

CHAPTER I

INTRODUCTION

Rationale for this Study

The concern of global warming and climate change has become important in several international agreements, such as the United Nations Framework Convention on Climate Change in 1992 (UNFCCC) and the subsequent Kyoto Protocol in 1997 at the city of Kyoto, Japan (UNFCCC, 2009). The ultimate objective of the Convention is to stabilise greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system. Under this treaty, 37 industrialised countries and the European Community have committed to reducing their emissions by an average of five percent by 2012 against the 1990 levels. Many researches on global warming show the global average temperature has been increased by the greenhouse gases which cause climate change (Leiper, Braithwaite and Witsel, 2008, p. 1; Olsthoorn, 2001, p. 87; Macintosh and Wallace, 2009, pp. 265-267). These gas emissions cause the greenhouse effect that has been intensified by men increasing the concentration of carbon dioxide as well as chlorofluorocarbons, methane, ozone and nitrous oxide in the earth's atmosphere. Possible effects are, for example, the rise of sea level or changes in vegetation (Braun, et al., 1999, p. 247).

International tourism is now becoming the fastest growing business sector (in the economy) in the world. However, it is also a major source of environmental impacts and resource consumption. Tourism and environment have always been intertwined by many activities such as transportation, construction, resource utilization, recreation activities carried out by the tourists whereby result to pollution (Chenoweth, 2009). Thus, a body of research has dramatically grown on tourism's environmental impacts especially on global warming (Becken, 2007). Braun *et al.* (1999) acknowledge the usefulness of a psychological experimental approach in researching the underlying processes of socio-economic impacts of the effects of an eventual climate change in the field of tourism, as tourism demand may be influenced in some ways by climate change impacts. Furthermore, according to Clayton (2009),

international tourism clearly comes at a significant cost to the environment in a range of different travel and tourism options, with the carbon dioxide emissions resulting from transport, accommodation and recreations. Transportation is an important sector in international tourism that produces high amounts of air pollution especially carbon dioxide emissions (Olsthoorn, 2001). Furthermore, with high amounts of greenhouse gas emission, international tourism clearly comes at a significant cost to the environment (Chenoweth, 2009).

Air transportation is an important part of the global economy because it is a major part of transportation today (Somerville, 2003). The reason is the total number of passengers travelling by air is forecasted to increase at an average annual rate of 4.6 percent between 2005 and 2025 (Environmental Unit, 2007). In addition, air travel accounts for approximately 52 percent of international tourism (World Tourism Organisation, 2009). This business has environmental impact because it uses fossil fuels and consequentially emits carbon dioxide and other greenhouse gases including methane and nitrous oxide. Even aviation produces only 1-2 percent of global carbon dioxide emission (Olsthoorn, 2001), the greenhouse gas emissions from air travel, is released at a height of 10-12 km. in the upper troposphere and lower stratosphere, where they have a large impact on ozone and cloudiness than they do at the earth's surface (IPCC, 1999).

Even though the airline industry is still not included in the practical action of the Kyoto protocol now, but in 2011, the airlines should take action about carbon dioxide emission by paying the emission tax (UNFCCC, 2009). According to Kirk (1996), the control of emissions, pollution, resource and waste management is part of the environmental system. To meet the target of emission reduction, new aircraft technologies could be in the order of 20 percent by 2050 and further gains are expected from improved airframes, weight reductions and better air transport management (Becken, 2007). International Civil Aviation Organisation (2004) acknowledged the discussion about market-based instrument such as voluntary agreement, emission trading and emission taxes or charges. Therefore, good environmental management policy or planning for airlines is significantly important to reduce emissions.

Lufthansa is an aviation company with operations worldwide and it is one of the world's leading international airlines. Lufthansa has good performance record in term of economic success as well as in two other disciplines of sustainability such as environmental care and social responsibility. This is demonstrated by the careful use of resources, ongoing support of climate research and political commitment to a future-oriented, internationalized air traffic control system in Europe (Lufthansa, 2009). There are several scientific researches to assess the environmental impact of air transport including the topic related to global warming at Lufthansa. For example, Lufthansa completed a feasibility study in Hamburg to reduce the greenhouse gas emissions in the areas of infrastructure and production by at least 30 percent by 2012 (Lufthansa, 2009). In addition, Lufthansa's declared goal is to reduce the specific CO₂ emissions of its Group fleet by 25 percent below 2006 levels by 2020 (Lufthansa, 2009).

The main participant in air transportation are the passengers themselves, who make their travel decisions and exert considerable market power. Equally, the concern for the environment has increased significantly during the past few decades and people's perception and attitudes towards nature have changed substantially (Brouwer, et al., 2008, p. 299). The climate change has become a major impact on passengers demand. Lufthansa Passengers can also participate in contribution to climate protection and donate their carbon-offsetting on the company website via <http://Lufthansa.myclimate.org> (Lufthansa, 2009, p. 72). According to Becken (2004, p. 341), the research explored how tourists perceive climate change and forest carbon sinks as a means to offset carbon dioxide emissions. The results showed that tourists distinguished between their travel and their everyday life, where responsibility for greenhouse gas emissions. Accordingly, both passengers' perception and attitudes are important input parameters to reduce the air travel impacts on global warming (Goessling, 2002). Passengers will be a part of responsibility to the environmental problems and save our world.

To meet the target for emission reduction, this study will determine airline passengers' perception and attitudes relevant to airline's impact on the global warming and their reactions to specific climate change policies as a case study of Lufthansa German Airlines.

The Purposes of this Study

1. To study Lufthansa German Airlines passengers' perception toward the air travel impacts on global warming
2. To study Lufthansa German Airlines passengers' attitudes toward the air travel impacts on global warming

Scope of the Study

1. The study focuses on the observation of Lufthansa German Airlines passengers' perception and attitudes on the impact of the airlines and global warming at Suvarnabhumi International Airport, Samutprakarn province, Thailand.
2. The study concentrates on passenger service department's activities, not related to mechanical department.

Definition of Terms

1. Airline Passenger is defined as someone who pays for airline services. In this research, passenger refers to outbound passengers travelling with Lufthansa German Airlines of flight numbers LH 773 and LH 783 during the month of February 2010 at Suvarnabhumi International Airport, Samutprakarn province, Thailand.
2. Lufthansa Environmental Program is the program, which comprises 15 guidelines. It is based on the internationally accepted Four-Pillar Strategy for air transport, which includes the entire range of practicable measures for climate protection in aviation.
3. Perception about Lufthansa Environmental Program is the process by which the Lufthansa German Airlines' passengers select, organize and interpret Lufthansa Environmental Program inputs to create a good practical guideline for Lufthansa German Airlines and others.
4. Attitudes towards Lufthansa Environmental Program are the Lufthansa Airlines passengers' favourable and unfavourable evaluations, emotional feelings, and action tendencies towards this program.
5. Global warming is the increase in the average temperature of the Earth's near-surface air and oceans since the mid-20th century and its projected continuation.

Conceptual Framework and Hypotheses

The following framework briefly shows an overview of the conceptual basis for finding the relationship between the passengers' perception and attitudes towards the Lufthansa Environmental Program on climate protection. The conceptual framework of this study is as follows:

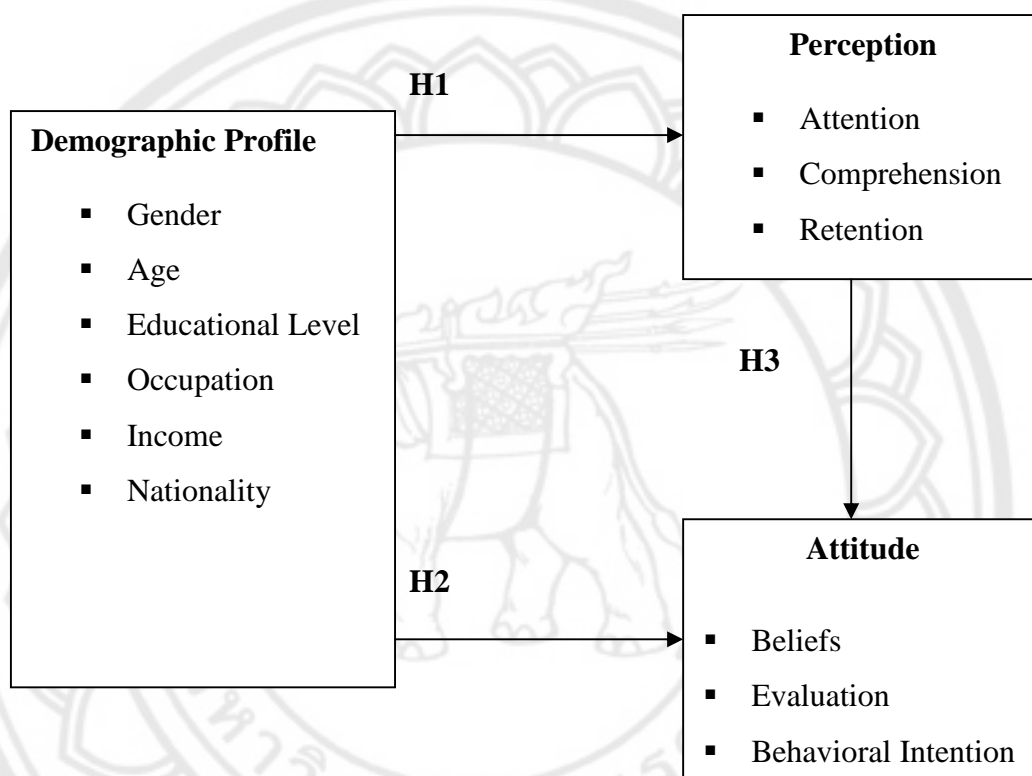


Figure 1 The conceptual framework

Hypotheses

H1: The passengers with different demographics will have perception towards airlines' impact on global warming.

H2: The passengers with different demographics will have different attitudes towards global warming in relation to choosing the airline service.

H3: There is a positive relationship between passengers' perception and attitude towards global warming in relation to the airline service.