Intention to return after disaster

H Umar\textsuperscript{1}, A R Munir\textsuperscript{2}, and N Syam\textsuperscript{3}
\textsuperscript{1}STIM Lasharan Jaya, Jl. Abd Dg Sirua Lrg. 5 No.106, Masale, 90231, Makassar, Indonesia.
\textsuperscript{2}Hasanuddin University, Jl. Perintis Kemerdekaan KM 10, Makassar, 90245, Indonesia.
\textsuperscript{3}STIPAR Tamalatea, Jl. Perintis Kemerdekaan No.12, Kapasa, Tamalanrea, 90245, Makassar, Indonesia.

E-mail: hikmahnurdin77@gmail.com

Abstract. This article discusses intention to return after a disaster. One of the issues that have recently surfaced in South Sulawesi is environmental issues and protection of natural resources. Natural disasters cannot be avoided, but the effort to avoid the fall of many victims is a matter of serious consideration. Natural disasters that occur in a tourism destination can be positive or negative. The purpose of this research was to contribute to the understanding of tourists’ reactions towards a tourism destination after a natural disaster and their influences on future visit intention. Being that the survey developed for this study examined the effects of a natural disaster on the behavioral intention to return a destination particularly natural attraction, the perceived risk, destination image and travel motivation to intention to return. In this study researchers set as many as 100 respondents. Analytical tool used is Structural Equation Modeling (SEM). SEM is a multivariate statistical technique that allows testing of a series of causal relationships between variables simultaneously so as to provide statistically efficiency. The results of this study indicate that there is a positive and significant relationship between Perceived Risk, Destination image and travel motivation on intention to return after a disaster.

1. Introduction

One of the issues that have recently surfaced in South Sulawesi is environmental issues and protection of natural resources. This issue arose and received many responses from the people in South Sulawesi along with the emergence of environmental problems in a number of districts/cities that led to the occurrence of floods, landslides, erosions and various natural resources (SDA) with various consequences of a number of casualties and material. In the rainy season, the Meteorological Climatology and Geophysics Agency (BMKG) will remind the public to stay alert to floods and landslides. Based on BMKG forecast analysis, cloud growth in South Sulawesi region is so significant that intensity and rainfall are still high.

Natural disasters cannot be avoided, but the effort to avoid the fall of many victims is a matter of serious consideration. Natural disasters that occur in a tourism destination can be positive or negative. The negative is already to be expected is the reduction of tourists (with the intention of vacation) because of the fear that can arise as a result of news of the disaster. On the other hand, the news of calamity was able to cause curiosity of potential tourists who originally did not know about the place. Much of the
discussions have dealt with this issue from the supply perspectives, proposing both proactive planning frameworks and reactive crisis management system. Other research provides quantitative measures of the impact of crises or forecasts of their impact. A key component of effective crisis management, however, pertains to management of visitor perception and perception change. Although tourist image towards a destination has traditionally been regarded as resistant to change and relatively persistent. Perception changes can occur after natural disaster occurrences due to their devastating effects. Should tourists become victims of a natural disaster, the negative impact on the image of the destination concerned can be both serious and long-lasting.

The link between tourism and disaster is one negative thing. Tourism is often associated with fun, and tourists see safety and comfort as an essential thing in traveling. Disaster is one of the most vulnerable factors affecting the ups and downs of demand in the tourism industry. The decline in tourist numbers as a result of the tsunami of 24 December 2004 was felt in several tourist areas such as Phuket Thailand, in Langkawi Malaysia, China, Aceh Indonesia, and Sri Lanka. The recent eruption of Mount Merapi in 2010 has resulted in a decrease in the number of tourist arrivals in some tourist attractions in Sleman and Central Java by almost 50 percent. But nothing is impossible in tourism, because it could be a place of disaster then exposed to an exotic tourist attraction. DeMondShondell Miller (2008) calls disaster tours present poverty and an opportunity to experience the distress suffered by others. Dissatisfied tourists visit places with high emotional impacts as they relate to death, disaster and cruelty. Commoditization of places and events is not associated with something mystical or ecological but rather a way to get tourists closer to reality and gain real experience. There are things that remain to be considered when presenting disaster tourism especially disaster mitigation system to ensure the safety of tourists and people who are in the tourist destination. At the time of the recovery (recovery) at least not only filled with rebuilding activities but also create pre-disaster conditions to anticipate in the event of a disaster. So, the disaster is not a threat again for tourism, but it can be an opportunity. This shows that tourism is the most adaptive sector in all situations either economic events or natural events. The purpose of this research was to contribute to the understanding of tourists reactions towards a tourism destination after a natural disaster and their influences on future visit intention.

2. Literature review

2.1 Perceived risks.
The issue of safety and security associated with destinations has become a pressing concern amongst tourists. These uncertainties which have been studied in tourism includes physical risk, financial risk, health risk, time risk, social risk, satisfaction risk, health risk, terrorism risk, political instability risk and psychological risk. Recently, the rampant occurrence of both natural and man-made disasters --- epidemic diseases (e.g. SARS, H1N1 avian flu), terror attacks on September 11, 2001 in United States, the 2004 Aceh tsunami triggered by an earthquake in Indian Ocean and the recent Great Eastern earthquake in Japan in March 2011 – have all caused a negative impact on global tourism industry. These events often heighten the level of tourist’s perceived risk which in turn may deteriorate the image of the destination as tourist hot spots. In light with risks pertinent to tourism, this paper highlights the importance of perceived risks in altering tourists’ destination image which in turn may affect the behavioral intention of tourists.

2.2 Destination Image.
Tourism is a service related industry in which the nature of their products is intangible. Such intangibility nature of travel products poses difficulty for tourists to evaluate it, thus highlighting the importance of destination image as a close representation of the actual product. As such, destination images play a vital role in conveying the destinations’ physical attributes across to tourists [1]. Since touristic images are largely formed based on perception rather than reality, portraying an accurate image is, therefore, crucial to creating positive destination image. In order to promote destinations successfully, destination marketers have to create an appealing image of destination such that each destination has to be uniquely
positioned for it to compete against other destinations [2]. Thus, there is a need to understand perceived risk and its potential impact on destination image which in turn may affect tourist behavioral intentions.

Tourists’ perception of a destination’s image as a preferred destination choice for travel is crucial. As a traveler is deciding a travel destination among alternative choices, the subjective judgment he/she makes about the alternatives available to him/her depends on a number of factors, among which the most important of these is the image about each alternative [3, 4]. Destination Image is recognized as an important factor in tourist destination choice behavior as well as playing a part in tourist satisfaction, and with it the intention to recommend or return [5-10]. The image is an important representation of how tourists feel about a destination [11]. According to image refers to an individual’s beliefs, thoughts and impressions about a location, and provides tourists with a certain feeling of anticipation [12, 13]. It also represents their expectations as a destination, which can motivate them to make a visit [14]. Destination image can be linked to travel-related behavior, specifically whether tourists will revisit destination and whether they might recommend the destination to others [15]. Destination image measures typically assess what people know about a place, how they feel about it, and how they plan to action those thoughts and feelings. The motivations behind the tourists’ decisions during the selection or decision process concerning their next holiday destination needs to be evaluated [16, 17]. Studies have thus indicated that destination image plays a significant role in the competitiveness of destinations.

2.3 Travel motivation.

Tourist motivation is viewed by many authors as one of the key elements in understanding tourist decision-making behavior. Why do people travel? The answer to this basic question has occupied the minds of tourist researchers for many years [18-21]. Tourist motivation can be defined “as the global integrating network of biological and cultural forces which gives value and direction to travel choices, behavior, and experience”. Motivation has also been referred to as psychological/biological/social needs and wants, including internal (or emotional) and external forces. These forces describe how individuals are pushed by motivation variables into making travel decisions and how they are pulled or attracted by destination attributes. The “push” factors are defined as origin-related and refer to the intangible, intrinsic desires of the individual traveler, such as the desire to escape, rest and relaxation, adventure, health, and prestige [22]. “Pull” factors are defined as mainly relating to the attractiveness of a given destination and tangible characteristics such as beaches, accommodation and recreation facilities and cultural and historic resources. The literature review developed with suggestions that following the line of theorization considerable progress has been made to use “push” and “pull” factors as a bedrock for understanding tourist behavior [19, 23, 24]. Several studies have examined the tourist motive as a force field analysis of “push” and “pull” factors. “Push” factors are those that drive a tourist to travel and “pull” factors are those which attract a tourist to travel to a destination [19]. However, development motivational construct is somewhat restrained, this study attempted to fill this gap and to create a platform for future derivative works such as market segmentation, mapping of tourist activity, and so on [25].

2.4 Intention to revisit.

In relation to the world of tourism, purchasing decisions are assumed to be a visiting decision so that theories about purchasing decisions are also used with the intention of returning. Purchasing decision is an integration process that combines knowledge to evaluate two or more alternative behaviors and choose one of them. The decision is a selection of two or more of the available alternatives. In this case, alternative options should be available when the decision-making process is done. Alternative options are used as a comparison or reference when decisions are to be determined. Purchasing decision is an integration process that combines knowledge to evaluate two or more alternative behaviors and choose one of them. In general, consumer purchase decisions are the most preferred brand. Kotler and Armstrong (2008) define purchasing decisions as consumer activities in which to buy or use the most preferred services. From this understanding can be concluded that the purchase decision is a consumer choice that falls on a particular product where the product is the most preferred product of various
alternatives that exist: Cognitive image, affective image, and unique image (overall image). Word-of-mouth (WOM) is defined as a non-commercial action by providing person-to-person information by communicating something about a brand, a product, an organization, or a service perceived by a communicator. Since consumer purchases of service products are intangible, the decision process usually requires high engagement as there are risk factors that can be felt by purchasing a service product. Positive WOMs are an excellent resource for reducing perceived risk for clarification processes and feedback opportunities. In addition, it is considered an important source of information that may affect consumer choice of destination destinations. Ferdinand (2002) describes four indicators that can define repeat interest, namely: (1) transactional interest, i.e. a person's inclination to buy products; (2) a referential interest, i.e. a person's tendency to refer products to others; (3) preferential interests, i.e. interests that describe the behavior of someone who has a primary preference for the product. This preference can only be changed if something happens with its preferred product; and (4) explorative interest, this buying interest illustrates the behavior of a person who is always looking for information about the product he is interested in and seeking information to support the positive characteristics of the product.

3. Methodology

3.1 Survey development and sampling.
Being that the survey developed for this study examined the effects of a natural disaster on the behavioral intention to return a destination particularly natural attraction, the perceived risk, destination image and travel motivation to intention to return.

3.2 Data Collection and Data Analysis.
The data collection procedure is done in two stages: (1) done through literature study, that is by collecting data or literature from the results of research that have been done to get the picture in general and planning the appropriate form of analysis to solve the problem being encountered and official archives of agencies related to this research. (2) is done by collecting primary data through the distribution of questionnaires in the sample research. Data collection techniques through forms that contain statements submitted in writing to respondents to get answers or responses and information needed by researchers. In this study researchers set as many as 100 respondents. Analytical tool used is Structural Equation Modeling (SEM). SEM is a multivariate statistical technique that allows testing of a series of causal relationships between variables simultaneously so as to provide statistically efficiency.

4. Findings
After testing the assumptions and actions as necessary to the next error will be done fit model analysis with fit model criteria such as GFI (Goodness of fit index), adjusted GFI (AGFI), Tucker-Lewis Index (TLI), Comparative of fit index (CFI) and Root Mean Square Error of Approximation (RMSEA) for both individual and complete models. The model test results are evaluated based on the goodness of fit indices as well as the critical values that have the suitability of the data.
Table 1. Evaluation criteria goodness of fit indices perceived risk, destination image and travel motivation

| Goodness of fit | Cut-off value | Result | Remark   |
|----------------|--------------|--------|----------|
| Chi-Square     | Expected Small | $218.766 < (0.05: 119 = 139.702)$ | Marginal |
| Probability    | ≥0.05        | 0      | Marginal |
| CMIN/ DF       | ≤ 2.00       | 2.317  | Marginal |
| RMSEA          | ≤0.08        | 0.065  | Good     |
| GFI            | ≥0.90        | 0.931  | Good     |
| AGFI           | ≥0.90        | 0.889  | Marginal |
| TLI            | ≥0.90        | 0.854  | Marginal |
| CFI            | ≥0.90        | 0.907  | Good     |

Table 1 shows that the measurement model of perceived risk, destination image, and travel motivation then the model criteria have shown the existence of fit model or suitability between data with the model. This is evidenced by the eight existing fit criteria. Thus, the above model shows a good acceptance level and therefore it can be concluded that the model is acceptable. Furthermore, to know the variables that can be used as an indicator of perceived risk, destination image, and travel motivation can be observed from the loading factor value or lambda coefficient ($\lambda$) and its significance level reflecting each variable as an indicator in the following table.

Table 2. Loading factor ($\lambda$) measurement of perceived risk, destination image, and travel motivation.

| Indicator | Loading Factor | Probability | Remark  |
|-----------|----------------|-------------|---------|
| X1.1      | 0.556          | 0.000       | Significant |
| X1.2      | 0.612          | 0.000       | Significant |
| X2.1      | 0.601          | 0.000       | Significant |
| X2.2      | 0.724          | 0.000       | Significant |
| X2.3      | 0.586          | 0.000       | Significant |
| X3.1      | 0.689          | 0.000       | Significant |
| X3.2      | 0.753          | 0.000       | Significant |
| X3.3      | 0.654          | 0.000       | Significant |

Table 2 is the loading factor ($\lambda$) measurement of perceived risk variable, destination image and travel motivation show the test results on the measurement model of the three variables used from each indicator explaining the construct so that all indicators are included in the next test.
Table 3. Goodness of fit indices intention to return after disaster

| Goodness of fit | Cut-off value | Result | Remark   |
|-----------------|--------------|--------|----------|
| Chi-Square      | Expected Small | $211.680 < (0.05: 119 = 139.702)$ | Marginal |
| Probability     | $\geq 0.05$   | 0      | Marginal |
| CMIN/ DF        | $\leq 2.00$   | 2.401  | Marginal |
| RMSEA           | $\leq 0.08$   | 0.096  | Marginal |
| GFI             | $\geq 0.90$   | 0.976  | Good     |
| AGFI            | $\geq 0.90$   | 0.840  | Marginal |
| TLI             | $\geq 0.90$   | 0.854  | Marginal |
| CFI             | $\geq 0.90$   | 0.876  | Marginal |

Table 3 is an Intention to Return measurement model showing the fit model or suitability between data and model. Thus, the above model shows a good acceptance rate therefore, it can be concluded that the model is acceptable. Furthermore, to know the variables that can be used as an indicator of intention to return can be observed from the loading factor value ($\lambda$) and the level of significance that reflects each variable as an indicator of customer satisfaction and loyalty seen in the following table.

Table 4. Loading factor ($\lambda$) measurement of intention to return after disaster variables

| Indicator | Loading Factor | Probability | Remark   |
|-----------|----------------|-------------|----------|
| Y1.1      | 0.763          | 0.000       | Significant |
| Y1.2      | 0.587          | 0.000       | Significant |
| Y1.3      | 0.759          | 0.000       | Significant |
| Y1.4      | 0.506          | 0.000       | Significant |

Table 4 is the loading factor ($\lambda$) measurement of the intention to return variable that shows the test results against the variable measurement model of each indicator explaining the construct so that all indicators are included in the test.

Based on the empiric model proposed in this study can be submitted to the hypothesis proposed through the coefficient of path testing on the model of structural equations. Table 5 is a hypothesis testing by looking at the value of $p$-value, if smaller than 0.05 then the relationship between significant variables. Test results are presented in the following table.

Table 5. Hypothesis testing of direct effect

| HIP | Independent Variables | Dependent Variables | Standardized CR | $p$-Value | Remark |
|-----|-----------------------|---------------------|-----------------|----------|--------|
| H1  | Perceived Risk        | Intention To Return | 0.14            | 2.075    | 0.00   | Significant |
| H2  | Destination Image     | Intention To Return | 0.138           | 2.106    | 0.03   | Significant |
| H3  | Travel Motivation     | Intention To Return | 0.265           | 3.425    | 0.00   | Significant |
The results showed that Perceived Risk has a positive and significant influence on Intention to Return. This is because the indicators used are safety and safety as well as psychological risks. Both of these indicators have a significant impact on Intention to Return after Disaster. Likewise, with Destination Image, the results show that there is a positive relationship and significant impact on Intention to Return. This can be seen from indicators that are used is alternative choice, place, and perception of tourists. These three indicators have a significant impact on Intention to Return after Disaster. Travel Motivation also showed the same result that has a positive relationship and significant effect on Intention to Return after Disaster. This is seen from the indicators used are relaxation, adventure, and prestige.

5. Conclusion
Based on the results of research from 100 respondents, the conclusion is there is a positive and significant relationship between perceived risks to intention to return after a disaster. There is a positive and significant relationship between the destination image to intention to return after the disaster and there is a positive and significant relationship between travel motivation towards the intention to return after disaster.

6. Recommendation
The government through the Tourism Department promotes and improves the image of tourist destinations and the government guarantees security and convenience by fixing and improving disaster management facilities and providing rapid information and responses related to natural events that will occur. It is also advisable for developers of science related to the marketing of the tourism sector or further researchers to further study on what factors are driving the tourists to visit destinations that have experienced natural disasters, especially in the province of Sulawesi.

References
[1] Tasci A D and Gartner W A 2007 Destination image and its functional relationships J. Trav. Res. 45 413-425.
[2] Bata I G and Munir A R 2017 The influence of exotic service quality towards overall satisfaction at hotels in Makassar Int. J. Bus. Res. 15 311-319.
[3] Hunt J D 1975 Images as a factor in tourism development J. Travel Res. 13 1-7.
[4] Kye-Sung C 1990 The Role of Destination Image In Tourism: A Review and Discussion The Tourist Review 2 2-9.
[5] O’Leary S and Deegan J 2005 Career progression of irish tourism and hospitality management graduates Int. J. Contemp. Hospit. Manag. 17 421-432.
[6] Govers R and Go J 2003 Deconstructing destination image in the information age Inf. Technol. Tour. 6 13-29.
[7] Reilly M D 1990 Free elicitation of descriptive adjectives for tourism image assessment J. Trav. Res. 28 21-26.
[8] Lengkeek 2001 Leisure experience and imagination: rethinking cohen’modes of tourist experience Int. Sociol. 16 173-184.
[9] Chon K S 1991 Tourism destination image modification process J. Tourism Manag. 12 68-72.
[10] Bigne J E, Sanchez M I and Sanchez J 2001 Tourism image, evaluation variables and after purchase behavior: inter-relationship J. Tourism Manag. 22 607-616.
[11] Hu X and Bai K 2013 A study on the tourism destination image restoration scale: a contrast perspective of domestic and inbound tourists integration Tour. Trib. 28 73-83.
[12] Crompton J L 1979 An assessment of the image of mexico as a vacation destination and the influence of geographical location upon that image J. Trav. Res. 17 18-23.
[13] Fakaye P C and Crompton J L 1991 Image differences between prospective, first-time and repeat visitors to the lower rio grande valley J. Trav. Res. 30 10-16.
[14] Leisen B 2001 Image segmentation: The case of a tourism destination J. Serv. Market. 15 49-66
[15] Chi C G Q and Qu H 2008 Examining the structural relationships of destination image, tourist satisfaction and destination loyalty: An integrated approach J. Tourism Manag. 29 624-636.
[16] Jang S and Feng R 2007 Temporal destination revisit intention: The effects of novelty seeking and satisfaction J. Tourism Manag. 28 580-590.
[17] Hikmah H, Payangan O R, Munir A R and Jusni J 2018 The effects of tourism products, service quality and destination uniqueness to the satisfaction and loyalty of tourist in South Sulawesi J. Res. Sci. 6 91-100.
[18] Dann G M S 1996 Tourists’ images of a destination: An alternative analysis J. Trav. Tourism Market. 5 41-55.
[19] Uysal M and Jurowski C 1993 An empirical testing of the push and pull factors of tourist motivations Ann. Tour. Res. 21 844-846.
[20] Pearce P L 1982 Perceived changes in holiday destinations Ann. Tour. Res. 9 145-164.
[21] Yoon Y and Uysal M 2005 An examination of the effects of motivation and satisfaction on destination loyalty: A structural model J. Tourism Manag. 26 45-56.
[22] Uysal M and Hagan L A R 1993 Motivation of Pleasure Travel and Tourism ed M Khan and M Olsen (New York: Van Nostrand Reinhold) pp 798-810.
[23] Baloglu S and Uysal M 1996 Market segments of push and pull motivations: a canonical correlation approach Int. J. Cont. Hospit. Manag. 8 32-38.
[24] Klenosky D B 2002 The pull of tourism destinations: a means-end investigation J. Trav. Res. 40 385-395.
[25] Iso-Ahola S E 1983 Towards a social psychology of recreational travel J. Leisure Studies 2 45-56.
[26] Lehto Y X and Douglas A 2008 Mediating the effects of natural disaster on travel intention J. Trav. Tourism Market. 23 29-43.
[27] Paitoon 2017 The influence of travel motivation, information sources and tourism crisis on tourists destination image J. Tourism Hospitality 6 278.
[28] Pearce P L and Caltabiano M L 1983 Inferring travel motivation from traveler’s experiences J. Trav. Res. 22 16-20.