism as economic development. *Sport, Business and Management: An International Journal*, 3(2), 147-157. <https://doi.org/10.1108/20426781311325078>
- Songkhla Provincial Office of Tourism and Sports. (2019). *Songkhla Province Tourism Statistics*. [In Thai]
- Suwan Na Khemrat, W, Suwan, P, & Buakhli, K. (2007). *Integrated Sports Management and Management for*

*Sustainable Semi-Conservation Tourism in the Andaman Triangle: Phuket*. Institute of Physical Education, Krabi Campus. [In Thai]

- Udomthanavong, S. (2019). The influences of motivation affecting sport tourism achievement at Phuket: A case study of event marathons. *Suthiparithat Journal*, 33(106), 236-250. [https://so05.tcithaijo.org/index.php/DPU\\_Suthiparithat\\_Journal/article/view/243502/165234](https://so05.tcithaijo.org/index.php/DPU_Suthiparithat_Journal/article/view/243502/165234). [In Thai]
- Weed, M., & Bull, C. (2012). *Sports tourism: Participants, policy and providers (2nd ed.)*. Routledge.
- Wiratchai, N. (1999). *LISREL model: Analytical statistics for research*. Chulalongkorn University Printing House. [In Thai]