

Article

Measuring Tourism Risk Impacts on Destination Image

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Abstract: This study develops and tests an integrated model of the moderated mediation of risks (man-made and natural disasters) that explains the associations between the benefits of tourism and the destination image. The study also considers how tourists are influenced by natural disasters and provides empirical evidence to predict the hypothesis models. The results of a study of 635 foreign tourists indicate that the tourism risks of man-made disasters positively influence the tourists' experienced benefits and feeling experience. Foreign tourists' risk evaluation may have a positive effect on their benefit and feeling experience and, thus, may link to the destination image. Somewhat as expected, the moderating effect of tourist benefit is found to strengthen the relationship between feeling experience and the destination image. Alternatively, foreign tourists' feeling experiences foster a positive link between tourism risk and destination image. The implications of the moderated mediation results are discussed.

Keywords: man-made; natural disaster; tourism risk; tourist benefit; destination image

1. Introduction

Since May 2015, the recurrence of the Middle East Respiratory Syndrome (MERS) virus has received worldwide attention and has had a serious impact on the tourism industry and economic development in Korea. Recently, the hot issue of tourism risk has been increasingly featured in the news. The risks associated with natural and man-made disasters not only affect the tourism industry and tourism security, but also threaten the economic foundations of countries [1–4]. Governments, representative groups for the tourism industry and individuals are all seeking to proactively reduce the risks of disasters, to minimize the negative consequences that a disaster would have on the economy and to avoid a potential crisis [5,6]. Overall, the presence of tourism risk is considered to be a potential influence on foreign tourists' behaviors and value evaluations; however, an integrated view of tourism risk and destination image has not yet served as the basis for empirical research of how individual tourists respond to [7]. The purpose of this study is to address this knowledge gap by examining how tourism risk is related to foreign tourists' evaluation of destination image.

The tourism research recognizes tourism risk as critical attributes of influencing tourist's behavioral intention [8], however, much of the existing empirical tourism and hospitality literature often lack an appropriate processes of examining such impacts [9]. There is an opportunity to broaden the tourism literature to incorporate important insights from research on how tourists' evaluations of tourism risk may influences of their travel decision and behavioral intention. This direct tourist evaluation of the destination image has been conceptualized in some studies [2,10] and has received anecdotal empirical support [11,12]. Whether tourism risk influences foreign tourists' benefits, and whether their feelings influence the destination image remains conceptually and empirically

unexplored. In a recent study by [7] on tourists' perceptions of risk and their travel decisions, uncertainty and risk awareness are understood in terms of how pre-determined notions about particular dangers, objects, or tourism activities influence tourist behavior. Nevertheless, the strength of those mediating paths and decision-making processes may vary considerably and may depend on the attributes of the tourism risk and the specific hazards that deter tourists. Consequently, tourism risk evaluation may significantly influence tourists' feelings and evaluation, thus sequences influences their destination image and travel decision. However, this is likely to occur in other ways and through different mediating paths than those through which the evaluation destination image is considered.

This research aims to contribute to the tourism studies on tourism risk and destination image. First, the research offers insight into the importance of tourism risk as a determinant of tourist behavior. In other words, destination image may be an outcome rather than a predictor when foreign tourists use safety to evaluate destination alternatives [11]. Specifically, this study posits that tourism risk plays a vital role in prompting foreign tourists' behavior that ultimately inspires tourist feeling experience and benefit. The study focuses on risk perception, as manifested in tourists' tendency to consider their actual experience, and thus helps tourist organizations and destinations evaluate the impacts of crises or disasters [4]. Second, drawing upon the process of developing a perspective, which views the evaluation of the destination image as a dynamic process that involves the tourist's experience, socio-psychological motivations, and perceptual/cognitive factors [13], the main proposition of this study is that the attributes of tourist benefits and feelings are mediating variables between tourism risk and the overall destination image. Third, this study contributes to the currently available studies on tourism risk evaluation that have invested considerable effort into understanding the consequences of various foreign tourist behaviors when investigating the type of tourism risk attribute that is likely to build both direct and indirect relationships with the benefit of the destination image. This question has largely been overlooked, perhaps because of the limited definition and the focus on the mutual influences of tourism risk in prior tourism studies. The arguments and studies described in this paper suggest that man-made tourism risks are a critical factor that may influence and generate the occurrence of natural disasters.

The main research framework and hypothesis is as follows: man-made tourism risk is generally expected to be positively correlated to tourist benefit, natural disasters and feeling experience. Natural disasters are proposed to have a direct influence on emotions, whereas tourist benefit and feeling experience may determine the destination image. Tourist benefit is suggested to be a mediating path in the relationship between man-made risk and destination image, and feeling experience is considered to be a mediating attribute that connects tourism risk and destination image. Tourist benefit is also included as a moderator because feeling experience may have positive effects on foreign tourists' evaluation of the destination image. Figure 1 shows the conceptual model and integrated hypothesis, which provides important insights into why and when tourism risk may drive foreign tourists' emotions, benefits and positive destination image. The next section provides a theoretical justification for each of the proposed hypotheses underpinning this model.

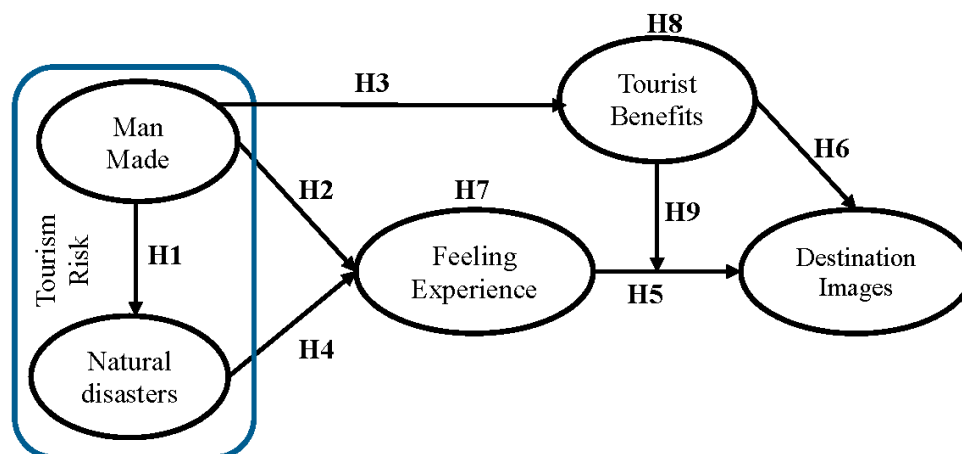


Figure 1. Research framework.

2. Theory and Hypothesis Development

Direct Effects and Hypothesis

Tourism risk refers to “Crises in the tourism industry can take many shapes and forms: from terrorism to sexual harassment, white collar crime to civil disturbances, a jet crashing into a hotel to cash flow problems, guest injury to strikes, bribery to price fixing, noise to vandalism, guest misuse of facilities to technology change . . . ” [10]. In each of these cases, tourism risk can be categorized as either man-made or a natural disaster [11]. Ritchie et al. (2014) noted that man-made tourism risk will increase the possibility and strength of a natural disaster and can affect the tourism industries and subindustries [8]. In recent years, tourism has experienced many natural crises caused by man-made disasters. For example, the 2010 BP oil spill not only polluted the ecological environment of the Gulf Coast over a three-year period but also caused economic losses exceeding \$23 billion and the loss of more than 400,000 travel industry jobs generating \$34 billion in revenue annually [14]. Thomalla et al. (2006) also suggested that the human activities of burning fossil fuel or coal fuel may lead to the expansion of the greenhouse referring to the persistent increase in global temperature and weather change [15]. Therefore, due to human activities, the possibility of natural disasters has increased.

Man-made disasters include not only terrorist attacks and political instability but also intense traffic, sewage, litter, oil seepage and water quality [16]. Pizam et al. (2006) asserted that man-made environmental pollution will influence tourists to visit an area less [14]. The principles of sustainable management and environmentally responsible behavior have come to play a fundamental role in the environmental policies of countries worldwide, and these policies must be faced and updated immediately at an international and multidisciplinary level [17]. Another man-made behavior that is seldom mentioned in previous tourism studies is that culture traditions can be directly affected by disaster. For example in 2014, the organization of the Islamic State of Iraq and the Levant (ISIL) destroyed at least 28 historical religious buildings and museums. ISIL’s activities not only seriously impacted the local and international tourism industry but also caused other countries to increase their military presence to protect valuable cultural goods. Ritchie (2004) suggested that social and cultural tourism are highly connected to tourists’ benefit evaluation of tourism’s value, learning, collective lifestyles, and safety levels [4]. Therefore, tourism risks that are man-made are influenced not only by the level of perceived risk but also by tourists’ feeling and benefits.

Hypothesis 1. *Man-made tourism risks are positively related to natural disasters.*

Hypothesis 2. *Man-made tourism risks are positively related to feeling experience.*

Hypothesis 3. *Man-made tourism risks are positively related to tourist benefit.*

A natural disaster refers to “an event, sudden or progressive, which impacts with such severity that the affected community has to respond by taking exceptional measures” [16]. From an economic perspective, natural disasters such as earthquakes, volcanic eruptions, floods and cyclones affect their victims by causing economic losses and require increased time and attention from the government and tourism managers [16]. Indeed, following the recent effects of global warming and unpredictable weather changes, the increased volume of global tourism activity also raised the impacts of natural disaster and exposed tourists to greater levels of risk [18]. For example, the 2004 Indian Ocean tsunami not only led to the deaths of over 270,000 people, injured half a million, and caused severe financial hardships and job losses for residents but also affected Thailand’s, Sri Lanka’s and the Maldives’ tourism industry for several years [10]. In the period after the tsunami, many flights and tours were cancelled, and tourists switched destinations. Overall, a high risk that a natural disaster will occur may deter tourists’ travel intentions. The proper management of natural disaster can be attractive for tourists and can provide local residents with economic benefits [3].

Hypothesis 4. *The tourism risks of natural disasters are positively related to feeling experience.*

Destination images can be identified as mental images accumulation about travel experiences; few impressions chosen from travel promotion advisement, books, movies or general media [19–21], which refers to the unique features of the destination; and the holistic evaluation of the components of a destination that tourists consider (Shani and Wang, 2011; Zhang, Fu, Cai, and Lu, 2014). From the intra-disciplinary marketing perspective, tourism destination image (TDI) changes over time, which may raise based on nationality, residents’ receptiveness and landscape, and destination promotion strategies, which as an important attributes of influencing tourist’s travel decision and behavioral intention [22]. Recent literature suggests that destination images were toward user-generated content (UGC), especially when social media grew dramatically, sources of destination information becoming more diversity and easy to access [23]. San Martín and Del Bosque (2008) proposed that destination images reflect to tourists’ objective perceptions, motives, feeling, experiences and attitudes for destination evaluation [24]. Simply, destination images can be seen as the sum of tourists’ objective views, thoughts, and impressions that a person has of a destination [20] (p. 2). Positive internal and external attributes of a destination help tourists construct an “awareness,” and the “evoked” sets of attributes thus serve to differentiate the image destination evaluation factors between destinations that are competing for tourist decision-making behavior. Baloglu and McCleary (1999) asserted that an individual’s mental representation of knowledge, feelings, and impressions will influence their destination choice and their order of priorities when planning to promote tourism destination [13]. Specifically, tourists’ perception, as a subjective concept, is formed by integrating the various information of the destination that they have received [24]. In other words, perception reflect individual attitudes and feelings for destination, not only established their beliefs or knowledge about the place’s attributes, but also meaningful to the individual when making travel decision [25]. San Martín and Del Bosque (2008) asserted that individual perception or emotions would be a critical part of internal forces of evoked by the destination image [24]. Therefore, when making the travel decision, the stronger is the positive affective image of positive feeling about the destination, the greater is the intent to recommend the destination to friends [17]. As such, this study proposes the following hypotheses:

Hypothesis 5. *Feeling experience is positively related to destination image.*

Hypothesis 6. *Tourist benefit is positively related to destination image.*

Tourist benefit and feeling experience as a mediator in the tourist risk-destination image relationship.

Given the complexity of the decision process for forming a destination image, it is often necessary for tourists to go beyond their evaluation of tourism risks to represent their feelings about the destination and their behavior [1,2,11]. A number of empirical tourism studies have shown that tourists who identify with a destination image tend to devote extra effort to collecting information and enriching their knowledge to reduce risk and avoid a potential crisis in their individual feelings and behavior [2]. When evaluating tourism activity and decision-making, perceived risk and safety concerns, such as disasters and crises may place the priority of destination ahead [18]. In tourism risk assessment research, images of a destination are highly correlated with risk perception. When tourists perceive uncertainties and possibility of various misfortunes, it might influence their willingness to visit the destination [26]. Nevertheless, when tourists experience strong feelings, regardless of whether they are real or perceived, the presence of the emotion and past experiences has the potential to influence the destination image and, consequently, the travel judgments [11,27]. Based on the above discussion, tourist risk should influence tourist destination image evaluation by mediating the feeling experience.

The literature has conceptualized tourism risk behavior as having the distinct dimensions of man-made and natural disaster behaviors. There is empirical evidence that these two dimensions have different antecedents and contribute independently to tourists' destination selection and benefit, and a significant correlation between them is usually found [17]. Kozak et al. (2007) suggested that tourists' perceptions of the risks of man-made disasters are very likely to play a crucial role in their travel decisions and behavior. Indeed, natural disasters may damage the environment, but such damage is temporary [18]. Man-made disasters cause permanent and serious damage. George and Swart (2012) further argued that man-made disasters may have even a detrimental effect on tourist benefit perception that will, in turn, impact the destination image [28]. In recent years, when tourists make travel decisions with friends or family, there has been increasing concern about man-made disasters when choosing a destination [18]. Man-made disasters usually directly influence travel decisions and benefits, and tourists thus often have greater concerns about them [1]. This makes man-made disasters quite distinct from natural disasters and they thus have a different influence on tourist benefit. Thus, the dependent variable in this study is destination image based on tourists' evaluations. As such, the following two separate mediation hypotheses were proposed to capture tourists' feeling of risk and the consequential behaviors:

Hypothesis 7. *The tourism risks associated with both man-made and natural disasters are positively related to feeling experience, which, in turn, is positively related to destination image.*

Hypothesis 8. *The tourism risks of man-made disasters are positively related to tourist benefit, which, in turn, will be positively related to destination image.*

There are moderating effects of tourist benefit in the feeling experience-destination image relationship.

In addition to having a direct effect, tourist benefits are likely to influence the relationship between feeling experience and destination image. Tourism studies suggest that tourism benefits increase encourage tourists to increase their positive feelings about the destination image and thus conform to the external attributes of evaluation and valuing the destination's international reputation [17]. As discussed above, the feeling experience is a reflection of the tourist's evaluation of a destination, which can increase their willingness to visit or their individual satisfaction. Similarly, when tourists perceive that they have benefited from past travel experiences or feelings, they are likely to become highly interested in future travel planning or destinations. This difference will determine the level of positive impact when identifying a tourism destination image. That is, the effect of the feeling experience on the tourist's destination image evaluation will vary with the different levels of tourist benefit. This leads to the following hypothesis:

Hypothesis 9. *Tourist benefits moderates the relationship between feeling experience and destination image such that higher levels of tourist benefit are associated with a stronger feeling experience-destination experience.*

3. Method

3.1. Data Collection Process

The research was conducted in Taiwan as a case study for several reasons and aimed to measure tourism risk impacts. Taiwan has unique natural and cultural resources that are distinctive for attracting international tourists. Faced with the increasingly complex problems of balancing economic benefits while maintaining natural preservation and tourist satisfaction, the study of a “pure island of preservation” and tourism impacts should be emphasized [16]. Additionally, Taiwan’s experience typifies the risks that could impact tourism, such as 921 earthquakes [20], SARS [29], typhoons [3], risk of flooding [30] and safety and security [31]. Using Taiwan as a case study can both catch the attention of tourism scholars and provide good sample data for studying the foreign destination image of Taiwan. Overall, this study includes both man-made and natural disaster tourism risks and their impact on Taiwan’s tourism industry. For example, the harm that earthquakes and typhoons may cause, such as damaging bridges and roads, can be easily reconstructed. Conversely, a damaged image of Taiwan as a tourist destination (especially for international tourists) is much more difficult to repair in the short run. Therefore, this study uses Taiwan as a sample to investigate the tourism risk impact for international tourists and thus to provide both a deep understanding of how foreign tourists imagine Taiwan and a future direction for tourism industry development.

To test the hypothetical relations, a survey was administered of the locations considered to be the top 10 hottest spots by international tourists, according to Taiwan’s 2014 Tourism Bureau report, such as the famous night market, Taipei 101, the National Palace Museum, Chiang Kai-shek Memorial Hall, Yehliu Geopark, Dr. Sun Yat-sen Memorial Hall, and Alishan National Scenic Area. These hot spots were selected by international tourists to support and encourage a cultural environment in Taiwan, to help improve its global reputation and economy and to attract visitors’ attention. A self-reported survey was conducted to collect data and measure foreign tourists’ image of perceptions of and travel experiences in Taiwan. Convenience sampling was employed in the data collection. The target subjects were foreign tourists who were at least 18 years old and who could clearly identify and describe their actual experience in Taiwan.

Data were collected by six student research assistants who collected the data in the assigned hot spots from October to December 2014. Each researcher needed to provide the number of collected surveys and questions every two weeks. To increase the response rate, the research assistant stood aside with the participants to provide any necessary assistance and explanations of unclear or confusing questions. Once the foreign tourist finished the survey, the research assistants checked the items to ensure that the survey was complete and usable for further analysis. As a result, 635 usable surveys were collected. The profile of the respondents is shown in Table 1.

Table 1. The profile of the respondents. (Southeast Asia comprises the territories of Brunei, Cambodia, East Timor, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam).

Item	Num.	%
Gender		
Male	271	41.4
Female	384	58.6
Total	655	100.0

Table 1. Cont.

Item	Num.	%
Level of Education		
Elementary and below	7	1.1
Senior high	126	19.2
University	461	70.4
Institute or more	61	9.4
Total	655	100.0
Nationality		
China	87	13.3
Hong Kong/Macao	86	13.1
Southeast Asia	233	67.8
Japan	170	26
Korea	9	1.4
America	36	5.6
Europe	20	3.4
Others	14	2.3
Total	655	100.0
Age		
20 and below	297	45.3
21–30	265	40.5
31–40	57	8.7
41–50	22	3.4
51 and above	14	2.1
Total	655	100.0
Occupation		
Business	47	7.2
Manufacture	66	10.1
Education	42	6.4
Agriculture	2	0.3
Student	479	73.1
Other	19	2.9
Total	655	100.0
Purpose		
Tourism	242	36.9
Learning	388	59.2
Others	25	3.8
Total	655	100.0

3.2. Measurement Scales

The questionnaire incorporated questions that were designed to measure the main constructs of this study (i.e., tourism risk, tourist benefit, tourist feeling and tourism image). The variables used to measure each construct were primarily derived from previous tourism studies. According to previous studies, the “tourism risk” variables were based on [32] and separated into two sub-dimensions, i.e., “Man-made disaster” and “Natural disaster”; the “tourist benefit” variables were based on [33]; and the “feeling experience” variables were first presented by [34]. The items used to measure the tourism destination image of Taiwan as reported by international tourists were based on [33]. Table 2 reports all of the measuring items and the reliability of both the hypothesis model and the data.

Table 2. The results of measurement items.

Variable	Items	Mean	S.D.	Factor Loading	C.R.	AVE	Alpha
Man made	1. Travel destination alerts affect the choice of travel destination.	5.63	1.23	0.74	0.866	0.567	0.793
	2. Certain disease control measures in the airport may affect travel attraction.	5.16	1.48	0.89			
	3. War affects travel activity.	5.94	1.30	0.76			
	4. People avoid travelling to drug-dealing areas.	5.59	1.39	0.63			
	5. The development of travel activity is more prominent in peaceful and safe areas	5.86	1.27	0.72			
Natural Disasters	1. Damage from natural disasters affects travel desire.	5.87	1.33	0.73	0.875	0.638	0.883
	2. The risk of natural disaster has a negative effect on tourism.	5.77	1.31	0.78			
	3. The potential diseases caused by a natural disaster affect travel desire.	5.67	1.32	0.85			
	4. The social instability caused by a natural disaster affects travel desire.	5.71	1.37	0.83			
Tourist Benefit	1. Tourist benefit from the tourism industry is worth studying.	5.39	1.30	0.67	0.864	0.562	0.867
	2. Unrestricted airspace affects tourist benefit.	5.31	1.31	0.67			
	3. Tourist benefit affects tourism industry development.	5.64	1.30	0.81			
	4. Analyzing tourist benefit is significant to tourism development.	5.58	1.19	0.85			
	5. Promoting a travel boom correlates with tourist benefit.	5.53	1.15	0.73			
Feeling Experience	1. Culture and tradition affect my travel perception.	5.40	1.33	0.64	0.856	0.598	0.779
	2. The accuracy of travel information affects my travel perception.	5.55	1.18	0.76			
	3. Attempting new travel may induce self-exploration for me.	5.45	1.19	0.69			
	4. Travel planning may provide different experiences for me.	5.67	1.15	0.88			
Destination Image	1. Travel activities affect my tourism perception.	5.55	1.18	0.72	0.833	0.559	0.852
	2. Tourism perceptions may affect my repeated travel.	5.54	1.17	0.77			
	3. Quality of service may improve my original negative images of travel destination.	5.62	1.19	0.82			
	4. The creation of tourism perception may improve any negative images that a travel destination has.	5.61	1.22	0.78			

4. Results

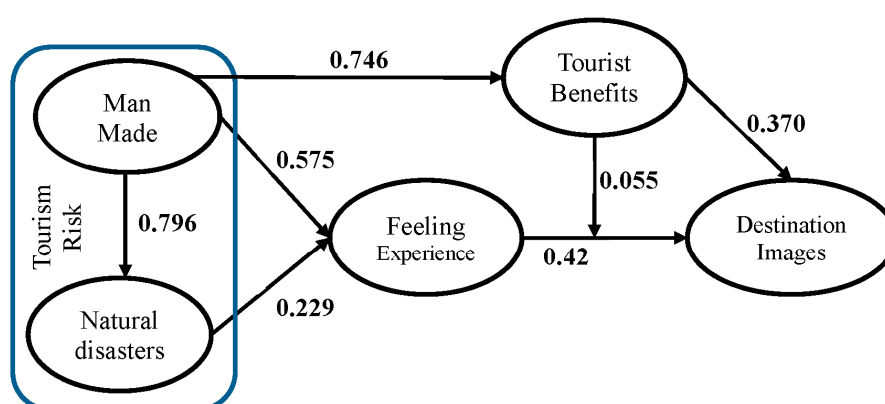
Table 3 presents descriptive statistics (e.g., means, standard deviations and alpha reliability coefficients) and correlations for the measured variables in this study. As shown in the diagonal of Table 3, each measured variable has an acceptable degree of internal consistency reliability greater than 0.7, achieving the suggested acceptance level of suggestion. The correlations between the study variables are generally consistent with the predicted direction and magnitude.

Table 3. Descriptive statistics and correlations.

Variables	Mean	S.D.	1	2	3	4	5	95% Confidence Interval		VIF
1. Destination Image	5.550	0.994	(0.852)							
2. Manmade	5.638	0.991	0.547	(0.793)				0.156	0.322	2.27
3. Natural Disaster	5.730	1.101	0.554	0.686	(0.883)			0.072	0.231	1.99
4. Feeling Experience	5.276	0.856	0.470	0.424	0.489	(0.779)		0.052	0.228	1.97
5. Tourist Benefit	5.495	1.008	0.570	0.519	0.597	0.606	(0.867)	0.186	0.350	1.65

N = 635; Reliabilities are in parentheses on the diagonal; Correlation with value greater than 0.424 are significant at $p < 0.001$.

The measurement model consisted of five latent constructs that are related to the hypotheses (destination image, man-made disaster, natural disaster, feeling experience and tourist benefit). The values for the model estimate indexes indicated that the measurement model had an overall good fit for the acceptance level ($\chi^2 = 780.079$; $df = 203$; $p < 0.001$; CFI = 0.919, AGFI = 0.867; GFI = 0.894, IFI = 0.919, RMSEA = 0.067). The results for the standardized path estimates in the hypothesized model are summarized in Figure 2.



$\chi^2 = 780.079$; $df = 203$; $p < 0.001$; CFI = 0.919, AGFI = 0.867; GFI = 0.894, IFI = 0.919, RMSEA = 0.067

Figure 2. Research framework.

In the direct effect examination, Hypothesis 1 proposed a relationship between tourism risks that man-made disasters are positively related to natural disasters. Hypotheses 2 and 3 proposed that the tourism risk of man-made disasters is positively related to feeling experience and tourist benefit. Consistent with these hypotheses, man-made disasters were positively related to natural disasters ($\beta = 0.796$, $p < 0.001$), feeling experience ($\beta = 0.575$, $p < 0.001$), and tourist benefit ($\beta = 0.746$, $p < 0.001$). In support of Hypothesis 4, the tourism risk associated with natural disasters is positively related to feeling experience ($\beta = 0.229$, $p < 0.01$), and feeling experience is positively related to destination image ($\beta = 0.428$, $p < 0.001$), which supports Hypotheses 5. The final direct effect hypothesis, which predicts that tourists' benefit is related to destination image, is also supported ($\beta = 0.370$, $p < 0.001$). Table 4 summarizes the predictor variables' direct and indirect effects on the measured variables.

Table 4. Decomposition of effects with standardized values in the indirect effect.

Variables	Direct Effect				Indirect Effect		Total Effect			
	ND	FE	TB	DI	FE	DI	MM	ND	FE	TB
Man Made (MM)	0.796 ***	0.575 ***	0.746 ***		0.182 *	0.600 ***				
Natural Disaster (ND)		0.229 **				0.198 **	0.796 ***			
Feeling Experience (FE)				0.428 ***			0.575 ***	0.229 **		
Tourist Benefits (TB)				0.370 ***			0.746 ***			
Destination Image (DI)							0.600 ***	0.198 **	0.428 ***	0.370 ***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

In the indirect effect analysis, the bootstrapping approach was adopted to provide more accurate tests of the indirect effect and has been widely used in previous studies [10,17,31]. Therefore, using AMOS 18.0, 95 percent bootstrap confidence intervals and 1000 resamplings were used to estimate all of the parameters in the indirect effects model. The results show a significant positive indirect effect of feeling experience on the relationships with tourism risk (e.g., man-made disaster ($\beta = 0.361$, $p < 0.001$) and natural disaster ($\beta = 0.198$, $p < 0.01$)), thus supporting Hypothesis 7. We also found a significant positive indirect effect of tourist benefit on man-made disasters and destination image ($\beta = 0.600$, $p < 0.001$). Therefore, Hypothesis 8 is supported.

The interaction hypotheses was tested using hierarchical multiple regressions in STATA 10.0, as shown in Table 5. Model 1 included only control variables (e.g., gender, age and level of education) and feeling experience. The main effect of tourist benefit and feeling experience were entered into Model 2. The two-way interactions were entered in Model 3. The results show significant two-way interaction effects between tourist benefit and feeling experience. Thus, these results confirm the prediction of Hypothesis 9 that tourist benefit moderates the relationship between feeling experience and destination image such that the positive relationship is stronger when the tourist is benefited. Figure 3 shows the moderating effect of tourist benefit on the relationship between feeling experience and destination image, which selected the values of unstandardized regression coefficients, mean and standard deviation from Model 3 to draw the three-dimensional diagram and illustrates the positive relationship between feeling experience and destination image under different levels of tourist benefit. In Figure 3, the level of destination image is improved as the level of foreign tourist's feeling experience increases; the increase in tourist benefit also increases the tourists' level of feeling experience and positive image of the destination. The results indicate that increasing tourist's positive feeling experiences about the destination, increases their likelihood to become highly interested and value evaluated affective image of destination which influence future travel planning or destinations selection.

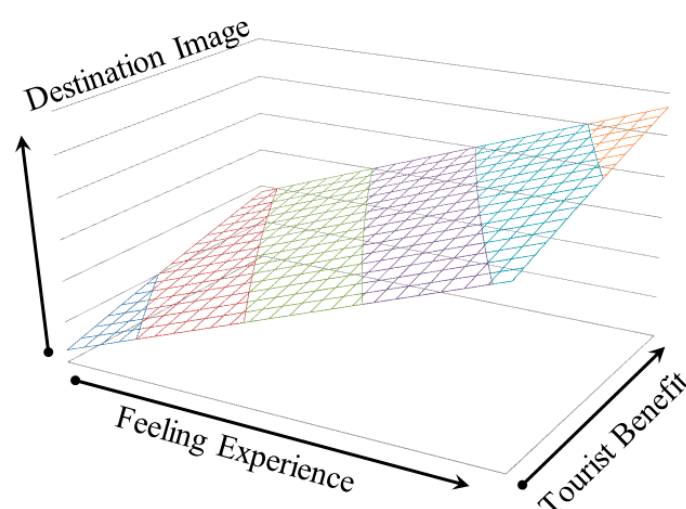


Figure 3. The moderating effect of tourist benefit on the relationship between feeling experience and destination image.

Table 5. Results of regression analysis predicting feeling experience and destination image.

Dependent Variables	Model 1		Model 2		Model 3	
	Destination Image					
	β	t	β	t	β	t
Control Variables						
<i>Gender</i>	0.021	0.33	0.038	0.59	0.032	0.50
<i>Age</i>						
21~30	−0.240	−1.00	−0.150	−0.63	−0.165	−0.69
31~40	−0.090	−0.38	−0.001	−0.01	−0.024	−0.10
41~50	0.064	0.25	0.144	0.56	0.114	0.45
51~60	−0.047	−0.16	0.058	0.20	0.029	0.10
<i>Education level</i>						
Senior high school	0.022	0.06	0.001	0.01	0.011	0.03
University	−0.165	−0.52	−0.147	−0.47	−0.128	−0.41
Graduate school or above	−0.226	−0.73	−0.196	−0.64	−0.180	−0.59
Moderating Variable						
Tourist Benefit	0.548	16.64 ***	0.441	11.06 ***	0.721	4.75 ***
Independent Variable						
Feeling Experience			0.206	4.58 ***	0.501	3.11 **
Interaction						
Benefit * Feeling					0.055	1.91 *
Model statistics						
R ²	0.338		0.360		0.363	
R ² _{adj}	0.329		0.349		0.352	
F	35.55 ***		35.11 ***		32.39 ***	

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.*Additional Test for Tourism Risk*

Although the interesting findings for tourism risk appear to be a relatively new phenomenon, a debate has already started about the correlation and impacts of the tourism risk attributes with reference to both man-made and natural disasters [14]. In this study, the higher coefficients (e.g., $\beta = 796$) found among man-made disasters and natural disasters compared with those for other constructs in the hypothesis indicate that further discussion is needed. When the relationship between man-made disasters and natural disasters is moved in Figure 4, the model estimate index values indicate that the measurement model becomes has a worse fit than the original model fit ($\chi^2 = 1170.994$; $df = 204$; $p < 0.001$; CFI = 0.864, AGFI = 0.839; GFI = 0.870, IFI = 0.864, RMSEA = 0.086), which shows that man-made disasters vary greatly and, though significant, paled in comparison with natural disasters (e.g., hurricanes), which have snowballed into a media relations problem that has afflicted the tourism region [35]. The study results are in line with the following notion: “Whereas natural risks are judged to be involuntary, uncontrollable, not socially attributable, and hence inevitable, risks of human origin are seen as voluntary, controllable, attributable and hence ultimately avoidable—and thus as more severe than risks from nature” [16].

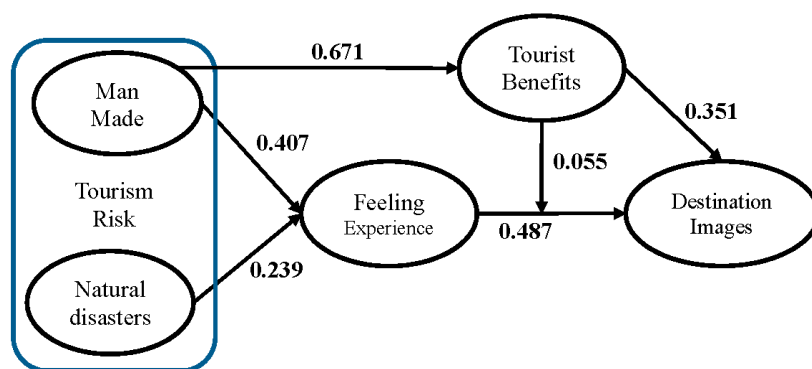


Figure 4. Alternative Model.

5. Discussion and Conclusions

This paper provided a novel concept and integrated framework to make a potential contribution of tourism to measuring tourism risk and destination image in Taiwan, and it examined the different mechanisms of tourist benefit and feeling experience in the tourism decision making process. To date, few tourism studies have both considered empirical studies of tourism security and used samples of foreign tourists to examine the effects of destination image [4,11,33]. This is a major knowledge gap in tourism studies when considering international tourism reputation and risk for foreign tourists [36]. This study extended the tourism literature by exploring the effects of tourism security on foreign tourists' real experience and feeling and by evaluating their destination travel decision behavior. This is a significant advancement, as tourists often fear the consequences of tourism risks, especially man-made and natural disasters [16]. The result shows that the tourism risk of man-made disasters was positively and significantly related to tourist benefit and that both attributes of tourism risk (e.g., man-made and natural disaster) are fully mediated by feeling experience. Prior research [17] has found that tourism risk may influence tourists and cause them to revisit their travel intentions. This study extended this finding by providing further empirical evidence that tourism risk, which is used to evaluate visiting intention, also increases tourists' feelings and benefits, which, in turn, influence foreign tourists' destination image.

The findings obtained in this study also show that tourist benefit should be seriously considered and that it is positively related to destination image and moderates the relationship between feeling experience and destination image. A high level of tourist benefit strengthens these relationships. This finding is consistent with previous research, such as [37], who argued that destination image is influenced by tourist feeling and benefit evaluation when the tourists experienced such feelings and benefits. Indeed, it is possible that if tourists feel that they have been in danger or at an unsafe travel destination, the benefit and destination image may be negative [17]. In other words, tourist benefit can help tourists improve and increase their feelings in the travel decision process and can increase or decrease their evaluation of the destination image. The findings of this study indicate that tourist benefit may maximize the foreign tourists' destination image, which underpins the success and strengthens the positive influence of tourists' feelings from travel.

This study has also answered the call for more research on the influence of man-made risks have on natural disasters [5], especially in understanding the foundational crisis in order to anticipate future tourism risks [15]. This study has thus, to some extent, filled a void in the current tourism risk literature. The results showed that man-made risks positively and significant influence natural disasters. This finding lends support to the existing literature, which suggests that a speedy recovery to benefit tourism also brings a high risk of natural disaster. This research highlighted that the reducing of man-made effects on the natural environment or the reduction of the over-usage of tourism resources is a key pillar to successfully "bouncing back" to the pre-disaster conditions [5].

5.1. Implications for Management Practice

Tourism scholars and practitioners have begun to recognize that engaging in tourism risk management can be an important source of encouragement for tourists' intentions to visit and their ultimate satisfaction. Tourism risk control has thus become a key attribute for international and domestic tourists to consider [7,19]. Based on the findings of this study, it is important for tourism decision management departments or governments to control and appropriately manage tourism policies. Policies are essential not only for developing an international tourism reputation but also for increasing tourism brand equity and identification, which can result in attracting international and domestic tourists. More specifically, it is imperative for tourism organizations to hire experienced employees, provide crisis response and management training, increase tourist benefit, and channel tourist feelings to positively improve the destination image evaluation. It is also important to keep employees aware of the tourism risk and involved in management activities to enhance their consciousness of tourism security.

Some tourism studies have asserted that the government should be responsible for tourism risk management [29] because of the high impact of the tourism industry [11]. However, the results suggest that tourism risks are connected to tourists' benefit and feeling; thus, it is important for managers to provide substantial training in tourism risk reduction strategies by identifying the potential attributes and attempting to resolve tourists' concerns, which allows the positive effects of tourism risk and security on tourists' evaluation of the destination image to be realized. Finally, this research indicated that man-made tourism risks can affect natural disasters. This finding shows that the environmental damage that occurs due to tourism can result in unpredictable and serious natural disasters. It is therefore important for tourism managers to implement policies that are directed at developing appropriate sustainability rules or concepts and to educate if these managers are to successfully change employee and tourist behavior so that they devote additional effort to protect our planet.

5.2. Limitations and Future Research Direction

In conclusion, although this study raised significant issues, it is important to consider its limitations and to address suggestions for further research addressed. Although Taiwan is categorized as a developed country, the environment regulations, traditions, standards, national culture and tourist behavior are, to a certain extent, different from those in Western economies and are even more different from the developing country of China. Although the situation of tourism risk theoretically should be present in most situations and applied to most tourism studies, the strength of tourism and its impacts may vary in Western countries or even in China. Therefore, it would be desirable to extend the findings of this study to include cross-cultural settings. Such studies would further develop and validate the measures of the tourism risk attributes and reexamine the strength of the relationships that have been tested in this study. Second, the international tourist data utilized in this study explain the hypothesized relationships for only a short period and at a particular point in time. In the future, tourism-related studies may collect data over a longitudinal period to observe the changes in international tourist behavior or use experimental or quasi-experimental designs to examine the changes in behavior under different situations. Further, it is suggested that when conducting experimental or quasi-experimental designs, samples with domestic tourists should also be included.

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