

## Risk in Chiang Mai Tourism Supply Chain

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### Abstract

The study focuses on assessing risk in tourism supply chain in Chiang Mai. Risk factors are identified based on literature review. In the study, 10 internal risks and 31 external risks are used. The result of the study yields from 255 returned questionnaires. For Chiang Mai tourism supply chain, Political Uncertainty, Economic Recession, Increased Domestic Competition, Competitor Cost Advantage, Decrease in Tourist Disposable Income, Rising of Fuel Cost, Image of Destination, Tourism Preference Change, Increased International Competition and Competitor Variety of Product are ranked as top 10 risks. However, concern varies between members as their driving value.

**Keywords:** Risk Assessment, Chiang Mai, Tourism Supply Chain.

### Introduction

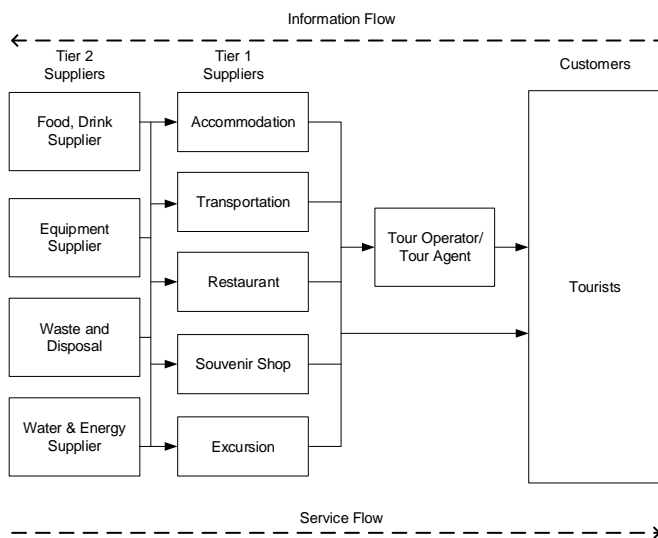
Tourism industry is one of Thailand main industry. Thailand's Office of National Economic and Social Development Board has reported that in 2014, the industry generated more than USD282b. This is equivalent to 11.6% of Thailand GDP.

Chiang Mai, the second largest economy in Thailand, is considered one of the most desirable destinations for tourists. With plenty of adventurous, art and cultural, historical and natural attractions, there were more than 14.1 million visitors visiting Chiang Mai in 2013. [1] According to Chiang Mai Development Plan 2014-2017, tourism industry is considered one of Chiang Mai's main strengths. With concrete tourism

resource, logistics and accessibility, MICE state promotion with related provincial theme such as medical hub, education hub, tourism industry of Chiang Mai goes very strong. Tourism industry is a significant pillar for Chiang Mai development. [2] However, whilst enjoying the growth and benefit of the industry, there are risks that are often overlooked. This refers to internal and external risks as well as changes that is on-going. It is therefore the objectives of the paper to identify risk in the industry, based on the practitioners experiencing in the industry, reflecting to Thai tourism industry. Of interest, Chiang Mai is nominated as the case study area.

### Tourism Industry's Supply Chain

The Tourism industry's supply chain, similar to other industries, involves many members. They transfer value through various supply chain and logistics channels. However, for the tourism supply chain, it is more of satisfying the customer with the pleasant service rather than focusing on products. It is normal that the tourists (as the customer) require multiple services within one experience. Therefore, the decision making may involve performance of several supply chain member, for example, accessibility, cost, time, reliability of activities such as booking, paying, transportation, accommodation and so on. The supply chain members are individual but interdependent to the customers. [3, 4, 5, 6, 7] As a single supply chain, tourist may not select to experience with only one unsatisfiable. [8, 9] For example, the political crisis in Bangkok in 2008 is the main cause of 30% tourist cancellation.

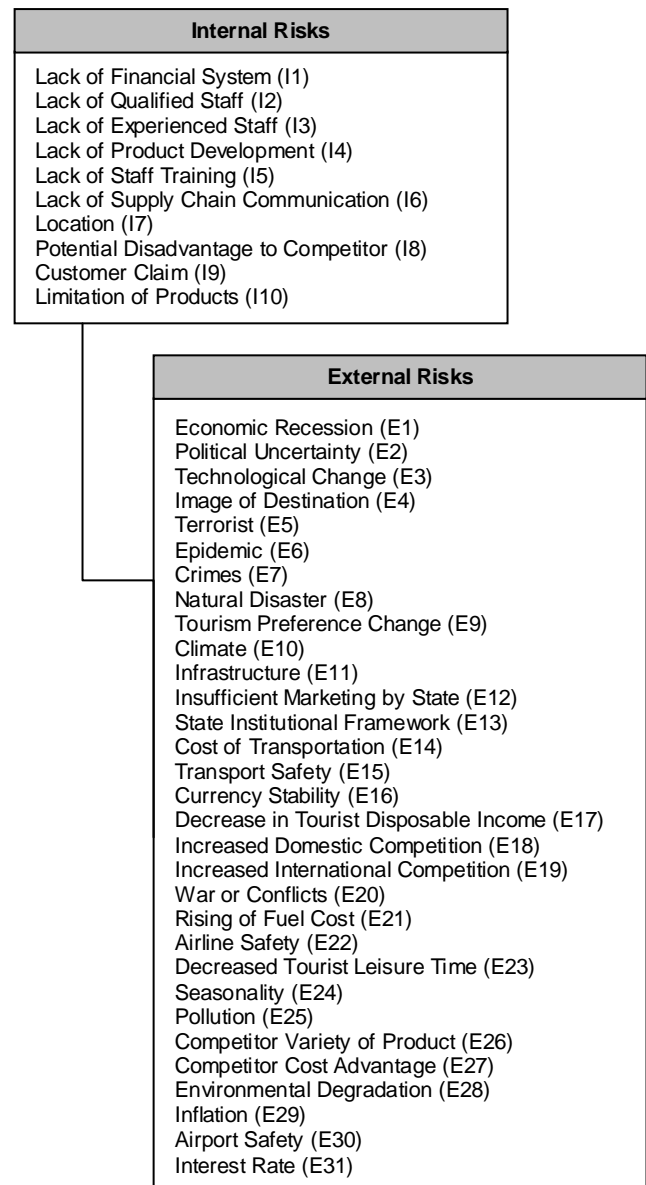


**Fig. 1. Chiang Mai Tourism Supply Chain(adapted from [3])**

### Tourism Supply Chain Risk Assessment

For many years, there have been vast research focusing on supply chain risk in both internal and external perspectives. [10, 11, 12, 13, 14, 15, 16, 17, 18] From the literature, it may be concluded that there are 7 main focus on risks, i.e.,

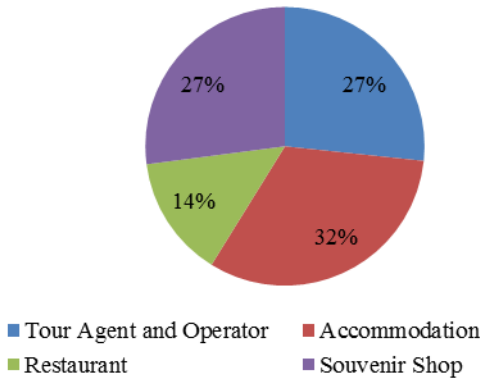
1. Economic Drivers: focusing on tourist income which is related to tourist themselves such as purchasing power, and also the other economic factors such as economic situation, service cost, exchange rate, inflation, etc.
2. Demographic Drivers: focusing on demographic distribution, aging society, small family which directly relates to customer behavior and preference, consumption rate, investment, saving, mobility
3. Security Drivers: focusing on life and property safety on both natural and non-natural factors  
 Environmental Drivers: focusing on tourism resource, pollution, global warming [13, 19, 20, 21, 22, 23]
4. Disease Drivers [24, 25]
5. Human Resource: focusing on staff quality, quantity, skill and experience, staff relocation, human resource management, etc. [26]
6. Image Drivers: focusing on country and destination image to tourist, including obvious risks [27]
7. Management Organization: focusing on organization management including demand management, multi-party relationship, supply management, inventory management, product development, tourism supply chain cooperation and information technology. [3]



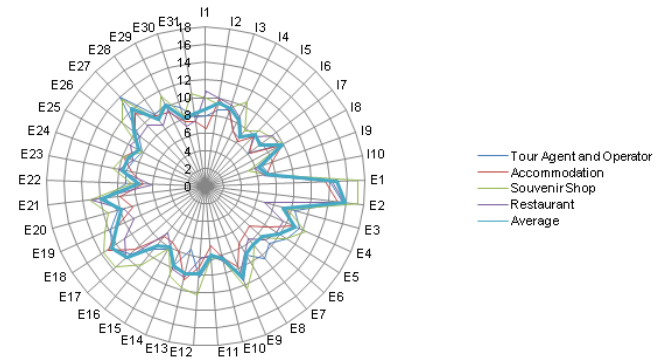
**Fig. 2. Collection of Risk Factors for Chiang Mai Tourism Supply Chain Study**

From the review, the most referred risks are therefore nominated as the criteria for tourism supply chain risk in the case study. The content validity test was then conducted to confirm the factors in Chiang Mai context. Fig.2 summarises a collection of risk criteria for the case study.

Of many direct and indirect players in tourism supply chain, the study focus on 4 key players i.e., tour agent and operator, accommodation, restaurant and souvenir shop.



**Fig. 3. Share of Returned Questionnaire by Players**



**Fig. 4. Assessed Risk For Chiang Mai Tourism Supply Chain**

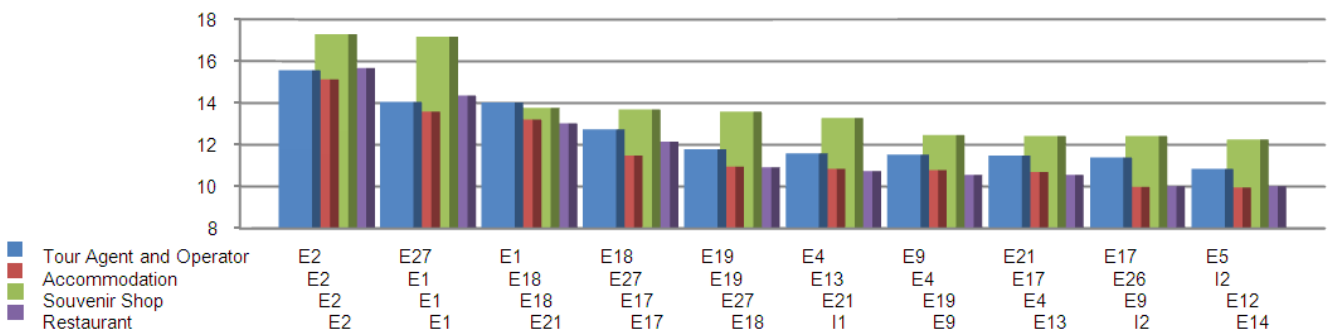
The questionnaire is then developed based on the risk factor collection. The main objectives is to assess risk based on (1) risk severity (impact) and (2) risk likelihood. 1-5 Likert scale is nominated where 1 is the least and 5 is the most in both cases. Data collection is conducted through questionnaire distribution via postal and walk-in. 1,529 questionnaires were distributed. 255 questionnaires were completed and returned. Return rate is 16.68%. Fig.3 illustrates the distribution of the returned questionnaires.

**Result Discussion**

Focusing on risk factors, there are obvious concerns on several criteria. Risk can be assessed by multiplying risk severity with risk likelihood (see Fig.4).

In general case, Political Uncertainty (E2), Economic Recession (E1), Increased Domestic Competition (E18), Competitor Cost Advantage (E27), Decrease in Tourist Disposable Income (E17), Rising of Fuel Cost (E21), Image of Destination (E4), Tourism Preference Change (E9), Increased International Competition (E19) and Competitor Variety of Product (E26) are among the most concerned. It can be seen that all of the top 10 risks are external. Where the most concerned internal risk comes at 19th and 22nd, they are Lack of Qualified Staff (I2) and Lack of Experienced Staff (I3).

Focusing top 10 risks, looking at player’s perspective on their risk, there are some common concerns. For example, Political Uncertainty (E2) is ranked the first for all players. This can be dynamic however it affects Chiang Mai tourism (and Thailand tourism) for quite sometimes already. Economic Recession (E1) is also critical to all members. It is either ranked 2nd or 3rd.



**Figure 5: Top 10 Risk per Player**

On the other hand, there are differences in concern. For example, for Competitor Cost Advantage (E27) factors, the restaurant group does not concern much in comparison to others. On the other hand, Rising of Fuel Cost (E21) and Tourism Preference Change (E9) are not the main concern for the Accommodation group. However, both are the main concerned to other players. Also, Increased International Competition (E19) is not a main concern for Restaurant. In additional, in general, the souvenir shop seems to suffer from risk more than other. (see Fig.5)  
These reflect the nature of business where some risks does not directly affect their value chain. However, as a tourism industry as a single value web, they are interconnected.

### Conclusion

It can be seen that there are risk concerns by the tourism supply chain in Chiang Mai. The study identifies those risks and ranks in terms of risk assessment, based on their severity and likelihood level. Risks are based on Chiang Mai's 255 chain members from group of Tour Agent and Operator, Accommodation, Souvenir Shop and Restaurant. Overall, Political Uncertainty, Economic Recession, Increased Domestic Competition, Competitor Cost Advantage, Decrease in Tourist Disposable Income, Rising of Fuel Cost, Image of Destination, Tourism Preference Change, Increased International Competition and Competitor Variety of Product are ranked in top 10. However, concern varies between members as their driving value.

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