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DEVELOPMENT OF A TOURIST RISK PERCEPTION (TRP) SCALE

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Abstract

The goal of this research note is to outline the procedure for developing a scale for measuring Risk Perception among tourists. The data were collected from snowball sample of visitors to a tourist destination at the beginning of the tourist season. The findings support the presence of 6-risk classification as against the seven types of risks highlighted in the previous literature. Findings further revealed a new risk criteria being identified as Exhaustion Risk.

Keywords: *Tourism, Perceived Risk, Risk Types, Reliability, Validity*

INTRODUCTION

Risk and Tourism are interlaced as the purchase of vacation trip is naturally attached to risk (March and Woodside, 2005). Similarly, Intangibility, Heterogeneity, Perishability, and Inseparability characteristic are inherited by tourism being it service in nature (Mitchell and Greatorex, 1993). This service characteristic makes measuring of perceived risk more difficult.

Risk Perceptions and Safety measures along with the previous travel experience are expected to influence travel decisions; affecting the future travel decision of the visitors themselves and also others through the experiences being shared with others. The technical version of word of mouth is well-thought-out to offer many more opportunities and possibilities to stretch across market segments that were impossible to reach and access otherwise (Dellarocas, 2013). In the similar manner negative word of mouth via digital mode can affect equally in the opposite direction for destination marketers. This necessitates it for tourism organizers and planners to understand Risk perceived by visitors and take necessary steps to avoid them.

Risk is defined as some explicit aspect which can upset in some way the perception, experience or integrity of tourists during or after their stay at a destination (Fuchs and Reichel, 2011). In tourism context Risk Perception is defined as 'What is perceived and experienced by the tourists during the process of purchasing and consuming travel services and at the destination' (Reisingerand Mavondo, 2005, p. 213). 'Perceived risk is a function of uncertainty and its consequences' faced in the course of the buying decision (Moutinho 2000, p. 41).

Dimensions of the Perceived Risk

Risk perception is the subjective judgement that people make about the features and acuteness of a risk (Bauer, 1960). Bauer (1960) familiarized the concept of perceived risk to the marketing research from psychology. Jacoby and Kaplan (1972) classified perceived risk and this classification identifies six types of perceived risks (financial, performance, physical, psychological, social, and time), finds its application in the consumer behavior research.

Roehl and Fesenmaier (1992) classified perceived risk into seven types in exploring the association between perceived risk and travel decision (performance, financial, physical, psychological, satisfaction, social, and time). Travelers' perceived risk is a likely undesirable situation at the destination of travel and subdivided into physical and equipment risk basis six evaluation standards (transportation, public security, sanitation, accommodation, weather condition, and travel place) (Tsaur et al., 1997).

This research note proposes risk classification based on risk classification by Roehl & Fesenmaier (1992) because this classification significantly measures the different risks associated with forms of travel currently emergent all over the world. Roehl and Fesenmaier (1992) discovered three aspects of perceived: physical or equipment, vacation, and location - specific risk.

Roehl and Fesenmaier (1992) studied risks associated with tourists and highlighted seven risks related with tour decisions mentioned above, which form the base of the study.

These risk dimensions (Roehl and Fesenmaier, 1992) which form the base of this study are considered for a number of reasons. Firstly, researchers in this study demonstrated that perceived risk is a feature of any purchase that is associated

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with travel decision. Secondly, the study supported 2 important considerations which hold true in case of current study. First consideration is regarding identifying risk segments basis respondents risk perspectives. Secondly considering that the risk segments are situation or context specific (Jalilvand & Samiei, 2012). One noteworthy point of interest of context specific measures is that detailed perceived risk and risk reducing strategies can be obtained (Mitchell & Vassos, 1998; Jalilvand & Samiei, 2012).

Scale items were identified basis the review of literature. The authors through brainstorming exercises identified the relevant items specific to the study and followed scale validation procedures. Validation is an important first step before the scale to be accepted as a research tool (Hinkin, Bruce, & Enz, 1997). The scale developers have listed below the references of the literature that formed the base for identifying the scale items.

Le Serre & Chevalier (2012) have highlighted equipment risk and time risk in their study on understanding of senior travelers. In this study which was conducted from the perspective of travel research on senior consumers, the equipment risk highlighted as the problems which might arise with amenities provided during holiday and perceived time risk is measured by them based on the traveler perception of a trip as waste of time. Equipment risk would also include the travel arrangements or chances of being hurt when on vacation. Based on this study of senior consumers (Le Serre and Chevalier, 2012), the scale items in the equipment risk defined as danger due to non-standard equipment, requirement of training and guidance for using the equipment and harm due to use of standard or non-standard equipment which is not timely serviced. Four variables identified to measure time risk perception included travelers' perception regarding the time being well spent and that they would not be worried about any timely appointments when on vacation, time lost due to missing of the timelines of commuting from one place to another and wasting time by missing to their chosen way of conveyance.

Study on perceived risk and travel intentions (Qi, Gibson, and Zhang, 2009) have particularly identified four perceived risk factors that include, personal safety, cultural risk, socio-psychological risk and violence risk. The social and Cultural risk components of the study related closely to the current study parameters and includes the visitors' perception that the culture at the place of visit is strange and forbidding and perception about whether the visitor would be able to share their experience at the place of visit with others. Qi et al. (2009) have also analysed travel risks from psychological perspective of visitors, which lists factors such as disaapointment or displeasure. The current study measures psychological risk perception in terms of not being able to enjoy when on tour, disappointed due to some trivial issues when on vacation and occurance of some unpleasant incidences when on vacation.

Variables in the satisfaction risk criterion, namely the visitors fear of getting stressed while on vacation and fear of being unhappy about the overall travel experience is derived from the study on perceived risk in terms of travel intentions of travelers. (Qi et al. 2009) Impact of perceived risk on travel decisions in terms of its importance in actual risk reduction (Mitchell, Yamin and Pichene, 1997) formed the basis for physical and financial risk components in the scale. Basis the above study the factors comprising financial risk include, the travelers perception that they might be overcharged, pickpocketed and whether they will or will not get value for the money spent. Physical risk variables based on Mitchell (2002) study included strange or unhygenic food at the place of visit, environmental conditions and overall physical exhersion during travel.

STUDY DESIGN

The empirical study used structured classification of 7 risk types associated with travel decision (Roehl and Fesenmaier, 1992). 23 Likert type statements with seven-point response scale pertaining to the 7 risk criteria were identified. Scale validity and reliability was tested and questionnaire was designed for pilot study. The questionnaire was administered to respondents, who were international tourists visiting Goa at 5 different locations in the state and included 2 beaches, 2 places of worship and at the capital city of Panjim prior to their exploring different attractions/activities. Snow ball sampling method was used due to time constraint and predictable response rates.

For defining scale reliability and validity, Panel of experts were chosen to review the scale. Content validity discusses how precisely an assessment or measurement tool taps into the different facets of the exact construct in question and acts as evidence to the researchers about the scale items relevance, simplicity and clarity. Haynes, Richard and Kubany (1995, p.238) defined content validity as 'the degree to which elements of an assessment instrument are relevant to, and representative of, the targeted construct for a particular assessment purpose'. Authenticity of the data collected using the instrument is weighted basis the extensive information available about the scales' reliability and validity. 'Content validity is the degree to which an instrument has an appropriate sample of items for the construct being measured.' (Polit and Beck, 2004, p. 423). Expert judgement displayed as mathematical ratings are used strictly for making decisions about items, such as revising item wording, presentation of ideas, or deleting items (Polit and Beck, 2006).

RESULTS

The population from which the sample is drawn is self-selected via snowball sampling method. Since risk perception among tourists was to be measured, the questionnaire was administered to international visitors before them actually exploring different tourist attractions.

The scale comprising of 23 variables and 7 dimensions was assessed for inter-rater reliability. Fleiss Kappa (The multi item, multi-rater reliability) of the scale is 0.34, indicating fair agreement. The *Inter-rater reliability based on Fleiss Kappa value revealed classification of the variables in the constructs which was accepted for further analysis.*

To establish the relevance, clarity and simplicity of the scale, a panel of 6 experts was asked to rate each statement on a scale of 1-4. The panel comprised of four research experts and two tourism professionals. The Risk Variables Individual Content Validity Index (I-CVI) for all the items was in the range of 0.70 to 1.00. The Scale Content Validity Index for relevance (S-CVI =.81), for clarity (S-CVI =.87) and for simplicity(S-CVI = .87) reveal high content validity. The value for CVI above .78 is acceptable. Thus the individual variables scoring below .78 on CVI ratings were omitted from the scale. The final scale comprised on 21 variables was used for further Analysis.

In total, 130 questionnaires were distributed and the response rate was 72%. Thus 94 completed forms were collected. The survey captured between 12-15 different nationalities. Results stated that there was no significant different in the sociodemographic make-up of the individuals.

Cronbach's Alpha to Measure Internal Consistency

Table 1 below provides Cronbach's Alpha values for the risk dimensions. The Financial Risk (0.815) and Equipment Risk (0.844) depicted relatively high level of internal consistency. Satisfaction Risk (0.728) depicted high level of internal consistency and Time risk (0.581), lower level of internal consistency. Total risk (0.650) depicted low level of internal consistency.

Table 1: Cronbach's Alpha - Types of Risks

Sr. No.	Risk Dimension	Cronbach's Alpha	Variance Ratio	Internal Consistency
1	Financial Risk	0.815	9.141	Relatively High
2	Equipment Risk	0.844	10.150	Relatively High
3	Satisfaction Risk	0.728	3.512	High
4	Exhaustion Risk	Not applicable	-	-
5	Time Risk	0.581	2.426	Low
6	Psychological Risk	Not applicable	-	-
7	Total Risk	0.650	45.917	Low

Reliabilities of all the variables are acceptable as are above 0.55. Thus, it can be assumed that the average correlation of set of items is an accurate estimate of the average correlation of all the items.

Factor Analysis of the Types of Risk

Factor analysis was conducted through principle axis factoring, of the 21 variables. The variables with the communality value lower than 0.5 are unacceptable and thus those variables scoring less than 0.5 on communalities were deleted.

Eight factors were extracted which explained 51.75% variance. After rotation, 8 factors Cumulative variance was 61.57 %.

After the omission of the variables scoring low in the initial factor loading using principle axis factoring, Dimension reduction was done. Promax with Kaiser Normalization method was performed. Six dimensions revealed 88.102 % of variance.

Table 2 below calculates the rotated component matrix of the final 10 variables. As observed in the below table rotated component matrix revealed the risk dimensions for the 10 variables.

Table 2: Rotated Component Matrix

	Component					
	1	2	3	4	5	6
I fear pick-pocketing	.931					
I might be overcharged	.908					

	Component					
	1	2	3	4	5	6
I fear equipment may not be of standard quality		.918				
I fear of not getting proper training and guidance for using equipment		.916				
I think on the whole I will have a good experience			.905			
Perceive to feel content after visiting the place			.888			
Relaxed and not worried about time and appointments				.880		
I think the time will be well spent				.874		
I fear of getting stressed while on vacation					.975	
I fear that the hotel reservation and train tickets may contain mistake						.968
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.[a]						

Pattern matrix revealed factor loading of 14 variables. This plot revealed distinguished risk dimensions and the variables featured in the respective risk dimensions. The results were similar to the 7 types of risk scale referred initially except for Physical and Social Risk. Thus social risk and Physical risk were insignificant as per factor correlation and thus were omitted.

In the process of initial factor loading below 2 variables loaded together.

1. 'I Fear of being challenged physically'
2. 'I fear of getting stressed while on vacation'

Thus Physical and Mental Stress was loaded together in this case. Unfortunately, physical stress did not load in the later proceedings. Thus, this factor (I fear of getting stressed while on vacation) which is loaded individually is renamed as Exhaustion Risk (Exhaustion Risk is defined as risk characterized by extreme physical or mental tiredness or fatigue).

The Variables and their risk Dimensions identified are as below in Table 3

Table 3: Risk wise Classification of Variables

Variables	**Risk Types**
I fear pick-pocketing	Financial
I might be overcharged	
I fear of not getting proper training and guidance for using equipment	Equipment
I fear equipment may not be of standard quality	
Perceive to feel content after visiting the place	Satisfaction
I think on the whole I will have good experience	
I fear of getting stressed while on vacation	Exhaustion
Relaxed and not worried about time and appointments	Time
I think the time will be well spent	
I fear the hotel reservation and train tickets may contain mistake	**Psychological**

The authors propose a self-reported reliable, valid and multi-dimensional scale that can be administered for measurement of risk perceived by tourists.

DISCUSSION

In this research note, systematic procedure undertaken to develop a measure of Risk Types associated with travel decisions is described for its application in travel research. The resulting scale measures 6 types of perceived risks as against the 7 types identified by Roehl and Fesenmaier (1992). The scale possesses acceptable reliability, and preliminary assessments of scale validity were successful.

The factor analysis of significant perceived risk classification among visitors has led to the identification of a new risk dimension named 'Exhaustion Risk' in the 6 types of risks, which is found to be significant among the visitors.

The scale and construct offer several useful applications to theory development and testing. The scale finds its application in tourism research specifically measuring the risks associated with travel related decisions and also can be applied for measuring overall risk associated with tourism

and not encompassing over a single form of risk such as terrorism or natural calamity which is seen commonly in most research conducted after the occurrence of any event in particular.

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