CHAPTER 3

Research Design, Scope and Method

3. Research Design, Scope and Method

3.1. Scope of the Study

All data on the study is taken the parts of tourism research in title "The Tourism Competiveness and Opportunities of ASEAN Tourism Market for Thailand" by the cooperation research between Public Policy Studies Institute Foundation and Faculty of Economics, Chiang Mai University. The data was collected from ASEAN residences except for Brunei Darussalam during March 2014 to June 2014. The total number of data collected was 3,505 that were consisted of 3,095 non-business tourists and 420 business tourists collecting both land and airport immigration in Thailand. However, this study used only 2,425 ASEAN tourists who were non-business tourist and travelled to Thailand by air.

3.2. Conceptual Framework

The study is to classify the ASEAN tourists into two different types, namely non low-cost tourists (full service airlines tourists) and low-cost airlines tourists, and will compare socio-economic characteristics in two types of tourists.

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In this study, two types of ASEAN tourists will be compared in the behavior of tourists as follows: (1) choice of airline, (2) expenditure, and (3) length of stay.

Socio-economic characteristics and travel information are the determinant factors affecting travel behavior. There are three models in this study: Probit model, Tobit model, and Poisson model. The models are used to analyze the choice of low cost airlines and full service airlines in term of choice of airline, expenditure and length of stay. A Probit model is employed to analyze the choice of airlines. The expenditure function is estimated using Tobit model, and the length of stay is analyzed by Poisson regression model. Descriptive statistics are used to explain travel style. The conceptual framework is illustrated in Figure 3.1.



Source: Adapted from Public Policy Studies Institute Foundation and Faculty of Economics, Chiang Mai University (2014) & The Tourism Authority of Thailand (n.d.)

Figure 3.1: Conceptual framework of the study

3.3. Hypothesis of the Study

In the study, the hypotheses that are relevant to socio-economic characteristics variables and travel information are hypothesized on tourism demand from the previous studies. There are three hypotheses concepts in this study. The first hypothesis concept is relevant to the choice of airline, and the second hypothesis concept is relevant to travel el expenditure. The last hypothesis concept is relevant to length of stay. Consequently, the proposed hypotheses of the study are shown below.

3.3.1. The hypotheses about the choice of airline

There are 11 hypotheses about the relationship between choice of airline and socio-economic characteristics variables and travel information as shown in Figure 3.2. Choice of airline is dependent variable, and socio-economic characteristics variables and travel information are independent variables.



Figure 3.2: Hypotheses about the relationship between choice of airline and socioeconomic characteristics variables and travel information

1) *H 1 Gender*: There is a significant relationship between choice of airline and gender of ASEAN air traveler who travels to Thailand. (Daamen, 2004; Department for Transport, U. K, 2003; Heyns and Carstens, 2011).

2) *H 2 Age*: There is a significant relationship between choice of airline and age of ASEAN air traveler who travels to Thailand (Daamen, 2004).

3) *H 3 Marital status*: There is significant relationship between choice of airline and marital status of ASEAN air traveler who travels to Thailand (Atilgan & Akinci, 2003; Kim, Lehto & Morrison, 2007; Lu & Shon, 2012).

4) *H 4 Religion*: There is significant relationship between choice of airline and religion of ASEAN air traveler who travels to Thailand (Atilgan & Akinci, 2003; Kim, Lehto & Morrison, 2007; Lu & Shon, 2012).

5) *H* 5 Country of residence: There is a significant relationship between choice of airline and country of residence of ASEAN air traveler who travels to Thailand (Daamen, 2004; Department for Transport, U. K, 2003).

6) *H* 6 Education level: There is significant relationship between choice of airline and education level of ASEAN air traveler who travels to Thailand (Hensher, Rose, & Greene, 2005).

7) *H* 7 *Main occupation*: There is significant relationship between choice of airline and main occupation of ASEAN air traveler who travels to Thailand (Atilgan & Akinci, 2003; Kim, Lehto & Morrison, 2007; Lu & Shon, 2012).

8) *H 8 Income*: There is a significant relationship between choice of airline and income of ASEAN air traveler who travels to Thailand (Department for Transport, U. K, 2003).

9) *H 9 First time tourist*: There is a significant relationship between choice of airline and first-time tourist who travels to Thailand (Pels, Nijkamp, & Rietveld, 2001).

10) *H 10 Individual tourist*: There is a significant relationship between choice of airline and individual tourist (size of traveling party) who travels to Thailand (Friedman, 2007).

11) *H 11 Purpose of trip*: There is a significant relationship between choice of airline and purpose of trip who travels to Thailand (Castillo-Manzano & Marchena-Gómez, 2010).

3.3.2. The hypotheses about travel expenditure

There are 11 hypotheses about the relationship between travel expenditure and socio-economic characteristics variables and travel information as shown in Figure 3.3. Travel expenditure is dependent variable, and socio-economic characteristics variables and travel information are independent variables.



Figure 3.3: Hypotheses about the relationship between travel expenditure and socioeconomic characteristics variables and travel information

1) *H 1 Gender*: There is a significant relationship between travel expenditure and gender of ASEAN air traveler who travels to Thailand. (Lee, 2002; Thrane, 2002).

2) *H 2 Age*: There is a significant relationship between travel expenditure and age of ASEAN air traveler who travels to Thailand (Henthorne, 2000; Thrane, 2002; Jang et al., 2004; Mehmetoglu, 2007). 3) *H 3 Marital status*: There is a significant relationship between travel expenditure and marital status of ASEAN air traveler who travels to Thailand (Asgary et al., 1997; Mak et al., 1977; Nicolau & Más, 2005).

4) *H 4 Religion*: There is a significant relationship between travel expenditure and religion of ASEAN air traveler who travels to Thailand (Minkus-McKenna, 2007).

5) *H 5 Country of residence*: There is significant relationship between travel expenditure and country of residence of ASEAN air traveler who travels to Thailand (Lee, 2002; Thrane, 2002; Laesser & Crouch, 2006).

6) *H* 6 Education level: There is significant relationship between travel expenditure and education level of ASEAN air traveller who travels to Thailand (Mak et al., 1977; Asgary et al., 1997; Cannon & Ford, 2002; Chhabra et al., 2002; Seiler et al., 2002; Nicolau & Más, 2005).

7) *H 7 Main occupation*: There is a significant relationship between travel expenditure and main occupation of ASEAN air traveler who travels to Thailand (Craggs & Schofield, 2009; Jang & Ham, 2009).

8) *H 8 Income*: There is significant relationship between travel expenditure and income of ASEAN air traveller who travels to Thailand (Mak et al, 1977; Asgary et al, 1997; Leones et al, 1998; Agarwal & Yochum, 1999 & 2000; Dávila et al, 1999; Downward & Lumsdon, 2000, 2003; Lee, 2001; Cannon & Ford, 2002; Chhabra et al, 2002; Seiler et al, 2002; Thrane, 2002; Jang et al, 2004, 2005; Lehto et al, 2004; Nicolau & Más, 2005; Wang et al, 2006; Mehmetoglu, 2007).

9) *H* 9 *First time tourist*: There is a significant relationship between travel expenditure and first-time tourist who travels to Thailand (Wang & Davidson, 2010a).

10) *H 10 Individual tourist*: There is a significant relationship between travel expenditure and individual tourist (size of traveling party) who travels to Thailand (Perez & Sampol, 2000; Lee, 2002; Downward & Lumsdon, 2004; Laesser & Crouch, 2006).

11) *H 11 Choice of airline*: There is a significant relationship between travel expenditure and choice of airline (Eugenio-Martin & Inchausti-Sintes, 2016).

3.3.3. The hypotheses about length of stay

There are 14 hypotheses about the relationship between the length of stay and socio-economic characteristics variables and travel information as shown in Figure 3.4. Length of stay is the dependent variable, and socio-economic characteristics variables and travel information are independent variables.



Figure 3.4: Hypotheses about the relationship between length of stay and socioeconomic characteristics variables and travel information

1) *H 1 Gender*: There is a significant relationship between the length of stay and gender of ASEAN air traveler who travels to Thailand (Barros & Machado, 2010).

2) *H 2 Age*: There is significant relationship between length of stay and age of ASEAN air traveler who travels to Thailand (Fleischer & Pizam, 2002).

3) *H 3 Marital status*: There is significant relationship between length of stay and marital status of ASEAN air traveler who travels to Thailand (Oppermann, 1995 & 1997; Seaton & Palmer, 1997; Sung et al., 2001).

4) *H 4 Religion*: There is a significant relationship between the length of stay and religion of ASEAN air traveler who travels to Thailand (Kozak, 2002; Shoemaker, 2000).

5) *H 5 Country of residence*: There is significant relationship between length of stay and country of residence of ASEAN air traveler who travels to Thailand (Oppermann, 1995 & 1997; Seaton & Palmer, 1997; Sung et al., 2001).

6) *H* 6 Education level: There is a significant relationship between the length of stay and education level of ASEAN air traveler who travels to Thailand (Kozak, 2002; Shoemaker, 2000).

7) *H 7 Main occupation*: There is a significant relationship between the length of stay and main occupation of ASEAN air traveler who travels to Thailand (Kozak, 2002; Shoemaker, 2000).

8) *H 8 Income*: There is a significant relationship between the length of stay and income of ASEAN air traveler who travels to Thailand (Kozak, 2002; Shoemaker, 2000).

9) *H 9 First time tourist*: There is a significant relationship between the length of stay and first-time tourist who travels to Thailand (Mingsarn Kaosa-Ard, Akarapong Untong, Piyaluk Buddhawongsa, Natthapon Anan-thanasan, & Worawat Saijai, 2015).

10) *H 10 Individual tourist*: There is significant relationship between length of stay and individual tourist (size of traveling party) who travels to Thailand (Mingsarn Kaosa-Ard et al., 2015).

11) *H 11 Purpose of trip*: There is significant relationship between length of stay and purpose of trip (Chen, 2009; Prayag, 2012).

12) *H 12 Trip descriptive*: There is a significant relationship between the length of stay and trip descriptive (Backman, Backman & Silverberg, 1999).

13) *H* 13 Tourist Lifestyle: There is a significant relationship between the length of stay and tourist lifestyle (In-touch Research & Consultancy, 2013).

14) *H 14 Choice of airline*: There is a significant relationship between the length of stay and choice of airline (Eugenio-Martin & Inchausti-Sintes, 2016).

3.4. Data Collection

All data on the study is taken the parts of tourism research in the title "The Tourism Competitiveness and Opportunities of ASEAN Tourism Market for Thailand" by the cooperative research between Public Policy Studies Institute Foundation and Faculty of Economics, Chiang Mai University. The data was collected from residences who live in ASEAN countries that are Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, and Vietnam. Brunei Darussalam is excluded. All data was collected from both land and airport immigration in Thailand, and quota sampling was used to determine the number of samples.

The total number of data collected was 3,505 that were consisted of 3,095 nonbusiness tourists and 420 business tourists. To generate the 3,505 non-business tourists, there were consisted of ASEAN residences as follows: 409 Cambodians, 452 Indonesians, 173 Laotians, 407 Burmese, 408 Malaysians, 419 Filipinos, 407 Singaporeans, and 418 Vietnamese. The 2,579 non-business tourists used air transportation; the 1,619 nonbusiness tourists used full-service airlines and the 960 non-business tourists used lowcost airlines. However, this study used only 2,425 ASEAN tourists who were nonbusiness tourist and traveled to Thailand by air.

Two types of questionnaires were employed to collect the data as follows: firstly, business questionnaires, and secondly, non-business questionnaires (individual and group questionnaire). There were two parts of business questionnaires as follows: travel information and personal information. There were four parts of non-business questionnaires as follows: travel information, tourism preference, travel expense, and personal information. In the part of travel information and personal information, it has the same details in business and non-business questionnaires.

There are 20 variables in travel information as follows: (1) frequency of travel internationally; (2) frequency of travel ASEAN; (3) frequency of travel within country of residence; (4) first trip to Thailand; (5) frequency of visit Thailand; (6) frequency of planning to visit Thailand in 2014; (7) source of information that makes tourist decide to visit Thailand; (8) mean of international transportation; (9) primary purpose of trip; (10) type of trip; (11) the number of people in trip; (12) total trip duration; (13) trip duration in other countries; (14) the number of destinations in Thailand; (15) leading destinations in Thailand; (16) favourite vocation activities; (17) the most attractive destination; (18) the first alternative destination to Thailand; (19) uncomfortable situations while staying in Thailand; and (20) the plan to visit Thailand during unrest political situation.

In the part of tourism preference, there were 21 items influence on the decision to travel to Thailand, and two favorite cities in ASEAN countries. The 21 items influencing the decision consisted of (1) sun and sea; (2) weather; (3) other natural attraction; (4) world heritage sites; (5) festivals; (6) other cultural attraction; (7) food; (8) nightlife; (9) shopping; (10) massage and spa; (11) helpful and friendly people; (12) quality of accommodation; (13) overall cleanliness; (14) overall safely; (15) convenient for international transportation and communication; (16) convenient for domestic transportation and communication; (17) low-cost airfare; (18) reasonable price; (19) religion prices; (20) availability of medical services; and (21) no visa requirement.

With travel expense, there were five variables in group tourists and seven variables in individual tourists. The five variables were (1) total expanse; (2) total package tour (for group tourists or cost of international transportation (for individual tourists); (3) type of accommodation; (4) kind of food and beverage that usually consume; and (5) the detail of total expenses. Two variables were added to individual tourist's questionnaires: 1) how tourists reserved their international flight to Thailand and 2) how tourists reserved their accommodation in Thailand.

In the study of "The Tourism Competitiveness and Opportunities of ASEAN Tourism Market for Thailand," it studied on both business and non-business tourists. However, this study concentrates only non-business tourists so that the questions involving the trip purpose will separate the data. The question is "What is your main purpose of this trip?". With the non-business tourists, it consisted of full-service and low-cost airlines data. Thus, the types of airlines data, which the tourists chose to fly will be separated by the questions involving international transportation. The questions are "How did you arrive Thailand on this trip?" and "How will you leave Thailand on this trip?"

Types of tourist lifestyle used in this study were obtained from "The Tourism Competiveness and Opportunities of ASEAN Tourism Market for Thailand" by the cooperation research between Public Policy Studies Institute Foundation and Faculty of Economics, Chiang Mai University. There are eight types of tourist lifestyle as follows:

- (1) Type 1 Nature fans: tourist who likes only nature;
- (2) Type 2 Golden oldies: tourist who likes only culture;
- (3) Type 3 Fun lovers: tourist who likes only entertainment;
- (4) Type 4 N-tertainers: tourist who likes nature and entertainment;
- (5) Type 5 Greeners: tourist who likes nature and culture;
- (6) Type 6 Tradition entertainers: tourist who likes culture and entertainment;
- (7) Type 7 Value lovers: tourist who likes nature, culture, and entertainment;

hts

(8) Type 8 Others: tourist who is not categorized in nature, culture, and entertainment.

reserved

3.5. Research Methodology

The main objectives of this study are (1) to determine factors affecting the choice of low-cost airlines and full-service carriers and (2) to compare the behavior of ASEAN tourists, who travel by low-cost airlines and full-service airlines regarding travel style, expenditure, and length of stay. The details are as follows: 3.5.1. To determine factors affecting the choice of low cost airlines and full service carriers

The study will compare the group of low-cost airlines tourist with the group of full-service airlines tourist. The multivariate Probit model is given by the following equation (4):

$$Z_{ij} = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_n x_{in} + \varepsilon_{in}, i = 1, \dots, n$$
(3.4)

where Z_{ij}

 β_0

ε

 $\beta_1 \text{ to } \beta_n \qquad \quad : \text{Coefficient for } x_{i1} \text{ to } x_{in}$

x_{i1} to x_{in}

: Socio-economic characteristics and travel information variables that consisted of (1) gender; (2) age; (3) marital status; (4) religion; (5) country of residence; (6) education level; (7) main occupation; (8) income; (9) first time tourist; (10) individual tourist; and (11) purpose of trip

: Error terms distributed as multivariate normal

3.5.2. To estimate tourism expenditure

In this study, expenditure function will be estimated using Tobit model. This analysis will show the influence of tourism characteristics variables affecting tourism expenditure. Additionally, variables will be analyzed by using a censored regression model to find a significant relationship between variables. The Tobit model is given by the following equation (5):

$$Y_{i}^{*} = \beta_{0} + \beta_{1}x_{i} + \beta_{2}x_{i2} + \dots + \beta_{n}x_{in} + \varepsilon_{in}, \varepsilon_{in} \sim N(0, \sigma^{2})$$
(3.5)

where Y_{i}^{*} : Dependent variables

- β_0 : Intercept
- β_1 to β_n : Coefficient for x_{i1} to x_{in}
- x_{i1} to x_{in} : Socio-economic characteristics and travel information variables

that consisted of (1) gender; (2) age; (3) marital status; (4) religion; (5) country of residence; (6) education level; (7) main occupation; (8) income; (9) first time tourist; (10) individual tourist; and (11) choice of airline

ε_i : Normally distributed error term

3.5.3. To estimate tourism demand from length of stay

In this study, length of stay will be estimated using Poisson regression model. This analysis will show the influence of tourism characteristics variables affecting the length of stay. The Poisson regression model is given by the following equation (6):

$$Pr(Y_i = y_i | u_i, t_i) = \frac{e^{-u_i t_i(u_i, t_i)y_i}}{y_i!} (y = 0, 1, 2, ...)$$
(3.6)
where Y_i : Dependent variable
 u_i : Interpreted as the risk of a new occurrence of the event
during a specified exposure period, t
 $Pr(Y_i = y_i | u_i, t_i)$: The probability of y_i event
 y_i : Event (Socio-economic characteristics and travel infor-
mation variables that consisted of (1) gender; (2) age; (3)
marital status; (4) religion; (5) country of residence; (6)
education level; (7) main occupation; (8) income; (9) first
time tourist; (10) individual tourist; (11) purpose of trip;
(12) trip descriptive; (13) tourist lifestyle; and (14) choice
of airline
 e : A Constant equal to approximately 2.71828