



**APPENDIX**

## APPENDIX A The Sample Size by Taro Yamane's Formula

According to the totals of the population of the study, the totals of population were 26,466 persons (Deutsche Lufthansa AG, 2009). Therefore, the researcher calculated the sample size by Taro Yamane's formula (Yamane, 1973, p. 727) as follows:

$$n = \frac{N}{1 + Ne^2}$$

When  $n$  = Sample size

$N$  = Population size

$e$  = The error of sampling

This studied allowed the error of sampling on 0.05, the sample size shows as follows:

$$n = \frac{26,466}{1 + [26,466 * (0.05)^2]} = 394.0445 \approx 400$$

Therefore, it could be concluded that the totals of sample size were 400 persons.

## APPENDIX B Test of reliability

The questionnaire was tried out with 40 passengers at the airport. After that the researcher analyzed discrimination power of data and reliability with the formula of Cronbach's alpha coefficient as follows:

$$\alpha = \frac{n}{n-1} \left( 1 - \frac{\sum S_i^2}{S_t^2} \right)$$

When  $\alpha$  = Reliability point

$n$  = Number of questionnaires

$\sum S_i^2$  = Total of variance of each item

$S_t^2$  = The variance of total score

According to this formula, The alpha value overall passengers' perception and attitudes towards airlines' impact on Global Warming in choosing airline service in part 2, 3, and 4 was 0.813.

## APPENDIX C Questionnaire



NARESUAN UNIVERSITY

Master of Arts in International Tourism and Hotel Management Program

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### Survey Questionnaire

**“Airline Passengers’ Perception and Attitudes Relevant to Airlines’ Impact on Global Warming: A Case Study of Lufthansa German Airlines’ Passengers”**

As part of the studies in the Master of Arts in International Tourism and Hotel Management, I am conducting a survey for a research project. The objective of this study focuses on the topic of; *Airline Passengers’ Perception and Attitudes Relevant to Airlines’ Impact on Global Warming: A Case Study of Lufthansa German Airlines’ Passengers*. Your assistance in completing this questionnaire is greatly appreciated.

Miss Chanasita Kanjanapirood  
Researcher

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Instruction: Please answer all questions that best reflect your opinion.

**There are four parts in this questionnaire as follows:**

Part1: Passenger’s profile

Part 2: Passenger’s general perception about Global Warming

Part 3: Passenger’s perception toward airlines’ impact on Global Warming

Part 4: Attitude of the passenger toward airlines’ attempt to alleviate impact on Global Warming

### Part 1: Passenger's profile

Please answer the questions by checking ✓ the appropriate circle

1. Gender

- 1) Male  2) Female

2. Age

- 1) Under 20  2) 20-35  
 3) 36-50  4) 51-65  
 5) Over 65

3. Education Level

- 1) High School  2) Vocational qualification  
 3) Bachelor degree  4) Master degree  
 5) Doctoral degree

4. Occupation

- 1) Government Officer  2) Private Company Officer  
 3) Self-employed  4) Student  
 5) Others (Please Specify).....

5. Income ( per month)

- 1) Less than \$ 1,500  2) \$ 1,500- \$ 3,000  
 3) \$ 3,001-4,500  4) \$ 4,501- \$ 6,000  
 5) Over \$ 6,000

6. Nationality

- 1) Scandinavian  2) European  
 3) North American  4) Others

7. How many times have you flown with Lufthansa?

- 1) First time  2) 2-3 times  
 3) 4-5 times  4) more than 5 times

8. Why do you choose to fly with Lufthansa? ( Choose >1 answer)

- 1) Reasonable price  2) Service quality  
 3) Punctuality  4) Safety  
 5) Reputation of responsibility to the environment

## Part 2: Passenger's general perception about Global Warming

Please mark your answer with an X in the appropriate box.

Features	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1.You are familiar with the term of Global Warming.					
2.The current earth temperature is warmer than in the past.					
3.Global Warming is mainly caused by human activities.					
4.Unreasonable energy consumption like electricity has an effect on Global Warming.					
5.Waste recycling can help to reduce impact on Global Warming.					

## Part 3: Passengers' perception toward airlines' impact on Global Warming

Please mark your decision with an X in the appropriate box.

Features	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1.The airlines industry is creating impact on Global Warming.					
2.The airlines industry is a major contributor in creating greenhouse gas emission.					
3.Greenhouse gas emission from air travel will rise considerably in the future.					
4.The aircraft engine pollutes and has an effect on Global Warming.					

Features	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
5. Air travel is a major contributor to global climate change via fossil fuel consumption.					
6. Increase efficiency in airline operation areas will help make good result on global warming.					

#### Part 4: Attitude of passengers toward airlines' attempt to alleviate impacts on Global Warming

Please mark your decision with an X in the appropriate box.

Features	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1. With the Cyclean Engine Wash, Lufthansa Airlines can reduce their CO <sub>2</sub> emissions proportionally.					
2. According to the environmental program of Lufthansa, with the use of Optimized Aircraft Load Planning, optimizing flight routes, flying at variable speeds, these can help to decrease CO <sub>2</sub> emissions.					
3. The environmental program of Lufthansa plans to use low-emission paint systems and replaced hazardous substances with biologically degradable could lessen the impact on Global Warming.					

Features	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
4. With the sustainable use of natural resources, it will help to reduce the impact on Global Warming.					
5.The airlines industry needs to collaborate and should acknowledge the Global Warming phenomenon.					
6.The airlines industry needs to take actions to help reduce greenhouse gas emission.					
7. The airlines industry needs to reduce greenhouse-gas emissions in the areas of infrastructure and production by at least 30 percent by 2012.					
8.You prefer to use less convenient products and services that has the responsibility to the Global Warming.					
9. You are willing to choose the airline with emissions reduction policy and precise environmentally-friendly operation.					
10. You are willing to use “green airline” which has sense of responsibility to the Global Warming.					
11. In the year 2011, the airlines industry has to pay emission tax. You are willing to contribute to pay a part of the emission tax					
12. You are going to convince your friends and relatives to choose airlines that have environmentally-friendly programs.					

Thank you very much for your cooperation