The Causal Effects of Island Tourism Safety Perception toward Island Destination Loyalty of International Tourists: A Case of Samui Island, Thailand

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Abstract

This paper aims to investigate 1) level of perceived island tourism safety by focusing on perceived safety before and during travelling, 2) level of destination loyalty, and 3) the effects of perceived tourism safety of Samui Island, Suratthani, Thailand on destination loyalty. The self-rated questionnaire used in the study was developed by extracting content from previously published papers and conducting in-depth interviews of tourism stakeholders, along with 3 experts and administering a pilot test. To analyze the collected data according to the research objectives, the final version is comprised of data collected by Non-probability sampling, convenient sampling from 245 foreign tourists in Samui Island, Suratthani, Thailand, Means, Standard Deviation, Exploratory Factor Analysis and the Structural Equation Model (SEM) by AMOS.

The findings found that level of island tourism safety perception before and during travelling was moderate and that island destination loyalty was at a high level. Additionally, the result revealed 3 unique components to measure tourism safety of island destinations consisting of: General Safety (GS), Tourism Activities Safety (TAS) and Tourism Destination Safety (TDS). The SEM result found that the perception of island tourism safety significantly affected island destination loyalty. Additionally, perceived tourism safety level significantly affects destination loyalty of international tourists. Tourism activities safety (TAS) played a vital role in perceptions of island tourism safety. It is incontestable that tourism planners should exert greater effort to systematically manage, as well as enhance, safety levels of tourism destinations, especially tourism activities on islands.

Keywords: Safety and Security, Tourism, Destination Loyalty, Island

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ผลกระทบเชิงสาเหตุของการรับรู้ความปลอดภัยในการท่องเที่ยวเกาะต่อความภักดีต่อแหล่งท่องเที่ยวเกาะของนักท่องเที่ยวต่างชาติ: กรณีศึกษาเกาะสมุย ประเทศไทย

บทคัดย่อ

งานวิจัยชิ้นนี้มีวัตถุประสงค์เพื่อศึกษา 1) ระดับการรับรู้ความปลอดภัยก่อนเดินทางและระหว่างเดินทางตามแหล่งท่องเที่ยวเกาะ 2) ระดับความจงรักภักดีต่อแหล่งท่องเที่ยวและ 3) ผลกระทบความปลอดภัยของการท่องเที่ยวเกาะต่อความจงรักภักดีต่อแหล่งท่องเที่ยวของนักท่องเที่ยวชาวต่างชาติ อำเภอเกาะสมุย จังหวัดสุราษฎร์ธานี เครื่องมือที่ใช้ในการเก็บข้อมูลคือแบบสอบถามซึ่งผ่านการพัฒนาจากการสกัดตัวแปรจากงานวิจัยที่ผ่านมาและการสัมภาษณ์เชิงลึกผู้ที่มีส่วนเกี่ยวข้องด้านการท่องเที่ยว ผู้ทรงคุณวุฒิ 3 ท่านและการทดสอบแบบสอบถาม เก็บข้อมูลจากกลุ่มตัวอย่างคือนักท่องเที่ยวชาวต่างชาติในอำเภอเกาะสมุย จำนวน 245 คน โดยการสุ่มแบบไม่ใช้ความน่าจะเป็น วิธีสุ่มแบบสะดวก วิเคราะห์ข้อมูลโดยใช้ค่าเฉลี่ย ค่าความแปรปรวน การวิเคราะห์องค์ประกอบเชิงสำรวจและสมการโครงสร้างโดยโปรแกรม AMOS

รายงานวิจัยพบว่า 1) ระดับความปลอดภัยที่นักท่องเที่ยวรับรู้ก่อนการเดินทางและระหว่างเดินทางอยู่ในระดับปานกลาง 2) ระดับความจงรักภักดีต่อแหล่งท่องเที่ยวอยู่ในระดับมาก และ 3) จากผลวิเคราะห์สมการโครงสร้างพบว่ามาตรวัดความปลอดภัยการท่องเที่ยวเกาะประกอบด้วย 3 ตัวแปรหลัก คือ ความปลอดภัยทั่วไป ความปลอดภัยด้านกิจกรรมท่องเที่ยวและความปลอดภัยในแหล่งท่องเที่ยว และยืนยันว่าความปลอดภัยสำหรับการท่องเที่ยวเกาะมีผลต่อความจงรักภักดีต่อแหล่งท่องเที่ยวของนักท่องเที่ยวต่างชาติ และแสดงให้เห็นว่าความปลอดภัยด้านกิจกรรมการท่องเที่ยวมีความสำคัญมากที่สุดต่อระดับความปลอดภัยในการท่องเที่ยวเกาะ ผู้บริหารการท่องเที่ยวของเกาะสมุยควรให้ความสำคัญต่อการจัดการความปลอดภัยโดยเฉพาะด้านกิจกรรมการท่องเที่ยว

คำสำคัญ : ความปลอดภัยในการท่องเที่ยว, ความภักดีต่อแหล่งท่องเที่ยว, แหล่งท่องเที่ยวเกาะ

Introduction

An effect of the expansive growth of travelling has been tourism becoming a vital tool for many countries, including developed and those still developing, in enhancing their prosperity and wealth. Every country has tried to increase their numbers of visitors, however, there are various obstacles which are not easy to manage. The most powerful threat tourism management must address has undoubtedly been that of safety and security, which can obviously erode tourism growth and competitiveness of the countries. Importantly, many risks

cannot be predicted in advance, because of its sophisticated as well as susceptible. As a consequence, there are various finding focusing on the importance of safety and security in tourism. Scholars reveals that safety and security perception positively impacts on tourism motivation and travelling attention (Reisinger & Mavondo, 2005). If tourists perceive high risks in hygiene and finances; this leads to increased fear and low tourism motivation or attention. Additionally, perceiving terrorism greatly impacts on the safety level perceptions of a destination. It has also been claimed that safety and security in tourism destination can cause travelers to change their travel plans causing selection of other destinations or cancellations, declining tourist volumes, erosion of customer confidence and reduced incomes and profits to the tourism industry (Seddighi, Nuttabll & Theocharous, 2001; Neumayer, 2004; Kozak, Crotts & Law, 2007; Rittichaninuwat & Chakraborty, 2009; Xueqing Qi,Gibson, & Zhang, 2009; Ghaderi, Mat Som, & Henderson, 2012). Furthermore, Slevitch and Sharma (2008) explain that tourists are willing to pay more to make sure of their safety in tourism destinations. Additionally, tourist's behaviors such as re-visitation, word of mouth and recommendations of others are impacted by safety levels (Batra, 2008; McDowall & Ma, 2010).

Importantly, safety and security are a determinant of destination's competitiveness. The World Economic Forum (2015) reported that the Global Travel & Tourism Competitiveness ranking of Thailand in 2015 was 35th, with an average score of 4.26. Singapore and Malaysia, Thailand's competitors, were in 11st and 25th (with a 4.86 and 4.41 score, respectively). Of great concern is the safety and security of Thailand was 132nd with a score 3.80, while, Singapore and Malaysia were superb, in 8th and 42nd with a score of 6.4 and 5.8 respectively. Therefore, Thailand may be confronted with onerous times in the future due to the loss of international tourists to neighboring countries, if safety and security are not improved.

As a result of the importance of safety for tourism, safety issues have been variously studied by academics in different dimensions. Specified safety issues and their impact toward tourism have been continuously studied, for example, political issues- including turmoil, conflicts, human rights, etc. (Neumayer, 2004; Seddighi, Nuttabll & Theocharous, 2001), natural disasters and diseases (Ghaderi, Mat Som, & Henderson, 2012), pandemic and terrorism (Kozak, Crotts & Law, 2007; Rittichaninuwat & Chakraborty, 2009), and hazards in island destinations (Becken, Mahon, Rennie, Shakeela, 2014). Most academic papers have focused on general safety in destinations. However, not much attention has been devoted to understanding measurement of island tourism safety, even though island destinations attract an enormous number of visitors each year.

Islands have been a popular destination in both Thailand and other countries. Some contexts of islands are different from inner-land destinations, especially geography and weather, which can cause different and severe hazards. Concerning the geography of Samui, most areas are sloping, winding or steep due to the mountainous nature of the island, causing a high rate of road accidents and other safety issues. For the weather, Samui has 2 seasons; rainy and summer, there are monsoons and storms during the rainy season. Importantly, tourism activities also rely on geography and weather such as swimming, sailing, surfing, snorkeling, kayaking, scuba diving, etc. Therefore, the types of accidents and dangers vary widely. While, general tourism safety and risk issues also occur on islands such as accidents, crime, terrorism, drugs, etc.

Samui Island is also a popular island destination in the southern part of Thailand, with beautiful beaches, stunning views and many activities related to the unique tourism resources of Samui Island. In 2015, the number of tourists was 4-5 million, with the proportion of international tourists being the majority at 70%, and Thai tourists at 30% (Ministry of Tourism and Sport, 2015). However, there are dangerous issues in relation to the context of visiting an island and the sea; traveling inter-island involves using boats with their inherent higher risks than travelling in other areas. Samui's Tourism sea-based activities come with risks of drowning, rip currents, sea nettles, storms, etc., which can have an impact on a tourist's destination decision making. Each year, Samui has been confronted with serious accidental cases with tourists becoming victims from rip currents, sea nettles and other accidents from water activities such as skis, swimming, kayaking, etc. The National News Bureau of Thailand (2015) reported that there were 6 cases of tourist drownings within a month (January 1 – February 11, 2015) in Samui. Furthermore, the record found that the mortality rate and injury from box jellyfish has evidently increased, there were 2 cases of death within 2 months, 2 serious injury cases and 60 cases of injury (Achalawitkun & Sucharitaku, 2016). Additionally, social media can spread misunderstandings about safety on the island and may convey an inaccurate perception of possible dangers which can lead to cancellation of holidays by many foreigner tourists. Importantly, foreigner tourists who are not familiar with the setting of Samui and of a totally different culture and language are more likely to have high potential of vulnerability when compared to local or Thai people (Allen, 1999). Undoubtedly, most of drowning and box jellyfish cases in Samui were those of international tourists. Therefore, it is serious to reduce risks and enhance safety level in Samui Island for international visitors.

In conclusion, tourism safety has been a concern in academic circles for a long time, however, measurement of tourism safety focusing on islands has been visibly neglected.

Becken, et al. (2014) had studied tourism disaster vulnerability but the framework was concerned only with natural disasters, while other dangers were neglected. This research aims to bridge an academic gap and to propose a new measurement of tourism safety with a focus on island destinations. Safety issues, with an island of Samui context, will be investigated to propose a new measurement for island tourism safety. Subsequently, this paper seeks to explore tourist's safety perceptions, focusing on both perceived safety before and during travelling, in order to further enhance loyalty toward island tourism destinations. Thus, this paper can make contributions to safety management, both theoretical and practical, to island tourism.

Research Objectives

1. To investigate level of perceived island tourism safety focusing on perceived safety before and during travelling of international tourists to Samui Island
2. To investigate levels of island destination loyalty of international tourists for Samui Island
3. To investigate the effects of perceived tourism safety toward island destination loyalty

Literature & Hypothesized Model Development

From literature review, tourism safety affects tourist's behavior in various dimensions, especially in repeat visitation. Many papers have confirmed that tourism safety has a high relation with destination loyalty. Batra (2008) found that safety level had a medium effect on future tourist's behavior and that a higher safety level will have an impact on the willingness to revisit and recommend the destination to others. Similarly, McDowall & Ma (2010) confirmed that the safety factor impacts positively on re-visitation and recommendation of the destinations. However, there are different variables that have emerged in island tourism safety and also in destination loyalty. The presence of these variables question whether or not the relationship between safety and loyalty is still positively related. Consequently, tourism safety issues and destination loyalty have been synthesized from existing academic papers in order to test its effects.

Island Tourism Safety

Safety in tourism can be interpreted as travelling without any problems or unexpected occurrences during the trip. As to its importance, tourism safety has been a concern of many academics and they have tried to study various perspectives of safety in tourism such as risk tourist types, types of safety, safety management, etc. Importantly, many academics have attempted to classify types of safety. Evans & Berman (1992) claimed that tourist's risk were of 3 dimensions: physical, monetary and timing. Mansfeld & Abraham (2005:140-141) summarized tourism safety into 4 issues consisting of crime, health, transportation, natural disaster, and politics. Kekovic & Markovic (2009) classified 5 factors of tourism safety; Criminal and terrorist threats Economic threats, Technological and Ecological Threats, Natural Danger and Human error, and hazards. It can be seen that types of safety in previous papers have been neglected tourism activities which can happen during the trips causing damage, injury and death. Some issues related to safety on islands is still blurred in existing papers. Some may argue that box jellyfish might be in natural danger, however this category focuses on flooding, storm, cyclone, etc.

In this study, therefore, 16 safety issues were synthesized from the previous papers in accordance with the Samui's context as shown in table 1.

Table 1: 16 Safety Issues Obtained from Past Studies

Safety Items	Lepp & Gibson (2003)	Reisinger & Mavondo (2005)	Fuchs & Reichel (2006)	Kozak et al. (2007)	Batra (2008)	Slevitch & Sharma (2008)	Rittichainuwat & Chakraborty (2009)	Popescu (2011)	Jonas et al. (2011)	This study
1. Terrorism	X	X	X	X		X	X	X	X	X
2. Political situation	X		X			X			X	X
3. Domestic/Local Conflicts	X						X	X		X
4. Rob/Steal/Thieve					X	X				X
5. Deceit / Cheating						X				X
6. Injure / Attack	X				X	X				X
7. Rape	X				X	X				X
8. Drugs									X	X
9. Road Accidents										
10. Nature Disaster			X	X				X	X	X
11. Disease / Outbreak / Epidemic			X	X				X	X	X
12. Decadence of tourism destination							X			X

13. Hygienic Condition such as Foods, Water, Restrooms	X	X	X			X			X	X
14. Cultural Obstacles such as Languages, Belief, Attitude	X									X
15. Weather / Temperature			X							X
16. Overcrowding of Tourists in Tourism Destinations			X							X

According to table 1, tourism safety issues synthesized from the previous papers are heterogeneous which can generally occur in any tourism destination. Tourists may have to confront these issues during travelling in Samui. Therefore, the issues including safety that can be harmful to a tourist's body, soul, and assets. Totally, 6 safety issues synthesized from the past studies were bought to study island safety level in this study. However, these issues in the table 1 were not covered island issues in the Samui's context, thus an in-depth interview was conducted to further assemble island tourism safety issues.

Tourism Safety Perception

In this study, safety perception will be separated into perception before travelling and during travelling, therefore island tourism safety is the difference between safety perception during and before travelling. According to the research objectives, collecting data onsite can obtain real feeling or attitudes of tourists as they can immediately reflect on their perceptions. While tourists recalling their safety perceptions after travelling may be distorted or blurred since most international tourists visit many destinations nearby. Rittichainuwat & Chakraborty (2009) found that first time and repeat travelers had different perceptions of safety and security in Bangkok. Additionally, many researches focus on perception of tourists during their travelling which is defined as the uncertainty experienced by tourists during their travelling (Boakye, 2012; Seabra, et.al., 2013).

Furthermore, perception of tourists before travelling has also been viewed as very important evidence of tourists for making a travelling decision in various academic papers. Normally, tourists obtain destination's information from various sources such as internet, relatives, friends, social online, news, etc., before making decisions to choose a destination. In this stage, tourists will perceive safety destination image, therefore, perception before travelling is what extent safety perceived by tourists before travelling or their expectation about safety destination image. Reisinger & Mavondo (2005) found that intention to visit international destinations depends on perceived safety level.

Therefore, in this study, island tourism safety will be studied though both perception before and during travelling, consequently island tourism safety is the difference of perceived tourism safety during travelling and before travelling in Samui of foreigner tourists.

Destination Loyalty

Definition of customer loyalty has been widely discussed as a consequence of its importance. Loyalty can impact a company's success, marketing management's cost as well as enhance competitive advantage in the long term. Many academics have tried to define customer loyalty leading to propose different measurements, however, there is currently no consensus. A customer's loyalty was formerly defined as repeat buying behaviors. Later on, other interpretations were revealed such as word of mouth, positive talking, recommendations, etc. Tourist's loyalty has also been applied in the tourism industry, because tourism is also a type of service or products. Therefore, similar issues have been employed to define tourist's loyalty consisting of re-visit, attention to repeat, recommendations, positive talking, posting on the internet and social online. The measurements of tourist's loyalty were diverse. Campon, Alves & Hermandez (2013) studied 74 research papers and found that 77% of total papers employed one dimension being behavioral factors, followed by applying 2 dimensions, being behavior and attitude, and with 13% and 10% using more than 2 dimensions.

In addition, obvious papers were studied to synthesize dimensional measuring tourist's loyalty to apply in this research, consequently, 5 items were employed in this study as follows:

Talking positive things (DL1), tourists who say positive thing about the destination, it can be interpreted that they are highly loyal (Chi & Qu, 2008). Normally, tourists have high impression towards things in the destination, they tend to talk and tell others. The positive things included beautiful views, sea, sand, beaches, local people, service quality, etc. Therefore, positive taking was also included in this study to measure tourist's loyalty.

Recommendation to friends, relatives or others (DL2) is also widely applied to investigate levels of tourist loyalty (Yoon & Uysal, 2005; Batra, 2008; Geng-Qing Chi & Qu, 2008; McDowall & Ma, 2010; Ozdemir, et al., 2012). Tourists who have high levels of destination loyalty tend to recommend it to others, especially friends, relatives, etc. Yoon & Uysal (2005) found that this item can predict 79% of tourist loyalty level.

Repeat visitation on the next trip (DL3) is a main factor employed to measure tourist's loyalty (Yoon & Uysal, 2005; Batra, 2008; Geng-Qing Chi & Qu, 2008; McDowall & Ma, 2010; Ozdemir, et al., 2012). Additionally, "re-visitation" was frequently employed to predict tourist loyalty and was proved in the Structural Equation Model (Yoon & Uysal, 2005; Geng-Qing Chi

& Qu, 2008; Ozdemir, et al., 2012). According to the context of Samui Island being a small island, yet there are many attractions and unique destinations which can induce tourists to revisit Samui on their next trip. Furthermore, if tourists perceived high safety, they are more willing to revisit.

Telling others about safety (DL4) is a kind of word of mouth (WOM) focusing on safety issues. The high loyalty tourists have a willingness to tell others about safety issues perceived during the trips. Additionally, a paper included word of mouth about safety issues to measure tourist's loyalty as well (Batra, 2008).

Posting via social online (DL5) is a modern way of WOM in the smart phone era. Currently, communication via online is normal for tourists, chatting or posting via web, blog, Facebook, Instagram, etc. have more powerful and high impact to tourists to make decisions about travelling, booking, and making any payment. E-word of mouth is more influential to visitors than traditional Word of Mouth.

Hypothesized Model

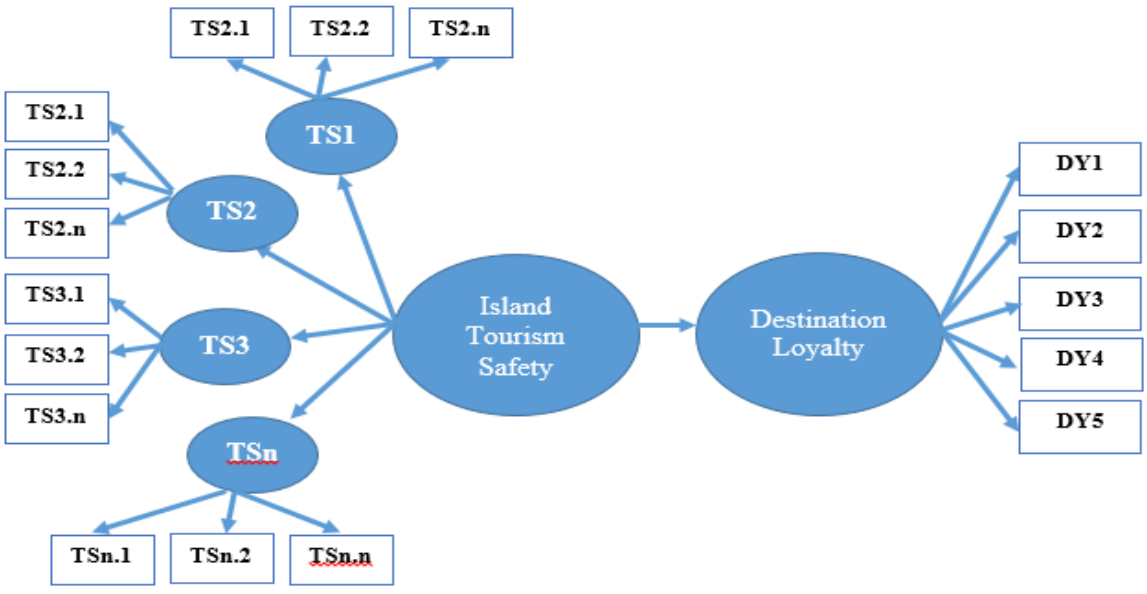

Figure 1: Hypothesized Model

Research Methodology

This research employed a mix of qualitative and quantitative research. The research population were foreign tourists in Samui Island, Suratthani, in the southern part of Thailand. The qualitative research was employed to improve and construct a draft of questionnaire while the quantitative was conducted to investigate perception of island tourism safety, destination loyalty levels and its impact.

The sample size was of 245 foreign tourists who had stayed overnight on Samui and were 20 years of age and over. There were incomplete 35 questionnaire, therefore completed questionnaires were 210 in this study. According to SEM, the appropriate sample size depends on the number of factors, it is suggested that the proper ration between respondents and variables should be 5 per 1 (Hair et al., 2010). While, Fan et al. (2009) suggested that applying 200 plus cases can decrease the convergence failure and improper solutions. A minimum sample size of 100– 200 or five cases per free parameter in the model was suggested by Kline (2010). Furthermore, Kenny (2014) claimed that 200 samples are adequate for the models with 4 latent variables or lower. Wolf, et al. (2013) found that large sample size is not always better, 100- 210 cases are enough in SEM with factor loading 0.8 and 2-3 factors in the model. In this study, there were 20 observed variables, while the latent variables were 5 being 4 variables of safety level and destination loyalty. As consequence, the 210 samples were adequate for applying SEM.

The research tool was a self-rated questionnaire. Firstly, items were synthesized from previous research, all obtained 16 items focused on general safety such as crime, political situation, rape, hygienic conditions, inconvenience in travelling, etc. which were suitable with Samui Island's context (see table 1). After that, in-depth interviewing of 13 tourism stakeholders such as local publics and privates in Samui Island and 12 tourists in Samui lead to the emergence of 4 new specified items focusing tourism safety on islands to construct the questionnaire. The 4 island tourism safety items were 1) water activity accidents such as jet sky, swimming, etc., 2) Accidents related to water traffic 3) Drowning in beach areas and 4) Accidents related to sea nettles. The safety issues final tally totaled 20 items to study island tourism safety perception before and during travelling

In the case of destination loyalty, there were 5 items. Some items were synthesized from previous papers, such as talking positive things or word of mouth, recommend to others and revisit. Items posted on social online apps was applied according to the context of

technology. Lastly, telling others about safety in tourism destination was applied to focus on safety in tourism.

The 5 levels of the Likert scale were applied to both perceived island tourism safety before travelling, during travelling and to destination loyalty. Whereas, 1 is strongly disagree and 5 is strongly agree. The Index of item Objective Congruence (IOC) of the questionnaire was checked by 3 experts, all items got 0.67 and above, therefore, no item was deleted in this step. After that, the pilot test with 30 foreign tourists was conducted to check the tool's reliability. The Cronbach's Alpha of the entire questionnaire was 0.961, while the perceived island tourism safety before travelling, during travelling, and destination loyalty were 0.971, 0.985 and 0.881, respectively.

It is noted that the questionnaire was written in English and Chinese due to the majority of tourists in Samui were Chinese. Back translation was conducted to enhance validity of the research tool. Firstly, the English version was translated to Chinese version by a professional and then translated back into English version by a different professional, then the validity of the two English versions were compared and improved. Non-probability sampling with accidental sampling was employed to collect data and the collection data period was in October-December in 2015. Four well-trained university students who spoke both English and Chinese were the data collectors.

In the case of data analyzation, percentages were employed to report respondent's information. Levels of perceived tourism safety before travelling, during travelling and destination loyalty were analyzed via Means and Standard Deviation. Exploratory Factor Analysis (EFA) was used to extract tourism safety components before applying Confirmatory Factor Analysis (CFA) and then the structural equation model for testing the effects of tourism safety toward destination loyalty. The main reason for applying SEM is confirming factor loading in the component of island tourism safety and the model is multi-level causal model (Hair, et. al., 2010).

Results

The raw data were analyzed to check the assumptions of applying SEM. Firstly, missing data was checked and found that there were 35 uncompleted questionnaires. Secondly, the 210 data were analyzed outlier through Z-score and found that all data were in acceptable range which is ±3 - ±4 (Hair, et. al., 2010). Finally, normal distribution of the data was also

checked. It found that the Skewness and Kurtosis were close to zero, and in a range of ±1 - ±2 showing that the data distribution were normal.

Secondly, the personal data of the respondents were male and female, 48% and 52%. The most respondents were from ASIA 54%, Europe 38%, Australia & New Zealand 3%, USA 4% and other 4%. Most respondents graduated Bachelor degree 50.5% and followed by higher than bachelor degree 24.3%. The main reason for visiting Samui Island was vacation and holiday 76%.

Thirdly, the tourism safety components were analyzed by applying Exploratory Factor Analysis (EFA), Extraction Method, Principal Component Analysis and Rotation Method by Varimax with Kaiser Normalization. The results revealed 3 components with Percentage of Variance being 58.63, 6.26 and 4.48, respectively. The KMO and Bartlett's Test was high, .955 significant at 0.000. Checking inner correlation found that all items were lower than 0.8, there was no inter-correlation in each pair of items, which indicated that all items were a good predictor of tourism safety (Hair, et.al, 2010). However, from this stage, there was 1 item deleted - road accidents - because the extraction value was lower than 0.5 indicating a poor predictor. Therefore, 3 components can measure 70.37% of tourism safety. Firstly, it was called "General Safety (GS)" consisting of 9 items. Secondly, Tourism Activities Safety (TAS) composed of 6 items and lastly, there were 4 items in Tourism Destination Safety (TDS), see table 2 below.

Table 2. Level of Perceived Island Tourism Safety Before Travelling, During Travelling and Island Tourism Safety

Latent Variables (α)	Safety Items	Perceived Island Tourism Safety				Perceived Gap of Island Tourism Safety = During-Before Travelling	
		Before Travelling		During Travelling			
		X	S.D.	X	S.D.	X	S.D.
General Safety-GS (0.914)	GS1-Terrorism	2.53	1.487	2.42	1.567	-.105	1.173
	GS2-Political Situation	2.67	1.425	2.56	1.534	-.110	1.187
	GS3-Domestic Conflicts	2.59	1.453	2.50	1.541	-.086	1.154
	GS4-Rob/Steal/Thieve	2.80	1.324	2.62	1.467	-.176	1.276
	GS5-Deceit / Cheating	2.63	1.296	2.61	1.454	-.019	1.174
	GS6-Injure / Attack	2.64	1.441	2.57	1.552	-.071	1.166

	GS7-Rape	2.47	1.445	2.48	1.599	.014	1.109
	GS8-Drugs	2.84	1.471	2.66	1.570	-.181	1.307
	GS9-Nature Disaster	2.62	1.344	2.49	1.504	-.129	1.043
	Total	**2.64**	**1.1902**	**2.55**	**1.399**	**-0.096**	**0.907**
Tourism Activities Safety-TAS (0.782)	TAS1-Disease / Outbreak / Epidemic	2.73	1.319	2.64	1.441	-.086	1.129
	TAS2-Decadence of tourism destination	2.72	1.370	2.84	1.499	.124	1.100
	TAS3-Accident related to water traffics	2.67	1.276	2.70	1.414	.029	1.030
	TAS4-Accidents Related to Water Activities such as Snorkeling Kayaking Skiing	3.07	3.871	2.70	1.438	-.029	1.210
	TAS5-Drowning in Beach Areas	2.65	1.373	2.64	1.481	-.005	.995
	TAS6-Accidents Related to Sea Nettle	2.55	1.380	2.56	1.480	.010	1.044
	Total	**2.67**	**1.139**	**2.68**	**1.296**	**0.007**	**0.752**
Tourism Destination Safety -TDS (0.762)	TDS1-Hygienic Condition such as Foods, Water, Restrooms	2.95	1.148	3.13	1.420	.176	1.171
	TDS2-Cultural Obstacles such as Languages, Belief, Attitude	3.07	1.256	3.05	1.438	-.019	1.190
	TDS3-Weather / Temperature	3.09	1.317	3.10	1.429	.014	1.065
	TDS4-Overcrowding of Tourists in Tourism Destinations	3.05	1.234	2.91	1.465	-.138	1.147
	Total	**3.04**	**1.018**	**3.05**	**1.247**	**0.008**	**0.874**
Overall		**2.79**	**1.021**	**2.76**	**1.235**	**-0.027**	**0.725**

According to table 2, the 3 latent variables having Cronbach's Alpha were above 0.7 and are of high reliability (Hair, et.al, 2010). Overall level of perceived tourism safety before travelling and after travelling were similar, at a moderate, 2.79 and 2.76, respectively, a difference of only 0.027. The highest safety difference was drugs (-.181), followed by Rob/Steal/Thieve (-.176), Overcrowding of Tourists in Tourism Destinations (-.138).

Table 3. Likelihood of Destination Loyalty Level (DL)

Items (α = 0.872)	X	S.D.
Talking positive things about Koh Samui (DL1)	4.28	1.01
Recommending others to visit Koh Samui (DL2)	4.20	1.05
Revisiting Koh Samui for my next trip (DL3)	3.86	1.17
Telling others that Samui has high safety and security for tourists (DL4)	3.75	1.14
Posting recommendations visiting Koh Samui via social online (DL5)	3.66	1.35
Total	**3.95**	**0.93**

According to table 3, the measurement reliability of destination loyalty was high at 0.872 (Hair, et.al, 2010). The result found that the average level of destination loyalty for Samui Island was also high. The highest score was taking positive thing followed by recommending others to visit Samui.

Results of Hypothesized Model Testing

From the EFA results, the measurement of island tourism safety consists of three components- leading to test the hypothesized model. There were two main steps to test the hypothesized model in this study. Firstly, two latent variables, namely tourism safety and destination loyalty, were analyzed via the Confirmatory Factor Analysis (CFA) to check the validity and reliability of measurements of both tourism safety and destination loyalty. Secondly, the impact of tourism safety toward destination loyalty or the hypothesized model in this research was checked via the Structural Equation Model (SEM)

Testing the hypothesized model by using SEM, the model was rectified until the all indices were in acceptable range. Consequently, the reliability and validity of measurement models were verified. The hypothesized model was fairly fit as shown by the statistics of χ^2= 315.511 df = 220, χ^2/ df = 1.378, GFI = 0.894, CFI =0.966 and RMSEA = 0.043, (see figure 1). CFI and GFI should be closed to 0.9 or above, the both results were in 0.9 and RMSE should be lower than 0.05, the result was 0.043 (Hair, et.al, 2010). Therefore, the model was verified.

Table 4. Validity of the hypothesized model

			Estimate	S.E.	C.R.	Std. Fl.	SMC
GS	<---	SAFETY	1.154	.189	6.107	.924	.071
TAS	<---	SAFETY	1.218	.203	5.989	.952	.579
TDS	<---	SAFETY	1.000			.761	.906
DL	<---	SAFETY	.433	.140	3.103	.266	.854

Remarks; All are significant at the 0.01 level (C.R. > 2.58), C.R.= Critical Ratio, Std. Fl. = Standardized Factor Loading, SMC= Squared Multiple Correlations

According to table 4, it found that the model had high convergent validity, with a factor loading close to 1, in a range of 0.7-0.9. While, the convergent validity of safety and destination loyalty (DL) was minimal, 0.266. However, its critical ratio (C.R.) was higher than 1.96, and all C.R. values were in a range of 3-7 (Rained - Eudy, 2000).

Additionally, the model also had high discriminant validity as can be seen from the AVE value which was 0.602, higher than 0.5 (Hair et al., 2010). Furthermore, the AVE value (0.602) was also higher than the Squared Correlation (0.050). It proved that the inner consistency in variables of each latent variable were high, because of the composite reliability value was 0.726 which was higher than 0.5 (Rained - Eudy, 2000). Therefore, this model was verified.

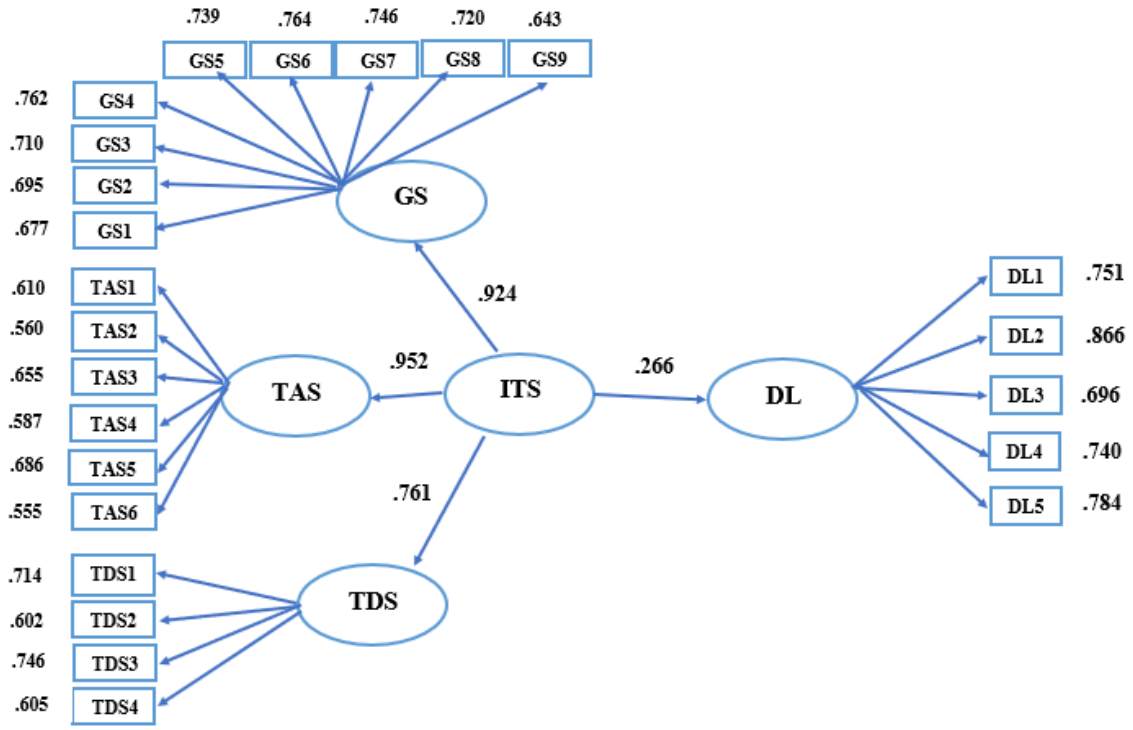

Figure 2. Structural Equation Model of Tourism Safety and Destination Loyalty

Remarks; GS = General Safety, TAS = Tourism Activities Safety, TDS = Tourism Destination Safety, ITS = Island Tourism Safety, DL = Destination Loyalty, All significant at 0.01

According to figure 2, the final model shows all loading factors of each component. Island Tourism Safety (ITS) consisted of 3 components being Tourism Activities Safety (TAS), General Safety (GS), and Tourism Destination Safety (TDS) with factor loadings of 0.952, 0.924, and 0.761, respectively.

Furthermore, there were 9 items to measure general safety with a factor loading range of 0.643-0.762, with the highest factor loading being injure and attack. Tourism destination safety was measured with 6 items with a factor loading range of 0.555- 0.686, with drowning in beach areas presenting the highest factor loading. There were 4 items of tourism destination safety with factor loading range of 0.602-0.746, with the highest importance item being weather/temperature. Lastly, the highest factor loading in destination loyalty was recommending others to visit Samui, with a range of 0.696-0.866.

The SEM result shows that tourism safety positively influenced destination loyalty of foreign tourists. It can be explained that increasing tourism safety can affect destination loyalty in foreign tourists, as reflected in the significant loading range of 0.266 at 0.01.

Discussion and Recommendations

The research result clearly makes a theoretical contribution to tourism safety. New measurement antecedents of island tourism safety were revealed. The hypothesized model of safety on islands was qualified according to the validity and reliability from the SEM. Three main variables; general safety (GS), tourism activities safety (TAS) and tourism destination safety (TDS) can adequately measure safety of island tourism destination. Accordingly, general safety (GS) included main categories as in previous papers such as crime (inclusive of robbery, theft, cheating), health, transportation, politic, terrorist threats, etc. (Lepp & Gibson, 2003; Reisinger & Mavondo, 2005; Fuchs & Reichel, 2006; Kozak, et.al., 2007; Slevitch & Sharma, 2008; Ritichainuwat & Chakraborty, 2009; Popescu, 2011; Jonas et al., 2011). While, a new component emerging in this study is Tourism Activities Safety focusing on safety issues related to tourism activities on an island which can increase a tourist's exposure to hazards during their trip. Importantly, the highest impact toward safety on island is tourism activities safety, followed by general tourism safety and destination safety. It is suggested that tourism planners should be concerned about safety of tourism activities such as accidents related to water activities such as snorkeling, kayaking, skiing, and drowning in beach areas, and sea nettles. The priority measurement should be issued to push tours and guides giving tourists correct information and closely monitoring tourists during their trips on Samui (Cortes, et al., 2006; Williamson, et al., 2012).

Moreover, practical contributions are revealed from the safety and loyalty level results. In the case of the safety level before and during travelling, it found that the safety level of during travelling was quite lower than that of before travelling. It can be interpreted that tourists' safety perception before travelling or their expectation had high, when they experienced they found that safety is lower than their expected. Accordingly, it is cautioned that 3 urgent issues should be improved such as drugs, rob/steal/thieve and overcrowding of tourists in tourism destinations. Authorities such as policeman, tourism police, etc., should strictly issue measures to reduce drugs in Samui Island, searching and watching businesses; bars and pubs as well as drug traffickers. In the case of rob/steal/thieve, accommodation firms and tourism stakeholder cooperation should be addressed to reduce the robbery rates. Additionally, the local public should work with tourism businesses such as tours, accommodations, bars, etc. to develop a guideline for general safety, tourism activities safety and destination safety to protect and raise safety awareness of tourists during the trips in Samui

(Popescu, 2011). Perceived safety may increase if tourists gain quality information from various channels (Slevitch & Sharma, 2008). Capacity management and strict regulations should be conducted to handle overcrowding in tourism destinations in order to increase Samui's safety for international tourists.

Destination Loyalty of Samui tourists was high, it can be predicted from willingness to talk positive things, recommending to others, revisit in the next trip, telling about safety and security and posting on social media platforms. From the mean value, it seems that Samui's tourist tend to especially spread perceptions of their experience to others. Thus, impression focusing safety improvement is serious issue to be concerned as the spreading of information online social platforms can distort destination safety image and consequently impact decision making to visit of new international tourists (Sonmez & Graefe, 1998).

Finally, the relation between safety and destination loyalty was significant and positive (Batra, 2008; McDowall & ma, 2010). Safety can increase 26.6% of tourist's loyalty toward the destination. The more safe a destination is perceived, the more loyal the traveler. However, destination loyalty can come from other factors such as tourist satisfaction (Chi & Qu, 2008), tourist's demographic and psychological (Chi & Qu, 2008). Consequently, enhancing safety level in Samui should be urgently addressed. Safety protection and reducing accidents focusing on tourism activities relies heavily on service providers such as guides, hoteliers, etc., who are close to tourists, therefore, the service providers should have measures in place to educate and protect tourists from any risk (Cortes, et al.,2006; Williamson, et al., 2012). While, Samui municipality should seriously support professional beach guards in order to reduce and stop cases occurring at famous beaches as Chaweng and Lamai (Fonfe & Connolly, 2015; Brighton, et al., 2013).

For further study, it is recommended to expand the scope of research areas and sample size to check the validity and reliability of the measurement. As there are many well-known island destinations in Thailand such as Phuket, Chang Island, etc. Additionally, German and Russian questionnaires should be considered, since many of the tourists cannot communicate well in English.

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Reference

Achalawitkun, T. & Sucharitaku, P. (2016). *Seasonal Distribution of Box Jellyfish (Chiropsoides buitendijki) at Samui Island, Suratthani Province*. Department of Marine and Coastal Resources.

Allen, J. (1999). Crime against international tourists. *NSW Bureau of Crime Statistics and Research*, 43, 1-8.

Batra, A. (2008). Foreign Tourists' Perception Towards Personal Safety and Potential Crime While Visiting Bangkok. *An International Journal of Tourism and Hospitality Researc*h, 19(1), 89-101.

Becken, S., Mahon, R., Rennie, H.G., & Shakeela, A. (2014). The tourism disaster vulnerability framework: an application to tourism in small island destinations. *Natural Hazards*, 71, 95-972.

Boakye,K. A. (2012). Tourist's views on safety and vulnerability: A study of some selected towns in Ghana. *Tourism Management*, 33, 327-333.

Brighton, B., Sherker, S., Bramder, R., Thompson, M. and Bradstreet, A. (2013). Rip current related drowning deaths and rescues in Australia 2004-2011. *Natural Hazards and Earth System Sciences*, 13, 1069-1075.

Campon, A. M., Alves, H., Hernandez, J. M. (2013), Loyalty Measurement in Tourism: A Theoretical Reflection, [in:] A. Matias et al., eds., *Quantitative Methods in Tourism Economics*, Springer-Verlag Berlin Heidelberg, 13–40.

Chi, C. G. Q., & Qu, H. (2008). "Examining the Structural Relationships of Destination Image, Tourist Satisfaction and Destination Loyalty: An Integrated Approach." *Tourism Management*, 29 (4), 624-36.

Cortes, L.M., Hargarten, S.W. and Hennes, H. (2016). Recommendations for water safety and drowning prevention for travelers. *Journal of Travel Medicine*, 13(1). 21-34.

Cortes, L.M., Hargarten, S.W. and Hennes, H. (2016). Recommendations for water safety and drowning prevention for travellers. *Journal of Travel Medicine*, 13(1). 21-34.

Evans, J.R. & Berman, B.)1992). *Marketing* 6th ed. New York:MacMilan.

Fan, X., Thompson, B. & Wang, L. (2009). Effects of sample size, estimation methods, and model specification on structural equation modelling fit indexes. *Structural Equation Modelling: A multidisciplinary Journal*, 6(1), 56-83.

Fonfe, M. D.C. and Connelly, J. (2015). Drowning in Tourism: An Industry Opportunity to lead the world. *Tourism, Leisure and Global Change*, 2,105-111.

Fuchs, G. & Reichel, A. (2006). Tourist Destination Risk Perception: The Case of Israel. *Journal of Hospitality & Leisure Marketing*, 14(2), 83-108.

Geng-Qing Chi, C and Qu, H. (2008). Examining the structural relationships of destination image, tourist satisfaction and destination loyalty: An integrated approach. *Tourism Management*, 29, 624–636.

Ghaderi, Z., Mat Som,A.P., & Henderson, J.C. (2012). Tourism crises and island destinations: Experiences in Penang, Malaysia. *Tourism Management Perspectives*, 2–3,79–84.

Hair,Jr., J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010). *Multivariate data analysis: A global perspective*. London:Pearson.

Jonas, A., Mansfeld, Y., Paz, S. & Potasman, I. (2011). Determinants of Health Risk Perception Among Low-Risk-Taking Tourists Travelling to Developing Countries. *Journal of Travel Research*, 50, 87-99.

Kekovic, Z. & Markovic, S. (2009). Security as a factor of competitive advantage in tourism. *Tourism and Hospitality Management*, 15(2), 291-305.

Kenny, D.A. (2015). Measuring Model Fit. Retrieved on November 20, 2016 http://davidakenny.net/cm/fit.htm

Kline, R.B. (2010). *Principles and practice of structural equation modelling*. Guilford Press, New York

Kozak, M., Crotts, J.C. & Law, R. (2007). The Impact of the Perception of Risk on International Travellers. *International Journal of Tourism Research*, 9, 233-242.

Lepp, A. & Gibson, H. (2003). Tourist roles, perceived risk and international tourism. *Annals of Tourism Research*, 30(3), 606-624.

Mansfeld, Y. and Abraham, P. (2005). *Management of Hospitality and Tourism Enterprises: Tourism, Security and Safety : From Theory to Practice*. USA: Routledge

McDowall, S. & Ma, E. (2010). An Analysis of Tourist' Evaluation of Bangkok's Performance, Their Satisfaction, and Destination Loyalty: Comparing International Versus Domestic Thai Tourists. *Journal of Quality Assurance in Hospitality & Tourism,* 11, 260-282.

Ministry of Tourism & Sport (2015). *Domestic Tourism Statistics; Classify by region and province*. https://www.mots.go.th/more_news.php?cid=492&filename =index

Moutinho , L. and Trimble, J. (1991). A Probability of Re-visitation Model: The Case of Winter Visits to the Grand Canyon. *The Service Industries Journal*, 11 (4), 439-457.

National News Bureau of Thailand (2015). *Training for water accident victims or drowned tourists Chaweang Beach*. Retrieved on November 20, 2016 from http://thainews.prd.go.th/ centerweb/News/NewsDetail?NT01_NewsID=WNPOL5609180020020

Neumayer, E. (2004). The Impact of Political Violence on Tourism: Dynamic Cross-National Estimation. *Journal of Conflict Resolution*, 48, 259-280.

Ozdemir, B, Aksu, A, Ehtiyar, R, Çizel, B, Bato Çizel, R and Tarcan Cigen, E. (2012). Relationships Among Tourist Profile, Satisfaction and Destination Loyalty: Examining Empirical Evidences in Antalya Region of Turkey. *Journal of Hospitality Marketing & Management*, 21:5, 506-540.

Popescu, L. (2011). Safety and Security in Tourism: Case Study:Romania. *Forum Geografic*, 10(1), 322-328.

Rained - Eudy, R. (2000). Using Structural Eqaution Modelling to Test for Differential Reliability and Validity: An Empirical Demonstration. *Structural Equation Model*, 7(1), 124-141.

Reisinger, Y. & Mavondo, F. (2005). Travel anxiety and intentions to travel internationally: Implications of travel risk perception. *Journal of Travel Research*, 48(February), 212-225.

Rittichaninuwat, B.N. & Chakraborty, G. (2009). Perceived travel risks regarding terrorism and disease: The case of Thailand. *Tourism Management*, 30, 410-418.

Seabra, C., Dolnicar, S., Abrantes, J.L. & Kastenholz, E. (2013). Heterogeneity in risk and safety perception of international tourists. *Tourism Management*, 36, 502-510.

Seddighi, H.R., Nuttabll, M.W. & Theocharous, A.L. (2001). Does cultural background of tourist influence the desitnation choice? An empirical study with special reference to political instability. *Tourism Management*, 22, 181-191.

Slevitch, L. and Sharma, A. (2008). Management of Perceived Risk in the Context of Destination Choice. *International Journal of Hospitality & Tourism Administration*, 9(1), 85-103.

Sönmez, S. and A.R. Graefe (1998). Influence of Terrorism Risk on Foreign Tourism Decisions. *Annals of Tourism Research*, 25(1):112-144.

Williamson, A., Hatfield, J., Sherker, S. Brander, R. & Hayen, A. (2012). A comparison of attitudes and knowledge of beach safety in Australia for beachgoers, rural residents and international tourists. *Australian and New Zealand Journal of Public Health*, 36(4), 385-391.

Wolf, E.J., Harrington, K.M., Clark, S. & Miller, M. W. (2013). Sample Size Requirements for Structural Equation Models: An Evaluation of Power, Bias, and Solution Propriety. *Educ Psychol Meas*, 76(6), 913–934.

World Economic Forum (2015). The Travel & Tourism Competitiveness Report 2015. http://reports.weforum.org/travel-and-tourism-competitiveness-report-2015/downloads/

Xueqing Qi,C. ,Gibson, H.J, & Zhang, J.J. (2009). Perceptions of Risk and Travel Intentions: The Case of China and the Beijing Olympic Games. *Journal of Sport & Tourism*, 14:1, 43-67.

Yoon, Y and Uysal, M (2005). An examination of the effects of motivation and satisfaction on destination loyalty: a structural model. *Tourism Management*, 26, 45–56.