RISK PERCEPTION AND DOMESTIC TRAVEL INTENSION DURING THE COVID-19 PANDEMIC: A CONCEPTUAL PAPER

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ABSTRACT

This conceptual paper aims to conceptualise the impact of the risk perception on travel intention during the COVID-19 pandemic. Based on a systematic review of the relevant literature, the current study proposes a new conceptual model that incorporates the theory of planned behaviour with the multidimensional risk perception model to understand the behavioural intention of domestic travellers during the COVID-19 pandemic. The validity of the newly proposed conceptual model could be tested by using the empirical data in the future study.

1.0   INTRODUCTION

In social science research, the theory of planned behaviour (TPB) has been a dominant theoretical framework to explain a broad variety of human behaviours, including travel behaviour (Sommer, 2011; Hsu and Huang, 2012; Boguszewicz-Kreft et al., 2020). An interaction between beliefs, attitudes, norms and behavioural control would jointly determine the behavioural intension in this framework. In its original model or the theory of reasoned action (TRA), Ajzen and Fishbein (1977) identified only two elements, namely attitude and subjective norms, as the determinants of human behaviour. Later, Ajzen (1985) added one more factor or perceived control behaviour to improve the TRA framework.

Tourism could be referred to as a socio-economic phenomenon that would involve people's movement from the usual environment to unusual areas (UNWTO, 2020). In the tourism research, the TPB also is one of the best-supported models to explain the travel behaviour (Bae and Chang, 2020; Bamberg, Ajzen and Schmidt, 2003; Kaplan et al., 2015). For example, Cheng et al. (2006) employed the TPB to discuss word-of-mouth communication in Chinese restaurants. Kaplan et al. (2015) used the theoretical framework to examine the intention to choose transportation mode. Amaro and Duarte (2015) analysed intentions to purchase travel online by using this theory.

However, the outbreak of the COVID-19 pandemic may induce researchers to rethink the validity of the TPB to examine the travel behaviour because this pandemic may raise awareness of the risk associated with the travel. A risk is a part of life and an essential component of economic activity (Knight, 1921) which could affect firms" production (U & So, 2020; Wen, Kozak, Yang, & Liu, 2020) and consumers' consumption (Bauer, 1960). In modern society, the travel is a crucial economic activity and, at the same time, it could be considered as a fundamental human need (Bae and Chang, 2020; Ding et al., 2020). On the

other hand, travel could be a complicated process which would involve some kind of risks.

Travel behaviour is very vulnerable to risks due to the intangible character of the risk(Hasan, Ismail, & Islam, 2017). In this sense, the COVID-19 would create an intricate tension between basic travel needs and risk perception among travellers (Bae and Chang, 2020; Ding et al., 2020). Thus, there is a need to reconsider existing theoretical model by taking account of a conflicting need for travel and safety during the COVID-19 pandemic (Bae and Chang, 2020; Ding et al., 2020).

Against this backdrop, this study attempts to propose a conceptual framework that would incorporate the TPB with the perception of risk associated with travel. In tourism research, risk perception could be considered as a subjective assessment of travel security that would affect tourists' purchase intention (Cui et al., 2016). The basic question in this context could be: how to measure the perception of travel risk. The current study chooses the multidimensional risk perception model known as the tripartite risk perception (TRIRISK) model to capture the perception of travel risk during the COVID-19 pandemic. Ferrer et al. (2016) claimed that the TRIRISK model of deliberative, affective, and experiential risk perception could provide a more comprehensive theoretical framework which could contribute to improving the predictive validity of risk perception model.

The contribution of the current study is threefold. Firstly, the current study examines critically previous research on travel risk perception and develop three research questions the travel behaviours during the COVID-19 pandemic. Secondly, the current study systematically reviews existing tourism research literature to examine the relationship between the main constructs. Thirdly, based on systematic literature, the current study propose a new conceptual framework which could combine the travel risk perception with the TPB. The current paper consists of the following six sections. In the following section, the second section criticises on the existing model for travel risk perception and develop three research questions. The third section explains the research method which is adopted in the current study. The fourth section reviews relevant literature on key concepts by highlighting the determinants of domestic travel intention. The fifth section is the discussion which proposes a new conceptual framework. The final section is the conclusion.

2.0   THEORETICAL MODEL FOR TRAVEL RISK PERCEPTION

Before the COVID-19 pandemic, human society suffered from numerous health crises, such as SARS, H1N1, or Ebola (Aydın and Ari, 2020; OCDE, 2020; IRTS, 2010). However, the COVID-19 is a far more serious threat to the global tourism market and travel behaviour than any previous pandemic outbreaks (Wen et al., 2020; Zhu and Deng, 2020). In other words, the COVID-19 pandemic is the "game-changer" that would significantly raise travel risk perception and fundamentally alter travel behaviours (Accenture, 2020; OCDE, 2020; Huang, Dai, and Xu, 2020). For example, over fifty percent of potential travellers decided to postpone or cancel their travels and hotel bookings (Gursoy and Chi, 2020). Thus, researchers may need to reconsider the existing theoretical model for the analysis of travel risk perception during the Covid-19 pandemic.

Numerous studies did incorporate travel risk perception in their analysis of travel behaviour in the pre-COVID-19 pandemic period (Roehl and Fesenmaier, 1992; Conway and Shrestha, 2005; Arana and Leon, 2008). However, there are three main shortcomings in these studies. Firstly, these studies could not take into account the immense effects of Covid-19 pandemic. In other words, these studies lacked understandings of the massive impact of the COVID-19 pandemic on travel behaviour which is far more significant (Wen et al., 2020; Zhu and Deng, 2020; Wen, Kozak, Yang, & Liu, 2020) than former tourism crises

(Neuburger and Egger, 2020). Secondly, these studies largely focused on the terrorism-related travel risk perception (Sonmez, Apostolopoulos and Tarlow, 1999; Sonmez and Graefe, 1998; Arana and Leon, 2008; Bhattarai, Conway and Shrestha, 2005), rather than health-related travel risk perception (Neuburger and Egger, 2020). As a consequence, these studies could not be applied for the analysis on the travel risk perception caused by the COVID-19 pandemic. Thirdly, these studies mainly focused on the antecedent of the travel risk perception (Reichel, Fuchs and Uriely, 2007; Roehl and Fesenmaier, 1992) rather than the consequence of travel risk perception (Gursoy and Chi, 2020). These studies could be used to identify factors that would affect specific travellers" travel risk perception. The COVID-19 pandemic would have impacts on almost all travellers due to its massive impact and its travel restrictions.

In this context, recent studies which are conducted in the post-COVID-19 pandemic period could be relevant in examining the association between travel risk perception and travel behaviour (Bae and Chang, 2020; Neuburger and Egger, 2020; Zhu and Deng, 2020). For instance, Bae and Chang (2020) examined the impact of travel risk perception on tourists' intention for the 'untact' tourism during the COVID-19 pandemic period in South Korea. Neuburger and Egger (2020) examined the impact of travel risk perception on travel behaviour in Germany, Austria, and Switzerland during the COVID-19 pandemic period. The effect of travel risk perceptions on the intentions of 'rural' tourists during the COVID-19 pandemic has been discussed by Zhu and Deng (2020).

These recent studies are valuable research for the analysis of the relationship between travel risk perception and travel behaviour in the post-COVID-19 pandemic period. However, these studies also have some shortcomings. For example, Neuburger and Egger (2020) used a unidimensional risk perception model which would not have any distinctive dimension among risk perception measurements. Their study may exclude a possibility that risk perception measurement could be separated into several dimensions. By contrast, Zhu and Deng (2020) employ more sophisticated risk perception model which includes seven separate dimensions, namely physical risk, psychological risk, performance risk, financial risk, social risk, equipment risk and time risk. However, some of these dimensions do not have direct linkage with the COVID-19 pandemic.

In this sense, a bidimensional risk perception model which is employed by Bae and Chang (2020) could be the most relevant study to analyse the impact of travel risk perception on travel behaviour during the post-COVIT-19 period. Thus, the current study uses Bae and Chang"s theoretical model with a minor modification. Their bidimensional travel risk perception model included two risk perception, namely cognitive risk perception and affective risk perception. However, Tversky and Kahneman (1974) famously argued that heuristics are used to make a decision under uncertainty. Heuristics is a short-cut mental strategy to give a solution to a complex problem, such as travel under the COVID-19 pandemic. By incorporating the heuristic nature of travel risk perception, the current study employs the TRIRISK model (Ferrer et al., 2016) that includes deliberative risk perception, affective risk perception and experiential risk perception, rather than Bae and Chang"s bidimensional model.

There are similarity and difference between the TRIRISK model and the bidimensional model. Firstly, a common factor in these models is affective risk perception which has a close connection with feeling and emotion. In this sense, affective risk perception is not always driven by rationality, but it is an emotional response to risk (Ferrer et al., 2016). Secondly, a similar factor in these models is rational risk perception. This rational risk perception is called "deliberative" risk perception in the TRIRISK model while it is named "cognitive" risk perception in the bidimensional model. This type of risk perception

is a systematic and reason-based assessment which has a close connection with probability calculation and utility maximization (Ferrer et al., 2016). Thirdly, a new factor in the TRIRISK model is experiential risk perception which is a rapid and heuristic nature of risk perception. The experiential risk perception is a quick mental response to an uncertain risk which involve in a gut feeling, mental image and narratives (Ferrer et al., 2016).

In the TPB, the relationship between beliefs and behavioural intension would be intervened by three mediators, namely attitudes, subject norms and perceived behavioural control. However, risk perception would play a dominant role to determine travel behaviours during the COVID-19 pandemic (Bae and Chang, 2020; Neuburger and Egger, 2020). Thus, this study replaces the beliefs with travel risk perception. In other words, three mediators in this study will intervene the relationship between travel risk perception and behavioural intention.

Thus, there are following three research questions (RQ) in the current study;

RQ1: Would risk perception (i.e., deliberative, affective, and experiential) affect attitude, subjective norms, perceived control behaviour, and behavioural intention

RQ2: Would attitude, subjective norms, and perceived control behaviour affect the behavioural intention

RQ3: Would Attitude, subjective norms, and perceived control behaviour mediate the relationship between risk perception (i.e., deliberative, affective, and experiential) and behavioural intention

3.0   METHODOLOGY

This study conducted a systematic literature review to answer three research questions. The relevant articles were strictly searched from "Web of Science Core Collection" by using a combination of keywords including "risk perception and behavioural intention," "multiple dimensions of risk perception," "factors impact on behavioural intention," "risk perception in tourism and COVID-19", and "the effects of COVID-19 on tourism", "the tripartite model of risk perception (TRIRISK)," and "theory of planned behaviour." The search yields journal articles covering the period between 1960 and 2020.

4.0   LITERATURE REVIEW

4.1   Tourism risk perception

As a service-oriented industry, tourism includes intangibility, heterogeneity, perishability, inseparability, and variability, which is different from perceived risk than goods (Hasan, Ismail and Islam, 2017). In other words, the risk of tourism also involves compiling factors which are beyond control during consumption of the tourism service (Cui et al., 2016). The previous studies (Dillard et al., 2012; Bae and Chang, 2020) show that individuals generally rate the likelihood of future events using the available heuristics. Therefore, the researchers usually have tested the risk perception instead of real risk due to individuals' risk perception as the primary factor of human behaviour (Dillard et al., 2012; Bae and Chang, 2020). The theory of risk perception proposed originally by Bauer in 1960, which is an essential

theoretical basis, explains consumers' decision-making behaviour (Wang et al., 2020). Risk perception is regarded as an individual's subjective evaluation based on the likelihood of an event's negative consequences (Bae & Chang, 2020; Bauer, 1960; Paek & Hove, 2017). Some scholars describe risk perception as the concept of an individual's attitude and intuitive judgment towards risk (Cui et al., 2016; Hasan, Ismail and Islam, 2017) to predict their health-related or risk-related decisions (Paek et al., 2017). In other words, individuals will reduce their risk actions when taking a risk-related problem (Waters, Ackermann, and Wheeler, 2019). Tourism risk perception is the tourists' judgment of the uncertain activities or processes in tourism, impacting tourists' decision-making behaviours if they believe the perceived risk is beyond acceptance (Chew & Jahari, 2014; Wang et al., 2020).

Based on previous researches, tourism scholars have widely discussed the relationship between perceived risk and tourist behaviours since the 1990s (Huang et al., 2020). Moreover, perceived risk plays a vital role in individuals' travel decision-making (Quintal, Lee and Soutar, 2010). In this study, COVID-19 is categorised under the health risk that impacts the individuals' decision behaviours in tourism. Moreover, the health risk (e.g., SARS, H1N1, and Ebola) has been proven to impact the tourism economy and tourist behavioural intention (Neuburger and Egger, 2020). In terms of the unprecedented COVID-19 pandemic, it is necessary to explain the relationship of risk perception of COVID-19 and travel behaviour. Therefore, risk perception theory is essential to be applied in the tourism field under COVID-19.

4.2 Tripartite model of risk

From relevant studies, risk perception can be characterized into three dimensions (i.e., deliberative, affective, and experiential), also called TRIRISK (Ferrer et al., 2016).

• Deliberative risk perception as an individual is a reasoned judgment that reflects one's susceptibility to a risk that is most frequently related to the models of decision-making or health behaviour theories(Ferrer et al., 2018; Ouyang, Gong and Yan, 2020)(e.g., "How likely is it that you will get COVID-19 at some point in the future?")(Ferrer et al., 2016). In addition, the decision may be defined as systemic, logical, extensional, cognitive, dispassionate or rational.

• Affective risk perception is characterised as an affective response based on the ability to develop a risk (e.g., disease or illness) and often involve anxiety, worries, and fear (Bae and Chang, 2020; Ouyang, Gong and Yan, 2020). In other words, affective risk perception means how the person feels towards a risk (Peters and Slovic, 1996) (e.g., "I am worried about the possible consequences of COVID-19") (Ouyang, Gong and Yan, 2020).

• Experiential risk perception is a glut-level calculation of vulnerability which could be a mental processing that is based on experimentally learned associations (Ferrer et al., 2016, 2018; Ouyang, Gong and Yan, 2020). For instance, "I feel very vulnerable to COVID-19" (Ouyang, Gong and Yan, 2020). Moreover, experiential risk perceptions have contrasted with deliberative risk perceptions (Ferrer et al., 2016)

Thus, the TRIRISK model provides a more advance conceptualization of health-related risk perceptions to predictive validity rather than unidimensional and bidimensional models. In the study of Ouyang et al. (2020), the findings supported that the risk perception (i.e., affective, deliberative and experiential) has impacted the behaviours of individuals in the hotel scam risk. However, their research also suggested that multiple adverse events would elicit different emotions, perceptions and behavioural responses. Therefore, the

findings need to be tested for health risks. This study will employ three dimensions of risk perception (i.e., deliberative, affective, and experiential) to explain the relationship of travel behaviour during the COVID-19 pandemic. The Tripartite Risk Perception Model is used as a theoretical framework to explain the health behaviour of visitors during the COVID-19 pandemic. Thus, the first proposition could be formulated as:

Proposition 1: Risk perception (i.e., deliberative, affective and experiential) would influence behavioural intention during the COVID-19 pandemic.

4.3   Theory of Planned Behaviour

As previous mentioned, TPB examines that behaviour intention is significant when the individuals' attitude to the behaviour is positive; when individuals are encouraged that behaviour by the people who are essential to them and believes they have the capabilities to practice the behaviour (Callow, Callow and Smith, 2020).

•   Attitude is defined as the degree to which an individual positively or negatively assesses behaviour (Ajzen, 1991). For example, "for me to travel domestically is useful."

•   Subjective norm means that the perceived social obligation to carry out the action or not (Ajzen, 1991), like "most people who are important to me think that I should travel domestically."

•   Perceived control behaviour is considered the perceived capabilities or incapability of performing the behaviour (Ajzen, 1991). For example, "I am capable of travelling domestically."

•   Behavioral intention underlines one's intention to travel or commitment to travel. It is the product of a mental process that contributes to behavioural intervention. (Jang, Bai, Hu, & Wu, 2009).

Numerous studies have tested and verified the TPB model's use to predict behavioural intentions (Maichum, Parichatnon and Peng, 2017), such as in the tourism industry (Chaulagain, Pizam and Wang, 2020). Thus, consistent with past studies, this study applies the TPB as one of the theoretical frameworks. Therefore, the second proposition could be formulated as:

Proposition 2: Attitude, subjective norm and perceived behavioural control would influence behavioural intention during the COVID-19 pandemic.

According to existing studies, risk perception was added into the TPB as a successful model to be tested in tourism (Sparks and Pan, 2009; Quintal, Lee and Soutar, 2010). For instance, TPB was used to predict tourists' health-related behaviour and travelling satisfaction towards Tibet (Huang, Dai and Xu, 2020). Besides, Quintal et al., (2010) pointed out that risk perception has directly impacted on behavioural intention. Some researchers stated that potential tourists' behavioural intention has changed in terms of the outbreak of the COVID-19 pandemic (Wang et al., 2020). Bae and Chang (2020) pointed out that affective and cognitive risk perception are the important factors influence attitude and subjective norms. Their study mainly discusses the risk perception of the bidimensional model, including affective and cognitive. Based on the above discussion, experiential risk perception has contrasted with deliberative risk perception (Ferrer et al., 2016). It is necessary to add experiential risk perception into the model. The relationship between risk

perception (i.e., deliberative, affective, and experiential) and TPB variables is suggested to be retested. Therefore, this study will apply the TPB model combined with TRIRISK as the theoretical framework to explain the COVID-19 risk perception affecting domestic tourism's behavioural intention. So, the third proposition could be formulated as:

Proposition 3: Risk perception would influence attitude, subjective norm and perceived behavioural control.

According to Soliman's (2019) study, attitude, subjective norms, and perceived control behaviour have a mediating impact on the relationship between variables. In another study, a mediating role of attitude has existed in the relationship of consumer ethnocentrism and intention towards purchasing domestic wine (Tomić Maksan, Kovačić, and Cerjak, 2019). Bae and Chang (2020) also stated that attitude and subjective norms were the mediators of risk perception and behavioural intention. A study proved that attitude played the mediating role between risk perception and behavioural intention (Choi, Lee and Ok, 2013). Therefore, this study suggests to retest that attitude, subjective norms, and perceived control behaviour mediate the relationship of risk perception and behavioural intention towards domestic tourism by using the more comprehensive multidimensional risk perception model. From the above discussion, the fourth proposition could be formulated as:

Proposition 4: Relationship between travel risk perception and travel intention would be moderated by attitude, subjective norm, and perceived behavioural control.

5.0 DISCUSSION

Based on systematic literature review and four propositions, the current study proposes a new conceptual framework which incorporates the risk perception and the TPB to understand the travel intension during the covid-19 pandemic (see Figure 1).
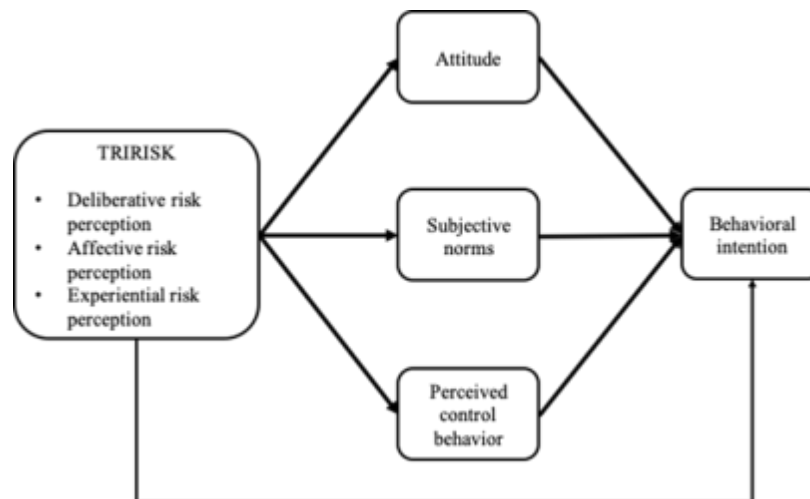

Figure 1: New conceptual model

This study incorporates TRIRISK into the TPB to understand the relationship of risk perception and behavioural intention. The preceding works of literature provide evidence to support the conceptual model of this study. Therefore, this paper suggested that behavioural intention as the dependent variable has been significantly affected by the multidimensions of risk perception as independent variables in the conceptual model

context. It states that individuals' travel intention towards domestic tourism had affected their perceived risk perception from COVID-19.

What is more, individuals' attitudes towards domestic tourism, subjective norms, and perceived control behaviour respectively had been influenced by the deliberative, affective, and experiential risk they perceived. The possibility of developing COVID-19 in the future, their worries according to the possible consequences of COVID-19, and their assessment of vulnerability to risk are assumed to affect the attitude, subjective norms, and perceived control behaviour. Moreover, from the findings above that have been examined in previous research, this study suggested that attitude, subjective norms, and perceived control behaviour had impacted the behavioural intention. It means that individuals' subjective assessment of their attitude towards domestic tourism, the recognition from their society or the people who are important to them, and the perceived capability to participate in domestic tourism have significantly impacted their travel intention during the COVID-19 pandemic. More importantly, this study assumed that attitude, subjective norms, and perceived control behaviour as the mediators have influenced the relationship of risk perception and behavioural intention. Taking an example, the individuals, who have perceived more risk, show more behavioural intention when they have an increased positive attitude towards domestic tourism; also, the individuals, who have perceived more risk, show more behavioural intention when they have increased capabilities to engage in domestic tourism; besides, the individuals, who have perceived more risk, show more behavioural intention when the society or their relatives and friends encourage them to engage in domestic tourism.

6.0   CONCLUSION

This paper provides a conceptual model incorporating TRIRISK and TPB to explore how risk perception could affect tourist intention during a pandemic crisis. From a literature review, the findings highlighted the impact of multidimensional risk perception on behavioural intent. Therefore, the findings fill the gap in prior academic research related to risk and tourism. Moreover, this paper indicates that perceptions, attitude, subjective norms, and perceived control actions as mediators have had an effect on the risk perception and intention.   This paper provides a new reference to predict tourists' behavioural intentions for the tourism industry during the pandemic regarding the findings. Additionally, in the future study, the conceptual model will be justified using actual data to confirm its validity.

From the above discussion, the findings set out the theoretical and practical consequences of this study. As far as the theoretical implications are concerned, this study proposed a novel conceptual model with a more comprehensive risk perception to predict tourists' behavioural intentions. This paper also highlights the importance of multidimensional risk perception for the individuals' behavioural intention according to the TRIRISK model. It also suggests the attitude, subjective norms, and perceived control behaviour as the mediators has impacted on the risk perception (independent variables) and behavioural intention (dependent variable). It shows new insight to fill the gap in tourism risk perception research.

Moreover, as a cross-study of health crisis and tourism, this paper provides a new conception to understand the current ongoing global issue of COVID-19. In terms of the practical implications, this paper proposes a new measurement to help the tourism industry and practitioners observe tourists' behavioural intentions related to travel risk perception during the COVID-19 pandemic. As we discussed above, COVID-19 has profoundly impacted on tourism market and tourists. The tourism industry must rethink tourists' behaviour and

the new norm in tourism. Thus, this paper provides a theoretical framework for tourism practitioners to make better strategies and implications that could encourage tourists to engage in domestic tourism and support the tourism industry.

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