Study on Risk Perception of Domestic Cruise Tourists

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Abstract. Although risk perception plays a key role in affecting cruise tourists’ purchase intention, the existing literature lacks of an empirical exploration of risk perception dimensions of cruise travel. A study of tourists of WuSongKou International Cruise Terminal in Shanghai was carried out by the methods of in-depth interview and questionnaire survey to explore the specific dimensions of cruise tourists’ risk perception. And this paper found six dimensions of risk perception from the perspective of tourists’ loss classification: physical risk, psychosocial risk, service risk, performance risk, communication risk and financial risk.

1. Introduction
The State Council issued the “Thirteenth Five-Year Plan for Tourism Development” on November 26, 2016, proposing to vigorously develop marine and waterfront tourism, and formulate regulations for the development of cruise tourism, which fully demonstrating the importance the state attaches to cruise tourism. Besides, according to the data of the China Cruise & Yacht Industry Association (CCYIA), the number of passengers in the Chinese cruise market reached 4.955 million in 2017, a 34% increase from the previous quarter, far higher than the world average growth rate and it is expected to reach 5.698 million in 2018 (Yan, 2018). Thus it can be seen that cruising is becoming an increasingly popular form of tourism, which also brings the increasingly complex needs and expectations of cruise tourists. And risk perception plays a key role in influencing purchase intentions and shaping consumer experience and satisfaction (Le & Arcodia, 2018) since consumers’ delays, changes or cancellations of purchasing decisions are largely influenced by their risk perceptions. So, it is necessary for cruise operators to be aware of the determinants of cruise tourists’ consumption decisions and the study of cruise risk perception should not be ignored (Henthorne et al., 2013; Bowen et al., 2014; & GAO, 2003). Exploring the dimensions of domestic cruise tourists’ risk perception from the perspective of tourists’ loss classification, It will be able to understand and grasp the expression means of cruise risk perception more specifically, and then help cruise companies to take measures to conduct business management and product development.

2. Overview of Risk Perception
“Psychologist Bauer (1960) argues that ‘consumers can’t predict the outcome of their behavior, and some results may make consumers unhappy’” (Stone & Grønhaug, 1993), indicating the two-dimensional structure of risk perception, namely, the uncertainty of the purchase results and the adverse consequences that consumers perceived during the purchase of the product or service. And scholars have found that risk perception has different dimensions or facets with the continuous deepening of subsequent research. For example, Jacoby and Kaplan (1972) divided the risk perceptions of consumers into five different dimensions: financial risk, performance risk, physical risk, and psychological risk,
social risk based on the former four types of risk perceptions of the Roselius (1971) as time loss, physical loss, self-loss, and money loss. Later, Peter and Tarpey (1975) added the sixth time risk perception, and the subsequent research on the risk perception dimension was based on the six facets (Stone & Grønhaug, 1993; Murray & Schlitter, 1990; Xu et al., 2013). After the introduction of risk perception into the tourism industry, scholars have come up with different tourism risk perceptions for different tourism behaviors and different types of tourism (Xu et al., 2013; Roehl & Fesenmaier, 1992; Mitchell & Vassos, 1997; Lepp & Gibson, 2003; Han, 2005; Qi, 2009). And Xu et al. (2013) addressed the present research problem that the existing research classification methods on the dimensions of tourism risk perception are inconsistent and have not concluded whether there is a unified dimension of tourism risk perception in the general tourism context. So, according to the general tourism scenario, the tourism risk perception dimension is identified from the perspective of tourists’ loss classification by Xu (2013), and nine dimensions of tourism risk perception are obtained, in addition to six basic risk perceptions dimensions: physical risk, performance risk, financial risk, psychological risk, social risk and time risk, there are also service risks, facility risks and communication risks perception. It is currently the most comprehensive division for tourism risk perception dimensions based on the classification of tourist losses. And, this paper follows this classification aims to explore the specific dimensions of cruise tourists’ risk perception based on the domestic cruise tourism scenario.

3. Research Methods

Adopting Hung and Petrick’s (1979) and Xu’s (2013) research method, it was conducted in three stages to address the objectives of this study. Stage one included in-depth interviews. Semi-structured interviews with a small sample were conducted to derive risk perception measurement items. Convenience sampling was used to select subjects for the study. Participants included cruise passengers mainly embarking at the Wusongkou International Cruise Port Terminal, Shanghai. Two cruise lines were contacted during the period of November 2017 to January 2018. The sample size was not determined a priori. Rather the strategy was to continue to interview people until the increment of new information forthcoming was minimal. All the interviews were semi-structured. In total, 50 interviews were conducted at the port with 4 interviews conducted with passengers who just debarked from cruises and 46 interviews conducted with passengers who were waiting for embarkation. A total of 35 interviews were conducted with Quantum Cruise Lines’ passengers and 15 interviews were conducted with Joy Cruises’ passengers.

Stage two utilized a panel of experts. The risk perception items (n=51) generated from both interviews and past literature (Gao, 2003; Xu et al., 2013; Mitchell & Vassos, 1997; Han, 2005; Qi, 2009; Shengshiung et al., 1997) were next submitted for review by a panel of experts consisting of six faculty who conduct tourism research. The panel judged the redundancy, applicability, and representativeness of the measurement items in a cruising context. Then, the 35 measurement items of 8 risk perception dimensions were retained. Besides, “facility risk” as an objective risk does not directly belong to the category of tourists’ own losses, but is an objective source of risk for tourists’ perception of physical risk, so it is not taken into account.

Finally, an exploratory factor analysis (EFA) with a varimax rotation was performed with 295 online and offline cruise passengers to determine the dimensions of risk perception at stage three. A total of 311 questionnaires were collected both online and in the field, included 109 questionnaires were from online tourists during February to March in 2018. The field survey was conducted at the Tourist Service Center of Wusongkou International Cruise Port Terminal Shanghai, and four cruise lines like Skysea, Quantum, Joy and MSC Splendida were contacted with 202 questionnaires during the period of March 2018 to May 2018. Deleting the invalid questionnaires, there are 295 valid questionnaires were used, the questionnaire efficiency was 87.8%. And there are 35 items that tourists worried about derived from the previous procedures were measured with a 5-point Likert-type scale (1 = “Strongly Disagree,” 5 = “Strongly Agree”).
4. Findings

4.1. The Samples
As the demographic variable information shows that a majority of (65.2%) the participants in survey are female, males accounted for 34.8%; tourists aged 18-45 years old has a cumulative proportion of 79.5%, the sample with monthly income between 5001 and 10,000 yuan has the highest proportion (31.9%); the degree of education is mainly undergraduate; tourists who had previously participated in cruise travel are accounted for 25.6%. Tourists travel in groups with different sizes and the group types include: parents tour, children tour, parents and children tour, family and friends tour, honeymoon tours, and company organized tours. Among the types of travel with parents, 77.14% of the book-payers are children who have participated in work and have economic income.

4.2. The Exploratory Factor Analysis of Cruise Risk Perception Dimensions
An exploratory factor analysis (EFA) with a varimax rotation was performed on 295 data to determine the dimensions of cruise risk perception. First, the applicability test is carried out on the variables. After testing, the KMO value is 0.937, which is greater than 0.8, considering that the correlation between the variables is strong. As for the results of Bartlett’s test, the approximate chi-square value is 7221.219, and the degree of freedom is 435, p=0.000, so reject the null hypothesis that each item is independent, suggests that it is suitable for further factor analysis of the cruise travel risk perception items. Finally, the varimax exploratory factor analysis loaded items on six factors (Table 1), with the latent root greater than 1 and the factor loading greater than 0.5 as the standard. There are the perception of physical risk (M=3.05), psychosocial risk (M=2.21), service risk (M=3.15) and performance risk (M=3.33) communication risk (M=3.22) and financial risk perception (M=3.54), which consists of 30 measurement items, explained a total of 73.773% variance, and the definition of risk perception in each dimension is shown in Table 2. Among the prior eight hypothetical risk perception dimensions of cruise travel, social and psychological risk perception were rotated to one dimension. As Jacoby and Kaplan (1972) stated that “social risk” refers to consumer’s perception of how others will react to his purchase, and they care about other people’s opinions to themselves (Roehl & Fesenmaier, 1992), and “psychological risk” should probably be reserved for situations regarding how the individual perceives himself, it is a fear of the possibility that their purchasing will not reflect their personality or self-image (Jacoby & Kaplan, 1972; Xu, 2013; Roehl & Fesenmaier, 2012). Hence, it is obvious that “psychosocial risk” is a psychological concern arising from consideration of social factors, fear that the product may not be able to match the consumer’s self-image or the product they purchased cannot reach the expected level, so that causing damage to self-perception. Besides, the “time risk perception” is not identified. On the one hand, it is because the participants of cruise travel are partly retired old people with abundant leisure time, on the other hand, according to the interviews with tourists, for those who have decided to participate in cruise travel, they have already make a psychological budget for the required expenditure of time. Therefore, they do not feel that it is very time-consuming to participate in it. What’s the most important thing is that cruise travel is leisurely, the slow-time characteristics of cruise are exactly what they needed, and cruise travel is the most convenient and time-saving tour compared to other types of travel since their consecutive service, so the time risk perception is not significant.

In terms of the mean of each dimension of risk perception, the average value of financial risk perception (M=3.54) and performance risk perception (M=3.33) of tourists are higher, and the mean value of perceived psychosocial risk (M=2.21) is the lowest one. Furthermore, the risk perception level of each dimension of cruise travel does not exceed 4.0, probably because risk perception is a fuzzy and cognitive concepts, judged by individual subjective cognition and specific scenario (Shengshiung, 1997; Dowling, 1986), in general, tourists are not overly concerned about themselves before being disturbed (Ahola, 2014).
| Factor               | Measured items of cruise risk perception                                      | Mean | Factor Loading | α-value | AVE | CR    |
|---------------------|--------------------------------------------------------------------------------|------|----------------|---------|-----|-------|
| Physical risk       | Violence and terror attacks at sea.                                            | 3.04 | 0.855          |         |     |       |
|                     | Shipping accidents may result in injury or loss.                               | 3.07 | 0.846          |         |     |       |
|                     | Suffering from infectious diseases through air, water or food.                  | 3    | 0.826          | 0.959   | 0.614 | 0.927 |
|                     | Poor weather conditions may cause physical damage.                             | 2.97 | 0.816          |         |     |       |
|                     | Encounter natural disasters such as earthquakes, tsunamis, and typhoons.       | 3.25 | 0.795          |         |     |       |
|                     | The social order of the destination is not good.                               | 3.06 | 0.753          |         |     |       |
|                     | Taking part in recreational activities may cause physical injury.              | 2.73 | 0.695          |         |     |       |
|                     | The journey is bumpy and seasick, causing me to feel sick.                    | 3.25 | 0.657          |         |     |       |
| Psychosocial risk   | Worry that taking a cruise will lead to negative opinions of me from others.    | 1.92 | 0.832          | 0.897   | 0.526 | 0.884 |
|                     | Group tour with slow time cannot show my personality and self-image.          | 2.12 | 0.805          |         |     |       |
|                     | Friends and relatives will disapprove of my cruise travel.                    | 2.05 | 0.791          |         |     |       |
|                     | Taking a cruise makes me a little nervous.                                     | 2.31 | 0.717          |         |     |       |
|                     | Taking a cruise travel is a bit of worry.                                     | 2.37 | 0.707          |         |     |       |
|                     | I will be regret if I cannot achieve the expected cruise travel purposes.     | 2.45 | 0.639          |         |     |       |
|                     | Before travel, I am worried that I cannot find a suitable playmate.           | 2.27 | 0.543          |         |     |       |
| Service risk        | The tour guide is uncooperative.                                               | 3.01 | 0.832          |         |     |       |
|                     | Mandatory shopping by tour guide.                                             | 3.42 | 0.789          | 0.903   | 0.528 | 0.847 |
|                     | The tour guide has no previous experience as a cruise guide.                  | 3.01 | 0.706          |         |     |       |
|                     | Cruise routes and projects will be temporarily changed or replaced.           | 3.11 | 0.677          |         |     |       |
|                     | Luggage may be lost, delayed or damaged by cruise company.                    | 3.22 | 0.607          |         |     |       |
| Performance risk    | The service personnel on board have poor service awareness and the service quality is not satisfactory. | 3.2 | 0.772          |         |     |       |
|                     | The room on the boat is not as good as advertised.                            | 3.2  | 0.737          | 0.856   | 0.519 | 0.811 |
|                     | There will be a decline in reception quality on the peak season of cruise travel. | 3.43 | 0.698          |         |     |       |
|                     | The onshore trip is too hurried to enjoy myself.                              | 3.48 | 0.669          |         |     |       |
| Communication risk  | Worried about that I cannot understand each other’s language                 | 3.17 | 0.884          |         |     |       |
|                     | It is important that people whom I communicate with can speak Chinese.        | 3.37 | 0.861          | 0.887   | 0.726 | 0.888 |
|                     | Inability to understand the meaning of each other lead to communication barriers. | 3.11 | 0.81           |         |     |       |
| Financial risk      | Actual travel costs will exceed expectations.                                 | 3.21 | 0.749          |         |     |       |
|                     | Worry about extra spending.                                                   | 3.57 | 0.712          |         |     |       |
|                     | Expensive spending items (such as wifi, tips, medical assistance, shopping commodities, etc). | 3.85 | 0.699          | 0.758   | 0.519 | 0.764 |

Rotation converged in 6 iterations.
4.3. Reliability and Validity Test

The Cronbach’s $\alpha$ coefficient value is between 0 and 1. The larger the $\alpha$ value, the better the correlation between the questionnaire items and the higher the internal consistency credibility. Using the reliability analysis function of scale module in SPSS software to analyze 30 risk perception items, the Cronbach’s $\alpha$ value is 0.955, and the reliability coefficients of each structural factor variable are 0.959, 0.897, 0.903, 0.856, 0.887, 0.758 respectively. All of them are greater than 0.7, indicating that the results of this survey have good reliability, and all observed variables are considered to be credible, so the questionnaire has a high internal consistency. Then, through Amos 21.0 software (Wu, 2009), the AVE (average variance extracted) value of each dimension of cruise travel risk perception is greater than 0.5, and the CR (composite reliability) value is greater than 0.6, showing that each dimension has good convergent validity. What’s more, the AVE value is larger than the square of the correlation coefficient between any two dimensions, which indicating that the cruise travel risk perception has a good discriminate validity between the dimensions (Xu et al., 2013).

| Risk Dimension       | Definitions of the Risk Dimensions                                                                 | Related Literature                                                                 |
|----------------------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Physical risk        | The possibility of exposing visitors to dangers, injuries and diseases since natural disasters,       | Xu (2013) & Roehl & Fesenmaier (1992)                                              |
|                      | poor weather and public security, safety incidents and health care problems during cruise travel.    |                                                                                   |
| Psychosocial risk    | Participating in cruise travel may harm the self-image and social relations of tourists, so that      | Derbaix (1983); Qi (2009)                                                         |
|                      | causing psychological discomfort.                                                                   |                                                                                   |
| Service risk         | Possibility of expected loss and other losses caused by poor service quality and service failure due | Xu (2013)                                                                         |
|                      | to the lack of professional quality and standardized management of cruise operators and practitioners.|                                                                                   |
| Performance risk     | Cruise products or services cannot achieve the expected effect.                                     | Jacoby & Kaplan (1972)                                                           |
| Communication risk   | Possibility of communication difficulties due to language or cultural barriers.                    | Xu (2013); Han (2005)                                                            |
| Financial risk       | The experience value of cruise travel is not in line with the cost and the possibility of unplanned consumption. | Jacoby & Kaplan (1972); Roehl & Fesenmaier (1992)                                |

5. Conclusion and Discussion

Based on literature reviews and social survey, the article obtains six dimensions of cruise travel risk perception through exploratory factor analysis, physical risk perception, psychosocial risk perception, service risk perception, performance risk perception, communication risk perception and financial risk perception. Cruise risk perception is a subjective cognition, guess and psychological feeling of tourists on the objective and unknown risks related to cruise tourism, the majority of people use their intuitive risk judgment and acquisition experience to evaluate risk though risk analysts implement risk assessment to evaluate risks (Le & Arcodia, 2018), and risk perception is subjected to external objective factors and individual differences of tourists (Wu, 2015). Therefore, in terms of operation and management, the cruise company should continue to do a good job of controlling the objective risks and preventing risks before they occur. What’s more, they should also strengthen their self-building, for instance, developing differentiated products based on diverse customer needs and building customer loyalty through quality, trust is based on quality, low-cost and low-quality operation have damaged tourists’ experience of cruise travel (Sun, 2016); in addition, as tourism is a comprehensive service industry, focusing on the overall
experience of products, cruise providers should understand the true meaning of the cruise service and strengthen cooperation with each other, then providing consecutive service to cruise tourists together, so that tourists will enjoy the trip rather than perceive risk of cruise travel.

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