

Destination Selection in Thailand toward the Risk in the Eyes of Tourist: A Case Study of Tham Luang Cave

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Article History

Received: 19 March 2020

Revised: 13 April 2020

Published: 30 June 2020

Abstract

The tourism risk always high impacted from the big disaster, this study aim to examine the impact factors of tourist who going to visit Tham Luang cave by using 3 research questions (RQ) as following; RQ1) the specific characteristic of the tourist who have heard the news about Tham Luang incident, RQ2) the different between the tourists who have heard the news about Tham Luang cave incident and still want to visit Tham Luang cave and who have heard the news about Tham Luang cave incident but do not want to visit Tham Luang cave and RQ3) the impact factors of tourist who going to visit Tham Luang cave. Samples were gathered from the web-based survey that ent to tourist community groups and the paper-based from the tourists who visited Thailand in many destinations in Bangkok. The total 452 responses, 152 of which were from the online channels, and 300 were from the paper-based questionnaires and there are 267 from 452 responses (59.1%) have heard of Tham Luang cave incident news. For the data analysis approach, we used the descriptive analysis for explaining RQ1 then RQ2 was tested on the basis of student t-test method, finally RQ3 was using the logistic regression to find the impact factors of tourist who going to visit Tham Luang cave. As a result, tourists who have heard news about Tham Luang cave incident also want to visit Tham Luang mostly used information for selection destination from online media and even if they know about the big incident that occur with Tham Luang Cave, they also want to travel with their families while literature, most of tourist who willing to go to the risky destination is the tourist who like to travel as sports tourism and adventure and less concern about the safety of location, however the result of Tham Luang cave case study show the opposite way.

Keywords: Tourism, Risk-Tourism, Risk Perception, Tham Luang Cave, Thailand

Introduction

The incident of the Thai junior football team trapped in Tham Luang, a cave located in the northern province of Thailand, in 2018 and its thrilling rescue has caught worldwide attention. To rescue the team of twelve boys and their coach, cooperation was provided by experts of many grounds, divers, drilling engineers, geographers, climbers, polices, private soldiers from all sectors in Thailand and other countries. The rescue operation was successful, although with the loss of one Thai ex-navy SEAL.

The incident occurred at Tham Luang cave is considered one of the world's most difficult rescue case study. The working team faced tremendously challenging conditions, including

the cave geography, unstable temperatures and heavy rain. In terms of the management, the command center director had to control and collaborate with more than ten thousand people spontaneously. Most importantly, the mission must be completed promptly as the cave was expected to be flooded during its regular rainy. Otherwise, the children would be stuck inside the cave for several months.



Figure 1 News about Tham Luang cave case

Source: Ministry of Culture (2018)

In tourism research, news related to natural disasters could extremely impact risk perception of tourist planning to visit the place. Especially Asia is perceived as a high-risk tourist destination in natural disasters. (Cohen, 2011) Although the disaster news related to tourist risk perception is very important for the tourism industry but there is rarely studied in this context. (Kapuściński & Richards, 2016) Providing critical information to tourists at the right time and covering the dangers that will be occurred, it is believed that related to creating misunderstandings about the safety level of the destinations. (Chew & Jahari, 2014; L'Etang, Falkheimer, & Lugo, 2007; Larsen, Brun, øgaard, & Selstad, 2011) According to the past study, the most important thing is to understand the effect of news or medias on the tourist's risk perception in the way which unpredictable events are framed.(Hove, Paek, Yun, & Jwa, 2015; Hughes, Kitzinger, & Murdock, 2006; Marks, Kalaitzandonakes, Wilkins, & Zakharova, 2007)

In Thailand, the number of tourists significantly decreasing when there is unrest, for instance, the case of the Ratchaprasong attack in 2015. The average daily tourists during that month was declined by 33% and the growth of tourists was decreased by 12.58%. The Phoenix boat crash in Phuket in July 2018 causing Chinese passengers 47 people died and resulted in a significant decrease in the number of Chinese tourists. Therefore, the safety factors affect the image and reliability of Thailand and reduce tourists to travel to Thailand. For example, a reducing of tourists after tsunami in Phuket in 2004 it causes severe economic stagnation which is related to the risk perception on natural disasters. (Ichinosawa, 2006)



Figure 2 The number of foreign tourists traveling to Thailand in the second quarter of 2019

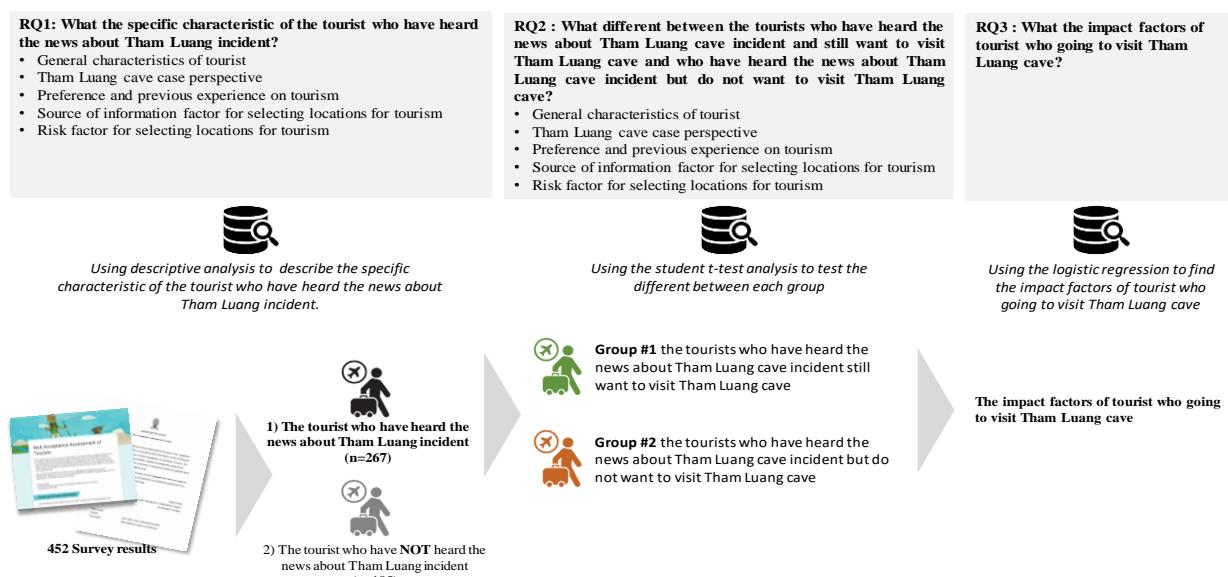


Figure 3 Research questions and Research Design

From Tham Luang cave case, we intend to explore tourist perceptions towards risks of tourism in Thailand. We formulate the following research questions to achieve the research goal: “is Tham Luang cave accident impact the risk perception of tourism in Thailand” in order to explore tourist perceptions towards risks during the travel in Thailand after Tham Luang cave incident.

RQ1: What the specific characteristic of the tourist who have heard the news about Tham Luang incident?

- General characteristics of tourist
- Tham Luang cave case perspective
- Preference and previous experience on tourism
- Source of information factor for selecting locations for tourism
- Risk factor for selecting locations for tourism

RQ2: What different between the tourists who have heard the news about Tham Luang cave incident and still want to visit Tham Luang cave and who have heard the news about Tham Luang cave incident but do not want to visit Tham Luang cave?

- General characteristics of tourist
- Tham Luang cave case perspective

- Preference and previous experience on tourism
- Source of information factor for selecting locations for tourism
- Risk factor for selecting locations for tourism

RQ3 : What the impact factors of tourist who going to visit Tham Luang cave?

Literature Review

Background

After this incident, there have been many analyzes and case studies in many areas, we grouping it into 3 main areas that are 1) Crisis management and global cooperation, 2) Technology that were used in this case and 3) The news reporting.

1) Crisis management and global cooperation: Tham Luang cave rescue operation was a one of lesson learn important for Thailand and the world, especially a crisis management, integrated planning and shared goal of the team. The operation got a cooperation from both local villagers and experts from around the world for example the farmers around the area allowed to pump water from the cave into their fields, people who are willing to deliver necessary food and utensils etc. to experts in various fields such as experts and technical assistance from the United States, six Chinese cave search and rescue experts and two high-pressure water-pumps provided by the Japan International Cooperation Agency (JICA). In addition, there are also help from government agencies, military officers, private sector and education sector that brings an innovation and inventions to help in this operation.

In the context of Tham Luang, it is possibility of having someone get stuck in a cave especially during the rainy season. In this case, luckily the children and their coach have the knowledge to survive such as preparation of food breaks and meditation to reduce energy consumption. They didn't survive because of the miracle but survived because he had knowledge of management.

This event not only brings together elite experts from various fields, including diving, cave drilling and medical personnel but this practice is concise, cleared and can be used as a case study for the next disaster.

2) Technology that were used in this case: In terms of technology that used in this case, in addition of pumps that pump water out of the cave, drones, zoom lenses, and thermal cameras are also used to create the first 3-D aerial map of the region and scout for cave access points. (MITTechnologyReview, 2019; Puri, 2018) Moreover, the powerful mobile radio allows the savior to communicate with the football team at a distance even if there is no radio infrastructure in the area. Although there was a proposal to build a submarine for children from Elon Musk, the CEO of SpaceX's, but unable to do so due to the constant rains causing the situation to deteriorate and the cave divers must work quickly. (MITTechnologyReview, 2019)

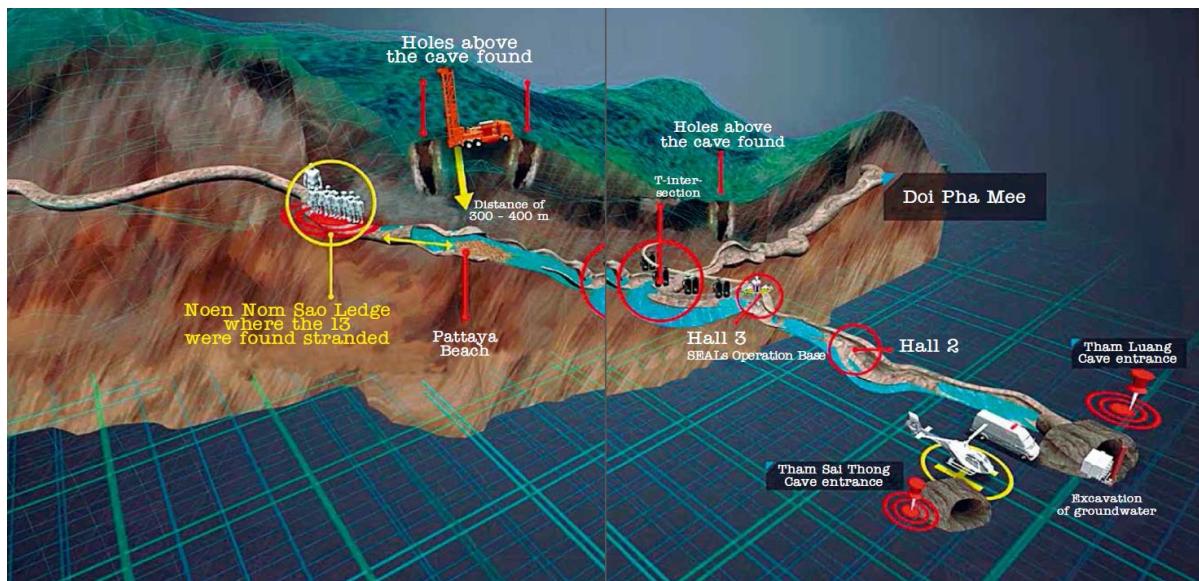


Figure 4 The virtual model of Tham Luang Cave and the plan to extract the 13 boys from the cave

Source: Ministry of Culture (2018)

3) News reporting and the impact: In addition, the dissemination of useful news is also very necessary because it will make people in society learn how to survive when an unexpected event happens to themselves. Some of case study mentioned that the news was reported as a breaking news by completing in storytelling and can be tracked and sold as a phenomenon that the world is watching. From searching the database in social media about the cave phenomenon, found over 559,810 messages and 165 million engagement between June 24, 2018 - July 6, 2018. The peak day is on 2 - 3 July, 2018 which is the day that the 13 victims were found and the July 3, 2018 is the highest engagement about 23 million engagement (ChulalongkornU, 2019) In another case study of news reporting that is the melodrama reporting style is one of the case studies that explain about the way of reporting the news is involved the audience's excessive emotion. (Thapthep & Hashim, 2019). Moreover, another case study found that today's the media's consumers are stronger in media monitoring and has a power to examine the media more than in the past. Therefore, when the media was watched, the media makers had to be more careful and working professionally.(thestandardth, 2018)

Tourism risk

Tourism is a service and the nature of buying service or receiving services always has a risk therefore tourism and risks are interrelated. (March & Woodside, 2005; Mitchell & Greatorex, 1993; Williams & Baláž, 2013) The World Trade Organization (UNWTO) of the World Tourism Organization classifies the risks in the tourism industry according to sources that cause risks. Which includes

- 1) The risks caused by humans and organizations outside the tourism sector include crimes, pickpockets, physical abuse, human trafficking, terrorism Social, political and religious conflicts including the most violent war.
- 2) Risks from the provision of services in the tourism and related fields that come from service and system defects, inferior of sanitation, safety and standards that causing injure to the tourist and property
- 3) Risk caused by travelers in doing activities and traveling that cause in health issues and also lack of care in their property and behavior that conflicts to local practices or the law

4) Risks caused by physical or environmental damage such as natural disasters, epidemics and hazards caused by the nature of the tourist attraction Especially dangerous plants and animals, etc.

Many researchers are more interest in the risks of tourism and consumption.(Berdychevsky & Gibson, 2015; Uriely & Belhassen, 2006) Their work is studying and finding ideas about risk management and risk incentive of tourist to confirm the possibility that risk is a part of entire travel journey.(Elsrud, 2001; Larsen et al., 2011)

In summary, there is a risk description from the perspective of classification, motivation and results of activities. For the tourism risks are a part of the tourist's travel since the travel planning until the trip is finished. However, the most people still love to travel and some group of tourists like 'risky tourism', which involves excitement seeking that has possibility to harm their physical.

Travel to the risk destination

Initially, the category of tourism of special interest tourist were related to cultural tourists, sport tourists, and eco-tourists but in the recent that he category expanded to tourists who want to participate in novice leisure and risk activity. In 21st century, risky tourism has a special interesting tourism because it is a widely accepted activity in many destinations. (Allman, Mittelstaedt, Martin, & Goldenberg, 2009; Buckley, 2012)

Taking risks is the main factor of the travel experience and the main reason for participation.(Allman et al., 2009; Lipscombe, 1999) Many researchers are identify the characteristic and travel preference of tourist who like to travel to the risk destination as the tourist that participating in high-risk activities (Elsrud, 2001) such as rock climbing, motorcycle racing, skydiving, or mountaineering while the leisure tourist. From the previous study, the tourist who participating high risk activities can be categorized into 2 main groups;

- 1) Extreme sports tourism is the travel that including the sport activities which accidents or mistakes will result in severe injury or death.(Allman et al., 2009) The activities are included hang gliding, skydiving, scuba diving, rock climbing, motorcycle racing/car racing, downhill ski racing, excessive alcohol or drug use, gambling, (Lyng, 1990; McCabe, Joldersma, & Li, 2010)

- 2) Adventure tourism is the travel that including the activities which gain more experience (Trauer, 2006) such as bungee jumping, caving,(Bentley, Page, Meyer, Chalmers, & Laird, 2001) waterfall kayaking, extreme mountaineering, solo rope-free climbing, (Brymer & Oades, 2007)), skateboarding, dirt-biking, snowboarding, and ski-jumping

However, (Lyng, 1990) argue that not all adventure activities related to risk, just some activities are risky. Therefore, adventure tourists who involve in high risk activities should be grouping in 'edgeworkers - voluntary risk taking' not adventure tourists.

In summary, the characteristic of tourist who interest in the destination that engage a high risk activities is the tourist who mostly has a travel preference in sports tourism or adventure tourism.

Tourism risks perception identification

The study of tourism risks, most of the literature has been focused on perceived risk rather than the actual risk with the increasing number of studies on tourist risk perception.(Korstanje, 2009; Williams & Baláž, 2013) The risk perception can be influenced by various characteristics of tourists such as general gender, age, income, travel experience and travel preference.

Tourist Characteristics

Demographic: A tourist's basic information, causing a risk acceptance, such as gender, age, education and income. For example women have a slightly more concern about travelling than men do, the older a tourist is , the more concern about climate change and the more-educated

tourist can accept more risk.(Hui, Fuming, Bin, Hanbing, & Qiuqiang, 2013; Reichel, Fuchs, & Uriely, 2007)

Travel Experience: A tourist's previous experiences causing a level of risk acceptance such as the experiences of a first-time abroad traveler or of a frequent abroad traveler who visits the destination for the first time. (Hui et al., 2013; Reichel et al., 2007)

Travel Preference: An information about travel preference such as an adventure story, a romantic story or a gourmet story or a prefer traveling alone or group travel. (Reichel et al., 2007)

The identify of tourism risk is a process of determining a different source of information, past incidents, prediction and ther relevant factors which may influence tourist perceptions on likelihood and severity of risks in particular contexts. The related studies on tourism risks considered different sets of risk factors.Based on the literature reviews and focus group discussions, we decided to investigate five categories of tourism risks. Definitions of the five identified risk aspects are;

Natural Risk: Risks from various nature incidents, such as natural disasters, climate conditions, natural pollution and destination's safety. (Yang & Nair, 2014; Lepp & Gibson, 2003)

Physical Risk: Risks from natural or people which affect tourist's physical health, such as epidemic diseases and crimes such as rape, murder, robbery and etc. (Cothran & Cothran, 1998; Dolnicar, 2005; Lepp & Gibson, 2003)

Political Risk: Risks from insecure political environments and the tourist's awareness level of political incidents being happened in the destination city as well as terrorist attacks. (Cothran & Cothran, 1998);(Dolnicar, 2005);(Poirier, 1997);(Liu & Pratt, 2017);(Boksberger, Bieger, & Laesser, 2007)

Performance Risk: Risks from satisfied or dissatisfied qualities of tourism products and services. (Cothran & Cothran, 1998; Fuchs & Reichel, 2006; Xiang & Gretzel, 2010)

Social Risk: Risks from a tourist's negative feeling of not being accepted by others about selecting destinations, tourism products and services as well as shared travel experiences from media and friends& family which effect on a tourist's perception of risks. (Cui, Liu, Chang, Duan, & Li, 2016; Fuchs & Reichel, 2006; Xiang & Gretzel, 2010)

Research Methodology

Research design

In this study, we intended to explore the tourists' perceptions regarding risks of traveling in Thailand. In particular, we aimed at determining whether tourists of various natures have different perceptions towards the identified collection of risks or not.

The perceptions of risks might also be influenced by various characteristics of tourists, for instance gender, age, income, travel experience and travel preference. We therefore use this kind of characteristic factors to cluster tourists into groups. Each group then composes of ones with somewhat similar nature. Based on the clustering outcomes, we applied the statistical analysis to check if each group perceive the impacts of identified risks differently or not.

As the definitions of the five aspects of risks were given previously, risk factors belonging to each aspect is presented in Table 2. The number of risk factors investigated for each aspect vary from two to four factors

Data Collection

The data collection lasted for approximately one and a half month, starting from November to December 2018. The invitations to the web-based survey were sent to tourist community groups. The paper-based data collection was performed by tourists who visited Thailand in many destinations in Bangkok such as Wat Phra Kaew, Wat Pho, Khao San Road, Chatuchak

Weekend Market and etc. Finally, we received in total 452 responses, 152 of which were from the online channels, and 300 were from the paper-based questionnaires.

From all 452 responses, 267 responses (59.1%) have heard of Tham Luang cave incident news. In this study we will focus on the tourist who have heard the news about Tham Luang to explore more on their risk perception of Thailand tourism from Tham Laung Cave Case.



Figure 5 59.1% from all responses have heard of Tham Luang cave incident news.

Data analysis approach

The groups of tourists was described the specific characteristic of the tourist who have heard the news about Tham Luang incident by using descriptive analysis for RQ1, then to test the different between 2 groups; 1) The tourists who have heard the news about Tham Luang cave incident still want to visit Tham Luang cave and 2) The tourists who have heard the news about Tham Luang cave incident but do not want to visit Tham Luang cave, the RQ2 was test on the basis of student t-test method. This statistic model was considered appropriate. For the RQ3 was using the logistic regression to find the impact factors of tourist who going to visit Tham Luang cave.

Overall Characteristics of participant

The sample group of 452 tourists is male rather than female. Half of which are Europeans (58.5%) followed by America (17.7%) and Asia (12.2%). Most of them are an age between 26-40 years (54.6%) and single (71.9%). The highest education is bachelor degree (62.4%), monthly income is in the range of 1,500-3,000 USD (36.5%) followed by less than 1,500 USD (28.6%) and more than half of them are employees of private companies followed by students and government officials / state enterprise employees equal to 45.1%, 19.9% and 18.8% respectively as shown in Table 1.

Table 1 The characteristics of participant of tourists who have heard the news about Tham Luang incident

Demographic	Frequency	Percent
Nationality (n=441)		
American	78	17.7
European	258	58.5
Asian	54	12.2
Russian	23	5.2
African	1	0.2
Others	27	6.1
Gender (n=410)		
Female	191	46.6
Male	219	53.4

Table 1 (Con.)

Demographic	Frequency	Percent
Age group (n=452)		
Less than 25 years	121	26.8
26-40 years	247	54.6
Greater than 40 years	84	18.6
Highest Education (n=452)		
Lower than Bachelor's	51	11.3
Bachelor's	282	62.4
Higher than Bachelor's	119	26.3
Income (USD) per month (n=441)		
<1,500	126	28.6
1,500-3,000	161	36.5
3,001-4,500	86	19.5
4,501-6,000	41	9.3
6,001-7,500	12	2.7
>7,500	15	3.4
Marital status (n=452)		
Single	325	71.9
Married	122	27.0
Divorced	5	1.1
Occupation (n=437)		
Student	87	19.9
Private company employee	197	45.1
Public servant-State Enterprise employee	82	18.8
Business owner	67	15.3
Unemployed	4	0.9

Results

RQ1: What the specific characteristic of the tourist who have heard the news about Tham Luang incident?

General information of tourists who have heard the news about Tham Luang cave incident

267 tourists who have heard the news about Tham Luang incident is male rather than female by more than half pf them being European (59.5%), followed by American (19.1%) and Asian (13.0%). The age ranged mostly between 26-40 years old (59.9%) and single status (73.4%). The highest education is at the bachelor's level (67.4%) and the monthly income almost is in the range of 1,500-3,000 USD (36.3%), followed by lower than 1,500 USD (30.1%) and more than a half of them are private company employee, student and public servant/state enterprise employee that equal to 49.4%, 20.5% and 16.2% respectively, as shown in Table 2.

Table 2 The characteristics of participant of tourists who have heard the news about Tham Luang incident

Demographic	Frequency	Percent
Nationality (n=262)		
American	50	19.1
European	156	59.5
Asian	34	13.0
Russian	8	3.1
African	1	0.4
Others	13	5.0
Gender (n=237)		
Female	102	43.0
Male	135	57.0
Age group (n=267)		
Less than 25 years	69	25.8
26-40 years	160	59.9
Greater than 40 years	38	14.2
Highest Education (n=267)		
Lower than Bachelor's	24	9.0
Bachelor's	180	67.4
Higher than Bachelor's	63	23.6
Income (USD) per month (n=267)		
<1,500	78	30.1
1,500-3,000	94	36.3
3,001-4,500	51	19.7
4,501-6,000	24	9.3
6,001-7,500	5	1.9
>7,500	7	2.7
Marital status (n=267)		
Single	196	73.4
Married	69	25.8
Divorced	2	0.7
Occupation (n=259)		
Student	53	20.5
Private company employee	128	49.4
Public servant-state enterprise employee	42	16.2
Business owner	35	13.5
Other	1	0.4

Tham Luang cave case perspective

The tourist who have heard the news about Tham Luang incident think 46.8% medium-risk level in visiting Tham Luang cave, followed by 39.0% for the high-risk level and the 14.2% for the low-risk level. After Tham Luang cave incident, only 25.5% of the tourist who have heard the news about Tham Luang incident still want to visit Tham Luang cave and they think the most way to manage the risk while visiting Tham Luang is by themselves (41.5%), followed by the local government (36.3%). In addition, their opinion the Tham Luang cave incident does not effect on Thailand tourism (56.6%) and makes Thailand more well-known and increases tourist visits 33.6 percent as shown in Table 3.

Table 3 Tham Luang cave case opinion of tourists who have heard the news about Tham Luang cave incident

Tham Luang cave case opinion	Frequency	Percent
Risk level in visiting Tham Luang cave		
Low	38	14.2
Medium	125	46.8
High	104	39.0
The need to visit the Tham Luang cave after the incident		
Still want to visit Tham Luang cave	68	25.5
Do not want to visit Tham Luang cave	199	74.5
Risk management for tourists in visiting Tham Luang (n = 248)		
By yourself	103	41.5
By the local government	90	36.3
By the national government	49	19.8
By the global aids	6	2.4
By others		
The perception of the Tham Luang cave incident effect Thailand tourism		
It does not effect on Thailand tourism	145	56.6
It makes Thailand more well-known and increases tourist visits.	86	33.6
It makes Thailand more well-known but decreases tourist visits.	25	9.8
By others		

Preference and previous experience on tourism

68.5% of the tourists have experience in oversea travelling and they have been visited Thailand before 37.1% with the most tourism preference is adventure (77.9%), followed by Sports (28.8%) and the least is Edu-Meditation (11.6%). In addition, most tourists prefer to travel with friends (77.5%), followed by travel with family (60.7%) and the least is traveling with tours group (7.9%) as in Table 4.

Table 4 Preference and previous experience on tourism of tourists who have heard the news about Tham Luang cave incident

Preference and previous experience	Frequency	Percent
Overseas travelling experience		
1-2 times	69	25.8
3-4 times	43	16.1
More than 5 times	71	26.6
Never	84	31.5
Thailand travelling experience		
1-2 times	59	22.1
3-4 times	16	6.0
More than 5 times	24	9.0
Never	168	62.9
Bangkok travelling experience		
1-2 times	62	23.2
3-4 times	15	5.6
More than 5 times	22	8.2
Never	168	62.9
Travel preference		
Health beauty and spa	63	23.6
Edu-meditation tourism	31	11.6

Table 4 (Con.)

Preference and previous experience	Frequency	Percent
Ethnic tourism	54	20.2
Sports tourism	77	28.8
Adventure travel	208	77.9
Home stay & farm stay	67	25.1
Long stay	34	12.7
Multi-style tourism	53	19.9
Travel companion preference		
Travel alone	49	18.4
Travel with friends	207	77.5
Travel with family	162	60.7
Travel in a tour group	21	7.9

Source of information factor for selecting locations for tourism

The information from online media to evaluate travel safety is the highest on average as well. In term of information from friends and family and directly related organizations have searched, exploited and used less than online media respectively, as shown in the table 5.

Table 5 A Significance level on decision for selecting locations for tourism of tourists who have heard the news about Tham Luang cave incident

Informational Factors	From directly related organizations		From friends and family		From online media	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Search for information about tourist attractions from various sources	2.8	1.3	3.5	1.0	3.8	1.0
Interest in information about tourist attractions search from various sources	2.8	1.2	3.5	1.1	3.8	1.0
Benefit from the information about tourist attractions searched from various sources	2.8	1.3	3.6	1.2	3.8	1.0

Risk factor for selecting locations for tourism

The tourists are searching for information about tourist attractions from online media highest on average, including the benefits from online media and the use of Decision for selecting locations for tourism affecting by risk factors. The tourists consider the epidemic diseases is the most risk factors of tourism (Mean = 4.0 ± 1.3) and follow by crime (Mean = 3.9 ± 1.3) and terrorist attacks (Mean = 3.6 ± 1.3) respectively, and the least in the subject of cultural difference (Mean = 2.4 ± 1.3) as shown in Table 6.

Table 6 Decision for selecting locations for tourism affecting by risk factors of tourists who have heard the news about Tham Luang cave incident

Risk factor	Mean	S.D.
Natural Risk		
Weather conditions	2.9	1.2
Natural disasters	3.2	1.2
Pollution	3.0	1.3

Table 6 (Con.)

Risk factor	Mean	S.D.
Physical Risk		
Location safety	3.4	1.3
Epidemic Diseases	4.0	1.3
Crime	3.9	1.3
Political Risk		
Uncertainty in government policy	3.1	1.3
Terrorist attacks	3.6	1.5
Public demonstrations	3.0	1.3
Performance Risk		
Security of facilities	3.3	1.3
Quality of service	3.5	1.3
Density of tourists	2.7	1.2
Social Risk		
Cultural difference	2.4	1.3
Difference in language	2.5	1.3

RQ2: What different between the tourists who have heard the news about Tham Luang cave incident and still want to visit Tham Luang cave and who have heard the news about Tham Luang cave incident but do not want to visit Tham Luang cave?

We applied the student t-test to test whether the Tham Luang cave case opinion, General demographic information, Preference and previous experience on tourism, a significance level on decision for selecting locations and decision for selecting locations for tourism affecting by risk factors of two tourist groups were significantly different

General characteristics of tourist

When we analyze more on the relationship between the general demographic information and the need to visit the Tham Luang cave after the incident, found that the occupation was significantly correlated with the needs need to visit the Tham Luang cave after the incident (p-value = 0.012) where the Student / Other (retired/unemployed) and Business owner have a greater proportion of wanting to visit Tham Luang cave after the incident as shown in Table 7.

Tham Luang cave case perspective

From the analysis of the relationship between the risk level in visiting Tham Luang cave and the need to visit the Tham Luang cave after the incident and the perception of the Tham Luang cave incident effect Thailand tourism, it was found that the risk level in visiting Tham Luang cave (p-value <0.001) and the perception of the Tham Luang cave incident effect Thailand tourism (p-value = 0.037 is significantly related to the need to visit the Tham Luang cave after the incident, as shown in Table 8.

Preference and previous experience on tourism

In term of travel preference and previous experience with the need to visit the Tham Luang cave after the incident, found that tourists that used to) travelled to Thailand and Bangkok (p-value = 0.024), Tourist that prefer to travel alone (p-value = 0.001) and tourist that prefer to travel with family (p-value = 0.018) have a statistically significant with the need to visit the Tham Luang cave after the incident at 0.05 as shown in Table 9.

Source of information factor for selecting locations for tourism

Table 9 presents the result of the different test in term of the factors of considering information about tourist attractions, the tourists who have heard the news about Tham Luang cave incident still want to visit Tham Luang cave is searching (p-value = 0.007), interesting (p-value = 0.034) and gaining benefit (p-value = 0.001) information about tourist attractions from online media significantly higher than other sources as shown in table 10.

RQ3: What the impact factors of tourist who going to visit Tham Luang cave?

Risk factor for selecting locations for tourism

The risk factors of considering information about tourist attractions In term of the risk factors, the results show that the perception of location safety of the tourists who have heard the news about Tham Luang cave incident still want to visit Tham Luang cave is higher than the tourists who have heard the news about Tham Luang cave incident but do not want to visit Tham Luang cave significantly at p-value = 0.003) as shown in table 11.

From factor analysis using logistic regression statistics by controlling the influence of 1) the opinions about the risks of Luang Tham cave, 2) the opinion of Tham Luang cave incident effect on Thailand tourism, 3) Occupation, 4) travel experience to Thailand and Bangkok, 5) travel alone, 6) travel with family, 7) searching information by online media, 8) interesting of tourism information from online media, 9) using benefit of tourism information from online media and 10) risk factors in location safety.

The result demonstrates in table 12, there are 4 factors that impact to the needs of tourists visiting the Tham Luang cave as 1) the tourists who have opinions about the risks of Luang Tham are high risk, 2) the tourists who prefer to travel with family and 3) the tourists who using benefit of tourism information from online media as shown in table 12.

Table 7 The test of different of Tham Luang cave case opinion

Categories	Want to Visit		Do NOT want to Visit		χ^2	df	p-value
	Frequency	Percent	Frequency	Percent			
Risk level in visiting Tham Luang cave							
Low	8	21.1	30	78.9	19.297	2	<0.001
Medium	47	37.6	78	62.4			
High	13	12.5	91	87.5			
The need to visit the Tham Luang cave after the incident							
By yourself	30	29.1	73	70.9	0.775	1	0.379
By the local government	35	24.1	110	75.9			
The perception of the Tham Luang cave incident effect Thailand tourism							
It does not effect on Thailand tourism	36	24.8	109	75.2	6.596	2	0.037
It makes Thailand more well-known and increases tourist visits.	20	23.3	66	76.7			
It makes Thailand more well-known but decreases tourist visits.	12	48.0	13	52.0			

Table 8 The test of different of General demographic information

Categories	Want to Visit		Do NOT want to Visit		χ^2	df	p-value
	Frequency	Percent	Frequency	Percent			
Nationality (n=262)							
American	13	26.0	37	74.0	0.121	3	0.989
European	39	25.0	117	75.0			
Asian	9	26.5	25	73.5			
Others	5	22.7	17	77.3			
Gender (n=237)							
Female	29	28.4	73	71.6	0.919	1	0.338
Male	31	23.0	104	77.0			

Table 8 (Con.)

Categories	Want to Visit		Do NOT want to Visit		X ²	df	p-value
	Frequency	Percent	Frequency	Percent			
Age group (n=267)							
Less than 25 years	21	30.4	48	69.6	2.774	2	0.250
26-40 years	41	25.6	119	74.4			
Greater than 40 years	6	15.8	32	84.2			
Highest Education (n=267)							
Lower than Bachelor's	6	25.0	18	75.0	5.418	2	0.067
Bachelor's	39	21.7	141	78.3			
Higher than Bachelor's	23	36.5	40	63.5			
Income (USD) per month (n=267)							
Less than 1,500	23	29.5	55	70.5	1.150	2	0.563
1,500-3,000	21	22.3	73	77.7			
More than 3,000	24	25.3	71	74.7			
Marital status (n=267)							
Single/Divorced	54	27.3	144	72.7	1.314	1	0.252
Married	14	20.3	55	79.7			
Occupation (n=259)							
Student/ Unemployed	19	35.2	35	64.8	10.962	3	0.012
Private company employee	27	21.1	101	78.9			
Public servant-State	7	16.7	35	83.3			
Enterprise employee							
Business owner	15	42.9	20	57.1			

Table 9 The test of different of preference and previous experience

Categories	Want to Visit		Do NOT want to Visit		X ²	df	p-value
	Frequency	Percent	Frequency	Percent			
Overseas travelling experience							
Yes	52	28.4	131	71.6	2.662	1	0.103
No	16	19.0	68	81.0			
Thailand travelling experience							
Yes	33	33.3	66	66.7	5.128	1	0.024
No	35	20.8	133	79.2			
Bangkok travelling experience							
Yes	33	33.3	66	66.7	5.128	1	0.024
No	35	20.8	133	79.2			
Travel preference							
Health beauty and spa	14	22.2	49	77.8	0.458	1	0.499
Edu-meditation	10	32.3	21	67.7	0.852	1	0.356
tourism							
Ethnic tourism	19	35.2	35	64.8	3.367	1	0.067
Sports tourism	14	18.2	63	81.9	3.026	1	0.082
Adventure travel	55	26.4	153	73.6	0.471	1	0.493
Home stay & farm stay	15	22.4	52	77.6	0.447	1	0.504
Long stay	11	32.4	23	67.6	0.973	1	0.324
Multi-style tourism	13	24.5	40	75.5	0.031	1	0.861
Travel companion preference							
Travel alone	22	44.9	27	55.1	11.936	1	0.001
Travel with friends	51	24.6	156	75.4	0.335	1	0.563
Travel with family	33	20.4	129	79.6	5.640	1	0.018
Travel in a tour group	7	33.3	14	66.7	0.743	1	0.389

Table 10 The test of different of significance level on decision for selecting locations for tourism

Informational Factors	Want to Visit		Do NOT want to Visit		t	p-value
	Mean	S.D.	Mean	S.D.		
Search for information about tourist attractions from various sources						
From directly related organizations	2.6	1.3	2.9	1.2	-1.346	0.179
From friends and family	3.5	1.3	3.5	1.0	-0.187	0.830
From online media	4.1	1.0	3.7	1.0	2.743	0.007
Interest in information about tourist attractions search from various sources						
From directly related organizations	2.7	1.2	2.8	1.2	-0.753	0.452
From friends and family	3.5	1.3	3.5	1.0	-0.154	0.878
From online media	4.0	1.1	3.7	1.0	2.128	0.034
Benefit from the information about tourist attractions searched from various sources						
From directly related organizations	2.7	1.3	2.9	1.2	-1.269	0.206
From friends and family	3.5	1.4	3.6	1.1	-0.778	0.438
From online media	4.2	1.0	3.7	1.0	3.360	0.001

Table 11 Test of different of risk factor

Risk Factor	Want to Visit		Do NOT want to Visit		t	p-value
	Mean	S.D.	Mean	S.D.		
Natural Risk						
Weather conditions	2.9	1.2	2.8	1.2	0.519	0.604
Natural disasters	3.2	1.2	3.3	1.2	-0.554	0.580
Pollution	2.9	1.2	3.0	1.3	-0.182	0.856
Physical Risk						
Location safety	3.0	1.2	3.6	1.3	-3.035	0.003
Epidemic Diseases	4.1	1.2	3.9	1.3	0.797	0.426
Crime	3.8	1.2	3.9	1.3	-0.711	0.478
Political Risk						
Uncertainty in government policy	2.8	1.3	3.1	1.3	-1.597	0.112
Terrorist attacks	3.4	1.5	3.7	1.5	-1.345	0.180
Public demonstrations	2.7	1.3	3.1	1.4	-1.864	0.063
Performance Risk						
Security of facilities	3.2	1.4	3.4	1.2	-1.004	0.316
Quality of service	3.3	1.3	3.6	1.2	-1.590	0.113
Density of tourists	2.8	1.2	2.6	1.2	1.240	0.216
Social Risk						
Cultural difference	2.3	1.3	2.4	1.3	-0.862	0.389
Difference in language	2.3	1.3	2.6	1.3	-1.608	0.109

Table 12 The fact that impact to the needs of tourists visiting Tham Luang cave

Factor	B	SE	Wald	p-value
The opinions about the risks of Luang Tham cave – High	1.276	0.353	13.038	<0.001
Travel with family	0.759	0.308	6.075	0.014
Using benefit of tourism information from online media	0.541	0.171	9.977	0.002
Constant	-4.322	0.808	28.617	<0.001

Discussion

As a result, tourists who have heard news about Tham Luang cave incident also want to visit Tham Luang. They mostly using information about tourist attractions from online media to select attractions, even if they know about the big incident that occur with Tham Luang Cave, they also want to travel with their families.

It can be seen that the tourists who want to visit Tham Luang have the opinion that the Tham Luang incident has a moderate risk, unlike tourists who do not want to go to Tham Luang that thinks that the cave event is a high risk. While considering the level on decision for selecting locations for tourism from various tourism risk factors, the tourists who want to visit Tham Luang have considered the safety of location such as proximity to dangerous animals or isolation from community higher than tourists who do not want to visit the Luang Tham significantly.

This research aims to study of 1) the specific characteristic of the tourist who have heard the news about Tham Luang incident, 2) the different between the tourists who have heard the news about Tham Luang cave incident and still want to visit Tham Luang cave and who have heard the news about Tham Luang cave incident but do not want to visit Tham Luang cave and 3) the impact factors of tourist who going to visit Tham Luang cave. According the literature, most of tourist who willing to go to the risky destination is the tourist who like to travel as sports tourism and adventure and less concern about the safety of location, however the result of Tham Luang cave case study show the opposite way. Currently, Tham Luang cave has become a popular tourist destination because of the challenge of exploring all the time, however Tham Luang is suitable for specific tourists with expertise and experience.

Conclusion, limitations, and future studies

The finding surprising us that even though tourists perceive the high risk of the Tham Luang cave case but they still want to go visit Tham Luang. In addition, the study also gives us the power and importance of online media which is an important tool for tourists to search information and gain the benefit from that information.

The number of tourist who visiting Tham Luang is higher then the Ministry of Tourism of Thailand together with the National Park Department and the Ministry of Natural Resources and Environment which is the management agency of the Tham Luang cave area to develop guidelines for Tham Luang cave as a new tourist destination in Thailand and pushed to be a major tourist attraction of the world as well.

The limitation of this study is the data collection that most of them we collected from the tourist who currently travel in Thailand adn most of them have visited Thailand and Bangkok before. For the future stduy we should expand to the tourist who never travel to Thailand we may see the different way of risk perception and in term of technology perspective we should study on utilizing technology to assist the torist who want to go to the risky destination to be safed during their trips such as mobile application that has a risk warning feature or application that can track the toruist location and lead them to the righ way etc.

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