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Review Paper

Tourism at Risk: A Review of Risk and Perceived Risk in Tourism

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Abstract: Since the 9/11 attack in 2001, a number of major tragedies, including the SARS outbreak, the Bali bombings, and the Asian tsunami, have swept the tourism industry across the globe. The impact of these crises was unprecedented and thus, it raises the necessity to review the existing risk literature in tourism. This paper reviews the multi-dimensional concept of risk in tourism by analyzing 46 selected articles following the guidelines of content analysis. The findings are categorized into four broad meaning themes: (1) the concept of risk, safety and security; (2) the research trend of risk in tourism; (3) the definitions and antecedents of perceived risk; and (4) risk as a positive element. Based on the analysis, a framework is proposed for future research. The originality of this study lies in its attempt to conceptualize a comprehensive framework of risk perception in tourism as the existing literature tends to be empirically skewed, resulting in theoretical frameworks underused or applied in a fragmented way.

Key words: Risk, perceived risk, safety, security, tourism

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Introduction

Greater disposable income and the burgeoning of budget airlines have transformed tourism from what was once the privilege of the rich into something affordable by the masses. As a result, tourism has become an important contributor to foreign exchange in many countries (Sönmez & Graefe, 1998b). With the increasing global mobility, considerable attention has been paid to the discussion of safety, security, and risk. Scholars generally contend that safety and security play vital roles in tourists' decision-making and travel experiences (Batra, 2008; Kovari & Zimanyi, 2011; Kozak, Crotts, & Law, 2007; Shin, 2005; Sönmez & Graefe, 1998a; Teng, 2005). Indeed, the 9/11 terrorist attacks in 2001 have demonstrated the impact of security risk on tourism which has resulted in a big slump in tourist flows and even regional stagnation (Kovari & Zimanyi, 2011; Shin, 2005).

Risks in tourism is a controversial research topic with many disputes and paradoxes. Although not directly focusing on risk, Cohen (1972) and Plog (1974) have inadvertently explored the risk attitude in tourism in their research on tourist typologies. Their work suggests the possibility of risk being a positive factor in tourism as some tourists are explorers or risk seekers. There has been an increasing number of tourism studies on risk and safety since 1970s (Maser & Weiermair, 1998; Milman, Jones, & Bach, 1999; Pizam, 1999; Sirakaya, Sheppard, & McLellan, 1997; Sönmez, Apostolopoulos, & Tarlow, 1999; Sönmez & Graefe, 1998a, 1998b; Tsaor, Tzeng, & Wang, 1997; Wilks & Atherton, 1994). The term 'risk' was used extensively in tourism research after the 9/11 incident (Dickson & Dolnicar, 2004; Fuchs & Reichel, 2006; Korstanje, 2011; Law, 2006; Lepp & Gibson, 2003; Pizam *et al.*, 2004; Quintal, Lee, & Soutar, 2010; Reisinger & Mavondo, 2005; Simpson & Siguaw, 2008; Williams & Baláž, 2013), followed by a couple of major tragedies including the SARS outbreak, the Bali bombings, and the Asian tsunami, which have shaken the tourism industry across the globe. The severity, frequency, and impact of these unprecedented tragedies have given rise to an increasing number of researches investigating the various aspects of risk in tourism.

Quoting the classic work of Maslow (1943), safety is the basic need of human beings. Much of the existing literature has lent support to this notion as they found that tourists tend to avoid destinations with higher potential risk (Batra, 2008; Law, 2006; Sönmez *et al.*, 1999). Shin (2005) aptly pointed out that peace is a prerequisite for the success of tourism. Nevertheless, tourism product is intangible, inseparable, heterogeneous, and perishable in nature which implies that the purchase of a holiday in itself is a risk (Mitchell & Greatorex, 1993; Williams & Baláž, 2013). This general disagreement on the role of risk in tourism merits further empirical and theoretical examination. This study, therefore, aims to analyze the trend of risk research in tourism and to develop a conceptual framework of risk by reviewing the existing literature on risk, safety, and security in tourism.

Methodology

The existing tourism literature concerning risk was reviewed and analyzed in a systematic manner. The selection of the articles was based on a set of criteria. Firstly, the title of the paper must include the following terms: risk, safety, or security. Secondly, the context of the article must be scoped within the field of tourism. Thirdly, published journal articles were preferred over other sources to ensure the quality and reliability of the content. As a result, 44 journal articles, one book chapter, and one conference paper were selected (see Table 1). The selection was based on articles published in a mix of journals but mainly included those widely cited in the risk literature. A total of 11 out of 46 articles were published before 2001 – the year when the 9/11 incident occurred. A preponderance of papers after 2001 was noted. It inadvertently supports Korstanje's (2011) view that the study of risk in tourism has attracted more attention after the 9/11 attack.

Table 1. List of selected articles

No.	Author(s)	Year	Title	Type of publication
1	Plog	1974	Why destination areas rise and fall in popularity	Journal article
2	Roehl & Fesenmaier	1992	Risk perceptions and pleasure travel: An exploratory analysis	Journal article
3	Wilks & Atherton	1994	Health and safety in Australian marine tourism: A social, medical and legal appraisal	Journal article
4	Sirakaya, Sheppard, & McLellan	1997	Assessment of the relationship between perceived safety at a vacation site and destination choice decisions: Extending the behavioral decision-making model	Journal article
5	Tsaur, Tzeng, & Wang	1997	Evaluating tourist risks from fuzzy perspectives	Journal article
6	Maser & Weiermair	1998	Travel decision-making: From the vantage point of perceived risk and information preferences	Journal article
7	Sönmez & Graefe	1998a	Determining future travel behavior from past travel experience and perceptions of risk and safety	Journal article
8	Sönmez & Graefe	1998b	Influence of terrorism risk on foreign tourism decisions	Journal article

Table 1. (cont)

9	Milman, Jones, & Bach	1999	The impact of security devices on tourists' perceived safety: The central Florida example	Journal article
10	Pizam	1999	A comprehensive approach to classifying acts of crime and violence at tourism destinations	Journal article
11	Sönmez, Apostolopoulos, & Tarlow	1999	Tourism in crisis: Managing the effects of terrorism	Journal article
12	Bentley, Page, Meyer, Chalmers, & Laird	2001	How safe is adventure tourism in New Zealand? An exploratory analysis	Journal article
13	Plog	2001	Why destination areas rise and fall in popularity - An update of a Cornell quarterly classis	Journal article
14	Seddighi, Nuttall, & Theocharous	2001	Does cultural background of tourists influence the destination choice? An empirical study with special reference to political instability	Journal article
15	Barker, Page, & Meyer	2003	Urban visitor perceptions of safety during a special event	Journal article
16	George	2003	Tourist's perceptions of safety and security while visiting Cape Town	Journal article
17	Lepp & Gibson	2003	Tourist roles, perceived risk and international tourism	Journal article
18	Dickson & Dolnicar	2004	No risk, no fun: The role of perceived risk in adventure tourism	Conference paper
19	Hall, Timothy, & Duval	2004	Security and tourism: Towards a new understanding?	Journal article
20	Pizam, Jeong, Reichel, <i>et al.</i>	2004	The relationship between risk-taking, sensation-seeking, and the tourist behavior of young adults: A cross-cultural study	Journal article
21	Reisinger & Mavondo	2005	Travel anxiety and intentions to travel internationally: Implications of travel risk perception	Journal article
22	Shin	2005	Safety, security and peace tourism: The case of the DMZ area	Journal article

Table 1. (cont)

23	Teng	2005	Risks perceived by Mainland Chinese tourists towards Southeast Asia destinations: A fuzzy logic model	Journal article
24	Cater	2006	Playing with risk? Participant perceptions of risk and management implications in adventure tourism	Journal article
25	Fuchs & Reichel	2006	Tourist destination risk perception: The case of Israel	Journal article
26	Law	2006	The perceived impact of risks on travel decisions	Journal article
27	Pizam & Mansfeld	2006	Toward a theory of tourism security	Book chapter
28	Kozak, Crotts, & Law	2007	The impact of the perception of risk on international travellers	Journal article
29	Nardi & Wilks	2007	Tourist water safety: Surf life saving initiatives for the Japanese inbound market	Journal article
30	Yüksel & Yüksel	2007	Shopping risk perceptions: Effects on tourists' emotions, satisfaction and expressed loyalty intentions	Journal article
31	Batra	2008	Foreign tourists' perception towards personal safety and potential crime while visiting Bangkok	Journal article
32	Simpson & Siguaw	2008	Perceived travel risks: The traveller perspective and manageability	Journal article
33	Gray & Wilson	2009	The relative risk perception of travel hazards	Journal article
34	Qi, Gibson, & Zhang	2009	Perceptions of risk and travel intentions: The case of China and the Beijing Olympic Games	Journal article
35	Korstanje	2009	Re-visiting risk perception theory in the context of travel	Journal article
36	Aschauer	2010	Perceptions of tourists at risky destinations - A model of psychological influence factors	Journal article
37	Chang	2010	Nationality's differences in youth tourists' travelling risk perceptions and satisfactions within Taiwan	Journal article

Table 1. (cont)

38	George	2010	Visitor perceptions of crime-safety and attitudes towards risk: The case of Table Mountain National Park, Cape Town	Journal article
39	Quintal, Lee, & Soutar	2010	Risk, uncertainty and the theory of planned behavior: A tourism example	Journal article
40	Fuchs & Reichel	2011	An exploratory inquiry into destination risk perceptions and risk reduction strategies of first time vs. repeat visitors to a highly volatile destination	Journal article
41	Kovari & Zimanyi	2011	Safety and security in the age of global tourism (The changing role and conception of safety and security in tourism)	Journal article
42	Wichasin & Dounghummes	2012	A comparative study of international tourists' safety needs and Thai tourist polices' perception towards international tourists' safety needs	Journal article
43	Björk & Kauppinen-Räsänen	2013	Destination countries' risk image as perceived by Finnish travellers	Journal article
44	Pennington-Gray & Schroeder	2013	International tourist's perceptions of safety & security: The role of social media	Journal article
45	Seabra, Dolnicar, Abrantes, & Kastenholz	2013	Heterogeneity in risk and safety perceptions of international tourists	Journal article
46	Williams & Baláz	2013	Tourism, risk tolerance and competences: Travel organization and tourism hazards	Journal article

The selected articles were analyzed according to the guidelines of content analysis which is an instrumental tool to make sense of text, audio, and image by coding and quantifying the occurring themes (Krippendorff, 1980). To be specific, an inductive content analysis was utilized to organize the selected literature through the process of open coding, categorizing, and abstracting (Berg, 2004). The articles were first scrutinized for the definitional discussion on safety, security, and risk. Subsequently, the literature was categorized into different themes based on the research foci. The emerged findings suggest risk perception as an important research strand in the study

of tourism risk. Thus, a third round of content analysis was carried out to examine the common topics discussed in risk perception studies. The findings of the analysis are presented in four broad meaning themes, followed by a conceptual framework which summarizes the main theories and concepts discussed in the selected literature.

Findings and Discussion

Theme 1: Risk, Safety, and Security

A number of risks have been highlighted in consumer behaviour literature, namely financial, functional, physical, social, psychological, time, satisfaction (Korstanje, 2009; Schiffman & Kanuk, 1991; Schiffman, Kanuk & Wisenblit, 2010), equipment (Tsaour *et al.*, 1997), situational (Korstanje, 2009), and the risk of opportunity loss (Fuchs & Reichel, 2011). Review of some tourism literature shows that financial, psychological, satisfaction, and time risks are relevant to pleasure travel (Roehl & Fesenmaier, 1992; Sönmez & Graefe, 1998a) whereas for other scholars, functional, physical, financial, social, and psychological risks are tourism-related (Björk & Kauppinen-Räsänen, 2013; Quintal *et al.*, 2010). All the aforementioned risks are borrowed from the consumer behaviour literature. It might be too early to conclude, but physical risk was not widely mentioned in tourism literature before the 9/11 incident (except Tsaour *et al.*, 1997) – at least not in the classic works of Roehl and Fesenmaier (1992) and Sönmez and Graefe (1998a) which are two of the most cited articles in the discussion of tourism safety and security.

One of the foci of this study is to review the concept of risk in tourism. It is perhaps important to first clarify the idea of risk, safety, and security before proceeding with further analysis and discussion. A preliminary review of the literature suggests that the definitions of safety, security, and risk are overlapping and confusing. According to Sönmez and Graefe (1998a), tourists' safety concern is a parallel concept to risk. Other studies (Maser & Weiermair, 1998; Reisinger & Mavondo, 2005) perceive safety and security as the subsets of risk. For example, Maser & Weiermair (1998) identified a range of travel-related risk which includes diseases, crime, natural disasters, hygiene, transportation, culture/language barriers, uncertainty of destination laws, and regulation. From the above list, crime can be identified as security-related risk whereas natural disasters and hygiene are associated with safety threat. Nardi and Wilks (2007) borrowed the definition of security from the renowned Servqual Model which suggested that security is "the freedom from danger, risk, or doubt" (Parasuraman, Zeithaml, & Berry, 1985, p. 47). This definition blurs the boundaries (if any) of safety, security, and risk. It infers that security is the opposite of risk and danger, which means 'no risk' equals to secure. This raises one question: where does safety fit into this definition?

The review of literature generally shows that the concepts of safety and security are different, but some studies have used these two terms interchangeably (George, 2003; Wichasin & Dounghummes, 2012). According to Hall, Timothy, and Duval (2004), tourism security is traditionally attached to issues of national security and political stability. Hall *et al.* (2004) stated, “for the tourism industry at least, security is now seen as more than just the safety of tourists” (p. 3) and “the term security resonates with deep seated longings to be safe” (p. 12). The above statements imply that safety and security are two distinctive but interrelated concepts. With the collapse of the Cold War divisions, the notion of security has evolved from warfare- and defence-focused to global- and people-centred (Johnston, 1992, as cited in Hall *et al.*, 2004). The nature of tourism security has changed significantly. On top of crime, terrorism, and national security, Hall *et al.* (2004) proposed to include health, social, and environmental issues in the lexicon of tourism security and sustainable tourism.

Hall *et al.* (2004) defined tourism security from a political standpoint. Using a tourism lens, Pizam and Mansfeld (2006) identified four types of security incidents that are malevolent to the industry: crime, terrorism, war, and civil/political turmoil. Safety, on the other hand, leans more towards health, accident, natural disaster, and other non-human induced incidents (Bentley, Page, Meyer, Chalmers, & Laird, 2001; Mansfeld & Pizam, 2006; Nardi & Wilks, 2007; Wilks & Atherton, 1994). Referring to this definition, SARS and the tsunami in Phuket can be considered as safety incidents whereas the 9/11 incident and the Bali bombings can be considered as security-related. Nevertheless, as an effect of globalization, human/tourist mobility across national and regional boundaries has reached an unprecedented level. As a consequence, the outbreak of diseases can be easily elevated from personal safety risk to global biosecurity risk (Hall *et al.*, 2004).

Theme 2: The Research Trend of Risk in Tourism

Table 2 presents a grouping of 46 articles pertinent to tourism risk dated from 1974 to 2013. In general, the selected articles cover five topics: (1) conceptualization and dimensions; (2) antecedents of perceived risk; (3) consequences of perceived risk; (4) risk and crisis management; and (5) others. As illustrated in Table 2, more than half of the selected articles studied risk factors and the majority of these studies investigated risk in the form of perceived risk rather than actual risk. In view of its significance implied by the findings, perceived risk will be discussed independently in the following sections.

Table 2. Literature review of tourism risk

Topics covered	Authors*
(1) Conceptualization and Dimensions	10, 18, 19, 24, 27, 35, 41
Conceptualization of risk in tourism	2, 5, 7, 10, 12, 15, 17, 18, 23, 25,
Identification or measurement of (perceived) risk	31, 32, 33, 34, 42, 43, 45
(2) Antecedents of Perceived Risk	1, 2, 7, 8, 13, 14, 15, 16, 17, 18, 20, 21, 22, 28, 31, 34, 36, 37, 38, 39, 40, 45, 46
(3) Consequences of Perceived Risk	1, 2, 4, 7, 8, 10, 13, 16, 20, 21, 26, 28, 30, 31, 34, 37, 38, 39, 40, 46
(4) Risk/Crisis Management	3, 9, 10, 11, 24, 29, 32, 44
(5) Others	
Information search and risk perception	6, 22, 26, 44
Host's perception on tourism risk	42

* 1. Plog (1974); 2. Roehl & Fesenmaier (1992); 3. Wilks & Atherton (1994); 4. Sirakaya *et al.* (1997); 5. Tsaour *et al.* (1997); 6. Maser & Weiermair (1998); 7. Sönmez & Graefe (1998a); 8. Sönmez & Graefe (1998b); 9. Milman *et al.* (1999); 10. Pizam (1999); 11. Sönmez *et al.* (1999); 12. Bentley *et al.* (2001); 13. Plog (2001); 14. Seddighi, Nuttall, & Theocharous (2001); 15. Barker, Page, & Meyer (2003); 16. George (2003); 17. Lepp & Gibson (2003); 18. Dickson & Dolnicar (2004); 19. Hall, Timothy, & Duval (2004); 20. Pizam, Jeong, Reichel *et al.* (2004); 21. Reisinger & Mavondo (2005); 22. Shin (2005); 23. Teng (2005); 24. Cater (2006); 25. Fuchs & Reichel (2006); 26. Law (2006); 27. Pizam & Mansfeld (2006); 28. Kozak *et al.* (2007); 29. Nardi & Wilks (2007); 30. Yüksel & Yüksel (2007); 31. Batra (2008); 32. Simpson & Siguaw (2008); 33. Gray & Wilson (2009); 34. Qi, Gibson, & Zhang (2009); 35. Korstanje (2009); 36. Aschauer (2010); 37. Chang (2010); 38. George (2010); 39. Quintal *et al.* (2010); 40. Fuchs & Reichel (2011); 41. Kovari & Zimanyi (2011); 42. Wichasin & Doungphummes (2012); 43. Björk & Kauppinen-Räsänen (2013); 44. Pennington-Gray & Schroeder (2013); 45. Seabra *et al.* (2013); 46. Williams & Baláz (2013).

A large proportion of the selected literature studied the impacts of risk perception on travel intention and behaviour. Many of these studies were found to be overlapping with studies on risk factors. It implies that the determinants and impacts of risk perception are perhaps the most popular topics in this field. Identifying the typology and dimension of risk and risk perception is another commonly studied topic. Articles focusing on this topic adopted a wide range of perspectives and approaches. Tsaour *et al.* (1997) is one of the first tourism studies to evaluate risks empirically using the Analytic Hierarchy Process (AHP) method and Fuzzy Multiple Criteria Decision-Making (MCDM) method. Other studies focused on the scaling of travel risks using psychometric analysis (Roehl & Fesenmaier, 1992) and Smallest Space

Analysis (SSA) (Gray & Wilson, 2009). There are also studies which measured risk of a specific destination, for instance, Israel (Fuchs & Reichel, 2006) and Thailand (Wichasin & Dounghummes, 2012).

Information search is another topic of increasing importance in the tourism risk literature. It can be attributed to the huge changes taking place in the means of communication in an era of social media dominance. For instance, Pennington-Gray and Schroeder (2013) studied the influence of Facebook and other social networks on tourist risk perception. The values of research on information encompass two aspects: (1) risk perception is built upon the available information that tourists are exposed to (Pennington-Gray & Schroeder, 2013; Shin, 2005); (2) information search is one of the risk-reducing activities (Reisinger & Mavondo, 2005; Roehl & Fesenmaier, 1992; Tsaur *et al.*, 1997). Sources of information are not limited to external media, for instance, media, travel advisory, and word-of-mouth. Internal sources including memory-based sources and personal experience also contribute to the formation of risk perception (Roehl & Fesenmaier, 1992).

Theme 3: The Definitions and Antecedents of Perceived Risk

The Perceived Risk

Past studies suggest that tourists are concerned about or experience risk that is related to themselves (Budescu & Wallsten, 1985; Reisinger & Mavondo, 2005) or those they are able to perceive (Quintal *et al.*, 2010). Majority of the studies investigated perceived risk rather than actual risk, thus highlighting its importance. For instance, Roehl and Fesenmaier (1992) discovered three dimensions of perceived risk, including physical-equipment risk, vacation risk, and destination-specific risk. A more recent work done by Pennington-Gray and Schroeder (2013) on international tourist safety and security perceptions suggested seven types of perceived risk related to tourists, which include crime, disease, physical, equipment failure, weather, cultural barriers, and political crises. Table 3 presents five selected definitions of perceived risk from the literature.

Table 3. Selected definitions of perceived risk

Authors	Definitions
Dickson & Dolnicar (2004, p. 9)	"... perceived risk is an individual's subjective assessment of the real risk while the real risk is the amount of risk that actually exists at that moment given the application of safety controls (Haddock, 1993)."
Reisinger & Mavondo (2005, p. 213)	"... refers to the individual's perceptions of the uncertainty and negative consequences of buying a product (or service) (Dowling & Staelin 1994), performing a certain activity, or choosing a certain lifestyle."

Table 3. (cont)

Teng (2005, p.99)	“... a consumer’s perceptions of the uncertainty and adverse consequences of engaging in an activity.”
Chang (2010, p. 21)	“The perceived risk is an individual’s subjective assessment of the real risk present at any time (Haddock, 1993) and is very different from absolute risk or real risk.”
Fuchs & Reichel (2011, p. 267)	“Perceived risk is defined as ‘A consumer’s perception of the overall negativity of a course of action based upon an assessment of the possible negative outcomes and the likelihood that those outcomes will occur.’ (Mowen & Minor, 1998, p.176).”

Perceived risk is more researched than actual risk as it is almost impossible to identify the actual scale and range of risk (Bentley *et al.*, 2001). Official statistics can only be used as a reference as not every victim reports to the police or is admitted to the hospital. On the contrary, it is important to explore tourists’ risk perception because how tourists perceive risk is likely to affect their current and future travel decisions (Yüksel & Yüksel, 2007). Borrowing the words from the renowned American sociologists – William Isaac Thomas and Dorothy Swaine Thomas, “if men define situations as real, they are real in their consequences” (Thomas & Thomas, 1928 cited in Schusterschitz, Schütz, & Wiedemann, 2010, p. 374). The above statement lends support to the power of perception. Nonetheless, it does not mean that studies on tourists’ risk perception are free from dispute. As Dickson and Dolnicar (2004) pointed out, risk perception is highly subjective.

From a socio-psychological point of view, the biggest challenge faced by risk research in tourism is the definition of risk perception itself (Korstanje, 2009; Quintal *et al.*, 2010). Korstanje (2009) argued that studying risk perception prior to the actual holiday is merely an exploration of anxiety as there is a lack of direct stimuli. Anxiety is more accurate in this sense as the respondents’ perception is built upon their own fantasy and imagination towards future vacations. According to Korstanje (2009), fear and risk perception are formed with the presence of direct stimuli. Therefore, it will be significant to explore the *in situ* and *ex post facto* risk perception (Fuchs & Reichel, 2006).

The Antecedents of Risk Perception

Tourists’ risk perception is shaped by two factors – internal and external factors. Internal factors are closely related to tourists themselves whereas external factors include the aforementioned information sources such as travel advisory and media as well as destination image (Heung, Qu, & Chu, 2001). The external sources provide tourists with the information of actual risks which they might encounter when

travelling to the destination. However, it is the internal factors that determine the interpretation and perception of these informed risks.

The findings of this study revealed 15 internal factors that can influence tourists' risk perception. These were categorized into four dimensions, namely sociocultural, socio-demographic, psychographic, and biological. As presented in Table 4, nationality and past experience were found to be the most significant factors shaping tourists' risk perception. A substantial number of past studies adopted Hofstede's (2001) five cultural dimensions to examine the causal linkages between risk attitudes and social norms in different countries (George, 2010; Korstanje, 2009; Kozak *et al.*, 2007; Quintal *et al.*, 2010; Reisinger & Mavondo, 2005; Seabra, Dolnicar, Abrantes, & Kastenholtz, 2013). Socio-demographic factor is another popular dimension in examining the underlying factors of tourists' risk perception (Aschauer, 2010; Chang, 2010; Sönmez & Graefe, 1998b; Williams & Baláz, 2013).

Table 4. The internal factors of risk perception

Authors	Nationality	Cultural Orientation	Education	Income	Age	Gender	Tourist Role	Past Experience	Lifestyle	Motivation	Novelty Preference	Attitude	Value	Personality	DNA
	Sociocultural		Socio-Demographic					Psychographic					Biological		
1 Plog (1974)				•					•	•					•
2 Roehl & Fesenmaier (1992)								•			•	•			•
7 Sönmez & Graefe (1998a)								•				•	•	•	
8 Sönmez & Graefe (1998b)			•	•	•	•		•	•	•		•	•	•	
13 Plog (2001)									•		•				•
14 Seddighi <i>et al.</i> (2001)	•	•										•			
15 Barker <i>et al.</i> (2003)	•	•			•	•									•

Authors	Nationality	Cultural Orientation	Education	Income	Age	Gender	Tourist Role	Past Experience	Lifestyle	Motivation	Novelty Preference	Attitude	Value	Personality	DNA
	Sociocultural		Socio-Demographic					Psychographic					Biological		
	←-----→														
16 George (2003)	•							•							
17 Lepp & Gibson (2003)	•				•	•	•	•			•			•	
18 Dickson & Dolnicar (2004)											•			•	•
20 Pizam <i>et al.</i> (2004)	•	•					•				•			•	
21 Reisinger & Mavondo (2005)		•						•	•	•	•			•	
22 Shin (2005)	•	•						•				•			
28 Kozak <i>et al.</i> (2007)	•	•			•	•		•							
31 Batra (2008)	•														
34 Qi <i>et al.</i> (2009)						•	•								
36 Aschauer (2010)	•	•	•		•	•	•	•		•	•	•	•	•	•
37 Chang (2010)	•	•	•	•		•									
38 George (2010)	•	•			•					•		•			
39 Quintal <i>et al.</i> (2010)	•	•						•				•			
40 Fuchs & Reichel (2011)								•		•					
45 Seabra <i>et al.</i> (2013)	•	•		•				•		•					
46 Williams & Baláz (2013)			•		•	•	•	•							
Total (N = 23)	13	11	4	4	7	9	4	13	4	6	8	8	3	11	1

It is reasonable to postulate that even from the same nation or age group, tourists are heterogeneous in terms of their risk perception (Seabra *et al.*, 2013). Some people prefer packaged tours, whereas others prefer offbeat travel experience. Thus, it is essential to examine risk perception at the micro level, which is at the individual level. Back in the 1970s, Cohen's (1972) classic work, *Toward a Sociology of International Tourism*, proposed a multidisciplinary model that links sociology to the realm of psychology where it categorizes tourists into four distinctive roles based on the individual's preference of novelty or familiarity: organized mass tourist, independent mass tourist, drifter, and explorer (Aschauer, 2010; Lepp & Gibson, 2003; Reisinger & Mavondo, 2005; Seabra *et al.*, 2013; Williams & Baláž, 2013). Lepp and Gibson (2003) were the first to systematically investigate the influence of tourist role and their preference for novelty or familiarity on risk perception. The need for novelty was found to be related to the individual lifestyle (Bello & Etzel, 1985) as well as personality (Plog, 1974). One of the most cited works associated with tourists' risk perception would be the classical work of Plog (Korstanje, 2009; Kozak *et al.*, 2007; Lepp & Gibson, 2003; Pizam *et al.*, 2004; Reisinger & Mavondo, 2005; Sönmez & Graefe, 1998b). Plog (1974; 2001) categorized tourists based on their personality and motivation into three scales. One is psychocentric tourists, for instance, mass tourists who seek familiar, safe, and secure destinations. The opposite of psychocentric tourists are allocentric tourists who strive for novelty and exotic experiences, at times, risky experiences. Mid-centric tourists who account for the largest segment of tourists are those who fall in between the aforementioned two extremes. Plog's work, however, was not without any dispute. Critics pointed out that the proposed tourist personality types lacked rigor (Korstanje, 2009) and were addressed in an oblique manner (Williams & Baláž, 2013). Taking up a psychological perspective, Korstanje (2009) urged risk perception researchers to adopt the Attachment Theory which investigates travellers' childhood memories in order to fully understand why some individuals are more adventurous or have higher endurance than others when it comes to risk.

Apart from the psychographic perspective, Dickson and Dolnicar (2004) also brought to light the biological explanation of tourists' risk perception. They examined the existing literature on adventure tourism and found that a novelty-seeking personality can be attributed to the DNA sequence. Past studies also indicate that approximately 40% of the novelty-seeking attribute is inherent (Hamer & Copeland, 1998, as cited in Dickson & Dolnicar, 2004).

Theme 4: Risk as a Positive Element – The Notion of no Risk no Fun

Risk is not necessarily something to be avoided (Korstanje, 2009). Reisinger and Mavondo (2005) pointed out that safety, security, and particularly, stress-free

travel are pivotal factors that influence future travel intentions. Nevertheless, the researchers also admitted that there is an increasing demand for perceived risk. Past studies indicate that tourists are likely to have certain needs for each vacation. For some individuals, an optimal level of perceived risk is essential as it forms the exciting part of travel (Cater, 2006; Dickson & Dolnicar, 2004; Quintal *et al.*, 2010). In Dickson and Dolnicar's (2004) review of the role of perceived risk in adventure tourism, the researchers suggested two possible benefits that tourists may gain when they participate in risky activities: (1) scary and thrilling but exciting experiences; (2) insights and personal growth. This argument is supported by Cater (2006) who found that the most successful adventure tourism operators are those who manage to reduce actual risk and increase the level of fear and thrill which are the subjective emotional responses to perceived risk. These existing studies which propose risk as a positive element in tourism has set the stage for future research to identify the risk seekers, and to explore why and how they are attracted to risk as well as the reasons of why risk-averse travelers sometimes make risky choices.

Conceptual Framework of Risk in Tourism

Risk perception is a multidimensional and multidisciplinary concept in nature (Fuchs & Reichel, 2006). As discussed, the underlying factors of risk perception range from macro determinants to micro attributes. Based on the findings and discussion above, a conceptual framework of risk in tourism is proposed in Figure 1.

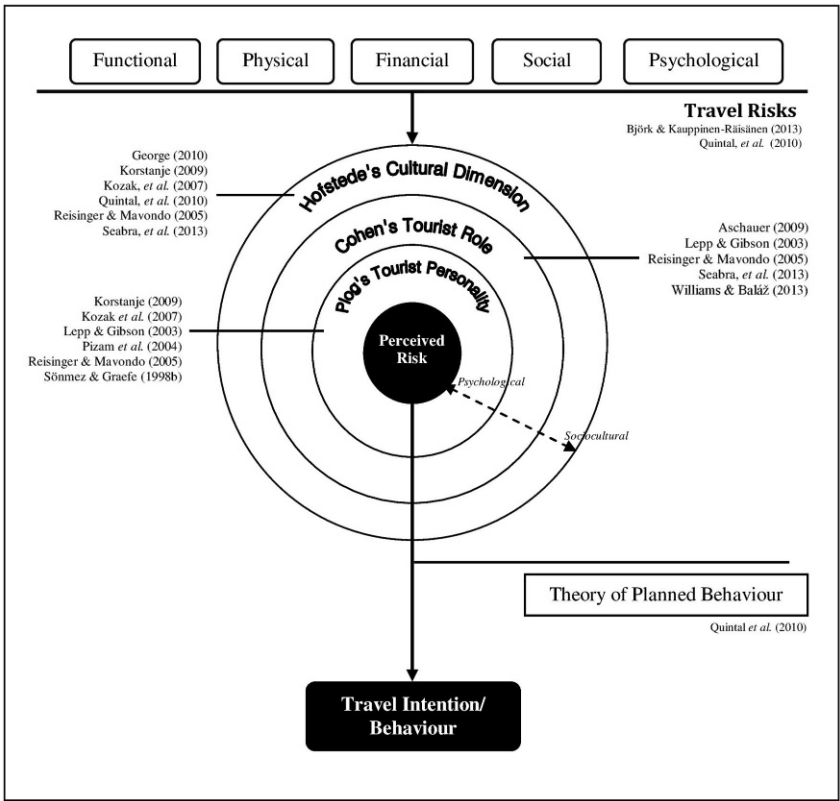


Figure 1. Conceptual framework of risk in tourism

As presented in Figure 1, the first layer of the framework lists the actual risks of travel which were adopted from Quintal *et al.* (2010) and Björk and Kauppinen-Räsänen (2013). The second layer of the framework proposes three widely cited theories based on selected literature: Hofstede’s (2001) cultural dimensions, Cohen’s (1972) tourist role, and Plog’s (1974) tourist personality. The above theories provide instrumental lens to analyze and interpret the underlying factors of tourists’ risk perception from the broader cultural orientation (Hofstede, 2001), moving towards the socio-psychology of the tourist role (Cohen, 1972), and towards the psychographic examination of the individual’s personality (Plog, 1974; 2001). The outcome of the analysis is expected to contribute a comprehensive understanding of tourists’ risk perception. The impact of risk perception on travel intention and travel behaviour is investigated in the third layer of the framework. The renowned Theory of Planned Behaviour (Ajzen, 1991; Quintal *et al.*, 2010) is proposed to examine the relationships between risk perception, attitude, subjective norms, perceived behavioural control, and ultimately, travel intention and travel behaviour.

Conclusion

This paper reviews the existing literature on risk and perceived risk in tourism. The originality of this study lies in its attempt to conceptualize a comprehensive framework of risk perception in tourism, as existing literature tends to be empirically skewed resulting in the dearth of theoretical understanding. The current study contributes to the understanding of risk in tourism by reviewing the core concepts and research trends of risk in tourism. A taxonomy of the underlying factors of risk perception is presented. Based on the findings, a conceptual framework is proposed for further investigation. Drawing on the existing literature, three renowned theories are integrated in the framework to provide a comprehensive understanding of risk perception. The impact of risk perception on travel intention and travel behaviour is suggested to be examined using the theory of planned behaviour.

The limitation of this study lies in the inherent nature of a review whereby all arguments are built upon secondary data. In addition, due to content and word limitations, only 46 articles were selected for this review. As a result, the findings of this study are merely based on a thin slice of the whole risk literature in tourism. Future studies should consider covering more literature and using 9/11 as the watershed event to observe if there is any difference in terms of research direction before and after the devastating attack. Future studies can also be extended to examine the feasibility of the proposed framework in explaining the determinants of risk perception and predicting its effect on travel intention.

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