# SUSTAINABLE DEVELOPMENT TOURISM ON SUPPLY CHAIN MANAGEMENT OF TOURISM IN PHUKET

# Sakapas Saengchai, Suan Sunandha Rajabhat University Natnicha Hasoontree, Suan Sunandha Rajabhat University

## ABSTRACT

To research about sustainable tourism development by supply chain management, Phuket tourist has the purpose to 1) To study tourism behavior on knowledge about sustainable tourism of foreign tourists visiting Phuket, 2) To study the relationship between upstream factors, center factor, and downstream factors, influencing on sustainable tourism development by supply chain management in Phuket and 3) To study causal relationships between variables based on the consistency test of the relationship model analyzes of causal factors using SEM model as quantitative research. The population was 13,203,284 tourists in Phuket. The samples were analyzed using the Taro Yamane formula. The sample size of this study was 400 persons to collect data for analyzing the questionnaire.

The research found that the general information of the respondents mostly male, 31-40 years old, general worker, bachelor's degree, minimum income of 30,000 baht, Chinese nationality. The behavior of sustainable tourists of Phuket most of them never visited this place, come to relax with a tour company. Most travel 2-3 people with family and there are 20,001-30,000 travel expenses, they are knowledge at 93.13. Information about the management of the service provider (Upstream factors). The resource side is continually revitalized/maintained. The organization is the harmonious and cooperative flow of information and information is very fast. Organizational culture has the opportunity to learn the lifestyle, cultural tradition with pleasure, participation of stakeholders directly and indirectly of the community. Work experience is the responsibility of the capacity personnel (Center factor) residence is clean, the sheets, pillowcases, blankets, transportation are convenient to use. It is safe to use tourist attractions are beautiful in nature, have a good taste, cleanliness of food, local products, price of the product is reasonable and the lifestyle of the community is sufficient to live with nature happy. Downstream factor (user) in terms of customer satisfaction found that the overall level of satisfaction was high. When considering each aspect found that service is streamlined and hassle-free, signs, notices, or information about the procedure and duration of service. Service with courtesy and friendly, have knowledge and ability to provide services such as answer the questions, provide advice and help solve the problem properly. For come back in the future, has impressed by the services of sustainable tourism, the attitude of tourist satisfaction, analysis of the relationship between upstream factors, downstream factor by The Pearson Coefficient Statistics. Overall, it was found a positive correlation coefficient  $(r_{xy} = 0.565)$  and a correlation between water and downstream factors. The Pearson Correlation Coefficient, overall, it was found that there were positive correlations ( $r_{xy}=0.609$ ) and multiple regressions. The upstream and downstream factors were positively correlated and downstream factors were positively correlated. When considering the direct influence on the water factor (MED), it was found that the variables were positively influenced by the upstream factor (UPS) has direct influencing as 0.66, which has statistics significant at 0.01, downstream factors (DOS) found that the variables were positively influenced by the water-mediated factors (MED), has direct influencing as 0.85, which is statistically significant at 0.01. In addition, the indirect effects of upstream factors (UPS) through mediated water factors (MED) are indirectly affected. 0.56, which is statistically significant at 0.01.

Keywords: Sustainable Tourism, Supply Chain, Management, Tourist

# **INTRODUCTION**

The Thai tourism industry has seen steady growth in tourist numbers with the top five foreign tourists visiting Thailand being China, Malaysia, Russia, India, and South Korea, respectively. There is a cumulative number of tourists during January-December 2019, 39.79 million foreign tourists were visiting Thailand, an increase of 4.24 percent compared to the same period last year. The tourism revenue was 1.93 trillion baht, an increase of 3.05 percent compared to the same period of the previous year. Therefore, throughout the year, the overall tourism economy continued to expand both in number and income. For average travel expenses per trip in 2019, the value of baht was at 48,580 baht per trip, a decrease of 1.1 percent when compared to 2018. While the value of US dollars was at 1,564 US dollars per trip grew by 2.9 percent, demonstrating the influence of the baht that affects expenditures of foreign tourists visiting Thailand (Economics Tourism and Sports Division, 2019). But if compared to the year 2015, since the integration of the ASEAN Economic Community (AEC) helping people from many countries to travel around the ASEAN region more. Including coming to Thailand both to contact trade and investment or leisure travel. This includes traveling in countries with connected territories, which will bring benefits to the nation both in terms of increasing income for the country directly and also distributing income to the locals. Moreover, help to improve the quality of Thai people and create value-added for Thailand's tourism as well. Therefore, the tourism industry is an industry highly important to national security and there is a need to develop tourist attractions. Including tourist attractions that create high value for the country such as the Andaman Sea attraction, have utilities, personnel, and related businesses to be of high-quality standards and impressive to tourists (Wassana Suwanvijit, 2019). As well as both Thai and foreign tourists which will cause employment, money turnover and is a good source of foreign currency attraction.

Phuket Province is located on the Andaman Sea coast. It has outstanding potential to become an international marine tourism destination. The number of tourists in 2018 was 13,651,301, which the Phuket Provincial Statistical Office (2020) reported that there were 3,730,147 Thai tourists and 9,921,154 foreign tourists. There are important selling points which are beautiful beaches, clear water, various islands and eco-tourism such as diving, rock climbing and have the charm of being "Andaman Paradise". Phuket being the center of the Andaman pearl and there are internationally famous tourist attractions such as Phi Phi Islands, Similan Islands, Surin Islands, etc. In addition, there are important world-class support services such as international airports and yacht marinas that are modern and comfortable to accommodate tourists from around the world. But from the rapid development growth of tourism is not well managed and appropriate would cause the deterioration of the environment. Especially the natural environment, when deteriorated cannot be restored as before. It can be seen that the deterioration of tourist attractions is caused by tourists, which may be caused by ignorance, lack of good conscience, and lack of knowledge and understanding of what actions will cause damage. Therefore, providing knowledge and understanding in the form of environment in tourist attractions to tourists. Including agencies, various sectors have recognition and play a role in instilling feelings of love and cherish resources in tourist attractions (Umaporn Boonphetkaew, 2018). Encourage individuals and organizations involved in tourism activities throughout the supply chain to realize and have mutually responsive feelings towards the development of tourism together. Therefore, it is of paramount importance to manage tourism that is linked from upstream, midstream, and downstream, resulting in sustainable tourism development in Phuket. To make tourists, especially foreigners, to be satisfied including inviting family members, friends, acquaintances to come back to travel again. This is in line with the important goal of Thailand's tourism development is to make Thailand's tourism an international tourist destination with sustainable tourism development.

### **OBJECTIVE OF RESEARCH**

1) To study tourism behavior, understanding the sustainable tourism of foreign tourists visiting Phuket.

2) To study relationships between upstream factors, midstream factors, and downstream factors that impact sustainable tourism development by supply chain management of tourism in Phuket.

3) To study causal relationships between variables based on the consistency test of the relationship model, analyzing causal factors using the SEM model.

#### **SCOPE OF RESEARCH**

This research is a study of the satisfaction of foreign tourists on the upstream, midstream, and downstream factors in the supply chain of sustainable tourism in Phuket. By studying the factors affecting the management and supply chain services in the above tourism supply chain.

#### **Upstream Factors (Service Providers) Include**

- 1. Resources
- 2. Organizational attributes
- 3. The flow of information
- 4. Organizational culture
- 5. Participation of stakeholders
- 6. Experience of the task.

### Midstream Factors (Service) Include

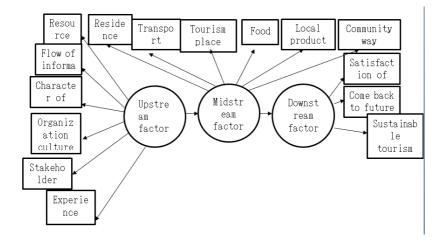
- 1. Accommodation
- 2. Transportation
- 3. Attractions
- 4. Food
- 5. Local goods
- 6. Community lifestyle

#### **Downstream Factors (User) Include**

- 1. The level of satisfaction of foreign tourists
- 2. The return to the future
- 3. Sustainable tourism.

#### **Conceptual of research**

The concept of sustainable tourism development by supply chain management of tourism in Phuket can be defined as a conceptual framework.



#### FIGURE 1 CONCEPTUAL OF RESEARCH

1532-5806-24-S1-168

# METHODOLOGY

The target population for this study is the Phuket tourist group. The number of tourists in 2018 was 13,651,301, which the Phuket Provincial Statistical Office (2020) reported that there were 3,730,147 Thai tourists and 9,921,154 foreign tourists.

The tourist sample group is the foreign tourist group, which main target group to travel to Phuket. The target population is unknown and the rate of increase of tourists every year. The researchers used the Taro Yamane formula to calculate the sample size. The sample size target for this study was 400 samples with probability sampling and simple random sampling choose as many examples as you like. The data were collected for questionnaire analysis to explore the satisfaction and suggestions of foreign tourists towards Phuket tourism.

The research uses statistical analysis according to the type of data, computer programs are used as tools, and statistics used in the study to analyze research data can be summarized as follows.

To analysis personal factors such as gender, age, education level, income, occupation, and nationality, used statistics is finding frequency and percentage.

Analyzes to test the correlation coefficients between independent variables are the upstream and midstream factors has a direct effect on dependent variables is a downstream factor. By using The Pearson Product Moment Correlation Coefficient was used to determine the calculated values of The correlation coefficient (r) is the value of r between -1.00 to 1.00. If r is negative, the relation r is positive, display a relationship in the same direction, value r is closely 1 shows the relationship in the same direction and is very correlated. The r-value is close to -1, indicating the relationship in the opposite direction, and if the value r equals 0, there is no correlation (Kanlaya Vanichbuncha, 2013), which can be considered r calculated.

Multiple regressions are methods for analyzing data to find relationships between three variables with one or more independent variables to test for the magnitude of the relationship between variables that are very similar which relationships to be analyzed are predictable. By considering the standard regression coefficient (Beta), which represents the rate of change of the variables when independent variables change to 1 unit (Kanlaya Vanichbuncha, 2013).

The Path Model is based on Path Analysis to study the causal relationship between the variables. Based on the hypothesis testing of hypothesis and analyzing causal factors using SEM model.

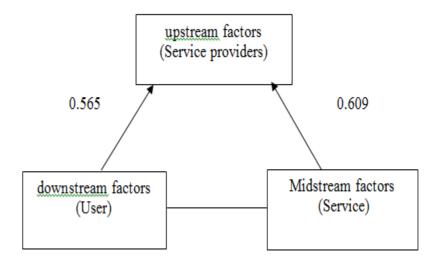
#### RESULTS

Research on sustainable tourism development by Supply Chain Management in Phuket Tourism purpose 1) To study tourism behavior, knowledge about sustainable tourism of foreign tourists visiting Phuket, 2) To study the relationship between upstream factors, midstream factor and downstream factors impact on sustainable tourism development by supply chain management of tourism in Phuket and 3) To study causal relationships between variables based on the consistency test of the relationship model and analyzes of causal factors using SEM model is Quantitative Research. The population was 13,203,284 tourists in Phuket. The samples were analyzed using the Taro Yamane formula. To calculate sample size for this study was 400 people. The collected data were collected for questionnaire analysis to opinion survey on Qualitative Research.

Travel behavior and understanding of sustainable tourism of Phuket province. The result of the study indicated the Sustainable Tourism Behavior of Phuket. Most of them never visited this place, come to relax and come with the company. Most of them travel 2-3 people with family and the expense of travel is 20,001- 30,000 baht, and the results of the study on sustainable tourism found that the level of knowledge is 93.13.

Information about the management of the service provider (Upstream factors). It was found that the overall level was very high. When considering each side, it was found that resource is constantly renewed/maintained with the highest average, highlights of natural resources or beauty

that attracts tourists and the use of renewable energy resources. Organizational characteristics were found to be at a high level. When considering each side, it was found that the organization is united and cooperative has the highest average. The flow of information has been rapidly updated. The organizational culture found that it was an opportunity to learn about culture and lifestyle, followed by is unique. Stakeholder participation has been shown to benefit both directly and indirectly from the community. The second is to participate in the management and there are meetings to hear. In terms of work experience, personnel who were assigned the appropriate tasks have the highest average. There are solutions to the problem be aware of what will happen next (and do the right job (Midstream factor). The study found that the cleanliness of the walls, pillowcases, pillows, blankets was the most average. In terms of transportation is safe to use. The tourist attractions found that the natural beauty of food is that the taste of food is good, cleanliness of food. Local products found that the price of the product is appropriate and the way of life in the community is to live in peace. just enough to live with nature. Downstream factor (User) in terms of customer satisfaction, the overall level of satisfaction was high. When considering each aspect service is streamlined and hassle-free, signs, notices, or information about procedure and duration of service with courtesy, able to provide services such as answer the questions, give advice and help solve the problem. To come back in the future found that the service is very average, sustainable tourism has shown that attitudes are explored satisfaction of tourists.



## FIGURE 2 RELATIONSHIP BETWEEN UPSTREAM FACTORS, DOWNSTREAM FACTORS BY USING THE PEARSON PRODUCT MOMENT CORRELATION COEFFICIENT

Analysis of the relationship between upstream factors, downstream factors by using The Pearson Product Moment Correlation Coefficient. Overall, it was found that positive correlation coefficient ( $r_{xy}$ =0.565) and correlation between midstream and downstream factors by using The Pearson Product Moment Correlation Coefficient. Overall, it was found that there were positive correlations ( $r_{xy}$ =0.609) and multiple regressions found that upstream and downstream factors were positively correlated. And midstream and downstream factors had a statistically significant positive correlation. When considering the direct influence on the Midstream factor (MED), it was found that the variables were positively influenced by the Upstream factor (UPS) has a direct influence of 0.66, which has significant statistics at 0.01. The Downstream factors (DOS) found that the variables were positively influenced by the Midstream factors (MED) has a direct influence of 0.85, which has significant statistics at 0.01. Furthermore, the indirect effect of the Upstream factor (UPS) *via* Midstream factor (MED) has an indirect influence of 0.56, which is statistically significant at 0.01.

# CONCLUSION

Tourism behavior and knowledge and understanding of sustainable tourism for tourists who come to Phuket. The results showed that sustainable tourism behavior of Phuket Province most of them have never visited this place. They are come to relax with a travel agency. Most of them traveled 2-3 times, which is consistent with the research of people traveling with family by Takengsak Chaichan (2013) who researched improving the quality of ecotourism in the northeastern region. Studies have shown that most tourists' behaviors have been to ecotourism a few times and most of them come with their families and travel expenses in the amount of 20,001 -30,000. The results of the assessment of knowledge and understanding about sustainable tourism in Phuket found that tourists' knowledge was at the level of 93.13. It was found that tourists knew about sustainable tourism in Phuket. Characteristics of a tourism model that aims to create awareness of ecosystem preservation, which is consistent with the research of Takengsak Chaichan (2013) who researched improving the quality of ecotourism in the northeastern region. To found that major tourists understand the nature of ecotourism, but not completely. Understanding that ecotourism is tourism where tourists and other stakeholders need to be responsible for the shared use of tourism in the area. For the results of upstream studies (service providers) in terms of resources, it was found that resources with continuous resource recovery/maintenance had the highest average. This may be because Phuket is a province in the south of Thailand. It is the largest island in Thailand in the Andaman Sea. The neighboring provinces to the north are Phang Nga Province, to the east are Phang Nga Province and Krabi Province. The whole island is surrounded by the Indian Ocean. The organization is united and cooperative, information flow is provided quickly has the most average. This is consistent with the concept of Richard Tapper & Xavier Font (2004) defines a supply chain or supply chain or Logistics network as the use of agencies system, people, technology, activities, information and resources to be applied together. For movement of goods or services from supplier to customer, supply chain activities transform natural resources, raw materials, and other materials into finished goods and sent to the last customer (consumer or End Customer) Moreover, consistent with the research of Srisomrak Intucchanyong (2014) has studied supply chains and data models in Thailand's tourism industry. The Thai tourism industry is important to the growth of Thailand's economy. Therefore, it is necessary to develop all sectors in this industry to be able to cooperate more effectively to contribute to the sustainable development of the industry and the study of the industry's supply chain. Tourism in Thailand to create an overall understanding of coordination between the key stakeholder operators and exchange of information between the stakeholder entrepreneurs. In term of organizational culture provide opportunities to learn about the way of life, traditions, culture, and participation of stakeholders. It was found that both, directly and indirectly, benefited of community. Have work experience, personnel is assigned the appropriate tasks. Most of Phuket's sustainable tourism behaviors come for recreation which corresponds to (Tourism Authority of Thailand, 1999) said that tourism is the recreation of human beings that is highly necessary to relax and change the environment from routine work to a new environment. In addition, to be important in terms of recreation it is also a study to gain knowledge in new social and cultural conditions. It creates an understanding and acceptance of fellow human beings in different societies and cultures in different regions around the world. The level of satisfaction of tourists found that the service process was flexible and hassle-free. Service Quality Model SERVQUAL of Parasuraman et al. From a research study by Parasuraman, Zethamal & Berry (1990), defines theories on service quality using service quality model name SERVQUAL divided communication means the service provider can explain. Let customers understand the service very well and understand the needs of customers and inform the details of the service fee to customer. Credibility refers to the credibility that the customer will receive and the loyalty that the service provider will have with the customer. It is also consistent with the research of Wasana Jaroonsrichotikamjorn (2017) on the efficiency of logistics management of tourist attractions in Kamphaeng Phet Province. Travel as a whole is a high level of opinion when considering each factor, it was found that logistics management factors customer service is of the highest average.

And the information flow logistics management factor was the lowest mean. Suggestions were found that traffic conditions should be improved. Development of public relations for tourist attractions and road signs including the development of a public transport system that can accommodate tourists with a public agency is responsible for providing both public utilities and budget support.

Analysis of the relationship between upstream factors, downstream factors using Pearson's correlation coefficient statistic. Overall, it was found that there was a high level of positive correlation ( $r_{xy}=0.565$ ). Analysis of the relationship between midstream and downstream using Pearson's correlation coefficient statistic. Overall, it was found that there was a high level of positive correlation ( $r_{xy}=0.609$ ) which is consistent with the research of Korawan Sangkhakorn (2015). Studying the tourism behavior of elderly tourists and the tourism supply chain. For the elderly, it was found that the tourism supply chain study for the elderly and study connecting supply chain of the elderly tourism industry. The study found that the upper northern area can create a connection of the supply chain according to the interest of tourists. It is designed into 9 areas: agriculture, history, dharma, health, adventure, nature, sports, entertainment, recreation, and learning new things and culture. Moreover, consistent with the research of Takengsak Chaichan (2013) has studied the development of ecotourism in the northeast. Regarding relationship within ecotourism supply chain in terms of upstream, midstream, and downstream. It was found that the factors that are components of the tourism supply chain are a clear correlation in all factors. The study of the direct impact of upstream factors, midstream factors, and downstream factors in managing the tourism supply chain system in Phuket according to the interests of tourists who make entrepreneurs, businessmen can formulate a business plan to promote higher tourism potential. Including preparation of tourism development policies from government and related agencies in integration that will develop Phuket into a sustainable world-class tourism hub.

#### ACKNOWLEDGEMENT

The researchers extend their thanks gratitude to the Budget Bureau for their support and funding of this study. 1. Corresponding Authors: Sakapas Saengchai, College of Politics and Government, Suan Sunandha Rajabhat University, Thailand. e-mail: Sakapas.sa@ssru.ac.th 2.Co-auther: Natnicha Hasoontree, College of Politics and Government, Suan Sunandha Rajabhat University, Thailand. e-mail: natnicha.ha@ssru.ac.th

#### REFERENCE

- Economics Tourism and Sports Division (2019). Tourism situation 2019. Bangkok: Office of Permanent Secretary Ministry of Tourism and Sports.
- Vanichbuncha, K. (2013). Structural Equation Model (SEM) by AMOS. Bangkok: Chulalongkorn University Book Center.
- Sangkhakorn, K. (2015) Connecting tourism supply chains in the upper Northern to support elderly tourists. Chiang Mai University: Chiang Mai.
- Phuket Provincial Statistical Office. (2020). Phuket Provincial Statistical Report: 2020.Bangkok: Statistical Forecasting Division, National Statistical Office.

Parasuraman, A., Zeithaml, V., & Berry, L.L. (1990). *Delivering quality service: Balancing customer perceptions and expectations*. New York: The free press.

Tapper, R., & Font, X. (2004). Tourism supply chains. Report of a desk research project for the travel foundation. Leeds: Leeds Metropolitan University.

Intucchanyong, S. (2014). A study of supply chains and data models in Thailand's tourism industry. Research report of The Thailand Research Fund.

Chaichan, T. (2013). Quality development of ecotourism in the Northeastern Region. Technology Management Program. Suranaree University of technology.

Sangaroon, T. (2011). An analytical framework of sustainability supply chain management. The 8th Annual Symposium on Supply Chain and Logistics Management.

Theppitak, T. (2011). Managing logistic systems for the creation of sustainable. Eco-Friendly Tourism on Koh Lan Coral Island. The 8th Annual Symposium on Supply Chain and Logistics Management.

- Tourism Authority of Thailand. (1999). Actions to formulate ecotourism policies.Bangkok: Tourism project plan Division.
- Boonphetkaew, U. (2018). Behavior and motivation of foreign tourists which affect low carbon tourist attractions in Koh Mak Island, Trat province. Veridian EJournal, Silpakorn University (Humanities, Social Sciences, and arts), 11(3), 2686-2703.
- Jaroonsrichotikamjorn, W. (2017). Logistics management efficiency of tourist attractions in Kamphaeng Phet Province. Journal of Modern Management Science. Kamphaeng Phet Rajabhat University, 10(2), 213-229.
- Suwanvijit, W. (2019). Strategies for promoting tourism in the Andaman coast of Thailand. Journal of Sukhothai Thammathirat. Sukhothai Thammathirat Open University, 32(2), 145-163.