Differentiation of services to achieve competitive advantage: airlines meeting the needs of the physically challenged persons

Md. Shafiqur Rahman
Southern Cross University

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DIFFERENTIATION OF SERVICES TO ACHIEVE COMPETITIVE ADVANTAGE — AIRLINES MEETING THE NEEDS OF PHYSICALLY CHALLENGED PERSONS

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BSS(Hons), MSS(Economics), MBA(Marketing), GDip(Business Admin), DipTT(Mgmt)

A thesis submitted to the Graduate College of Management, Southern Cross University, Australia, in partial fulfilment of the requirements for the degree of Doctor of Business Administration

2011
I certify that the substance of this thesis has not been currently submitted for any degree and has not been previously submitted for any other degree.

I also certify that to the best of my knowledge any help received in preparing this thesis, and all sources used have been acknowledged in this thesis.

____________________
Md. Shafiqur Rahman

March 2011
Publications


2. Rahman, S. & Ng, K.Y.N. 2009, The paradox of marketing to the physically challenged individuals— sustainable differentiation or simply marketing hype. ASEAN Journal on Hospitality & Tourism, Vol-8, No.1


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Lastly, I like to dedicate this thesis to my father Dr. K. M. S. Rahman, mother Momtaj Begum and my daughter Quarina Rahman.
Abstract

Product differentiation is a competitive business strategy whereby firms attempt to gain a competitive advantage. Airlines have employed several differentiation strategies to gain a competitive advantage over other airlines in order to better position their products. People with disabilities, together with careers, constitute a large potential consumer market segment for the tourism and hospitality industry. Disability affects 15—20% of every country’s population. The growing market of physically challenged persons can be a source of competitive advantage for the airlines if they differentiate their products and services by fulfilling the needs of physically challenged persons. The literature review gave clear focus to the relevance of the research problem and underlined the gaps in the body of knowledge. Accordingly, the research problem formulated for this research was “How can airlines differentiate their services and achieve competitive advantage by fulfilling the needs of physically challenged persons?”

The interpretivist orientation of qualitative research methods with case studies has guided this research; the aim being to investigate the research problem and research questions leading to research propositions. The aim of this thesis is to enhance understanding of the issue of how airlines can differentiate their services and achieve competitive advantage by fulfilling the needs of physically challenged individuals and also to develop a model rather than test theory.

The unit of analysis was international airlines (single unit of analysis). Four major airlines were chosen as cases and in-depth interviews were carried out among 15 persons at different hierarchical management levels (3 to 5 from each airline depending on the participants’ availability). Purposeful and convenience methods of sampling were used as the sampling strategy. Access to the sample group was based on the researcher’s personal contacts.
Airlines were chosen from the different Asian regions for maximum representation. Data were collected from the in-depth interviews, and both within-case and cross-case analysis were selected. All the information obtained from the cross-case analysis were later analysed and triangulated. Concept mapping technique was used in pattern matching and for replication to achieve external validity in multiple case studies.

This research has had a number of findings. The main contribution of this research to enhance knowledge and understand product differentiation as a competitive advantage particularly in the context of the physically challenged persons. The growing market of physically challenged persons might be a source of competitive advantage for airlines that differentiate their products and services to fulfil those needs.

This research provides useful information to policy makers in terms of the needs of physically challenged persons, barriers to implement product differentiation, measures to be taken for product differentiation and achieve competitive advantage, the challenges physically challenged persons face when travelling by air, and the preconditions for product differentiation in the market.

A major contribution of the present study is the derivation of a theoretical model of airlines differentiation for physically challenged persons. This model not only identifies the needs of the physically challenged persons but also proposes guidelines for government policy makers in formulating policy to create awareness on the rights, barrier-free travel and improve infrastructure to cater the market segment of physically challenged persons.
The following acronyms and abbreviations are used and applied in this research.

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<th>Acronym</th>
<th>Full Form</th>
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<tr>
<td>$</td>
<td>United States Dollar</td>
</tr>
<tr>
<td>APEC</td>
<td>Asia-Pacific Economic Cooperation</td>
</tr>
<tr>
<td>BFT</td>
<td>Barrier-Free Travel</td>
</tr>
<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>CRQ</td>
<td>Central Research Question</td>
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<tr>
<td>CRS</td>
<td>Computer Reservation System</td>
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<tr>
<td>DDA</td>
<td>Disability Discrimination Act</td>
</tr>
<tr>
<td>DRC</td>
<td>Disability Rights Commission</td>
</tr>
<tr>
<td>EDF</td>
<td>European Disability Forum</td>
</tr>
<tr>
<td>ESCAP</td>
<td>United Nations Economic Commission for the Asia Pacific</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>FREMAC</td>
<td>Frequent Travellers Medical Card</td>
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<tr>
<td>HREC</td>
<td>Human Research Ethics Committee</td>
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<tr>
<td>HRM</td>
<td>Human Resource Management</td>
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<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
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<td>ICAO</td>
<td>International Civil Aviation Organization</td>
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<td>IQ</td>
<td>Interview Question</td>
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<td>KLM</td>
<td>Royal Dutch Airlines</td>
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<td>Acronym</td>
<td>Description</td>
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<tr>
<td>MEDA</td>
<td>Medical Clearance Form</td>
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<td>MD</td>
<td>McDonnell Douglas</td>
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<tr>
<td>ODO</td>
<td>Open Doors Organization</td>
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<tr>
<td>PRM</td>
<td>Person with Reduced Mobility</td>
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<td>RQ</td>
<td>Research Question</td>
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<tr>
<td>SARPS</td>
<td>Standards and Recommended Practices</td>
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<tr>
<td>SATH</td>
<td>Society for Accessible Travel and Hospitality</td>
</tr>
<tr>
<td>SOP</td>
<td>Standard Operating Procedure</td>
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<tr>
<td>TIA</td>
<td>Travel Industry Association of America</td>
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<td>TQ</td>
<td>Theory based Questions</td>
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<td>UN</td>
<td>United Nations</td>
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<tr>
<td>US</td>
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Chapter 1

Introduction

1.1 Introduction

This chapter provides an overview of the research. The background of the research is provided with the research problem, questions and propositions suggested from the literature review. A justification of the research, followed by an explanation of the research methodology is provided. The structure of the thesis is presented, outlining the definitions and limitations.

1.2 Background of the research

“The world must make its hotels, transportation services and communication systems accessible to persons of all disabilities, not because it is the nice thing to do but because travel is a right of every person with a disability throughout the world” (Walsh, 1995, p.543)

Over many centuries, tourism has been practiced in some form or other but the phenomenon of tourism as industry is very recent. It is believed that it has its origin in Britain during the mid 1800s (Weaver and Opperman, 2000). New market segments are continually being sought by the tourism industry as older segments mature and evolve. For example, the seniors market or "Grey Tourism" has recently emerged as a major market for tourism. This was brought about through the ageing of the "Baby Boomer" generation who have historically influenced market shifts over the last two decades. Closely linked to the needs of the seniors market are people with disabilities, whose travel needs have been described as “barrier-free tourism” (Vignuda, 2006). Barrier-free tourism offers a new segmentation opportunity that merges the access requirements of the seniors and disability markets. In this regard, information provision, presentation, promotion and marketing of easy access facilities can provide a niche market for the airlines if they can meet the needs of physically challenged persons.
Airline’s including other service operator’s should strive to reach this expanding market by preparation and training for its special needs. People with disabilities, together with careers and their friends, relatives, and older persons constitute a large potential consumer market segment, both in terms of numbers and tourism expenses for the tourism and hospitality industry (Vignuda, 2006). The growing market of physically challenged persons can be a source of competitive advantage for the airlines if they differentiate their product and services by fulfilling the needs of physically challenged persons.

1.3 Justification of research

This study suggests that market segmenting and meeting the needs of physically challenged persons is a sustainable proposition for the airline and tourism industry, given that little previous research has been conducted in identifying this potential group of customers. This study is also beneficial from a managerial perspective, given the implications in terms of assisting the airline operators and marketers to better understand this group of customers and their needs. In particular specific features identified in this paper can help improve the overall position of airline operators in appealing to this growing segment.

People with disabilities are becoming a growing group of consumers of travel and leisure-oriented products and services (Vignuda, 2006). Disability affects 15-20% of every country’s population; there are at least 610 million people with disabilities worldwide (Elwan, 1999). Data from the United Nations indicate that around 10% of the world's population, or 650 million people, live with a disability — constituting the world’s largest minority (Factsheet on Persons with Disabilities, 2008). In 2001, the airline industry saw $3.3 billion in spending by travellers with disabilities, resulting in 52,800 jobs created to provide services for people with disabilities. The lodging industry saw $4.2 billion in spending and 60,000 jobs. People with disabilities could at least double their spending, generating $6.4 billion for airlines and $8.4 billion for lodging if the needs of travellers with disabilities were addressed. Currently, travellers with disabilities generate a total of 194,000 travel-related jobs, $4.22 billion in payroll and $2.52 billion in tax revenues in the U.S. (Open Doors Organization, 2003).

As per Asian Development Bank (n.d), the UN estimates that 600 million people are persons with disabilities, totalling 10% of the world population. The Asia-Pacific region has
estimated 400 million people with disabilities impact on their families, affecting the lives and livelihood of over 800 million people or about 25% of the population. The proportion of persons with disabilities is increasing due to poverty, poor pre-natal care, lack of occupational health and safety, poor road and traffic management, civil conflicts, and landmines. Poverty is also increasing among persons with disabilities. The condition of disability is alarming in Asia. Most of the disabled remain invisible and under-reported in national censuses and surveys.

*Travel Daily News* (2003) has stated that there are millions of people with disabilities in the Asia-Pacific region; they would love to travel but cannot due to the lack of facilities and services in the region to cater to the special needs of this untapped market. The United Nations Economic and Social Commission of Asia and the Pacific (2003) states that the countries with the highest rates of disability are also countries that have already recognised barrier-free tourism as an important market segment. It was found that no country or area in Asia and the Pacific had ever undertaken any research into travel patterns or the scope of the travel market for barrier-free tourism for people with disabilities.

Further justifications will be provided in Chapter 2 Literature review.

**1.4 Research problem and propositions**

Sekaran (2003) defined the problem statement as a “clear, precise and succinct statement of the question or issues that is to be investigated with the goal of finding an answer or solution” (p.70).

The research problem addressed in this research is:

**How can airlines differentiate their services and achieve competitive advantage by fulfilling the needs of physically challenged persons?**

To address this research problem, the following research questions are developed for this study:

1. **To what extent are airlines aware of the market of physically challenged persons?**
2. Do airlines have plans to promote and enhance the business segment of physically challenged persons?

3. To what extent are airlines aware of and fulfilling the needs of physically challenged persons?

4. Are airlines differentiating their products by fulfilling the needs of physically challenged persons?

5. What actions can airlines take to achieve competitive advantage in this market?

6. How can guidelines or a model be developed for policy makers to formulate policy in catering to the market segment of physically challenged persons?

According to Cooper and Schindler (1998), a research proposition is a statement about concepts that may be judged as true or false if it refers to observable phenomena. When a proposition is formulated for empirical testing, it is called a hypothesis.

The researcher chooses the term proposition for the following reasons:

The empirical part of this study is exploratory in nature given the little previous research that has been done in the area. This research was conducted to increase understanding of certain phenomenon. In addition, the research was not based on previous models and the issue was approached from a more pragmatic view that was guided by practical experience and observation rather than theory.

The six research questions led to four research propositions. These were:

- That Asian airlines are aware of and plan to promote and enhance the market segment of physically challenged persons.
- That Asian airlines are aware of and fulfilling the needs of physically challenged persons.
- That Asian airlines are differentiating their products and achieving competitive advantage in this market.
- That a guideline/model can be developed for policy makers to cater to the market segment of physically challenged persons.
1.5 Research objectives

Research objectives explain the purpose of the research in measurable terms and specify what the research should achieve (Zikmund, 1997). Research problems and questions guided the following objectives to be achieved:

1. To identify to what extent airlines are aware of the market of physically challenged persons.

2. To examine to what extent airlines are aware of the needs of physically challenged persons.

3. To identify to what extent airlines are fulfilling the needs of physically challenged persons.

4. To examine the actions airlines can take to differentiate their products and achieve competitive advantage in this market.

5. To develop a guideline/model for the policy makers in catering to the market segment of physically challenged persons.

1.6 Literature review and theoretical framework

This research included an analysis of the major schools of thought on competitive advantage (Porter, 1980, 1985; Barney, 1991; Coyne, 1986), generic strategies by Porter (1985) and product differentiation (Kotler, 1998; Chamberlin, 1965; Porter, 1985; Scheuing, 1974; Hotelling, 1929). It also included economists’ views (O’Shaughnessy, 1984), and strategic views (Smith, 1956; Johnson, Scholes & Whittington, 2008) of product differentiation. A further review was carried out on product differentiation in airlines and physically challenged persons. It examined the definitions of physically challenged persons, the disability discrimination acts of some countries, the market for physically challenged persons and their needs to have deep understanding of the issue. It has been observed that airlines have adopted product differentiation techniques to achieve competitive advantage. However, differentiation of services to achieve competitive advantage by fulfilling the needs of physically challenged persons has not been considered by the airlines. Airlines are also not aware of the needs of physically challenged persons. In particular, Asian airlines are neither aware of the needs nor the size of the market segment of physically challenged persons. The growing market of
physically challenged persons can be a source of competitive advantage if airlines differentiate their products and services by meeting and exceeding the needs and requirements of physically challenged persons. The literature review in Chapter 2 has confirmed that no previous theory or model on the phenomenon is under study. The lack of current guidelines indicates the importance of developing a guideline/model for the policy makers in catering to the market segment of physically challenged persons. The review gave clear focus to the relevance of the research problem and underlined the gaps in the body of knowledge. These gaps are shown in Table.2.2. This endorsed the formulation of the research questions and shapes the research propositions.
Since this research problem has not been undertaken and published before, a theoretical model (Figure 1.1) was developed from the literature review as a guide to the research.

Figure 1.1 **Theoretical framework**

- **Airlines fulfilling the needs of physically challenged persons**
- **Airlines differentiating their products**
- **Airlines achieve competitive advantage**
- **Plans to promote and enhance business segment of physically challenged persons**
- **Formulate guideline to cater to the segment of physically challenged persons**

Source: developed for this research

**1.7 Research methodology**

The interpretivist orientation of qualitative research methods with case studies has guided this research; the aim was to investigate the research problem and six research questions
leading to four propositions as detailed in section 1.4. Qualitative methods were selected for this research for the following two reasons.

**Firstly**, differentiation of products and competitive advantage from catering to physically challenged persons in airlines is a relatively new topic in the marketing and airlines literature, and so qualitative methods are required to explore this complex topic in depth to generate ideas to enhance understanding the issues rather than to test theory.

**Secondly**, this research needs depth and detailed qualitative data to understand the complex phenomenon of how airlines can differentiate their services and achieve competitive advantage by fulfilling the needs of physically challenged individuals. Rich, real information and non-statistical data can only be obtained in the in-depth relationship between the researcher and subjects as the qualitative researcher conducts their studies in the field.

There are three major reasons to use the case study method (Yin, 1994) for this research:

- the type of research question posed
- the extent of control an investigator has over actual behavioural events
- the degree of focus on contemporary as opposed to historical events

This study meets the important criteria for a case research (Yin, 2003): it attempts to answer the questions that are typical for a case study: why and how. This research attempts to answer: How can airlines differentiate their services and achieve competitive advantage by fulfilling the needs of physically challenged individuals?

Case research is best suited for research questions where the researcher is interested in understanding dynamic contemporary events in an environment over which the researcher has no control (Yin, 1994). This research is undertaken in an environment which cannot be controlled and as such the case study method is most appropriate.

A case study approach is preferred as it investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident (Yin, 1984). As per United Nations (2008) around 10% of the world's population, or 650 million people, live with a disability. They are the world's largest minority. This figure is increasing through population growth, medical advances and the ageing process, says the World Health Organization (WHO). In countries with life expectancies over 70 years,
individuals spend on average about 8 years, or 11.5 per cent of their life span, living with disabilities. The disability discrimination acts (DDA) of different countries protect all people with a disability from unfair or unfavourable treatment because of their disability. This is a contemporary issue.

Finally, case study research is suitable for the study as the research aims to build theory rather than test theory. The aim of this thesis is to enhance understanding of the issue of how airlines differentiate their services and achieve competitive advantage by fulfilling the needs of physically challenged individuals and also to develop a model rather than test theory.

1.7.1 Data collection

Yin (1994) identified six primary sources of evidence for case study research. In this study, the main part of the data was collected from in-depth personal interviews. The following data collection techniques were used in the research:

- Semi-structured interviews
- Observation
- Documentation
- Internet websites

In this research, the unit of analysis was international airlines (single unit of analysis), chosen among the other types of transportation available in the world. Four major airlines were chosen as cases and in-depth interviews were carried out with 15 persons at different hierarchical management levels (3 to 5 persons from each airline depending on the availability). Purposeful and convenience methods of sampling were used as the sampling strategy for this research. The main reason purposeful sampling was used was due to the researcher’s experience in the airline industry, which enabled to select case that represent the population. Respondents were selected from the researcher’s personal judgment so that they could provide the required information for the research. Access to the sample group was secured through personal contacts and those easily accessible. Airlines were chosen from the different Asian regions for maximum representation.
1.7.2 Data analysis

To analyse the data collected from the in-depth interviews, both within-case and cross-case analysis were selected. Within-case analysis involved describing each individual case. Case descriptions were done through explanation building with the use of the Wengraf (2001) pyramid model of interview research (Figure 3.5). An illustration of theory based questions is included in Appendix D. All the information obtained from the cross-case analysis were later analysed and triangulated. Concept mapping technique was used in pattern matching and for replication to achieve external validity in multiple case studies.

This research planned to achieve literal replication logic to investigate airlines’ awareness of the needs of physically challenged persons and the extent that they are fulfilling these needs. The cases were selected from Asian airlines and this study seeks to understand whether Asian airlines are aware of the needs and the extent to which the airlines are fulfilling needs of physically challenged persons. The similar findings in the cases support the development of a preliminary theory to describe the phenomenon (theoretical replication). Initially three airline cases were studied for literal replication and a fourth airline case was added later for pattern matching to compare and support the pattern derived from the original cases.

In this study, the data were categorised before drawing the concept maps. Concept maps were developed for each interview question to help to organise and classify the data. One illustration of concept maps is included as Appendix E.

Yin (1994) states that the several sources of evidence constitute a major strength of case study methodology. Actual triangulation occurs when the researcher is able to collect information from different sources to corroborate the same fact or phenomenon. The triangulation procedure is explained in section 3.9. Semi-structured in-depth interviews were carried out among the different levels in the airlines’ management to support each case and answer the research questions. Secondary data from airlines documents and websites were also analysed to support the airlines’ views. Observation on the ground and inside the aircraft also provided some data for triangulation to enhance the validity. The triangulation of data is shown in table 4.30.
1.8 Contribution of research to knowledge

This research contributes to theory, for governments and policy makers.

- The contribution of this research is identified as enhancing knowledge of product differentiation and competitive advantage as a phenomenon and in the context of physically challenged persons, which is new topic in airlines literature.

- The research outcomes contribute to knowledge as the issue of Asian airlines' awareness of the market segment of physically challenged persons and plans to promote this segment have not been studied in earlier research.

- The research outcomes contribute to knowledge as the needs of physically challenged persons travelling by air have been identified and the extent to which airlines are fulfilling these needs has not been studied in earlier research.

- The research contributes to knowledge as the barriers and preconditions mentioned by the airlines to implementing product differentiation in the market segment of physically challenged persons have been identified.

- The research outcomes contribute to knowledge as the Asian airlines' actions to achieve competitive advantage in the market segment of physically challenged persons have not been recorded in earlier research.

- The literature review in Chapter 2 has established no previous theory or model on the phenomenon under study. Differentiation and competitive advantage from physically challenged persons in airlines is a relatively new topic in the airlines literature. The methodology used in this research (qualitative research with case studies) will convince researchers to conduct studies with similar research techniques.

- Government policy makers may note the research outcomes in section 5.2.3 (preconditions for product differentiation), section 5.2.4 (challenges), table 5.5 (needs) and table 5.8 (external barriers). Some important factors have emerged from this study as presented in table 5.12. This research provides useful information for governments and this is an addition to the existing knowledge.
The literature review enabled the researcher to identify the research issue and objectives. The findings reconfirmed the relevance of the research problem and the research questions. This endorsed the formulation of the research objectives and shape of the research propositions. The research issue was examined from the data collected from in-depth interviews followed by analysis. This research has formulated a model/framework (figure 5.1) for policy makers that contribute to knowledge.

1.9 Research gap

Hart (1998) has elaborated the purpose of a literature review 1. To demonstrate scholarly ability to identify relevant information and to outline existing knowledge 2. To identify the 'gap' in the research that study is attempting to address, positioning in the context of previous research and creating a 'research space' 3. To produce a rationale or justification for study.

The background in section 1.2 and justification in section 1.3 has indicated that the growing market of physically challenged persons can be a source of competitive advantage for the airlines if they differentiate their products and services by fulfilling the needs of the physically challenged persons, given that little research has been conducted in identifying this potential group of customers. Literature review in chapter 2 has revealed that airlines adopted different product differentiation techniques to achieve competitive advantage (Chan, 2000a, 2000b, Kleymann and Seristö, 2004) but differentiation of services to achieve competitive advantage by fulfilling the needs of physically challenged persons has not been considered by airlines. Airlines are also not aware of the needs, especially Asian airlines are neither aware of the needs nor the size of the market segment of physically challenged persons (United Nations Economic and Social Commission of Asia and the Pacific, 2003). The review has indicated the gaps in the body of knowledge and shown in table 2.2.

1.10 Definitions

The literature review in chapter 2 and section 5.4 shows that there are wide varieties of definition of disability. Passengers with a physical disability or with a medical condition, require more individual attention or assistance on enplaning/deplaning and during ground handling than is normally extended to other passengers. The definition of physically challenged persons used in this study consists of the wheelchair-bound, the blind, the deaf and dumb persons.
1.11 Outline of this thesis

This chapter is the foundation of this thesis. The research problem, research questions and propositions have been presented. The justification of the research was explained and objectives outlined. The literature review along with a theoretical framework and justifications of methodology used were also briefly explained. The contribution of this research to knowledge has been discussed and limitations will be identified. The next chapter reviews the related literature.

This thesis follows the standard framework as suggested by Perry (1998b). The five chapters of this thesis are presented in figure 1.2:

![Outline of the thesis](source: Developed for this research)

**Chapter 1** presents an introduction to the research, the background to the study, justification for the research, introduces the research problem, propositions and theoretical framework and a summary of the methodology used. An outline of the research is also provided, together
with the limitations, research gap and the contribution of research to knowledge in the area of disabled travel.

**Chapter 2** presents a detailed review of the existing literature related to the parent disciplines of competitive advantage, product differentiation and the definition of physically challenged persons and the immediate discipline of competitive advantage and product differentiation in airlines and physically challenged persons. This chapter describes Airline and Asian airline industry. This is followed by descriptions of the market of physically challenged persons and the needs of physically challenged individuals. Chapter 2 also describes the gaps in the literature.

**Chapter 3** outlines the justification and description of the methodology adopted in this research. The chapter also reviews the sample size, the data collection procedure and data analysis procedure. In the last section, ethical issues in this research are described.

**Chapter 4** presents data analysis relevant to the research propositions with within-case and cross-case analysis along with concept mapping/pattern matching/replication, themes emerging from interview data, and the triangulation of data. The data collected from in-depth interviews were analysed and are presented in the form of descriptions, quotations, figures and tables. There is frequent and extensive use of quotations from the informants’ interview data to compare, contrast and support the findings.

**Chapter 5** describes conclusions about the three research propositions and conclusions about the central research issue. The limitations, implications of this research and implications for further research are discussed.

### 1.12 Limitations

The purpose of this research is to investigate how Asian airlines go about differentiating their services by fulfilling the needs and promoting the segment of physically challenged persons. Therefore, the findings of this research may be suitable to the Asian market.

The limitations were due to lack of resources and time constraints. This research had no sponsorship and was not supported by government, or any organisational, funds.
Proper literature on airlines differentiating their services by fulfilling the needs and promoting the market segment of physically challenged persons and academic research undertaken and published was limited. Properly defining disability was difficult due to the wide variety of definitions of disability in the literature.

Some personnel at major airlines in the Asian region declined to be interviewed despite being told that no personal questions will be asked and no information would be sought on the airlines’ procedures/operations. Some officials also expressed an initial willingness to participate in the interviews but later withdrew due to time and schedule constraints.
2.1 Introduction

This chapter reviews the literature related to the parent disciplines of competitive advantage, product differentiation and the definition of physically challenged persons and the immediate discipline of competitive advantage and product differentiation in airlines and physically challenged persons. The chapter is divided into ten sections. Section 2.1 deals with the introduction to the chapter, which includes the overall picture of the chapter including the concept map of the literature review (Figure 2.1). There is then a review of the literature on competitive advantage and product differentiation, which are the parent disciplines of the thesis. Section 2.4 describes the various definitions of physically challenged persons found in the literature. It also elaborates the Disability Discrimination Acts of some countries. Section 2.5 describes Airline and Asian airline industry. Section 2.6 and 2.7 concern the review of product differentiation in airlines and physically challenged persons. Section 2.8 describes the market for the physically challenged persons. Section 2.9 presents the needs of physically challenged persons and why airlines are not meeting the needs. Section 2.10 presents the gaps in the literature that were uncovered during the review process. Lastly, a conclusion section of the literature review will summarise the chapter.
2.2 Definitions of competitive advantage

In recent years, the concept of competitive advantage has been a focus of discussions in business strategy. There are plenty of statements about competitive advantage but an exact definition is elusive. Competitive advantage in the strategy literature indicates the common theme is value creation. However, there is not much agreement on value to whom and when. According to one school of thought, value is created by favourable terms of trade in product markets, where sales revenues exceed costs. Another school of thought holds that advantage is revealed by “super-normal” returns. A third school of thought relates advantage to stock market performance (Rumelt, 2003).

Porter (1980) in his book *Competitive strategy* has mentioned competitive advantage is at the heart of a firm’s performance in competitive markets. Competitive advantage means having
low costs, differentiation advantage, or a successful focus strategy. Porter (1990) also argues that competitive advantage develops fundamentally out of the value a firm is able to create for its buyers which exceeds the firm’s cost of creating it.

Peteraf, 1993 (as cited in Rumelt, 2003) defines competitive advantage as sustained over normal returns. Imperfectly mobile resources that are specialised to the firm can be a source of competitive advantage because any Ricardian or monopoly rents generated by the asset will not offset fully by accounting for the asset’s opportunity cost.

Coyne (1986) suggested that because the meaning of competitive advantage is superficially self-evident, there is no need to define its exact meaning. However, differentiation based on key buying attributes of a product is the base of an advantage. Coyne (1986) suggested three conditions that must be met for competitive advantage: 1) customers must perceive differences between the attributes of one firm's product/service and those of its competitors, 2) the difference is the result of a capability gap between the firm and its competitors, and 3) that the difference in attributes and the capability gap are expected to continue over time. The sustainability of a competitive advantage is a function of the durability of the attributional difference and the capability gap that created it. A sustainable competitive advantage is not necessarily related with increasing shareholder wealth, only with beating competitors. Therefore, a competitive advantage might in fact lead to a decrease in shareholder wealth if pursued and sustained.

Saloner, Shepard and Podolny (2001) have clarified that most forms of competitive advantage mean either that a firm can produce some service or product that its customers value more than those produced by competitors or that it can produce its service or product at a lower cost than its competitors. They also suggest that the firm must also be able to capture the value it creates in order to prosper. The firm must have a sustainable competitive advantage in order to create and capture value.

The most explicit attempt to define competitive advantage and sustainable competitive advantage has come from Barney (1991). He stated that a firm has a competitive advantage when it implements a value-creating strategy not simultaneously implemented by competitors and other firms are unable to duplicate the benefits of this strategy. He asserts that a
competitive advantage is sustained only if it continues to exist after efforts to duplicate that advantage have ceased.

Finally, the economic definition of comparative advantage removes the aspects of efficiency and opportunity costs from the competitive advantage concept. Comparative advantage is commonly used in economic texts to denote conditions in which one entity has the ability to produce a good or service with more efficiency than can other entities, based upon lower opportunity costs of production. The cost leadership principles described by Porter (1985) and some degree of relative value creation expressed by Barney (1991) can be placed within the comparative advantage concept, thus leaving the concept of competitive advantage more uncluttered. A firm with a comparative advantage in producing valuable goods and/or services may be able to achieve a competitive advantage (Flint, 2001).

2.2.1 Competitive strategies

These were first set out by Michael Porter in 1985 in his book *Competitive Advantage: Creating and Sustaining Superior Performance*. This book discussed "generic strategies" that can be applied to products or services in all industries and to organizations of all sizes. Porter called the generic strategies: "Cost Leadership”, "Differentiation” and "Focus”. Focus strategy has been sub-divided into two parts: "Cost Focus" and "Differentiation Focus". These strategies are shown in Figure 2.2 below.

![Porter's generic strategies chart](image_url)

Source: Adopted from Porter (1985)
Cost Leadership Strategy — Porter’s generic strategies are ways of achieving competitive advantage by developing the "edge" that increase sales through:

- Increasing profits by reducing costs, while charging industry-average prices.
- Increasing market share by charging lower prices, while still making a reasonable profit on each sale because of reduced costs.

Differentiation Strategy — Differentiation involves making products or services different from and more attractive than those of competitors. This depends on the exact nature of the industry and of the products and services themselves, but will typically involve features, functionality, durability, and support and also a brand image that customer value. The success of a generic differentiation strategy depends on:

- Good research, development and innovation.
- The ability to deliver high-quality products or services.
- Effective sales and marketing, so that the market understands the benefits offered by the differentiated offerings.

Large organisations pursuing a differentiation strategy must be active with their new product development processes. Otherwise, they risk attack on several fronts by competitors pursuing focus differentiation strategies in different market segments.

Focus Strategy — Companies with focus strategies concentrate on particular niche markets and by understanding the dynamics of those markets and the unique needs of customers. They must develop uniquely low cost or well-specified products for those markets. They tend to build strong brand loyalty amongst their customers as they serve customers in their market uniquely. This in turn makes the particular market segment less attractive to their competitors.

It is essential to decide to pursue cost leadership or differentiation as broad market strategies once a focus strategy is selected as the main approach. Focus is not normally enough on its own. Whether cost focus or differentiation focus, the key to making a success of a generic focus strategy is to ensure that “something extra” is added as a result of serving only that market niche. It's simply not enough to focus on only one market segment when the organisation is too small to serve a broader market. The "something extra" can contribute to reducing costs or to increase differentiation though deep understanding of customers’ needs. (Mind Tools, n.d.)
Generic value propositions were first identified in 1993 in the Harvard Business Review article, *Customer Intimacy and Other Value Propositions*. In the article, Treacy and Wiersma (1993) have modified Porter's three strategies to describe three basic "value disciplines" which will create customer value and provide a competitive advantage. Companies achieve leadership positions and command market leadership by narrowing, not broadening their business focus. Three "value-disciplines" that can serve as the basis for strategy: operational excellence, customer intimacy, and product leadership.

**Operational Excellence:** The Strategy is to focus on the production and delivery of products and services. The objective is to lead the industry in terms of best total costs and hassle free interaction with the firm (cost leadership / focus on supply chain management).

**Product Leadership:** The Strategy focuses on producing a continuous stream of new innovative products and services (innovation / focus on product lifecycle management).

**Customer Intimacy:** The Strategy is about tailoring and shaping products and services to fit an increasingly fine definition of the customer. The objective is long-term customer loyalty and long-term customer profitability (service leadership / focus on customer relationship management).

Kim and Mauborgne (2005) has developed the Blue Ocean Strategy which illustrates that an organisation can generate the high growth and profits by creating new demand in an uncontested market space- "Blue Ocean", than by competing for known customers in an existing industry. Red oceans are all the industries exist today, the known market space. Industry boundaries are defined and the competitive rules known to everyone. Companies try to outperform their rivals to obtain a greater share of product or service. Competition increases in crowded market space, which reduces profits and growth. Blue oceans, refer to all the industries not in existence today, the unknown market space. Demand is created and plenty of opportunity for growth that is both profitable and rapid. Competition is irrelevant because the rules are yet to be set. Blue ocean is an analogy to depict the wider, deeper potential of market space that is not yet explored. A blue ocean is created when a company achieves value innovation that creates value simultaneously for both the buyer and the company.

Thompson and Strickland (2008) have expanded Porter’s generic strategies from three to
five: overall low-cost provider strategy, broad differentiation strategy, best-cost provider strategy, focused low-cost strategy, and focused differentiation strategy.

2.2.2 Sources of competitive advantage

In most industries, regardless of whether the average profitability of the industry is high or low, some firms are more profitable than others. The superior performers have something special and difficult to imitate that allows them to do better than their rivals. In strategy literature, these unique skills and resources are mentioned as sources of competitive advantage.

Bharadwaj, Varadarajan and Fahy (1993) classify two broad sources of competitive advantage: unique resources (assets) and distinctive skills (capabilities). Day and Wensley, 1988 (as cited in Bharadwaj, Varadarajan and Fahy, 1993) characterize superior skills as the distinctive capabilities of a firm's personnel that set them apart from the personnel of competing firms and superior resources as more tangible requirements for advantage that enable a firm to exercise its capabilities. These two sets of sources allow a business to perform the various primary and secondary value activities that compose its value chain at a lower cost or lead to differentiation. They create competitive positional advantages in the form of superior customer value by differentiated goods/services, and/or lower relative costs through cost leadership. Firm-specific skills and resources are also referred to as the "drivers" of cost and/or differentiation advantages (Porter, 1995 as cited in Bharadwaj, Varadarajan and Fahy, 1993). There are varieties of drivers in the literature; these include resource-based drivers such as economies of scale and scope, brand equity, and reputation, and skills-based drivers such as the skills underlying the innovativeness and superior quality of a business's offerings. Superior skills and resources do not give a business a competitive advantage. They only offer the business an opportunity to use its skills and resources to achieve competitive cost and/or differentiation advantages. Thus one must identify the skills and resources that have the greatest potential to endow the firm with enduring competitive advantages. Aaker, 1989 (as cited in Bharadwaj, Varadarajan and Fahy, 1993) stated that multiple sources of competitive advantage are necessary for a business to compete successfully.
2.3 Product differentiation

It has long been acknowledged that service differentiation through effective market segmentation ensures survivability of the firm in the long run (Chan, 2000a). Much literature has propounded the importance of service differentiation and market segmentation to appeal to groups of buyers for profitability (such as Aaker, 2008; Johnson, Scholes and Whittington, 2008). A business must recognise that it cannot appeal to all customers in the marketplace. It has to identify the different groups of buyers with similar needs and requirements so that it can serve each group separately and effectively. In addition the availability of a firm’s resources is often limited (Lynch, 2000) and this necessitates market segmentation to better target customers needs. Gilmour, Borg, Duffy, Johnston, Limbek and Shaw (1994) further iterate the need not only to differentiate between markets but also the service requirements administered. This is achieved in bridging the gap between the firm’s assorted product attributes and those targeted specifically at customers’ needs. While scale economies do not have an overall impact in this instance, tailoring services increases the number of options available to the firm so that more customers can enjoyed a customised variety of services (Larissa and Myroslaw, 1994). This often results in greater price negation and long-term profitability for firms competing to gain greater market shares.

The literature of both economics and marketing abounds in formal definitions of product differentiation. Jernström (2000) in her doctoral dissertation describes the difficulty in defining differentiation. The term “product differentiation” was introduced by Edwin Chamberlin in 1933 in his classic Theory of Monopolistic Competition. Harold Hotelling, 1929 (as cited in Beath and Katsoulacos, 1991) published an analysis of competition between firms in a market in which buyers were dispersed geographically and firms competed by varying location as well as price. The potential application of the Hotelling’s location model to the analysis of product differentiation was mostly ignored until Lancaster’s (1966) introduction of the notion of characteristics into demand theory. This has allowed location and differentiation to be linked (Beath and Katsoulacos, 1991).

There are different approaches to differentiation: one is that of a marketer, one that of an economist and one that of a strategist. Differentiation also works on many levels such as the product level, the product and service offering and the level of the firm. Scheuing (1974) defines differentiation as adding variations of one product that will compete with it within the
same market. Scheuing points out substantive differences in products. Kotler (1998) takes a wider approach, including any aspect of the total offering, by stating differentiation is the introduction of differential features, quality, style or image of brands as a basis for commanding a premium.

Chamberlin (1965) elaborated that the concept of product differentiation is the explanation for a downward-falling demand curve of an individual product. The non-price competition at firm level can be met by creating certain product attributes and/or product variation, so that differentiation can take place. A firm differentiates itself from competitors only when it is unique at something that is valuable to buyers (Porter, 1985; Calori and Ardisson, 1988). Calori and Ardisson (1988) have further added the following criterion: the products or services must be perceived by customers as being unable to be imitated by competitors and as valuable for the supplier either through creating a higher market share and/or a higher margin.

The economists’ view of differentiation given by O'Shaughnessy (1984) is that any non-price differences constitute differentiation. A strategic viewpoint of product differentiation is securing a measure of control over the demand for a product by advertising or promoting differences between a product and the products of competing sellers (Smith, 1956).

A firm may target an entire market or one (or more) segment by using a product differentiation strategy. Competing firms may differentiate their product offerings when trying to achieve competitive advantage with the same group of targeted customer (Cravens and Piercy, 2006).

Product differentiation is a business strategy whereby firms try to achieve competitive advantage by increasing the perceived value of their products and services relative to the perceived value of other firms’ products and services. Products sold by two different firms may be exactly the same but a product will get a differentiation advantage if customers believe one is more valuable than others. The product differentiation is always a matter of customer perception but firms can take different actions to influence these perceptions (Jaquier, 2003).
2.4 Definitions of physically challenged persons

There are a wide variety of definitions of disability in the literature. According to David Pfeiffer, 1998 (as cited in Kaplan, n.d), disability policy scholars describe four different historical and social models of disability:

A **moral model** of disability that regards disability as the result of sin or an intergenerational curse. The person is either paying for their own sin or those of parents or ancestors.

A **medical model** of disability that regards disability as a defect or sickness that must be cured through medical intervention; this view considers disability as an individual, rather than a societal, problem and thus seeks solutions in the individual sphere, through therapy and technical support.

A **rehabilitation model** is an offshoot of the medical model. It regards disability as a defect that must be cured medically by a rehabilitation professional or other helping professional.

The **disability model** defines the problem as a dominating attitude by professionals and others in society. It perceives inadequate support services for people with disabilities when compared with society generally, as well as attitudinal, architectural, sensory, cognitive and economic barriers as crucial elements of the problem and the strong tendency for people to generalize about all persons with disabilities, while overlooking the large variations within the disabled community. It is society that disables an individual.

United Nations (as cited in The Centre for An Accessible Society, n.d) has defined **Impairment** as loss of psychological or anatomical structure or function; **Disability** as any restriction or lack (which has resulted from an impairment) of ability to perform an activity within the limit considered normal for a human being; and **Handicap** as a disadvantage for a given individual, resulting from an impairment or disability, that limits or prevents the fulfilment of a normal role for that individual(depending on age, sex, social and cultural factors). Handicap is therefore a function of the relationship between disabled persons and their environment. It occurs when they encounter cultural, physical or social barriers that prevent their access to the various systems of society that are available to other citizens. Thus, handicap is the loss or limitation of opportunities to take part in the life of the community on an equal level with others.
The World Health Organization (WHO) further classifies impairment, disability, and handicap: **Impairment** is a permanent or transitory psychological, physiological, or anatomical loss or abnormality of structure or function; **Disability** is being restricted from performing an activity, as a result of impairment, in the manner, or within the range, considered normal for a human being; and **Handicap** is a disability that constitutes a disadvantage for a given individual in that it limits or prevents the fulfilment of a role that is normal depending on age, sex, social and cultural factors (Burnet and Baker, 2001).

IATA’s (International Air Transport Association) definition of incapacitated passengers is passengers with physical or mental disabilities or passengers who need assistance when boarding, disembarking, or during the flight from the airlines. This includes passengers with legs gymsumed (LEGL, LEGR, LEGB), passengers to be separated from the rest of the passengers (MEDA), passengers to carried by stretchers (STCR), passengers to use wheelchairs (WCHR, WCHS, WCHC), blind passengers (BLND), and deaf passengers (DEAF) (IATA 2006). IATA *airport handling manual, 20th edition, 2000* (AHM 176) gives recommendations for the handling of Passengers with Reduced Mobility (PRMs). Passengers with reduced mobility are defined as those passengers with a physical disability or with a medical condition, who require individual attention or assistance with enplaning/deplaning and during ground handling that is normally not extended to other passengers.

International Civil Aviation Organization (ICAO, 1999) in Article 37 of the *Convention on International Civil Aviation, inter alia*, Annex 9 gives provisions on the facilitation of the transport of passengers requiring special assistance. Chapter 1 of Annex 9 defines a "person with disabilities" or a person with reduced mobility (PRM) as those persons whose mobility is reduced due to a physical incapacity (sensory or locomotor), an intellectual deficiency, age, illness or any other cause of disability when using transport and whose situation needs special attention and the adaptation to the person's needs of the services made available to all passengers.

There was a wide range of disparity in the definitions relating to physically challenged individuals. The similarity between these definitions was that people with disabilities are not sick; they only have some kind of disability.
2.4.1 International Air Transport Association (IATA) codes applying to disabled people requiring assistance

MEDA

Passenger whose mobility is impaired due to a clinical case with medical pathology in progress, who is authorised to travel by medical authorities.

STCR

Passenger who can only be transported on a stretcher.

WCHR

Passenger who can walk up and down stairs and move about in an aircraft cabin but who requires a wheelchair or other means for movements between the aircraft and the terminal, in the terminal, and between arrival and departure points of the terminal.

WCHS

Passenger who cannot walk up or down stairs, but can move inside the aircraft cabin who requires a wheelchair to move between the aircraft and the terminal, in the terminal, and between arrival and departure points of the terminal.

WCHP*

Passenger with a disability of the lower limbs who has sufficient personal autonomy to take care of him/herself, but who requires assistance to embark or disembark and who can move about in an aircraft cabin only with the help of an onboard wheelchair.

WCHC

Passenger who is completely immobile who can move about only with the help of a wheelchair or any other means and who requires wheelchair to/from aircraft/ mobile lounge and must be carried up/down steps and to/ from cabin seat.

BLND

Blind passenger.
DEAF

Passenger who is deaf or a passenger who is deaf without speech.

DEAF/BLND

Passenger who is both deaf and blind, who can only move around with the help of an accompanying person.

MAAS

All other passengers in need of special assistance.

* WHCP is not yet internationally recognised. (IATA 2006)

2.4.2 Disability Discrimination Acts of different countries

United Nations

In 1981, the United Nations(UN) General Assembly adopted the theme of the Year of Disabled Persons with the slogan "Full Participation and Equality". A number of UN documents refer to the rights of people with disabilities; the most important being the UN Declaration on the Rights of Disabled Persons. Since publication it has become widely accepted as setting the overall goals for all development efforts in the disability area. The UN Decade of Disabled Persons (1983—1992) and further policies and programmes outlined significant developments to be achieved but there was too little progress. The international disability community requested the UN to assume a strong leadership role and pursue more concrete guidelines for development. This has resulted the Standard Rules on the Equalization of Opportunities for Persons with Disabilities, which was unanimously adopted by the General Assembly in its resolution 48/96 of 20 December 1993 (UN, 2007).

The Commonwealth Disability Discrimination Act 1992

The UN Declaration on the Rights of Disabled Persons and various other UN conventions were the basis for the development of the Commonwealth Disability Discrimination Act.

The Commonwealth Disability Discrimination Act 1992:

• prohibits direct and indirect discrimination on the grounds of disability
• provides a broad definition of disability
• provides a complaints and conciliation mechanism for alleged disability discrimination.
Disability discrimination happens when people with a disability are treated less favourably than people without a disability. The Act recognises two types of discrimination:

- Direct – refusing a person a job because they have a disability
- Indirect – discrimination by “same treatment” such as a service provider requiring all customers to apply in person, when their infrastructure is not wheelchair accessible.

The DDA protects all people with a disability from unfair or unfavourable treatment because of their disability. The Act defines “disability” very broadly and is intended to protect everyone with a disability. It includes physical, intellectual, psychiatric, sensory, neurological or learning disabilities. It also includes physical disfigurement and the presence in the body of a disease-causing organism. The DDA covers disabilities that people have now, had in the past, and may have in the future, or which they are believed to have. It also protects the “associates” of people with disabilities, their relatives, friends, carers and co-workers, against discrimination because of that association (Commonwealth Consolidated Acts, n.d).

**European Union**

The *EU Charter of Fundamental Rights* makes reference to people who are disabled. Article 21 prohibits discrimination based on grounds of disability, among others and Article 26 provides explicit recognition of the rights of persons with disabilities and the need to ensure their independence, social and occupational integration, and participation in the life of the community (*Official Journal of the European Communities*, 2000).

**The Disability Discrimination Act 1995 of the UK**

The Disability Discrimination Act (DDA) 1995 aims to end the discrimination of the disabled people. This Act gives disabled people rights in the areas of:

- employment
- education
- access to goods, facilities and services
- buying or renting land or property.

The Act also allows the government to set minimum standards so that disabled people can use public transport easily.
In April 2005, a new Disability Discrimination Act was passed by UK Parliament, which amends or extends existing provisions in the DDA 1995, including:

- making it unlawful for operators of transport vehicles to discriminate against disabled people
- ensuring that discrimination law covers all the activities of the public sector
- requiring public bodies to promote equality of opportunity for disabled people

The Disability Rights Commission (DRC) was set up by the government to help secure civil rights for disabled people and provide guidance and information on aspects of life covered by anti-discrimination law for disabled people. The development of legislation to improve the rights of disabled people is a continuing process. From 1 October 2004, Part 3 of the DDA 1995 has required businesses and other organisations to take reasonable steps to tackle physical features that act as a barrier to disabled people. Businesses and organisations are called “service providers” and include shops, restaurants, leisure centres and places of worship (UK Government, n.d).

**International Civil Aviation Organization (IACO) / International Air Transport Association (IATA)**

Pursuant to Article 37 of the *Convention on International Civil Aviation*, signed in Chicago on 7 December 1944 (the Chicago Convention), ICAO has *adopted* Annex 9 — *Facilitation* to the Chicago Convention. This contains provisions on facilitation of air transport, namely Standards and Recommended Practices (SARPS), including provisions on the facilitation of the transport of passengers requiring special assistance.

Chapter 1 of Annex 9 defines "Person with disabilities" as any person whose mobility is reduced due to a physical incapacity (sensory or locomotor), an intellectual deficiency, age, illness or any other cause of disability when using transport and whose situation needs special attention and the adaptation to the person's needs of the services made available to all passengers. Chapter 8 of Annex 9 contains two Standards and fifteen Recommended Practices that address accessibility to all elements of the air transport chain by persons with disabilities.
The Standards require that all airport facilities and services should adapt to the needs of persons with disabilities and the persons with disabilities have adequate access to air services.

**Standard 8.27** Contracting States shall take the necessary steps to ensure that airport facilities and services are adapted to the needs of persons with disabilities.

**Standard 8.34** Contracting States shall take the necessary steps to ensure that persons with disabilities have adequate access to air services.

The Recommended Practices of Annex 9 provide that Contracting States should ensure that persons with disabilities, when travelling, be provided with special assistance to ensure they receive services customarily available to the general public. All elements of a journey are to be made accessible to persons with disabilities and persons with disabilities — particularly the hearing- and vision-impaired — are to be given all necessary information, by travel agents, airlines, airports, and ground handling operators, to help them in their travel. Adequate training programmes are to be established to ensure that trained personnel are available to assist persons with disabilities and reserved points are located as close as possible to the main entrance of a terminal building, for ease of access for persons with disabilities. The recommended practices also state that aircraft are to have movable armrests, on-board wheelchairs, and other similarly user-friendly facilities for persons with disabilities and that if such a person requires an escort, airlines are encouraged to offer discounts for the carriage of the escort.

ICAO has prepared guidance material, ICAO Circular 274 — Access to Air Transport by Persons with Disabilities, which gives details of the Annex 9 Standards and Recommended Practices relating to persons with disabilities. This is to assist the civil aviation community in the day-to-day application of these SARPs (ICAO, 1999).

The Standards and Recommended Practices and complemented by guidance material, Contracting States have taken the necessary steps to make the system work satisfactorily. Airlines on a worldwide basis have voluntarily standardised their procedures to a greater extent for acceptance and handling of disabled passengers. The International Air Transport Association (IATA) has also played an important role in the standardisation and implementation of such procedures through IATA resolution 700 and detailed guidelines in *The Airport Handling Manual* (IATA, 2006).
2.5 Airline industry

The international airline industry provides service to virtually every corner of the globe. The airline industry itself is a major economic force, both in terms of its own operations and its impacts on aircraft manufacturing and tourism industry. The global airline industry dealt with major technological innovations, introduction of jet airplanes for commercial use in the 1950s, development of wide-body “jumbo jets” in the 1970s. Airlines were heavily regulated in which technological advances and government policies were given priority over profitability and competition. Economic deregulation of airlines in the United States in 1978 has given rise to issues of cost efficiency, operating profitability and competitive behaviour. Airline deregulation or at least “liberalisation” has affected both domestic air travel within each country and, more importantly, the continuing evolution of a highly competitive international airline industry. Today, the airline industry consists of over 2000 airlines operating more than 23,000 aircraft, providing service to over 3700 airports. The growth of world air travel has averaged approximately 5% per year over the past 30 years. Airlines around the world are facing a growing wave of liberalisation and as a result are facing competitive pressures, both from low-cost airlines and re-structured legacy carriers (Airline Industry Overview, n.d).

Air transport is one of the most dynamic industries in the world. The International Air Transport Association (IATA) is its global trade organisation. IATA has developed the commercial standards that built a global industry over last 60 years. IATAs mission is to represent, lead and serve the airline industry. Its members comprise 230 airlines from 118 countries - the world’s leading passenger and cargo airlines among them - representing 93 percent of scheduled international air traffic. In 2009, world’s airlines carried 1.6 billion passengers and 39 million tons of cargo (IATA, 2010b).

Air Transport Action Group study on Economic & Social Benefits of Air Transport (as cited in IATA, 2010d) has mentioned that Air transport Industry generates 31.9 million jobs globally. Aviation provides the only worldwide transportation system which makes it essential for global business and tourism. Aviation transports around 2.2 billion passengers annually. Aviation carries over 36 million tons of freight annually and 35% of interregional exports of goods by value. 40% of international tourists travel by air. Aviation’s global economic impact is estimated at $3,557 billion in 2007.
Air Transport Facts (2009)
There are 1,715 airlines with 27,024 aircraft (22,235 jets and 5,789 turbo props). There are 3,670 airports and 28.6 million scheduled departures per year.

Air Transport Efficiency

Aviation occupancy rates of 75.7% (2009 industry load factor) are better than those of road and rail. Air transport entirely covers its infrastructure costs ($54.2 billion/year)

Airlines’ worldwide sought to share cost by creating partnerships or alliances. Airline alliances add destinations to a route network and offer more frequencies of service to customer. The three major global alliances are:

Star Alliance
Established in 1997 by Lufthansa, SAS, United Airlines, Thai Airways International and Air Canada. Star Alliance now has 27 member airlines and three regional members, Serving 1160 destinations in 181 countries and carries over 603.80 million passengers annually (Star Alliance, 2010)

Oneworld
Formed in 1999, Oneworld comprises 12 of the world's largest airlines including American, plus 20 affiliates. The alliance carries over 291 million passengers with daily departures of 8244 flights. Oneworld's combined network includes nearly 701 destinations in almost 136 countries (Oneworld, 2010).

Skyteam
Founded in 2000, Skyteam is made up of 13 member airlines including Northwest, Delta and three associates. The Skyteam network consists of 898 destinations in 169 countries approximately 13,000 daily flights and carries over 384 million passengers annually (Sky team, 2010).

2.5.1 Asian airline industry

Asia is the world's largest and most populous continent, located in the eastern and northern hemispheres. It covers 8.6% of the Earth's total surface area (or 29.9% of its land area). It has
approximately 4 billion people and hosts 60% of the world’s current human population (Travel Asia, 1998). First countries in Asia to embrace air transport were India, Philippines, Indonesia, Hong Kong and Pakistan. The Philippine airlines was founded on February 26, 1941, making it as Asia’s oldest scheduled carrier and the oldest operating under its current name. Air India which had its beginning as Tata Airlines in 1932, a division of Tata Sons Ltd (now Tata Group). Many countries also embraced air transport with the beginning of the new nations, Cathay Pacific of Hong Kong (founded in September 1946), Orient Airways (later Pakistan International Airlines; founded in October 1946), Malayan Airlines (later Singapore and Malaysia Airlines; founded in 1947), Garuda Indonesia in 1949, Japan Airlines in 1951, and Korean Air in 1962 (Cheema & Adnan, 2010).

IATA now represents 230 airlines around the globe and 61 airlines are from Asia (IATA, 2010a). Asia-Pacific is home to two of the world’s top five airlines in term of profitability. The region’s two biggest growth markets – India and China. Asia-Pacific’s diversity, dynamism and potential are a great opportunity. Giovanni Bisignani, IATA’s Director General and CEO has mentioned that Asia’s rapidly developing markets are defining aviation’s future and the global air transport industry will triple in size when Asians travel as much as those in the US (IATA, 2010b). Asia-Pacific carriers continue to benefit from strong regional growth as the Asian economy is expected to grow by 7% this year. IATA in its latest industry outlook has projected a global profit of $8.9 billion in 2010 for the Airline industry as a whole with airlines in the Asia-Pacific region with profits to the tune of a $5.2 billion compared with $3.5 billion in North America, $one billion in Latin America, $400 million in the Middle East and $100 million in Africa. This strong improvement in Asian airline profits has been based on strong market growth and yield gains. The 23.5 per cent improvement in high volume intra-Asia premium traffic has resulted to a surge in business travel, was another of the driving factors, while renewed buoyancy in air freight markets was also important for airlines, where cargo can represent up to 40 per cent of revenues (World Market Pulse, 2010).

Number of low-cost carriers has grown considerably in Asia. The ‘Orient Thai’ first low-cost carrier in Asia started in the mid-1990s in Thailand. Many other low-cost carriers sprang up in different Asian countries like the 'Cebu Pacific Air' (Philippines), 'Air Asia' (Malaysia) and
Deccan Air (India). National carriers also came into picture; Singapore Airlines (SIA) announced the launch of ‘Tiger Airways’ in December 2003. The Thai Airways has also launched ‘Nok Air’, in mid-2004 (Venketesh and Chaudhuri, 2004). Asian low cost airlines has gained considerable market share from legacy carriers in last 18 months. The liberalisation of markets has also helped to bring a boom in low cost travel, especially in Southeast Asia (Flightglobal, 2010).

2.6 Product differentiation in airlines

Differentiation is a competitive business strategy by which firms attempt to gain a competitive advantage by increasing the perceived value of their products and services relative to the perceived value of their rivals (Wheelen and Hunger, 2008). Products that are sold by two different firms may be the same, but the first product will get a differentiation advantage if customers believe the first is more valuable than the second. In short, all else being equal, the existence of differentiation means that firms can take different actions in influencing customers’ perceptions.

Product differentiation in airlines can take many forms. Proussaloglou and Koppelman 1999 (as cited in Gursoy, Chen and Kim, 2005) have described how airlines have been searching for ways to increase product differentiation to gain a competitive advantage over other airlines to better position their products. Some of the strategies adopted by the airlines are: implementation of capacity controls, differentiation of pricing by market segment, frequent flyer programs designed to induce travellers’ loyalty, alliances with other airlines for joint marketing and code sharing, improvements in terminals and on-board amenities, and monitoring and improving on-time performance.

For many years, the airline industry operated on two facets of the business: costs and revenues. Focusing purely on costs has allowed many budget airlines to thrive such as Jet Star Asia, Ryan Air, Tiger Airways and many others. However, full service airlines such as Singapore Airlines and British Airways have been able to compete against these cost-efficient airlines by building on the overall travel experience through service differentiation (Chan, 2000b). This includes adding to comfort and convenience features, exquisite gourmet in-flight cuisine, frequent flyer programmes and custom-built seats, which have been proven as tangibly differentiated schemes. Shaw (2007) further suggests that establishing long-term
relationships with important customers is one of the most important characteristics of successful differentiated airlines. Previous studies have identified the benefits of keeping the customer satisfied (such as Barsky and Labagh, 1992; Kandampully, 2000; Skogland and Siguaw, 2004). For instance, the longer a customer stays with an organisation the more utility the customer generates (Reichheld and Sasser, 1990). Research also suggests that satisfied customers add value to the firm by not only buying frequently and paying higher prices but also exhibiting the willingness to provide positive word-of-mouth recommendations to others (Poon and Low, 2005). Therefore generating satisfied customers is essential for any sustainable business and this applies equally to the airline industry.

Many airlines have also capitalised the digital revolution to differentiate their services. Early web applications in the form of asynchronous sites allowed customers to access the same information on timetables and fares provided by travel agents, albeit in new formats. Carriers started selling tickets on the web to make use of cheaper distribution channels than the standard computer reservation systems (CRSs). Now, the internet potentially permits carriers to obtain significant economic and competitive benefits beyond those that happen from e-commerce. A wider e-business view may assure a one-to-one relationship with target customers, with a consequential fine-tuning of a firm's special offer. At the same time, carriers may take advantage of the significant cost savings from the procurement processes (Jarach, 2002).

There is a now well-known fact that an airline’s operation at a given airport greatly affects its competitive position on the routes flown out of that airport (Levine, 1987; Borenstein, 1989 as cited in Berry, 1990). Airlines usually defend any competitive advantage as stemming from the lower costs and better service that are said to be generated by hub-and-spoke route systems using a strong "home" base strategic hub capability as part of a competitive and collaborative strategy (Chan, 2000a). Hanlon 1996 (as cited in Chan, 2000a) has indicated that a strategic hub capability boosts the strategic competitive position of an airline. Hence, a strong strategic hub capability is of essential importance. Airlines having such strong strategic hub capabilities not only will have strategic competitive advantage, but also can leverage on their hub capabilities and present themselves as attractive partners in any collaborative arrangements with other airlines (Chan,2000a).
Other airlines have used their human resource management (HRM) to differentiate their services and achieve competitive advantage. Swiercz and Spencer (1992) suggested that HRM is a contributing factor to the overall effectiveness of the organisation. Discussions of competitive advantage usually take place within the context of strategic planning where questions of customer needs, product/service attributes, manufacturing capabilities, industry and competitor analysis are highlighted. Human resource issues exist in the background. Porter (1985), in his popular value chain approach to competitive advantage, describes human resource management as a support activity that along with technology development and procurement, serves to sustain higher priority primary activities.

While there is immense value and competitive differentiation potential in bringing a new product to market more rapidly than the competition, the core service provided from origin to destination is almost the same in every airline (Kleymann and Seristö, 2004). It is noteworthy that the advances in the adoption of differentiation strategies have created new avenues for the airline industry; embracing differentiation does not necessitate the success of any airline. Competitive escalation has intensified to the point where airlines constantly search for ways to increase differentiation over rivals (Gursoy, Chen and Kim, 2005). Differences in flight time are very small as all airlines tend to use similar aircrafts. Although scheduling and pricing can be key forms of product differentiation; in the short term, both are easily imitable and will lead to erosion of profits. Hence, differentiation can be made in the reservation services, check-in, in-flight services, route selection and different types of marketing components such as advertising, and bonus-programs (Kleymann and Seristö, 2004). It is in this light that Shearman (1992) (as cited in Kleymann and Seristö, 2004) discusses the importance of differentiating an airline through- providing added value to tangible products and improving the intangible service quality. Therefore it is imperative that the airline industry constantly adapts to environmental changes, such as meeting the demands of customers through differentiation. Achieving and sustaining competitive differentiation is the primary challenge and is key to survival and prosperity.

2.7 Product differentiation in physically challenged persons

There are numerous articles and surveys on proposals and guidelines for air carriers and airport administrations throughout the world on facilitating the carriage of physically challenged persons. With the implementation of disability discrimination acts in different
countries, the airlines are trying to modify their physical structures to accommodate such passengers. A new service for physically challenged passengers has been introduced by KLM Royal Dutch Airlines in co-operation with the Netherlands Council for the Physically Challenged and is designed to meet the requirements of passengers whose physical mobility is temporarily or permanently restricted. With the new service, the carrier's Boeing 767, 747, 737 and MD-11 aircraft will be fully equipped with specially-designed wheelchairs will allow the flight crew to wheel passengers to and from the lavatories. Recently, the Canadian Transportation Agency directed that local airlines must offer physically challenged or clinically obese travellers accompanied by an attendant the ability to fly using one ticket, even if they take up two or more seats; this means carriers such as Air Canada, Air Canada Jazz and WestJet have one year to institute a "one-person, one-fare" policy. The ruling applies to disabled people and severely obese passengers, who require two seats to accommodate their size. This ruling also applies to disabled persons who need to have an attendant seated with them on flights (Cheplic, 2008).

2.8 The physically challenged market

People with disabilities are becoming a growing group of consumers of travel and leisure-oriented products and services (Vignuda, 2006). The Disability Discrimination Act (DDA) of different countries protects all people with a disability from unfair and unfavourable treatment arising from their disability. In 1993, all member states of the United Nations adopted the Standardized Rules on Equalization of Opportunities for Persons with Disabilities (United Nations, 1993). Disability affects 15–20% of every country’s population and worldwide there are at least 610 million people with disabilities (Elwan, 1999).

Data from the United Nations indicate that around 10% of the world's population, or 650 million people, live with a disability constituting the world’s largest minority (Factsheet on Persons with Disabilities, 2008). It is accepted that with present life expectancies of 70 years, individuals will spend on average almost 8 years, or 11.5% of their life span, living with disabilities. With the current advances in medical technologies in prolonging lives, this figure is expected to mushroom in the years to come. Mont (2007) indicated a significant prevalence of disability in many countries as illustrated in table 2.1.
Table 2.1  
Prevalence of disability in selected countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Percent of population with a disability</th>
<th>Country</th>
<th>Year</th>
<th>Percent of population with a disability</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>2000</td>
<td>19.4</td>
<td>New Zealand</td>
<td>1996</td>
<td>20.0</td>
</tr>
<tr>
<td>Canada</td>
<td>2001</td>
<td>18.5</td>
<td>Australia</td>
<td>2000</td>
<td>20.0</td>
</tr>
<tr>
<td>Brazil</td>
<td>2000</td>
<td>14.5</td>
<td>Uruguay</td>
<td>1992</td>
<td>16.0</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1991</td>
<td>12.2</td>
<td>Spain</td>
<td>1986</td>
<td>15.0</td>
</tr>
<tr>
<td>Poland</td>
<td>1988</td>
<td>10.0</td>
<td>Austria</td>
<td>1986</td>
<td>14.4</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>1984</td>
<td>3.8</td>
<td>Zambia</td>
<td>2006</td>
<td>13.1</td>
</tr>
<tr>
<td>Uganda</td>
<td>2001</td>
<td>3.5</td>
<td>Sweden</td>
<td>1988</td>
<td>12.1</td>
</tr>
<tr>
<td>Mali</td>
<td>1987</td>
<td>2.7</td>
<td>Ecuador</td>
<td>2005</td>
<td>12.1</td>
</tr>
<tr>
<td>Mexico</td>
<td>2000</td>
<td>2.3</td>
<td>Netherlands</td>
<td>1986</td>
<td>11.6</td>
</tr>
<tr>
<td>Botswana</td>
<td>1991</td>
<td>2.2</td>
<td>Nicaragua</td>
<td>2003</td>
<td>10.3</td>
</tr>
<tr>
<td>Chile</td>
<td>1992</td>
<td>2.2</td>
<td>Germany</td>
<td>1992</td>
<td>8.4</td>
</tr>
<tr>
<td>India</td>
<td>2001</td>
<td>2.1</td>
<td>China</td>
<td>1987</td>
<td>5.0</td>
</tr>
<tr>
<td>Colombia</td>
<td>1993</td>
<td>1.8</td>
<td>Italy</td>
<td>1994</td>
<td>5.0</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>1982</td>
<td>0.8</td>
<td>Egypt</td>
<td>1996</td>
<td>4.4</td>
</tr>
<tr>
<td>Kenya</td>
<td>1987</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Mont (2007)

The Open Doors Organization (2003) in cooperation with the Travel Industry Association of America (TIA) and the Society for Accessible Travel and Hospitality (SATH) released a significant study on the spending trends and market scope of U.S. resident travellers with disabilities. The study was conducted by Harris Interactive and polled 1,037 people with disabilities. The major findings of this landmark study were released on January 16, 2003 at the 7th Annual SATH World Congress in Miami. The study suggested that if certain needs were met people with disabilities could spend at least $27 billion per year; the top issues for the airlines included "meet and greet" at airports and preferred seating. Lodging issues included the need for rooms close to amenities and staff members that go out of their way to accommodate guests with disabilities. People with disabilities spent $13.6 billion on 31.7 million trips in 2002. The modifications proposed by the survey could increase expenditure by people with disabilities by 100% per year.

In 2001, travellers with disabilities spent $3.3 billion in the airline industry, which resulted the creation of 52,800 jobs to provide services for people with disabilities. The lodging industry saw $4.2 billion in spending and 60,000 jobs. The study also suggested that people with disabilities could at least double their spending, generating $6.4 billion for airlines and $8.4 billion for lodging if the needs of travellers with disabilities were addressed. Currently in
the U.S., travellers with disabilities generate a total of 194,000 travel-related jobs, $4.22 billion in payroll and $2.52 billion in tax revenues (Open Doors Organization, 2003).

A follow-up poll in 2005, conducted by Harris Interactive, confirmed the Open Doors Organization’s (ODO) study on the spending trends and market scope of U.S. adults with disabilities. The results indicated a strong disability travel market, with more than 21 million adults with disabilities travelled for pleasure and/or business. The 2002 ODO study revealed that approximately US$13.6 billion was spent by physically challenged individuals on travel annually. It is believed that meeting certain needs could easily double the expenditure arising from this segment (Open Doors Organization, 2005).

Buhalis, Eichhorn, Michopoulou and Miller (2005) describe the total European market size for accessibility as more than 127 million European citizens, which include the total disability population as well as the elderly population. The accessibility market is often described as a niche market. There is an enormous market for accessible products and services in all countries as the majority of European countries have a population ranging between 20% and 37% with explicit accessibility requirements. The general demand for accessibility in Europe alone exceeds 127 million people, which are more than 27% of the European population. More than 70% of those in this market have both the financial and the physical capabilities to travel. With their friends, relatives and carers, the number raises substantially, with estimated tourism revenues exceeding 80 billion Euros. Deloitte Touche (as cited in Buhalis, Eichhorn, Michopoulou and Miller, 2005) estimated in their study “Tourism for All in Europe” that 70% of the Europeans with varying accessibility requirements have the economic and physical ability to travel and that persons with disabilities seldom travel alone. Deloitte Touche found a multiplier effect of 0.5 for travel companions but there can be multiplier effect of 2. Assuming a multiplier effect of 0.5, meaning that half of the population with accessibility requirements will have at least one person travelling with them once a year, represents the potential travel market of 134 million with expected revenues of more than 83 billion Euros. With a multiplier effect of 2, the potential travel market would rise to over 260 million, with expected tourism revenues of 166 billion Euros. With estimated arrival numbers of approximately more than 500 million, potential tourism revenues ranging between 83 billion Euros and 166 billion Euros would increase sales in the European tourism sector from

40
249.2 billion Euros to over 300 or 400 billion Euros respectively. Considering the market potential of disabled travellers, it is important to take into account their travel companions, as they are likely to accompany disabled partners or friends. This will have a significant economic impact in terms of the multiplier effect on overall travel expenditure.

As per Asian Development Bank (n.d) the latest UN estimates are that 600 million people are persons with disabilities, which is 10% of the world population. The Asia-Pacific region has an estimated 400 million people with disabilities, which have the impact on their families, and the lives and livelihood of over 800 million people, or about 25% of the population. The proportion of persons with disabilities is increasing due to poverty, poor pre-natal care, lack of occupational health and safety, poor road and traffic management, civil conflicts, and landmines. Poverty is also increasing among persons with disabilities. The condition of disability is alarming in Asia. Most of the disabled remain invisible and underreported in national censuses and surveys.

*Travel Daily News* (2003) has stated that there are millions of people with disabilities in the Asia Pacific region, who would love to travel but cannot due to lack of the facilities and services in the region to cater to the special needs of this untapped market. A major study on barrier-free travel for people with disabilities in the Asia-Pacific region by the United Nations Economic and Social Commission for the Asia Pacific (ESCAP) shows that while the industry has moved to attract some niche markets like ecotourism, it has done nothing to attract people with disabilities. ESCAPs’ study accuses the travel and tourism industry of indirectly, perhaps inadvertently, discriminating against travellers with disabilities. The ESCAP study referred a disabled persons’ freedom to travel as Barrier-Free Travel (BFT). The ESCAP study considers all forms of disability—physical, sensory and intellectual. ESCAP has been working through its transport and tourism division on ways of improving conditions to enable BFT for many years. They have organised a number of conferences and seminars and completed a study in 2001. The purpose of this 2001 study was to:

- demonstrate an economic rationale for developing BFT
- identify existing barriers to BFT
- identify good examples of BFT practice within ESCAP member countries
- develop guidelines and directions for developing a BFT industry
Primarily due to time constraints, out of ESCAPs’ 60 member countries, only 26 were included in the research and only seven responded. One member country declined to participate because of committed resources to a similar APEC project. Another member country responded by returning a copy of its response to the APEC project. The researchers concluded from the low response rate that non-responding countries either did not have knowledge of BFT or had committed resources to the APEC project so were not prepared to duplicate their efforts. The study concluded that there is a paucity of statistical data relating to BFT. No country had undertaken a national approach to researching the economic potential of the BFT market.

The United Nations Economic and Social Commission of Asia and the Pacific (2003) have stated that countries with the highest rates of disability are also countries that have already recognised barrier-free tourism as an important market segment. This includes North America, parts of Europe, Australia and New Zealand, where domestic tourism is barrier-free for people with disabilities. If barrier-free domestic tourism is at an advanced level of development, this would provide a source for both learning from experience and best practices. It was found that no country or area in Asia and the Pacific had undertaken research into the travel patterns or the scope of the travel market for barrier-free tourism for people with disabilities.

2.9 Needs of physically challenged individuals

Buhalis, Eichhorn, Michopoulou and Miller (2005) suggest that the needs of physically challenged individuals vary depending of the severity of their impairments. Figure 2.3 indicates the key variations of demand types for the disabled and the aging population requiring accessibility. The elderly, who have low to moderate access needs, make up the vast majority of those with any sort of access need. In addition, physically challenged persons might travel alone or in the company of able-bodied assistants, friends or family members, illustrating the real market size. The demand types identified and illustrated have different levels of requirements, ranging from severe to low or mild.
People with all kinds of access requirements represent a combination of challenges and opportunities for the travel and tourism industry. Serving these market segments requires considerable effort as a result of diverse requirements and information needs. As such, it necessitates inclusive design and good market segmentation. Dividing the market into distinct groups of people with similar needs and wants allows tourism planners and marketers to appreciate what really matters for consumers and to create unique offerings. By targeting these groups, they have the chance to achieve competitive advantages through differentiation.

2.9.1 Why airlines are not meeting the needs

Despite the potential market size for physically challenged persons, several limitations can be identified that thwart the realisation of the full potential of this market. These limitations
require the airlines industry to adopt a more proactive approach in addressing the needs of these physically challenged individuals. These include:

**Inaccessible Facilities** – Physically challenged individuals are often confronted with limited options or accessibility issues that drive them to put up with more expensive arrangements than the rest of the group. The United Nations Economic and Social Commission for Asia and the Pacific (2003) identified major infrastructure limitations in aircrafts/airports. These problems consist of the lack of ground services to and from airports, convenient drop-off points near main entrances, and adequate auxiliary services within airports (accessible toilets/change rooms, phones and autobank), and also include the distance from check-in to the departure terminal, seating location, availability of seats with retractable arms, lack of accessible toilets, and difficulties with the retrieval and identification of luggage. In addition, wheelchair-bound travellers have problems with boarding and disembarking aircraft, transferring flights and the inaccessibility of aircraft restrooms. For people with visual impairments, locating and retrieving luggage becomes another obstacle in the course of their already difficult journey. The pain of long-haul travel in an economy class seat for someone with stiff limbs or arthritis, the sheer size of modern airports for those with mobility problems, and inadequate planning for all are some of the further challenges facing the travellers with disabilities.

**Inadequate Training** – It was established that travel and booking agencies and airline staff were ill-prepared in rendering pre-booking assistance (Department of Transport, 2006). Despite the regulatory requirements of disability equality and training provisions for all personnel working at airports, including those providing direct assistance to disabled people, professional and appropriate services were found to be inadequate. Of the disabled people surveyed, 37% had experienced problems with staff attitudes on-board planes (Laidler, 2007). While airlines have progressively added more user-friendly services for average travellers, problems still persist such as luggage misplacement and flight delays. Some mishaps might cause serious difficulty for travellers with disability, such as the damage and loss of wheelchairs on airplanes, which will lead to diminished propensity of travel.

**Incomplete Information** – As a consequence of inadequate training of employees and airline staff, airline websites rarely provide sufficient information for disabled customers. To make matters worse, disabled customers have hardly ever been allowed to book assistance online.
In order to have companions such as caregivers, these individuals often have to make many concessions in terms of destination, time, and date of travel (Yau, McKercher and Packer, 2004). The ability of travel agents to serve disabled customers is compromised by inadequate, inaccurate or incomplete information. McKercher, Packer, Yau and Lam (2003) point out three main factors contributing to the general lack of information. Firstly, many travel agents do not understand the specialised needs of physically challenged individuals. Secondly, the lack of product knowledge is another factor. Lastly, the limited information provided by the airlines themselves.

**Inconsistent policies** – Governments need to standardise and update their policies on accessibility in air travel, as evidence shows that these policies have failed to have enough positive impact on the experiences of disabled people, and that the air industry has not always fully complied with existing guidelines. Given existing DDA specifications on equality treatment for disabled persons, inclusion of DDA specifications into aircraft designs should be mandatory. The civil aviation conference of different regions would be required to play a proactive role rather than merely providing recommendations on the design of aircraft. This is an area that requires continued pressure to ensure the industry makes significant changes in the near future (Laidler, 2007). Governments will therefore need to update the voluntary codes of practice on accessibility in air travel as current policies lack credible legislative power due to low enforcement.

### 2.10 Research gap

The earlier sections have detailed a comprehensive review of the literature on the parent and immediate disciplines related to the research issues. An analysis of the major schools of thought on competitive advantage (Porter, 1985, Barney, 1991, Coyne, 1986) and product differentiation (Kotler, 1998, Porter, 1985, Chamberlin, 1965) has been included. A further review has detailed product differentiation in relation to airlines and physically challenged persons (Chan, 2000a, 2000b, Kleymann and Seristö, 2004, Cheplic, 2008). I have also examined the definitions of physically challenged persons, the disability discrimination acts of some countries, and the market of physically challenged persons and their needs to have deep understanding of the issue. It has been observed that airlines have adopted different product differentiation techniques to achieve competitive advantage but the differentiation of services to achieve competitive advantage by fulfilling the needs of physically challenged
persons has not been considered by the airlines. Airlines are also not aware of the needs of physically challenged persons, especially Asian airlines who are neither aware of the needs nor the size of the market segment of physically challenged persons (United Nations Economic and Social Commission of Asia and the Pacific, 2003). The growing market of physically challenged persons can be a source of competitive advantage of the airlines if they differentiate their products and services by fulfilling the needs of physically challenged persons.

My review has given clear focus to the research issues and underlined the gaps in the body of knowledge. These gaps are shown in table. 2.2.
Table 2.2 Identification of research gaps

<table>
<thead>
<tr>
<th>Research issues</th>
<th>Literature review findings</th>
<th>Research gaps</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Awareness &amp; fulfilment of the needs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Awareness of the needs of physically challenged passengers in the travel &amp; tourism industry</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>- Awareness of the needs of physically challenged persons by airlines</td>
<td>No</td>
<td>Airlines’ awareness of the needs of physically challenged persons</td>
</tr>
<tr>
<td>- Awareness of the needs of physically challenged persons by Asian airlines</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>- The extent to which airlines are fulfilling the needs of physically challenged persons</td>
<td>No</td>
<td>To what extent airlines are fulfilling the needs?</td>
</tr>
<tr>
<td><strong>Differentiation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Differentiation of products &amp; services by the firms</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>- Differentiation of services by the airlines</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>- Differentiation of services by the airlines in relation to physically challenged persons</td>
<td>No</td>
<td>Asian airlines differentiating their services from the market segment of physically challenged persons</td>
</tr>
<tr>
<td>- Differentiation of services by Asian airlines in relation to physically challenged persons</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td><strong>Competitive Advantage</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Achievement of competitive advantage through products &amp; services by firms</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>- Achievement of competitive advantage through products and services by airlines</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>- Achievement of competitive advantage through fulfilling the needs of physically challenged persons by airlines</td>
<td>No</td>
<td>Asian airlines’ actions to achieve competitive advantage from the market segment of physically challenged persons</td>
</tr>
<tr>
<td>- Achievement of competitive advantage through fulfilling the needs of physically challenged persons by Asian airlines</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td><strong>Awareness &amp; plans to capture the market segment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Airlines’ awareness of the market of physically challenged persons</td>
<td>Yes</td>
<td>Extent to which Asian airlines are aware of the market</td>
</tr>
<tr>
<td>- Asian airlines’ awareness of the market segment of physically challenged persons</td>
<td>No</td>
<td>Asian airlines’ plans to promote and capture the market segment</td>
</tr>
<tr>
<td>- Plans to promote and enhance the market segment of physically challenged persons</td>
<td>No</td>
<td>What model can be developed for policy makers to capture the market segment?</td>
</tr>
</tbody>
</table>

Source: Derived from the review of the literature
The theoretical framework in Chapter 1 has led to a data analysis process of four well-defined steps as described in fig 2.4

Figure 2.4  
**Steps of data analysis**

Source: Developed for this research from Abdlla, Mohamed and Mekawy (2007)

Airlines generally seek to achieve three goals: (a) to satisfy customers’ needs and requirements; (b) to meet the company’s corporate objectives by producing profits; and (c) to surpass competitors through product differentiation (Alamdari, 1999 as cited in Abdlla, Mohamed & Mekawy, 2007). In this study, we have examined airlines’ awareness of the needs of physically challenged persons and the extent to which airlines are fulfilling these needs. I will also examine the actions airlines are taking to differentiate their products and to achieve competitive advantage from this market.
2.11 Conclusion

This chapter has reviewed the literature relevant to the parent and immediate disciplines of the research. The review has revealed that fulfilling the needs of physically challenged persons could be the “important factor” enabling the airlines to differentiate their products and achieve competitive advantage. The review has indicated the importance of developing a guideline/model for policy makers in order to capture the market segment of physically challenged persons. The findings have reconfirmed the relevance of the research problem and the research questions. This has endorsed the formulation of the research objectives and the shaping the research propositions. The next chapter will deal with the selection of the appropriate research methodology to examine the research propositions developed from the research.
3.1 Introduction

The main purpose of chapter three is to describe the methodological framework that guided this research. The first part of this chapter outlines the philosophical assumptions and theoretical perspectives that underpin this study. In the later part of the chapter, the strategies and data collection methods adopted and the analysis methods used to meet the research objectives will be justified. The chapter will demonstrate a selection of qualitative strategies and methods presented under the guidance of an interpretivist paradigm. The chapter will also provide an overall understanding of the methodology and discuss its application to the research findings that are presented in chapter four.

3.2 Philosophical assumptions

Each research strategy approach is related to different traditions in social theory and diverse research techniques. The approaches are similar to a research program, research tradition, or scientific paradigm (Neuman, 2006). Thomas Kuhn (1970) coined the term “paradigm” in his book *The Structure of Scientific Revolution* and defined it as a fundamental point of view scientists adopt in their search for meaning. A paradigm can be regarded as a set of basic beliefs (or metaphysics) that deal with ultimate or first principles. All researchers approach their studies from within a particular paradigm or world view. A paradigm is comprised of three elements: epistemology, ontology, and methodology. The paradigm consists of a basic set of assumptions about the nature of the social world (an ontological view), the relationship between the researcher and the researched (an epistemological view) and the process of the research (the methodological issue).

Sarantakos (1993), as cited in Hine and Carson (2007) and Neuman (2006), describes three dominant paradigms in the social sciences: positivistic, interpretist and critical. Guba and

Table 3.1  
Types of paradigm

<table>
<thead>
<tr>
<th>Paradigm</th>
<th>Positivist</th>
<th>Interpretivist</th>
<th>Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ontological</strong></td>
<td>Reality exits independently of the observer. Natural laws take the form of context-free generalisations. Laws serve in a cause-effect manner to establish predictable patterns of behaviour.</td>
<td>Reality is constructed and arises out of social interaction. No single reality but many realities. Everyone has different view of reality that they construct for themselves (multiple realities).</td>
<td>Reality is subjective and based on values. Change comes through mounting a critical challenge to the dominant values.</td>
</tr>
<tr>
<td><strong>Epistemological</strong></td>
<td>Objective, distant, non-interactive, value and bias free with no influence on the research outcomes or the data collected/analysed. Researcher maintains an objective separateness from their objects.</td>
<td>Personal values, beliefs and attitudes that may bias the way data is collected and analysed. Sometimes interact with the study and may extend to collaboration (knower and subject create understanding).</td>
<td>Expose myths in such a way as to empower people who are victims of operation, domination and exploitation. Attempt to enable subjects to make sense of a world that hitherto they had accepted without challenge.</td>
</tr>
<tr>
<td><strong>Methodological</strong></td>
<td>Accepts an objective stance and chooses a manipulative methodology. Attempts to quantify the real world. Hypothesis are constructed and focused on rigorous empirical testing using descriptive and inferential data analysis techniques.</td>
<td>Affects which methodology is best suited for a specific research design. Denzin and Lincoln (1998) describe a naturalistic (in the natural world) set of methodological procedures.</td>
<td>“Objectivity” is a myth and any interpretation of data by the researcher is “subjective”. Influences the data in a multiplicity of ways to clear the myths and ideology associated with a social phenomenon and bring change through critical reflectivity.</td>
</tr>
</tbody>
</table>

Source: Developed for this research from McMurray (2008)
The interpretivist orientation of this study is inductive theory/model building. It aims to generate or inductively develop a theory or pattern of meaning instead of starting with a theory (Creswell, 2007). The literature review in Chapter 2 found no previous theory or model for the phenomenon under study. The purpose of this study is to develop a model emerging from the data. Such a model would illustrate in-depth knowledge and understanding of airlines differentiation of their products to achieve competitive advantage by meeting the needs of physically challenged persons.

The ontological assumption of interpretivism is that it assumes reality is constructed and arises out of social interaction. Hence, there is not a single reality at all but many realities. Everyone has a different view of reality that they construct for themselves. Individuals are studied with the aim of reporting these multiple realities. In this type of research, each interviewee develops subjective meaning from their experiences and the researcher relies much on the participants’ views of the situation (Creswell, 2007). As differentiation and competitive advantage from physically challenged persons in airlines is a relatively new topic in the airlines literature, this complex topic needs to be explored in depth to generate ideas to enhance understanding the issues rather than to test theory. To build rich descriptions from these complex circumstances, multiple realities are supported from different individuals and different perspectives are presented.

Epistemological assumptions of the interpretivist paradigm require the researchers to be as close as possible to the participants being studied (Guba and Lincoln, 1988 as cited in Creswell, 2007). A qualitative researcher conducts their study in the field where the participants work and live, as these are important contexts for understanding what participants are saying. This study has collected data from the field in the form of in-depth interviews. Researchers have personal values, beliefs and attitudes that may bias the way data is collected and analysed. Sometimes they interact with the study and may extend collaboration. The researcher’s experience in the airline industry has influenced the way data was collected and sometimes guided the interview process with leading questions.

The methodological question affects which methodology is best suited for a specific research design. Qualitative research includes ethnographies, case studies, action research and grounded theory. The collection and analysis of data are comprised of observation,
participant observation, interviewing, focus groups and surveys. Multiple case studies with interviewing as a data collection method have been used in this study.

The paradigm can also be described by deductive and inductive approaches:
1. Deductive research methods are concerned with theory testing where conclusions will be made from the research outcomes that will either support or diminish the validity of the initial theory.
2. Inductive research methods are useful to establish a proposition and to explain facts to theory building. This will guide an interpretive research paradigm (Yin, 2003).

3.3 Qualitative versus quantitative research

The research sought to interpret respondents’ meaning in relation to the phenomenon to be understood. It was not concerned with quantification but with understanding the phenomenon from the viewpoints of those experiencing it. It was based on the belief that “human behaviour, unlike that of physical objects, cannot be understood without reference to the meanings and purposes attached by the human actors to their activities” (Guba and Lincoln 1994, pp.106).

Both qualitative and quantitative researchers aim to develop new knowledge but their methodologies are different. Quantitative methods create knowledge through objective, controlled statistical tests, measurements, simulated exercises and models. The search for truth within the quantitative paradigm tends to be fixed and singular, reflective of a casual and factual view of reality. Qualitative research does not set out to support or disconfirm a hypothesis; rather it seeks to use the subjective experience of informants to explain meaning or to deepen understanding. Walliman (2006) has mentioned that there are underlying epistemological differences in the two approaches, other than simple distinctions of use of measurements or descriptions in collecting and analysing data.
The fundamental differences between qualitative and quantitative research strategies are also shown below (Bryman, 2001):

Table 3.2  **Fundamental differences between quantitative & qualitative research strategies**

<table>
<thead>
<tr>
<th>Principal orientation to the role of theory in relation to research</th>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deductive Testing of theories</td>
<td>Inductive Generation of theory</td>
<td></td>
</tr>
<tr>
<td>Epistemological Orientation</td>
<td>Natural, science model; in particular, positivism</td>
<td>Interpretivism</td>
</tr>
<tr>
<td>Ontological Orientation</td>
<td>Objectivism</td>
<td>Constructionism</td>
</tr>
</tbody>
</table>

Source: Bryman (2001)

The two approaches differ significant ways (Neuman, 2006):

Table 3.3  **Quantitative versus qualitative approaches**

<table>
<thead>
<tr>
<th>QUANTITATIVE APPROACH</th>
<th>QUALITATIVE APPROACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measures objective facts</td>
<td>Constructs social reality, cultural meaning</td>
</tr>
<tr>
<td>Focus on variables</td>
<td>Focus on interactive process, events</td>
</tr>
<tr>
<td>Reliability is the key</td>
<td>Authenticity is the key</td>
</tr>
<tr>
<td>Value free</td>
<td>Values are present and explicit</td>
</tr>
<tr>
<td>Theory and data are separate</td>
<td>Theory and data are fused</td>
</tr>
<tr>
<td>Independent of context</td>
<td>Situationally constrained</td>
</tr>
<tr>
<td>Many cases, subjects</td>
<td>Few cases, subjects</td>
</tr>
<tr>
<td>Statistical analysis</td>
<td>Thematic analysis</td>
</tr>
<tr>
<td>Researcher is detached</td>
<td>Researcher is involved</td>
</tr>
</tbody>
</table>

3.4 Qualitative research approach

The qualitative research approach is typically used to answer questions about the nature of phenomena with the purpose of describing and understanding from the participants’ point of view. As mentioned by Creswell (2007), the ontological issue relates to the nature of reality and its characteristics. Qualitative researchers accept the idea of multiple realities. Individuals are studied with the aim of reporting these multiple realities.

Multiple realities are supported by the use of multiple quotes from different individuals from the actual world and presenting different perspectives from individuals. Epistemological assumptions require the researchers to try to be as close as possible to the participants being studied. A qualitative researcher conducts their study in the field where the participants work and live, as these are important contexts for understanding what participants are saying. Guba and Lincoln (1988) as cited in Creswell (2007) describe the researcher trying to minimise the distance or objective separateness between themselves and those being researched.

Qualitative research has four general emphases in theoretical perspective and research methodology, which differentiate it from quantitative research. First, there is a move away from the construct of scientific objectivity and the consequent focus on the need to acknowledge explicitly (rather than recognize and minimise) the researcher’s own biases in conducting the research. Second, there is an effort to conduct research in more naturalistic settings rather than in the rigid and artificial controls imposed by the laboratory. Third, the use of more naturalistic research settings encourages the endeavour to understand phenomena as the participants under investigation understand them, being wary of the imposition of categories created by the researcher upon such phenomena. Fourth, there is the acknowledgment that all behaviour occurs within a social, political, and historical context that shapes behaviour and the ways in which behaviours are understood. Data collected by researchers operating within a qualitative paradigm are therefore rich, have transferability, and contextual sensitivity (Papps, 2005).

Qualitative research questions are provisional and open to change and have a different focus depending on the epistemological standpoint. Qualitative research questions ask how something happens rather than what happens. That is, a question is chosen and then the methods best suited to answering the question are decided (Willig, 2001). Qualitative
methods can be used to explore areas about which little is known or much is known to gain novel understanding (Strauss and Corbin, 1998).

Qualitative researchers emphasise the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape the inquiry. Qualitative research focuses on how social experience is created and given meaning. Qualitative research studies people doing things in places where these things are done (Becker, 1986). There is no specific field site or natural place to do this type of work.

The richness and diversity of overall design strategies in qualitative research are apparent in the literature describing specific studies. Analysis of this richness yields three distinct strategies, each associated with the genres mentioned below:

Table 3.4  
**Qualitative genre and overall strategy**

<table>
<thead>
<tr>
<th>Genre</th>
<th>Main Strategy</th>
<th>Focus of Enquiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual lived experience</td>
<td>In-depth interview</td>
<td>Individuals</td>
</tr>
<tr>
<td>Society and culture</td>
<td>Case study</td>
<td>Groups or organisations</td>
</tr>
<tr>
<td>Language and communication</td>
<td>Microanalysis</td>
<td>Speech, events and interactions</td>
</tr>
</tbody>
</table>


**3.4.1 Different qualitative methods**

Creswell (2007) describes five approaches to qualitative research.

1. A narrative-biographical study (Angrosino, 1994) — Life experiences of a single individual when material is available & accessible and the individual is willing to share stories.

2. A phenomenological study (Anderson and Spencer, 2002) — A phenomenon and the meaning it holds for individual.

3. A grounded theory study (Morrow and Smith, 1995) — To generate and develop a theory.
4. An ethnographic study (Haenfler, 2004) — To study the behaviour of a culture-sharing group or individual.

5. A case study (Asmussen and Creswell, 1995) — Case bounded in time or place and look for contextual material about the setting of the case.

Merriam (1998) refers to qualitative research as a number of forms of social enquiry, including generic research, ethnography, case study, grounded theory, and phenomenology. Generic research refers to the discovery and understanding of a phenomenon, a process, a perspective or view of people. Each form of research interrelates to some extent with the philosophical and sociological roots of phenomenology and symbolic interactionism.

Qualitative researchers typically have four methods for collecting information: (a) participating in the setting; (b) observing directly; (c) interviewing in depth; and (d) analysing the documents and material culture (Marshall and Rossman, 2006).
Qualitative methods are used for this research for two reasons.

**Firstly,** differentiation and competitive advantage from physically challenged persons in airlines is a relatively new topic in the marketing and airlines literature, and so qualitative methods are required to explore this complex topic in depth to generate ideas to enhance understanding the issues rather than to test theory. Qualitative methods develop rich descriptions of complex circumstances that are unexplored in the literature. They also emphasise the quality, depth and richness in the findings (Marshall and Rossman, 2006). The information collected can assist in theory building.

**Secondly,** this research need in-depth and detailed qualitative data to understand the complex phenomenon studied. It can only be obtained with the in-depth relationship between the researcher and the phenomenon that occurs as the qualitative researcher conducts their studies in the field. The collection of rich, real information and non-statistical data analysis is only possible through qualitative research. The qualitative research allows the gathering of rich and detailed information on how airlines will differentiate their services and achieve competitive advantage by fulfilling the needs of physically challenged individuals.

### 3.5 Researching the airline industry

Yin (1984) defines case study research as an empirical inquiry that investigates a contemporary phenomenon within its real-life context, while Harvey (2007) suggests that civil aviation is the most significant and fastest-growing area in the service sector. Giovanni Bisignani, Director General and CEO of the International Air Transport Association (IATA) at its 64th Annual General Meeting described aviation as the world’s most exciting industry. Airlines face many challenges but have the capability to change fast (IATA Annual Report, 2008).

The dynamic nature of the airline industry has been researched in several ways in many of its aspects. Airlines face many challenges and case study research plays an important role in researching the airline industry to generate theory, explain certain phenomena and answer “why” and “how” questions.
Evaluations of the profitability and competitive consequences of airlines’ “hub-and-spoke” networks have been carried out and results confirm the hub structure is a major determinant of profitability and superior efficiency in airlines (Daneshi, n.d.; Khan, 1993). Potential benefits and costs of airline mergers and their effects on price and output have been carried out in case study research. Mergers cause increases in fares and a significant reduction in overall service but the introduction of superior product (Carlton, Landes and Posner, 1980; Werden, Joskow and Johnson, 2006). The consequence of strategic alliances and code sharing is an overall reduction in layover time. Alliances allow airlines to coordinate their operations in international service. Correlation between variation in service and fare were found, so that those with the strongest service increases also had the lowest fare increases. It is suggested that positive effects of alliances may outweigh any negative impacts (Waleed and Mark, 1994; Brueckner, 2001). A case study research on the Scandinavian Airlines System (SAS) and several other airlines in relation to customer focused service development has been carried out. The SAS has gone through investigations into the concerns of their customers throughout the entire travel experience. Based on the results, they developed new services and re-designed old services. In the present competitive market, a firm should be “creating loyal customers”. Airlines need to adopt quality techniques in the service environment and to develop customer-focused service in order to attain sustainable competitive advantage (Gustafsson, Ekdahl and Edvardsson, 1999; Rahman, 2004).

Case study research has been conducted involving Ryan air, Aer Lingus, Air Asia and Malaysian Airlines in terms of passengers’ perceptions of low cost airlines and full service carriers (O’Connell and Williams, 2005) as the direct competition between full service airlines and no-frills carriers intensifies across the world. The study provided the answers to a number of critical questions: what are the key drivers behind each type of airline’s business model? Is there a difference in passengers’ perceptions of low cost and full service carriers? Is there a reason for a passenger’s choice of a particular airline type? International regulation of air transport has been studied in case study research (Doganis, 1973) that concluded free competition between airlines is impossible for political reasons and suggested non-scheduled traffic-freed from artificial conditions, should be included in bilateral agreements, with limit on capacity but no control on tariffs.

Case study research involving Southwest Airlines in relation to employees’ needs satisfaction and organisational capabilities to achieve competitive advantage was done using an
integrated approach (Hallowell, 1996). A framework was presented that showed competitive advantage was created: (a) created through employee needs satisfaction; (b) converted to customer and shareholder value via organisational capabilities; and (c) captured by the firm as a result of its cost advantage and superior service.

Airlines reservation systems, including initial system design, simulations and system measurement tools, systems stability, reliability, serial processing, storage hierarchy, flexibility versus performance, were analysed in case study research (Knight, 1972).

National carriers play a major role in nation building and national identity. Airlines have been regarded as key national symbols and have been used by governments as instruments representing their countries globally. Case studies have examined the varying ways airlines have helped to promote nation building and national identity in Singapore and Malaysia (Raguraman, 1997). The governments of both countries have viewed their carriers as instruments of social and economic development.

3.6 The case study method as a qualitative approach

Yin (1984) defines the case study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used.

As a form of qualitative research, case studies are defined by interest in individual cases, not by methods of inquiry used. They draw attention to the question of what specifically can be learned from the cases. Case studies are used when the researcher expects to support his/her argument by an in-depth analysis of a person, a group of persons, an organisation or a particular project. The case study approach is not limited in value; rather, it provides an in-depth analysis of a specific problem. Although the case study method has been dismissed by many for lack of rigor in the approach, over the past twenty years numerous studies have demonstrated that the case study method can successfully be used to probe underneath the surface of a situation and to present a rich context for understanding the phenomena under study (Zach, 2006). Stake (2005) states that case study research is not a methodology but a choice of what is to be studied, and Denzin and Lincoln (2005) present it as a strategy of inquiry, a methodology or a comprehensive research strategy.
Case studies are complex as they require multiple sources of data and contain multiple cases within a study, which generate large amounts of data for analysis. Researchers use the case study method to build upon theory, to produce new theory, or to dispute or challenge theory. It also explains a situation, provides a basis to apply solutions to situations, and explores an object or phenomenon. As explained by Eisenhardt (1989), case studies can be used to achieve various aims: to provide description (Kidder, 1982), test theory (Pinfield, 1986; Anderson, 1983), or generate theory (Gersick, 1988; Harris and Sutton, 1986). The advantages of the case study method are its applicability to real-life, contemporary, human situations and its public accessibility through written reports. Case study results relate to the common person’s everyday experience and assist understanding of complex real-life situations.

### 3.6.1 Types of case study

Yin (1993) has identified three types of case studies: *Exploratory, Explanatory,* and *Descriptive.* In exploratory case studies, fieldwork and data collection may be undertaken before defining a research question. This type of study may refer to a large social scientific study. Explanatory case studies are useful for conducting casual studies. Descriptive case studies present a detailed picture of the phenomena but do not attempt to test or build theoretical models. They are sometimes done for the purpose of achieving a better understanding of the present status. The investigator must also determine before beginning the research exactly what the unit of analysis in the study will be. This study will be both descriptive and exploratory in nature. Hakim (2000) has mentioned that descriptive case studies may be exploratory when relatively little research has been done in the area, or they may be illustrative of aspects thought to be representative or typical: both exploratory and illustrative aspects may be included in a single typical case study. She identified descriptive case studies as typical, or selective. The selective case study may focus on a particular issue or aspects of behaviour with the purpose of refining knowledge in a specific area and enhancing understanding of causal processes. The selective case study may lead to questions about “how” and “why” issues or behaviour conspired to generate the resulting outcomes, which leads into explanatory evaluation.

There is no superiority between exploratory, descriptive and explanatory case studies; some of the best case studies are either exploratory and descriptive or descriptive and explanatory.
Yin (2003) cites Whyte's (1943) *Street Corner Society* as an example of a case with excellent descriptive and explanatory qualities.

Stake (1995) identifies three types of case studies:

- **Intrinsic** — aimed at understanding a particular case because the case itself is of interest (e.g. how one person managed a stroke). A case may be of interest because it has particular features or because it is ordinary.

- **Instrumental** — aimed at providing insight into an issue or problem or to refine a theory. In this instance, understanding the complexities of the case is secondary to understanding something else.

- **Collective** — a number of cases are studied jointly in order to understand a phenomenon, population or general condition; often referred to as a multiple-case study (e.g. 15 primary care practices are studied as single but conjoined cases in order to understand how obesity is discussed in this setting).

This study will be both **Instrumental and Collective**. It will aim to provide insight into the issue of “Product differentiation in airlines by fulfilling the needs of persons with physical challenges”. Airlines will be studied jointly in order to understand the issue.

Jensen, Jeson and Rodgers (2001) set forth a typology of case studies, including these types:

1. **Snapshot case studies**. Detailed, objective studies of one research entity at one point in time; includes hypothesis-testing by comparing patterns across sub-entities (e.g. comparing departments within the case study agency).

2. **Longitudinal case studies**. Quantitative and/or qualitative studies of one research entity at multiple time points.

3. **Pre-post case studies**. Studies of one research entity at two time points separated by a critical event. A critical event is one that on the basis of a theory under study would be expected to impact case observations significantly.

4. **Patchwork case studies**. Sets of multiple case studies of the same research entity, using snapshot, longitudinal, and/or pre-post designs. This multi-design approach is intended to provide a more holistic view of the dynamics of the research subject.
5. *Comparative case studies.* Set of multiple case studies of multiple research entities for the purpose of cross-unit comparison. Both qualitative and quantitative comparisons are generally made.

**Snapshot case studies** will be used in this research as they will provide a detailed and objective study of the airlines. Major airlines will be studied as sub-entities and will be compared.

Yin (2003) has mentioned four types of case design as shown in table 3.5.

Type 1 comprises a single case design with a single unit of analysis. Type 2 comprises a single case with multiple unit of analysis. Types 3 and 4 are multiple case designs with a single unit of analysis and multiple unit of analysis.

<table>
<thead>
<tr>
<th>Types of designs for case studies</th>
<th>Single-case designs</th>
<th>Multiple-case designs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holistic (single unit of analysis)</td>
<td>Type 1</td>
<td>Type 3</td>
</tr>
<tr>
<td>Embedded (multiple unit of analysis)</td>
<td>Type 2</td>
<td>Type 4</td>
</tr>
</tbody>
</table>

Source: Adopted from Yin (2003) for this research

The unit of analysis is the major entity that is analysed in the study. It is the “what” or “whom” that is studied. In this research, the unit of analysis is the international airlines (single unit of analysis) among the other types of transportation available in the world. The research has a holistic-multiple case design. While using multiple cases, each case is treated as a single case. Each case’s conclusions can then be used as information contributing to the whole study, but each case will remain a single case. What motivates the researcher to consider a large number of cases is the idea of “generalisability” (Glesne and Peshkin, 1992 as cited in Creswell, 2007).

**3.6.2 Selecting the cases**

The researcher during the case study design determines what approaches are to be used in selecting single or multiple real-life cases to examine in depth and which approaches are to be used for instruments and data gathering. There are no particular guides to the number of cases to be included, but Romano (1989), as cited in Perry (1998), describes the literature
suggesting the use of case studies rarely stipulate how many cases should be developed. The decision is left to the researcher. Eisenhardt (1989) recommends that cases should be added until "theoretical saturation" is attained, but proposes between four and ten cases. Many researchers have suggested the number of cases used be between four to ten cases. Some advocate a minimum of two, but the usual view is that "in practice four to six groups probably form a reasonable minimum for a serious project" (Hedges, 1985, pp. 76-7). Hedges (1985) agrees to an upper limit of 12 because of the high costs involved in qualitative interviews and the quantity of data that need to be effectively assimilated. Patton (1990), as cited in Perry (1998a), does not offer researchers an exact number or range of cases that could serve as guidelines, claiming that "there are no rules" for sample size in qualitative research. Single cases can be used when there is a significant case in which to test a well specified proposition, or where an extreme or unique case is the main focus. The logic underlying multiple cases, as Yin (2003) has mentioned, is that each case must be selected carefully so that it either (a) predicts similar results (a literal replication) or (b) predicts contrasting results but for predictable reasons (a theoretical replication).

A multiple-case study approach was used in this study for the following reasons. Firstly, multiple cases are suitable for the description and investigation of complex situations (Yin, 2003). Secondly, Yin (1993) argues, multiple-case studies should follow a replication, not sampling logic. This suggests that two or more cases should be added within the same study when the investigator predicts similar results (replication). Replication found in several cases brings more confidence in the overall results. Thirdly, multiple cases engage a variety of evidence and offer analytic conclusions, which provide more compelling results, and the overall study is therefore more robust and powerful (Yin, 2003). Examining a number of airlines increases the accuracy, validity and reliability of the results by depicting the holistic essence of the subject. In this study, if all or most of the cases present similar results, there can be significant support for the development of a preliminary theory that describes the phenomena (Eisenhardt, 1989).

There are no hard-and-fast rules in multiple case design in relation to how many cases are required to satisfy the requirements of the replication strategy, but Yin suggests six to ten cases if the results turn out as predicted as sufficient to support the initial set of propositions (Yin, 1994). Yin also states that since the multiple case study approach does not rely on the type of representative sampling logic used in survey research that the typical criteria
regarding sample size are irrelevant. Instead, sample size is determined by the number of cases required to reach saturation; that is, data collection until no significant new findings are revealed.

In this study, four major airlines have been chosen as cases. This research planned to achieve

![Figure 3.2 Unit of analysis and cases](image)

Source: Developed for this research

literal replication logic to investigate airlines’ awareness of, and the extent to which they fulfilling the needs, of physically challenged persons. The cases selected are from Asian airlines and this study seeks to understand whether Asian airlines are aware of the needs of physically challenged persons and the extent to which they are fulfilling those needs. Therefore, similar findings are predicted that will support the development of a preliminary theory to describe the phenomenon (theoretical replication). Initially, three airlines (cases) have been studied for literal replication, and a fourth airline (case) was added later for theoretical replication. The multiple-case design provides a laborious approach for collecting and analysing data. The replication strategy allows the researcher to identify likely patterns in the data and to explore more data by returning to the field. Careful application of these techniques ensures that the explanations for the phenomena under study developed from the data can be verified during the research process (Zach, 2006).
3.6.3 Sample size

Purposeful and convenience methods of sampling are used for the sampling strategy in this research. Purposeful sampling is used as the researcher from his experience in the airline industry selected cases that represent the population. Respondents were selected from the researcher’s personal judgment where permitted so that they could provide the required information for the research. The research also uses convenience sampling as the sample group was secured through personal contacts and was easily accessible. Some officials expressed an initial willingness to participate in the interviews but later withdrew due to time and schedule constraints. Four major airlines were chosen and in-depth interviews were carried out among 15 persons at different hierarchical levels in the airlines’ management (3 to 5 from each airline depending on availability). Perry (1998) describes three interviews at different hierarchical levels within case study organisations as being ideal. However, in a small business or in any Asian organization, it is difficult to obtain more than one interview, so interviewees could be in the "context" of case organisations.

Other than being chosen from personal contacts, airlines were also chosen from different Asian regions:
1. South West Asia (One)
2. South East Asia (One)
3. South Asia (Two)

The candidates for the interview were selected to fit the following criteria:
1. The interviewee must be from the airlines
2. He or she had to have a sound understanding of the phenomenon researched (Stake, 1995).

<table>
<thead>
<tr>
<th>Airline/Interview Sections/Function</th>
<th>Airline “A”</th>
<th>Airline “B”</th>
<th>Airline “C”</th>
<th>Airline “D”</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Ground/Airport/Customer/Special services</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>International relations/Alliances</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate Planning</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ALL</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>15</td>
</tr>
</tbody>
</table>

Source: Developed for this research
With purposeful sampling, the researcher selects individuals and sites for study because they can purposefully inform an understanding of the research problem and central phenomenon in the study (Creswell, 2007)

### 3.7 Relevance of the case studies to the research problem

This section will justify the use of case research by comparing other research methods: histories, experiments, archives and surveys. The comparison is summarised in the table 3.7.

**Table 3.7 Selecting appropriate research methods**

<table>
<thead>
<tr>
<th>Propositions</th>
<th>Focuses on contemporary events?</th>
<th>Requires control over behavioral events?</th>
<th>Type of research problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Methodology</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Case study</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Survey</td>
<td></td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>Archival analysis</td>
<td>√</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>History</td>
<td></td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Experiment</td>
<td>√</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


There are three major reasons to use the case study method for this research:
- the type of research question posed
- the extent of control the investigator has over actual behavioural events
- the degree of focus on contemporary, as opposed to historical, events

Benbasat, Goldstein and Mead (1987) have stated three reasons to use case research strategy:
(1) the researcher can study in a natural setting, learn the state of the art, and generate theories from practice; (2) the researcher can answer the questions that lead to understanding of the nature and complexity of the processes taking place; (3) it is an appropriate way to research a previously little-studied area.

**Firstly**, a case-based research methodology usually addresses research problems within the realism paradigm (Perry, 1998) and tries to explain things rather than measure them. The
research problem will be “how” and “why”. The researcher investigates the object of the case study in depth using a variety of data gathering methods to produce evidence that leads to understanding of the case and answers the research questions. This study meets the important criteria for a case study (Yin, 2003): it attempts to answer questions that are typical for a case study, why and how: how can airlines differentiate their services and achieve competitive advantage by fulfilling the needs of physically challenged individuals?

**Secondly,** case research is best suited for research questions where the researcher is interested in understanding dynamic contemporary events in an environment over which the researcher has no control (Yin, 1994). The first step in case study research is to establish a firm research focus to which the researcher can refer over the course of study of a complex phenomenon or object. The researcher establishes the focus of the study by forming questions about the situation or problem to be studied and determines a purpose for the study. The research object in a case study is often a program, an entity, a person, or a group of people. Each object is likely to be intricately connected to political, social, historical, and personal issues, providing wide ranging possibilities for questions and adding complexity to the case study research.

**The final reason** for using case study research is that it investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and where multiple sources of evidence are used (Yin, 1984). Disability affects 15—20% of every country’s population. There are at least 610 million people with disabilities worldwide (Elwan, 1999). In December 1993, all member states of the UN adopted the *Standard Rules on the Equalisation of Opportunities for Persons with Disabilities*. The UN *Declaration on the Rights of Disabled Persons* and various other UN conventions have formed the basis for the development of Disability Discrimination Acts in different countries. DDAs protect all people with a disability from unfair or unfavourable treatment because of their disability. This is a contemporary issue. As per United Nations (2008), around 10% of the world's population, or 650 million people, live with a disability. They are the world's largest minority. This figure is increasing due to population growth, medical advances and the ageing process, says the World Health Organization (WHO). In countries with life expectancies are over 70 years, individuals spend on average about 8 years, or 11.5% of their life span, living with disabilities.
We can conclude that the case study is the only research methodology that focuses on contemporary events over which researcher has no control where the research problem is a “how” and “why” question.

3.8 Criteria for judging the quality of case research

As in all research, consideration must be given to construct validity, internal validity, external validity, and reliability. Validity is the extent to which the information collected by the researcher truly reflects the phenomenon being studied. Qualitative researchers do not claim that there is only one way of interpreting an event. There is no one “correct” interpretation. In case studies, data collection should be treated as a design issue that will enhance the construct and internal validity of the study, as well as its external validity and reliability (Yin, 1994). The specification of the unit of analysis also provides internal validity as theories are developed, and data collection and analysis test those theories.

Yin (2003) has proposed four basic tests to assess the quality of a qualitative research design as appropriate for a case study design:

**Construct validity:** Construct validity requires correct operational measures for the establishment of the concepts under study (Yin, 2003). To achieve construct validity, the research design must include: the use of multiple sources of evidence in a manner encouraging convergent lines of inquiry; the establishment of a chain of evidence; and the review of the draft case study report by key informants (Yin, 2003). Multiple ways to measure the key variables (constructs) will overcome possible problems of inaccuracy in the study. The present study was based on a review of literature in Chapter 2 that was used to develop a conceptual framework for the data collection from multiple sources. Multiple sources of evidence are essential as little information is available on airlines’ differentiation of services by fulfilling the needs of the physically challenged to enhance/promote the segment of physically challenged persons and their actions to achieve competitive advantage from this segment. The sources of data collection include interviews with officials in diverse positions in different airlines, data from documents from the case organisations (airlines), and their websites. The chain of evidence also maintained the research procedures, the research problem, research questions, the case study protocol and case study database. The
researcher’s supervisor was allowed to review a draft of the case analysis to clarify ambiguity in findings in order to increase construct validity.

**Internal validity:** Internal validity is concerned with credible casual relationships of cause and effect, whereby certain conditions are shown to lead to other conditions, as distinguished from spurious relationships (Yin, 2003). It is not easy to identify the specific tactics, which achieve internal validity (Yin, 2003).

The criterion of internal validity is not that appropriate in this research. The purpose of this research is to find out/investigate whether airlines are differentiating their services by fulfilling the needs of physically challenged persons and enhancing/promoting that market segment. This research is interested in airlines’ actions to achieve competitive advantage from this segment rather than causation. It also investigates the phenomenon within the real life context, instead of controlling factors. Unlike experiments that investigate the cause and effect relationship, this study investigates the “how” and “why” questions in order to explain/describe the phenomenon.

However, some methods are used in this study to achieve internal validity. Yin (2003) suggests the analytic tactic of pattern matching, which was used in this study to increase the internal validity of the research.

**External validity:** External validity is concerned with the ability to generalise findings from a setting and a small group to a broader population (Neuman, 2006). It relates to the setting up of a domain to which a study’s findings can be generalised (Yin, 2003). This entails carefully choosing the cases and explaining why each case is chosen, and its similarities and differences with other cases as per research questions. External validity is more difficult to attain in a single case study. Yin (1994) asserts that external validity can be achieved from theoretical relationships and from these relationships generalisations can be made. Yin (2003) suggests external validity can be achieved using replication logic in multiple case studies. This study achieved external validity by implementing replication logic in a multiple case design as explained in section 3.6.2.

**Reliability:** Reliability is the extent to which research findings would be the same if the research were to be repeated at a later date or with a different sample of subjects (Veal,
2006). The goal of reliability is to minimise the errors and bias in study (Yin, 2003). Reliability relates to the methods of a study, such as data collection procedures, being able to be repeated and achieve same results (Yin, 2003). Two procedures can be employed to attain reliability: establishing a case study protocol and developing a case study data base (Yin, 2003). This study developed a case study protocol (Section 3.9.1) and interview protocol (Appendix A) during the research design phase and tested the interview protocol. The researcher constantly used the case study protocol during the data collection phase. Each interview was transcribed and maintained in a distinct database enabling review of the information at later date.

3.9 Data collection procedures and triangulation

A key strength of the case study method involves using multiple sources and techniques in the data gathering process. The researcher determines in advance what evidence to gather and what analysis techniques to use on the data to answer the research questions. Data gathered is normally largely qualitative, but they may also be quantitative. Tools used to collect data can include surveys, interviews, documentation review, observation, and even the collection of physical artefacts. Yin (1994) identifies six primary sources of evidence for case study research. The use of each of these might require different skills from the researcher. Not all sources are essential in every case study, but the importance of multiple sources of data to the reliability of the study is well established (Stake, 1995; Yin, 1994). The six sources identified by Yin (2003) are:

- documentation
- archival records
- interviews
- direct observation
- participant observation
- physical artifacts.
Interviews are one of the most important sources of case study information. There are several forms of interviews: open-ended, focused, and structured interviews or surveys. In an open-ended interview, respondents are asked to comment on certain events. They may offer solutions or provide insight into events. They may also support evidence obtained from other sources.

Through the process of triangulation, any finding or conclusion is much more convincing and accurate if it is based on several different sources of information. When a case study thesis provides theoretical or policy insight based on a small number of cases or even on a single case, a "triangulation" approach to validation is strongly recommended. Yin (2003) suggests that the problem of construct validity can be addressed with data triangulation because the multiple sources of evidence largely provide multiple measures of the same phenomenon. Multiple methods may comprise of structured and unstructured interviews, sample surveys, focus groups, phenomenological research, ethnography, network analysis, symbolic action research, content analysis, participant observation, examination of archival records, secondary data analysis, narrative analysis, experiments, quasi-experiments and other methods. Data collected by multiple methods address some of the validation problems in case study designs. In this study, firstly, semi-structured interviews rather than structured interviews were selected as they offer sufficient flexibility to approach different respondents in a different way while still covering the same areas of data collection. Semi-structured in-depth interviews were carried out among personnel at different levels in the airlines’ management to support each case and answer the research questions. Secondly, Documentary evidence sometimes works as a method to cross-validate information gathered from interviews, as sometimes what people say may be different from what they do. Secondary data from airlines’ documents and websites were also analysed to support the airlines’ views.
and triangulation. **Thirdly**, Observation inside aircraft while travelling to conduct the interviews also provided some data for triangulation and enhanced the validity.

The main part of the research data was collected from in-depth personal interviews. Notes were made during each interview and later documented. Interviews could not be tape-recorded because of confidentiality. The interviewing process contained following:

- population selection
- mapping potential interviewees
- selection of appropriate interviewees
- designing an interview protocol
- testing the interview protocol
- establishing the final interview protocol
- semi-structured interviewing
- documenting and arranging the interview data for further analysis
- organising interview material
- interview reports.

The final interview protocol (Appendix A) was prepared after comments were obtained from four airlines experts. Based on practical experience in the industry, the protocol contained open-ended questions were used to justify the validity (internal/external) and reliability of the research. The interviews were carried out in the head offices and with personnel at different management levels of the respective airlines. Commercial confidentiality was maintained and the airlines/companies were protected by the use of acronyms/codes. Each interviewee was also protected through confidentiality and was given anonymity by the use of codes.

### 3.9.1 Case study protocol

A case study protocol is essential for a multiple-case design in order to improve the reliability of the study by providing direction and guidelines that enable replication of the research process (Yin, 2003). A case study protocol includes the following sections:

- **An overview** of the case study project. This includes the research problems, case study questions and information-relevant readings (Yin, 2003). The research problem and research questions were presented in chapter 1 and the literature appropriate to the research problem was presented in chapter 2.
- **Field procedures** include establishing the credentials of the researcher, accessibility to site and general sources of information (Yin, 2003). An assurance of confidentiality is essential for achieving the cooperation and trust of interviewees. Confidentiality in this research was attained by sending an information sheet to each airline, describing the background of the researcher and seeking permission to interview. The information sheet also included an introduction to the researcher and researcher’s supervisor, the purpose of the study, the definitions of terms used in the research, the procedure to be followed (data collection methods), the researcher’s responsibilities, any possible discomfort or risks involved, and information about freedom of consent, and how to discontinue participation and further inquiry/complain (if needed) in regard to the proposed methods (Appendix B).

- **Case study questions** Specific questions must be developed by the interviewer to enable the collection of data that will be used to answer the research questions (Yin, 2003). The interview questions were developed from the research problems and research questions. The interview protocol is placed in Appendix A.

- **Guide for the case study report** this refers to guidelines for the outline and format of data for the case study report and the bibliographical information (Yin, 2003). Chapter 4 will provide a case study report providing formatted data and bibliographical information as referenced at the last part of the thesis.

### 3.9.2 Testing of an interview protocol

Stake (1995) emphasised good preparation for case study interviews includes trying out the questions in pilot form or at least in mental rehearsal. The five-page interview protocol was pre-tested by following four informants from different airlines:

1. General Manager, Biman Bangladesh Airlines, Dhaka
2. Ex-Director Marketing & Sales, Biman Bangladesh Airlines, Bangladesh
3. Ex-Chief Marketing Officer, Sri Lankan Airlines, Sri Lanka
4. Sales Manager, Sri Lankan Airlines, Singapore

Some modifications were made to the wording and format of the questionnaire for the final interviews. The testing of the interview protocol and subsequent refinements and additions improved the quality of research. The interview protocol in English was used in all interviews (Appendix A). Pre-testing showed that the language of the interview protocol was clear and
understandable. Feedback on the interview protocol was positive. This supported the research method choice as being suitable for the research problems. The testing of the interview protocol also proved that a minimum of 60 minutes would be required for each final interview.

3.10 Data analysis

Data analysis includes examining, categorising, tabulating, or recombining the evidence to address the initial research propositions (Yin, 1994). The analysis is one of the least developed parts of the case study methodology (Yin, 2003). Yin (2003) describes three strategies for data analysis:- relying on theoretical propositions, rival explanations, and developing case descriptions. These strategies can be used in practicing five specific techniques:- pattern matching, explanation building, time-series analysis, logic models, and cross-case synthesis.

In our study category development was used to reduce the volume of qualitative data to a manageable mass. A coding system was developed from the interview transcripts from the airlines personnel. Having created as many categories as needed, the next step was to search for themes by identifying patterns and relationships between concepts. Secondary data from airline documents and websites were also analysed to support the views of the airlines personnel and triangulation. Theoretical propositions to answer the research questions were taken from the analysis.

Pattern matching is another major mode of analysis. This type of logic compares an empirical pattern with a predicted one. Internal validity is enhanced when the patterns coincide. In multiple case studies, the replication is done by pattern matching. Initially three cases were studied and a subsequent case was added to compare and support the empirically based pattern derived from the original cases. In our study, each interview response from the airlines personnel was data coded and categorised and unique patterns were identified in the documentation.

One of the main problems with case studies is massive and versatile data (Yin, 1989). This problem was handled by using concept maps technique (Novak, 1998). Concept maps were developed from each interview question to help to organise and classify the data. In this
study, data were categorised before drawing the concept maps. One illustration of the concept maps used is included as Appendix E.

In our study, the conceptual framework and categories were developed from the interview data as shown below:

![Conceptual framework](image)

Source: Developed for this research

In explanation building, the case study data is analysed by building explanations about the case. In our study, the case description was done through explanation building. In the explanation building stage, the Wengraf (2001) Pyramid Model of interview research was used. This model consist of the sequence from the Central Research Question (CRQ) that leads to a number of Theory based Questions (TQ) and subsequently to a number of Interview Questions (IQ). The theory based questions taken together will answer the central research question. A series of interview questions have been developed from each theory based questions. So, the interviewees’ answers for the IQ taken together will answer the TQ, and the answers to the TQ taken together will answer the CRQ.
3.11 Practical issues in case design

In the case study design, the researcher must identify his or her case(s) (Creswell, 2007). The case researcher must choose which bounded system to study, and which case or cases will illustrate worthiness for study. The researcher may consider a single case or multiple cases. More than one case dilutes the overall analysis and more cases will result less depth than in any single case. A purposeful sampling strategy must be used for selecting each case and collecting information about the case. This will indicate the amount of information to be collected about each case.

The ‘boundaries” of a case must be decided; that is how the case will be constrained in terms of time, events and processes. This is challenging in case study design. Some case studies may not have clean beginning or ending points and in such situation, the researcher has to set boundaries that sufficiently surround the case (Creswell, 2007).
3.12 Limitations of case study methodology

The case study method presents a lot of important information, which probably could not be revealed any other way, but it does have its shortcomings (Salkind, 2009). The case study methodology is rigorous, coherent, and based on justified philosophical assumptions (Perry, 1998), but some characteristics that lead to strengths can also lead to weaknesses (Eisenhardt, 1989). Some of the limitations of the case research methodology are discussed below.

Firstly, a case study seems easy to do, but it is one of the more time consuming research methods. Data are gathered from a variety of sources and in a variety of settings and conditions, over which researchers have little choice (Salkind, 2009). It is also difficult to conduct because of possible logistical and operational problems (Eisenhardt, 1989). Case studies are typically lengthy and the result is often massive and unreadable documents (Yin, 2003). In this study, this problem was overcome by the development of the case study protocol and interview protocol.

Secondly, a case study approach does not establish a cause-and-effect relationship. There are always insufficient data to conclude that a cause-and-effect relationship exists and also studying casual relationship is not the purpose of this method (Salkind, 2009). The case study approach is a descriptive method and without controlled conditions, so hence a cause-and-effect relationship cannot be assumed. Behaviour can be described not explained.

Thirdly, the generalisability of the findings is limited in case studies (Eisenhardt, 1989; Yin, 2003; Salkind, 2009). It is not wise to conclude that because the focus of a study is similar, the findings will be similar too (Salkind, 2009), as only one individual or a few cases may not be representative of the general group or population. Yin (2003) has described case studies as experiments, which are generalisable to theoretical propositions but not to populations or universe. Hence, like experiments, case studies do not represent a “sample” and the researcher’s goal is to expand and generalise theories (make analytic generalisation) but not to enumerate frequencies (make statistical generalisations).

Fourthly, the greatest concern of the case study is it lacks rigour and bias may influence the direction of findings and conclusions (Yin, 2003). Researchers must not be biased in data collection and interpretation processes (Salkind, 2009). Case study research techniques have been followed at each stage of this research to overcome this problem.
Fifthly, case studies present in depth but lose in breadth. They are extremely focused but not comprehensive like other methods. Case studies are suited for completing an in-depth study of one type of phenomenon (Salkind, 2009).

Despite many believing that case studies will never result in groundbreaking basic research (which is not the purpose of case studies), case studies reveal a diversity and richness of human behaviour that is simply not accessible through any other methods (Salkind, 2009).

3.13 Ethical issues in this research

Diener and Crandall (1978) as cited by Bryman (2001) identified many of the ethical principles in social research: whether there is harm to participants, whether there is invasion of privacy, whether there is lack of informed consent, and whether deception is involved. Research should not harm the participants (Wysochi, 2004; Walliman, 2006).

There are six areas in which ethical concerns must be considered in research (Nachmias and Nachmias, 2008): the research problem, research settings, procedure of research design, data collection methods, types of persons serving as subjects, and type of data collected. Only data collection methods affect this research due to the research circumstances.

Steps have been taken to ensure ethical collection of data.

**Informed Consent:** Participants must give permission (“informed consent”) only after they have been informed of the purpose of the study, about the researcher and what will be done during the study (Wysochi, 2004). Before the commencement of the interviews, an introduction letter (“Information Sheet”) was given to each participant explaining the name of the project, name of researcher and supervisor, purpose of the research, procedures to be followed, any possible risks or difficulties, freedom of consent and contact numbers of the researcher, supervisor, and ethics complaint officer to provide further information if required. Informed consent (“Consent Form”) (Appendix C) based on the National Statement on Ethical Conduct in Human Research (National Statement/NS) was obtained from each participant before the commencement of each interview.

**Confidentiality/Anonymity:** It is the obligation of the researcher to protect the anonymity of research participants and to keep research data confidential (Nachmias and Nachmias, 2008). The participant’s name, organisation identity and any other information, and
identifying information of participants will not be publicly disclosed. It was stated in the 
information sheet and consent form that the information given by the participants would be 
protected and names or any identifying information would not be disclosed or published.

This study applied ethical guidelines based on those from Southern Cross University’s 
Human Research Ethics Committee (HREC). Steps were taken to ensure ethical collection of 
data and strict ethical procedures were followed throughout the research process.

3.14 Conclusion

This chapter has provided details of the justification for the qualitative research methodology 
and for using case study research within the interpretivist paradigm. This chapter also 
explained the rigour of this research through construct validity and reliability criteria. A 
framework of the case study research was presented to illustrate how researcher decided the 
number of cases and number of interviews. It further explained how the data were analysed 
and addressed the limitations and ethical considerations.

The next chapter analyses the data obtained from this research.
4.1 Introduction

Chapter 3 discussed the research methodology employed for this research. This chapter will present the information/data gathered and discuss the analysis process. It will also discuss the data collected to address the research propositions outlined in Chapter 1. Chapter 5 will compare the findings from this chapter and draw conclusions along with their implications. The next section will provide the description of the cases. A summary of the interviewed persons and their backgrounds and the themes emerging from the interview data will be presented. This will be followed by the analysis of case. Section 4.6 will provide the analysis of data relevant to the research propositions in within-case and cross-case comparisons. Concept mapping with pattern matching (replication) and finally data triangulation will be described in section 4.7.

4.2 Description of the cases

To protect the confidentiality of the participants, each participant has been identified by a code. The details of the organisations they worked for have also been coded to protect their confidentiality. In describing the cases, the actual names will not be used and will be replaced by using numbers and acronyms. This consideration is essential to ensure that the participants’ name, organizations’ identities and any other identifying information are kept discrete.

This subsection provides a brief description of the four airlines selected as case studies for this research. The participating cases have been identified as cases 1, 2, 3, and 4 and each corresponding airline as A, B, C, and D.
## Table 4.1  
**Case descriptions**

<table>
<thead>
<tr>
<th>Case</th>
<th>Airline</th>
<th>Region</th>
<th>Established in</th>
<th>Total Fleet size (Aircraft)</th>
<th>Total Destinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>South East Asia</td>
<td>1960</td>
<td>88</td>
<td>70</td>
</tr>
<tr>
<td>2</td>
<td>B</td>
<td>South Asia</td>
<td>1979</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>3</td>
<td>C</td>
<td>South Asia</td>
<td>1972</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>D</td>
<td>South West Asia</td>
<td>1950</td>
<td>28</td>
<td>40</td>
</tr>
</tbody>
</table>

Source: Developed from the field data

**CASE 1 (A)**

This is an international airline in South East Asia and an IATA member airline. It is a national carrier and was founded in 1960. It operates domestic, regional and international flights. As of January 2009, the airline had a total of 88 aircraft and most of them were wide bodied models. It is a member of the Star Alliance and flies to over 70 destinations all over the world.

**CASE 2 (B)**

This is an international airline in South Asia and an IATA member airline. It is a national carrier and was founded in 1979. It operates flights to 45 destinations in 25 countries in Europe, the Middle East, South Asia, South East Asia and the Far East. As of January 2009, the airline had 14 aircraft and all of them were wide bodied. The airline has a workforce of more than 5000 people.

**CASE 3 (C)**

This is also an international airline in South Asia and an IATA member airline. It is a national carrier and was founded in 1972. As of January 2009, the airline had 11 aircraft and operated to 18 destinations in South Asia, South East Asia, the Far East, the Gulf and Middle East and Europe.
CASE 4 (D)

This is an international airline in South West Asia and IATA member airline. It is a national carrier and was founded in 1950. As of January 2009, the airline had 28 aircraft and operated to over 40 destinations in 26 countries.

4.3 Participant profiles

The participants’ names and organisations’ identities were coded to protect the confidentiality of the participants. Each participant from each airline was coded as P1, P2, P3, P4, and P5.

Table 4.2  
Interviewed persons

<table>
<thead>
<tr>
<th>Date interviewed</th>
<th>Airline</th>
<th>Person</th>
<th>Designation</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>07.01.09</td>
<td>A</td>
<td>AP1</td>
<td>Duty Manager</td>
<td>Ticketing Office</td>
</tr>
<tr>
<td>07.01.09</td>
<td>A</td>
<td>AP2</td>
<td>Department Manager</td>
<td>Special Services Dept.</td>
</tr>
<tr>
<td>08.01.09</td>
<td>A</td>
<td>AP3</td>
<td>Director</td>
<td>Commercial</td>
</tr>
<tr>
<td>20.01.09</td>
<td>B</td>
<td>BP1</td>
<td>Manager</td>
<td>Airport Service Support</td>
</tr>
<tr>
<td>20.01.09</td>
<td>B</td>
<td>BP2</td>
<td>Manager</td>
<td>Airport Service Delivery</td>
</tr>
<tr>
<td>20.01.09</td>
<td>B</td>
<td>BP3</td>
<td>Regional Manager</td>
<td>Commercial</td>
</tr>
<tr>
<td>23.02.09</td>
<td>C</td>
<td>CP1</td>
<td>General Manager Sales</td>
<td>Commercial</td>
</tr>
<tr>
<td>26.02.09</td>
<td>C</td>
<td>CP2</td>
<td>General Manager District Sales</td>
<td>Commercial</td>
</tr>
<tr>
<td>01.03.09</td>
<td>C</td>
<td>CP3</td>
<td>General Manager Marketing</td>
<td>Commercial</td>
</tr>
<tr>
<td>08.03.09</td>
<td>C</td>
<td>CP4</td>
<td>Deputy General Manager</td>
<td>Corporate Planning</td>
</tr>
<tr>
<td>24.03.09</td>
<td>D</td>
<td>DP1</td>
<td>Head</td>
<td>International Relations &amp; Alliances</td>
</tr>
<tr>
<td>24.03.09</td>
<td>D</td>
<td>DP2</td>
<td>Director</td>
<td>Alliances &amp; Partnership</td>
</tr>
<tr>
<td>24.03.09</td>
<td>D</td>
<td>DP3</td>
<td>Regional Manager</td>
<td>Commercial</td>
</tr>
<tr>
<td>24.03.09</td>
<td>D</td>
<td>DP4</td>
<td>Vice President</td>
<td>Customer Services</td>
</tr>
<tr>
<td>25.03.09</td>
<td>D</td>
<td>DP5</td>
<td>General Manager</td>
<td>Commercial</td>
</tr>
</tbody>
</table>

Source: Developed from the field data
Four major airlines were chosen and in-depth interviews were carried out among 15 persons in different hierarchical levels in the management (3 to 5 from each airline depending of availability). The selection details of participants were described previously in section 3.6.3.

Figure 4.1  **Percentage of gender distribution**

Out of total 15 persons interviewed at the different airlines, 13 were men and 2 were women. To protect the confidentiality of the participants’ the full transcripts of the in-depth interviews have been kept confidential.

**4.4 Analysis of cases**

In order to analyse the data collected from the in-depth interviews, the researcher used both within-case and cross-case analysis. Within-case analysis involved describing each individual case. Explanation building technique was used to analyse the case study data by building on explanations about the individual case. Case description was done through explanation building. Wengraf’s (2001) Pyramid Model of interview research was used (as stated in figure 3.5) in the explanation building stage. An illustration of the theory based questions is included in Appendix D. All information obtained from the within-case analysis was compared using cross-case analysis for triangulation. Concept mapping technique was used to match patterns and for replication. Initially three cases were studied and subsequent one case was added to compare and support the empirically based pattern derived from original cases.
4.5 Emerging themes

Some themes (some comprising of sub-themes) emerged from the analysis of the interview data. These themes and sub-themes are described below to illustrate how interview data are coded and themes emerged from the data analysis. Detail of the themes emerged has been analysed in chapter 4 and 5.

**Theme 1: Market awareness**

Almost all the respondents indicated that there is a good/significant market of physically challenged persons but they did not know the volume or size. This is reflected in participant DP2’s comment, “definitely there is a market. Do not know the volume. We need to have policies to treat them well. The segment needs to be addressed.”

**Theme 2: DDA conformance**

All the airline personnel mentioned that the airlines strictly followed the disability discrimination acts and do not discriminate the passengers. However, during the discussion with the participants it was observed that many had no in-depth knowledge of the DDA of their respective countries.

**Theme 3: Present facilities**

Physically challenged persons need special attention at different stages of their travel, i.e. during reservation, on-board, disembarkation, baggage delivery, check-in and embarkation/transit.

3.1 Reservation

Data obtained from the respondents indicated that the necessary information/preferences about the physically challenged person’s needs were being inserted in the airline reservation systems. Passengers must inform the airlines about their type of disability, seat preference, meal selection and special attendance requirements at airports. Travel agents are well informed about the procedures of the airlines.
3.2 On-Board

Reservation data link to other departments for services such as special seats/meals. The crew is informed about the requirements well in advance. Cabin crew are trained to handle all kind of passengers including physically challenged. Special crew members are assigned to take care of them.

3.3 Check-in

From the interview data, it was found that none of the airlines separate check-in counters for physically challenged persons. However, they have special staff to handle them. They are taken separately for check-in.

3.4 Disembarkation

The physically challenged are greeted and assisted by staff. All airlines have special handling units to take care of them. Stations are communicated about their travel. Staff handover physically challenged passengers to their relatives. There is no Standard Operating Procedures (SOP).

3.5 Baggage delivery

Almost all respondents indicated that physically challenged persons are assisted by staff and that the special handling unit/passenger service unit on the ground will assist them.

3.6 Embarkation/Transit

Physically challenged persons are looked after by staff in a specially allocated area in transit. They are provided with special labels for identification. If required, wheelchairs are carried by a high lifter to the aircraft. A special handling unit assists them. No special SOP, but ground staff offer their services automatically.

Theme 4: Planned future facilities

Respondents could not provide details about their plans to introduce more facilities for the physically challenged. Many respondents mentioned that they had no current plans to improve facilities. Some said they were coordinating with airport authorities to improve infrastructure, and their new aircraft will be equipped with all services.
Theme 5: Information dissemination
The airline websites do not adequately inform the public about their procedures to aid in the acceptance of passengers with special needs and also there are no other publications on this issue. One participant mentioned that their website was not complete and still in development, while another participant agreed their website needed improvement.

Theme 6: Future differentiation techniques
The airlines had no plans to introduce more facilities to cater physically challenged passengers. Some respondents did mention that their new aircraft will be fully equipped and special units will assist these passengers. There will be a special area in transit for them. One respondent indicated that little attention is given to this segment as negligible numbers of physically challenged passengers travel. They would increase facilities with growth in the market.

Theme 7: Acceptance of passengers
To cater to the market segment of the physically challenged persons, it is imperative that airlines accept them for travel. Respondents indicated that their airlines accept wheelchair-bound, deaf, dumb and blind passengers.

7.1 Documentation
All such passengers are accepted without any additional documentation. They only provide information and indicate their requirements during reservation.

Theme 8: On-board facilities

8.1 Available on-board facilities
Almost all respondents mentioned that the aircraft are equipped with special toilet facilities with handle bars. This was observed and confirmed on-board the aircraft and this information was also on the airline websites, which endorsed the participants’ data in this regard.
8.2 Procedures to safely deplane during emergency

Respondents mentioned that the airlines follow procedures as per IATA specifications. Seats for the physically challenged are assigned by the cabin crew and the special seating enables them to deplane with the assistance of the crew. That’s why the number of travel of physically challenged passengers in a flight is important so that cabin crew can take care during an emergency.

8.3 Additional announcement

There were no additional announcements/displays for the physically challenged mentioned in the interview data. No additional announcements/displays on-board (other than the physical demonstration of the safety instructions) were found.

Theme 9: Staff training

All participants stated that their airport and cabin staff are well trained as per IATA specifications to handle these passengers. No further special training was imparted in this regard.

Theme 10: Travelling needs

Airlines must make efforts to fulfil the needs of physically challenged persons as stated in interview data. To enjoy sustainable success, carriers must know their customers individually, differentiating them by their values and needs so that they can offer more personalised and customised actions to fit the long-term strategy of meeting these needs.

10.1 Infrastructure

Proper infrastructure is needed for physically challenged passengers both in the airport and inside the aircraft. Transportation in the airport, access to amenities, and proper infrastructure during boarding, deplaning and baggage collection is required.

10.2 Emotional support

Physically challenged persons need emotional care and support from family members, staff and fellow passengers.
10.3 **Government support**

Physically challenged persons require support from governments in terms of policy and financial support. They need sufficient funds or special assistance from government and adequate policies to protect their rights.

10.4 **Trained staff**

Staff should be trained to understand the requirements of the physically challenged. These passengers should be handled in person and their equipment properly dealt with.

10.5 **Treat as normal people**

Treat the physically challenged as normal passengers and as individuals. They should be treated equally and should not be treated differently from other passengers.

10.6 **Respect and recognition**

The physically challenged should be respected and their requirements should be recognised. There should be a positive attitude both from general public, staff and fellow passengers.

10.7 **Attention and comfort**

The physically challenged need attention and comfort throughout their journey. All touch points must be user friendly.

10.8 **Special assistance and care**

They must be given warm a welcome and special service. As AP2 said, “we should focus on that we are their friends and they should come to us”. Airlines must have special features to serve them. They must have a whole package from check-in to arrival for them.

10.9 **Fulfilling the needs of the physically challenged**

Many respondents have mentioned that they are fulfilling the needs of the physically challenged as per IATA or EU guidelines and special handling units take care of them but the airlines are unsure about how to fulfil their needs.
Theme 11: Numbers of physically challenged persons travelled

All airline personnel interviewed have mentioned that they do not have the statistical data about the number of physically challenged persons who travelled with their airline.

Theme 12: Barriers

The barriers to implementing product differentiation for physically challenged persons in airlines were identified by the respondents.

12.1 Internal

Internal barriers are considered those barriers within the airlines. Many airlines are not ready and do not have operational policies for physically challenged persons. Tools and support equipment including in-flight equipment are not ready. The capacity of aircraft also restricts the number of passengers accepted. There is a lack of trained manpower and manpower resources when large groups travel. Lack of financial resources at the airlines is also considered a barrier. There is a large cost of making appropriate gadget both on the ground and on board. Security restrictions and security measures by governments also discourage travel. Staff aim to help the physically challenged both on ground and on board. Lack of specialised training for staff is also a major barrier. There is a need for more training to increase awareness about needs and rights of physically challenged passengers, to treat them with honour and dignity, and not with pity. Another important barrier is the commercial reason to tap the market. Physically challenged persons can lack financial resources, the lack of discounts by the airlines and the lack of dedicated team to help the physically challenged are also considered as internal barriers.

12.2 External

Infrastructure at the airport and other areas, aircraft and technology are considered major external barriers. The lack of manpower available for additional services and financial resources of physically challenged persons are also considered as barriers. They do not have money and also are financially unable to travel. Other people’s negative or indifferent attitude towards recognising their needs is also a barrier. Respondent CP1 said,

“We see them as burden.”
Culture also plays a significant role as a barrier as it is not focused on this group. The non-availability of equipment at airports, other areas and in aircraft and the lack of government response and awareness, and the lack of awareness by staff are also barriers to implementing of product differentiation. Participants also indicated proper communication is required to contact this passenger group and being unable to highlight their products’ features is a barrier. With the recent implementation of additional security measures in airports, access to information and facilities especially at security points is considered a barrier as there are no proper facilities available for physically challenged persons. The increase and implementation of various taxes have also restricted special fares for them.

**Theme 13: Product differentiation preconditions**

Participants of all cases have identified the preconditions of product differentiation for physically challenged persons. Participants also identified measures taken by their airlines to use market segment of physically challenged persons as product differentiation strategy to achieve competitive advantage. One of important factor is social commitment, as BP3 put it, “carrying them will make the airlines seemed socially responsible”. Respondent CP1 stated that it is the commitment towards social responsibility that can differentiate one airline from other airlines, by them showing this commitment.

**Theme 14: Challenges of physically challenged persons**

Airlines need to overcome the challenges of dealing with the physically challenged to differentiate their products/services to achieve competitive advantage. Some of the challenges include issues with proper equipment and logistics, restriction of movement, financial constraints, allowing the passengers a sense of dignity, communication, advance information about requirements.

**4.6 Data analysis relevant to the research questions**

In this section, we will analyse data across all the cases in order to identify similarities and differences. The data analysis includes two steps: within-case analysis and cross-case comparison (Eisenhardt, 1989). Techniques such as within-case and cross-case analysis ensure external validity. Within-case analysis is a term used from Miles and Huberman
(1994); however, Yin (1994) posits that comparing findings to frame the reference (i.e. previous studies) is one of the two ways to analyse case study data.

Within-case analysis analyses the data within the case and compares them to the previous theory/theories. When comparing the data to the previous theory, they either fit the previous theory, or do not. In within-case analysis, data either verifies or falsifies previous research. Or in case of this study, data produce something the other studies did not (Data analysis in qualitative research, n.d). In this research, cross-case analysis was carried out for each research proposition; this is because cross-case analysis emphasises the reasons for differences and why differences occur, occasionally using quotations obtained from the interviews also justify conclusions about differences between cases in the cross-case analysis.

4.6.1 Research proposition 1

The aim of this section is to answer the first research proposition: That Asian airlines are aware of and plan to promote and enhance the market segment of physically challenged persons.

Research proposition 1 comprises the research questions:

1. To what extent are airlines aware of the market for physically challenged persons?
2. Do airlines have plans to promote and enhance the business segment of physically challenged persons?

The research proposition also attempts to answer the following theory based questions(TQ) (Appendix D) as explained in figure 3.5.

A. Is there awareness of the market?  B. Are there plans to promote it?

As stated in section 4.2, each participant was coded by a letter, so that the code can be linked back to the original transcript for reference purposes.

Case 1(A): Within case analysis

About the awareness of the market of physically challenged persons, AP1 has stated that they did not “focus” on this group and “never think” of this market segment. AP2 said “I am not
sure but there is still a market”, but AP3 suggested that market is not that large. They have restriction of movement and limited financial resources. All participants (AP1, AP2, and AP3) mentioned that their organisation is in compliance with the relevant disability discrimination act (DDA). AP1 also mentioned that “our culture is not to hurt them. Give more attention to them and not refuse them. It is like a duty”. AP3 explained “we fly to countries which have DDA, so have to follow strictly”.

Answering the question of “is your airline planning to introduce more facilities to cater to these passengers?” AP1 said “we are trying to provide the equipment as per IATA specifications and at the moment there are no plans to have more facilities”. AP2 mentioned that they are coordinating with the airport authorities for different colour lanes to be introduced, but participant AP3 stated that there are no further plans to introduce more facilities.

When asked about what procedures are in place through websites and publications in accepting passengers with special needs, all the participants (i.e. AP1, AP2 and AP3) mentioned that nothing particular was available at this moment. Participant AP1 clarified that their website is not complete and it is still relatively new.

In responding to the airlines’ future plans to differentiate their services by attracting disabled passengers to gain competitive advantage over other competitors, AP1 said “It is dependent on marketing planning and I will not be able to answer”. AP2 said “Do not know yet”, and AP3 said, “we have new aircraft coming that are fully equipped to handle these types of passengers. This will differentiate our product in the market”.

**Case 2(B): Within case analysis**

BP1 believed that there is a market segment for physically challenged persons but was unsure about the size of the market. BP2 said “we do have some market. Domestically, some disabled soldiers and some disabled persons attend different games and seminars”. BP3 echoed the same, “there is a good market and we have a good number of soldiers and civilians who are disabled. Internationally, there is a potential segment if we meet their demands and find ways to look after them”.

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All participants in this case also agreed that they strictly followed the DDA. BP2 has also mentioned that “We are to assist them and not to isolate them”, and BP3 said “no complaints till now”.

All participants in Case 2(B) iterated that their airline is planning to introduce more facilities to cater to this group of passengers. BP1 and BP2 mentioned that a special unit will be formed to handle them. Special teams will be trained in medical/first aid and soft skills in handling physically challenged individuals. BP3 said “Our Motto is Customers first and highlighting the service to all types of passengers”.

BP1, BP2 and BP3 unanimously agreed that their website was comprehensively developed and provided information to aid the acceptance of passengers with special needs. They do not have additional publications on this issue. With regards to any future plans for the airline to differentiate itself by attracting disabled passengers to gain competitive advantage over other airlines, BP1 and BP2 pointed the need to have a separate special unit to handle them. BP2 also said “there will be special area in transit to keep these passengers”. BP3 said “we are willing to help rather than to avoid them and to show, we want them”.

Case 3(C): Within case analysis

With regard to the market segment of physically challenged persons, both CP1 and CP4 felt that there was a good market but were unsure of the size; thus they were not tapping into this market. CP2 said “there is a significant market, but in context of travelling it is not significant”. CP3 was convinced of the considerable number of handicapped persons in society but felt that this number was insufficient to constitute a market for air travel. The airline should consider this market as a marketing opportunity and should capitalize on the opportunity.

CP1 and CP2 agreed that their airline adhered to government policies, but CP3 said “Our airline has no conscious agenda or procedures to handle these passengers indiscriminately”. Only CP4 said he was not aware of the DDA.

With the exception of CP3, the other participants, CP1, CP2 and CP4 explained their airline plans to introduce more facilities to cater these passengers. They said the airline will be buying a new generation of aircraft, which will be equipped with all necessary facilities. CP2
also mentioned that priority training will be given to both ground and cabin crew and improvements on infrastructure facilities will be discussed with civil aviation. Only CP3 said that there was “no immediate or current plan”.

All participants agreed that their airline’s website was inadequately developed to aid in the acceptance of passengers with disabilities and also said there was no other publication that specified such procedures.

About having future plans to differentiate the airline by attracting disabled passengers in order to gain competitive advantage, CP1 said nothing is being planned at the moment. However, CP2 said “Our government is giving preference to this segment. Our airline is in line with the needed specifications for new aircraft and our marketing campaign will attract these passengers”. CP3 also acknowledged that nothing is currently planned but may be after buying of the new aircraft. CP4 came out with a different view. He said, “We could not give enough attention to this market due to the negligible number of physically challenged persons travelling. We will increase facilities with growth in the market”.

**Case 1(A), 2(B), 3(C): Cross-case analysis**

Cross-case analysis is often used to simply analyse data so that conclusions can be drawn from this perspective as well. In cross-case analysis, similarities with within-case analysis are found, but often other patterns are discovered as well. Eisenhardt (1989) suggests that the cross-case analysis should preferably be used for searching patterns. The overall idea is to force the researcher to go beyond their initial impressions, by using structured and diverse lenses on the data that will result an accurate and reliable theory. Three tactics for doing this are recommended: 1) select categories and look for within-group similarities together with intergroup differences, 2) select pairs of cases and list the similarities and differences, and 3) divide the data by data source to exploit “unique insights possible from different types of data collection” (Eisenhardt, 1989, pp. 540-541).

The participants’ interview data for Case 1(A), Case 2(B) and Case 3(C) provide deep insight into the issues around of research proposition 1 when the patterns and themes in the data across the cases are examined.
Table 4.3  Summary of cross-case analysis of research proposition 1

<table>
<thead>
<tr>
<th>Construct</th>
<th>Case 1(A)</th>
<th>Case 2(B)</th>
<th>Case 3(C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plans to introduce more facilities to cater passengers</td>
<td>As per IATA. No plans. Co-ordinating with airport authorities.</td>
<td>Special unit with training on medical and human aspects of service. Service motto: “customer first”</td>
<td>New aircraft will be equipped with all services. Training to be given to ground/cabin staff. Co-ordinate with airports to improve infrastructure. No plans.</td>
</tr>
<tr>
<td>Future planning to differentiate to gain competitive advantage</td>
<td>Do not know. New aircraft will be fully equipped.</td>
<td>Separate unit. Special area in transit.</td>
<td>Nothing at this moment. Government giving preference to this segment. New aircraft and campaign. Negligible persons travelling so not currently giving much attention. Facilities will depend on market growth.</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research

The following figure 4.2 presents the similarities between categories in the cross-case analysis. There are similarities in categories between cases 1 and 2, cases 1 and 3, cases 2 and 3 and finally some data common in cases 1, 2 and 3. The respondents for all three cases stated about the market segment of physically challenged persons that: they have some market, but they are not sure of the size, and the airlines strictly follow the relevant disability discrimination acts.
Figure 4.2  

**Similarities of categories in cross-case analysis**

Source: Developed for the research from field data

### 4.6.2 Research proposition 2

The aim of this section is to answer the second research proposition: *That Asian airlines are aware of and fulfilling the needs of physically challenged persons.*

Research proposition 2 comprises the following research question:

1. **To what extent are airlines aware of and fulfilling the needs of physically challenged persons?**

The main intention of research proposition 2 is to answer the following theory based question (TQ) (Appendix D) as explained in Fig.3.5.
A. To what extent are airlines fulfilling the needs of the physically challenged?

In the sections that follow, the themes that emerged from the interviews relating to research proposition 2 are discussed; first based on within case analysis and thereafter on a cross-case analysis.

**Case 1(A): Within case analysis**

To be aware of the needs of physically challenged individuals, it is necessary to know the number of these persons travelling in each airline. In responding to the question, AP1 replied not much was done to meet the needs of those individuals; furthermore, this was complicated by the lack of statistics. AP2 agreed that the airline did not have data but believed that the numbers of wheelchair-bound passengers were approximately 6000 per month, deaf and dumb passengers were 10–20 and blind passengers were 20–25 per month. Participant AP3 also said “No record”.

Physically challenged persons need special attention on different stages of their travel, i.e. during reservation, on-board, disembarkation, baggage delivery, check-in and embarkation/transit. Table 4.4 shows the participants’ responses on the facilities that the airline offers in the different stages of travel for case 1(A).

<table>
<thead>
<tr>
<th>Stages</th>
<th>AP1</th>
<th>AP2</th>
<th>AP3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reservation</td>
<td>Passengers identify themselves. IATA standard procedure</td>
<td>Take the information and give to others</td>
<td>Passengers identify themselves.</td>
</tr>
<tr>
<td>On-board</td>
<td>Reservation data links to other departments</td>
<td>Cabin crew take care</td>
<td>Special seat/meal/toilet</td>
</tr>
<tr>
<td>Check-in</td>
<td>No idea</td>
<td>Special staff to handle them all the way to aircraft.</td>
<td>No special desk/counter</td>
</tr>
<tr>
<td>Disembarkation</td>
<td>No idea</td>
<td>High lifter for wheelchairs</td>
<td>No comment</td>
</tr>
<tr>
<td>Baggage delivery</td>
<td>No idea</td>
<td>Staff are there to assist them</td>
<td>No comment</td>
</tr>
<tr>
<td>Embarkation/Transit</td>
<td>No idea</td>
<td>High lifter for wheelchairs</td>
<td>Special label. They do not travel their own, travel with someone.</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research
In response to being questioned about the acceptance of wheelchair-bound, blind, and deaf and dumb passengers for travel, all participants indicated that all these passengers are accepted for travel in their airline. They also mentioned that no documentation is required for such passengers, other than only to provide the airline with information and indicate their requirements for additional services.

In terms of the types of onboard facilities available, the procedures to safely deplane during emergencies and additional announcements for special needs passengers, the respondents’ responses are summarised below:

Table 4.5  
Case 1(A): summary of additional procedures

<table>
<thead>
<tr>
<th>Procedure</th>
<th>AP1</th>
<th>AP2</th>
<th>AP3</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-board facilities</td>
<td>IATA procedure</td>
<td>Special seat near toilet. No special on-board announcements; physical demonstration only for deaf and dumb passengers.</td>
<td>Seating as per type of disability. Toilet with handle bar. No additional announcements; only pictograms. Special seating zone.</td>
</tr>
<tr>
<td>Procedure to safely deplane during emergency</td>
<td>No idea</td>
<td>Special seats to enable them to deplane first.</td>
<td>Special priority by cabin crew. Ratio of travel is important. We need prior information. All procedures are as per IATA</td>
</tr>
<tr>
<td>Additional announcements/displays</td>
<td>Nothing special. This group of people are taken care of by someone. They will go directly to airport. Announcements sometimes for foreigners but for locals nothing.</td>
<td>No additional announcements</td>
<td>No special announcements or displays. Only pictograms. Blind people will be with dog or someone. We follow IATA procedures.</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research
In case 1(A), all participants mentioned that their airport and cabin staff are well trained to handle these passengers. Information relating to the website and publications has already been explained in section 4.6.1 case 1(A) within case analysis and table 4.3.

The needs of physically challenged persons when travelling by air and how airlines respond to those needs are summarised below:

**Table 4.6  Case 1(A): summary of the needs of physically challenged persons and how the airline is fulfilling them**

<table>
<thead>
<tr>
<th>Needs when travelling by air</th>
<th>AP1</th>
<th>AP2</th>
<th>AP3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical — Limitations of some airports</td>
<td>Treat them as normal passenger</td>
<td>Respect &amp; recognise them. Treat them as normal passenger.</td>
<td>Adequate attention</td>
</tr>
<tr>
<td>Mental — they need mental care; support and sufficient funds from government.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How airlines fulfilling the needs</td>
<td>As per policy and IATA guideline</td>
<td>With our culture &amp; hospitality</td>
<td>Special handling unit takes care of them</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research

**Case 2(B): Within case analysis**

In terms of the number of physically challenged persons that travelled with the airline, the respondent BP1 indicated that they do not keep a record, but believed that wheelchair-bound passengers amounted to about 24 per day, deaf and dumb passengers at 5 per month and the blind at 1 per month (5 in 6 months). Both BP2 and BP3 had “No comment”.

Physically challenged passengers require facilities at different stages of travel, i.e. reservation, on-board, disembarkation, baggage delivery, check-in and embarkation/transit. Table 4.7 shows participants’ responses on the facilities that the airline offers in the different stages of travel for Case 2(B).
Table 4.7  **Case 2(B): summary of facilities that the airline offers at different stages of travel**

<table>
<thead>
<tr>
<th>Stages</th>
<th>BP1</th>
<th>BP2</th>
<th>BP3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reservation</td>
<td>Preferred seat. Proximity to the toilet.</td>
<td>Travel agents are well informed</td>
<td>Someone else will book for them</td>
</tr>
<tr>
<td>On-board</td>
<td>Crew know in advance. They are specially trained.</td>
<td>Allocate seat and notify crew. Aisle wheelchair in most aircraft.</td>
<td>Special crew member assigned to them</td>
</tr>
<tr>
<td>Check-in</td>
<td>No separate counter. They are checked separately as they do not have to be in queue.</td>
<td>Report to passenger service unit. They handle them.</td>
<td>No special counter. They are taken separately for check-in.</td>
</tr>
<tr>
<td>Disembarkation</td>
<td>Greeted &amp; assisted by staff.</td>
<td>Stations are communicated about their travel. Staff hand over to relatives.</td>
<td>Hardware and manpower are there to help them.</td>
</tr>
<tr>
<td>Baggage delivery</td>
<td>Greeted &amp; assisted by staff.</td>
<td>Passenger service unit handles them.</td>
<td>Ground crew assist them.</td>
</tr>
<tr>
<td>Embarkation/Transit</td>
<td>Special allocated area. In custody of staff.</td>
<td>No comment</td>
<td>No comment</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research

In response to being questioned about the acceptance of wheelchair, blind, and deaf and dumb passengers for travel, all participants have indicated that all these passengers are accepted for travel in their airline. They also mentioned that **no documentation** is required, but BP1 and BP2 indicated that a medical clearance (MEDA) form is required if they are declared sick.

In terms of the types of on-board facilities available, the procedures to safely deplane during emergencies and additional announcements for special needs passengers, the respondents’ responses are summarised below:
Table 4.8  Case 2(B): summary of additional procedures

<table>
<thead>
<tr>
<th>Procedure</th>
<th>BP1</th>
<th>BP2</th>
<th>BP3</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-board facilities</td>
<td>Toilet equipped with railing. No special announcements. Easy access to the toilets and close to exit but not near emergency exit.</td>
<td>All aircraft toilets are equipped. No additional announcements. Pre-seat in advance</td>
<td>All wide-body aircraft are equipped. No special announcements. Pre-seating. Board them first.</td>
</tr>
<tr>
<td>Procedure to safely deplane during emergencies</td>
<td>We follow the standard operating procedure of IATA.</td>
<td>Standard operating procedure and IATA. All crew are well trained.</td>
<td>Unable to comment. Depends on safety rules.</td>
</tr>
<tr>
<td>Additional announcements/displays</td>
<td>Boarding announcement. Special tag for disabled passengers.</td>
<td>Nothing special. Only during boarding, they will be taken first.</td>
<td>No comment</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research

All participants stated that their staff are well trained to handle these passengers. However, BP2 also mentioned that they will be allocated based on gender; females will be escorted by females. Participants mentioned that their airline website was comprehensively developed and well informed. They have no other publications for passengers with special needs.

Participants’ data on the needs of physically challenged persons when travelling by air and how the airline is able to fulfil those needs are summarised below:

Table 4.9  Case 2(B): summary of the needs of physically challenged persons and how the airline is fulfilling them

<table>
<thead>
<tr>
<th>Needs when travelling by air</th>
<th>BP1</th>
<th>BP2</th>
<th>BP3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Must be comfortable. Treat as normal person.</td>
<td>They need assistance. Treat them as normal persons and intervene when required.</td>
<td>Use of toilets &amp; meals. Give them service so that they are treated as normal person.</td>
</tr>
<tr>
<td>How airlines fulfilling the needs</td>
<td>As per IATA and EU recommended practices.</td>
<td>Separate unit to handle them. Seated in convenience places in aircraft. Ambulift used for those who can not climb steps. Toilets are fixed with special handles.</td>
<td>No comment. Outside of scope of job.</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research
**Case 3(C): Within case analysis**

All the respondents CP1, CP2, CP3 and CP4 pointed out that they do not have any data on the number of physically challenged persons that travelled with their airline.

Participants’ responses on the facilities that the airline offers in different stages of travel for physically challenged passengers, i.e. reservation, on-board, disembarkation, baggage delivery, check in and embarkation/transit, are shown in table 4.10.

<table>
<thead>
<tr>
<th>Stages</th>
<th>CP1</th>
<th>CP2</th>
<th>CP3</th>
<th>CP4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reservation</td>
<td>Information received during reservation</td>
<td>Nothing</td>
<td>Seat preference. Meal selection. Special attendance requirements at airport.</td>
<td>To insert required information.</td>
</tr>
<tr>
<td>On-board</td>
<td>Crew are trained</td>
<td>Nothing</td>
<td>No standard procedure. Crew offer service as per booking order.</td>
<td>Crew trained but no equipment.</td>
</tr>
<tr>
<td>Check-in</td>
<td>Preferential check-in</td>
<td>Priority given to them</td>
<td>No special counter but check-in staff offer separate service for them.</td>
<td>Special handling unit takes care of them</td>
</tr>
<tr>
<td>Disembarkation</td>
<td>Special handling unit</td>
<td>Special unit takes care of them</td>
<td>No SOP</td>
<td>Special handling unit take care</td>
</tr>
<tr>
<td>Baggage delivery</td>
<td>Special handling unit</td>
<td>Special unit take care</td>
<td>No special procedure</td>
<td>Special handling unit takes care of them</td>
</tr>
<tr>
<td>Embarkation/Transit</td>
<td>Special handling unit</td>
<td>Special unit takes care of them</td>
<td>No SOP but ground staff offer to help automatically</td>
<td>Special handling unit takes care of them</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research

In response to being questioned about the acceptance of wheelchair-bound, blind, and deaf and dumb passengers for travel and the documentation needed to accept such passengers, all participants (CP1, CP2, CP3 and CP4) indicated that all these passengers are accepted for travel in their airline, but CP3 indicated that deaf and dumb, and blind passengers are
accepted along with their attendants. All participants indicated that no documentation is required, but CP2 additionally commented that they only need information during reservation to enable special handling.

In terms of the type of on-board facilities available, the procedure to safely deplane during emergencies and additional announcements for special needs passengers, the respondents’ responses are summarised below:

Table 4.11  
**Case 3(C): summary of additional procedures**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>CP1</th>
<th>CP2</th>
<th>CP3</th>
<th>CP4</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-board facilities</td>
<td>No special toilet. No special announcements but allow them to board/disembark in advance. Seating as per IATA.</td>
<td>No special toilet. No special announcements but during boarding/deplane given special priority. Seating as per IATA</td>
<td>No special toilet. No special announcements. No specific seats but front row with more seat pitch not near exit.</td>
<td>No special toilet. No additional announcements. Seating as per IATA</td>
</tr>
<tr>
<td>Procedure to safely deplane during emergency</td>
<td>As per IATA</td>
<td>As per IATA</td>
<td>No comment</td>
<td>As per IATA</td>
</tr>
<tr>
<td>Additional announcements/Displays</td>
<td>No additional announcements</td>
<td>No special announcements. Display board with signage</td>
<td>Nothing special or different.</td>
<td>Nothing</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research

CP1 and CP2 pointed out that their staff are trained as per IATA procedures. CP3 commented “No special training is imparted in this regard”. CP4 stated that their staff were not adequately trained. All participants have mentioned that their airline’s website was not adequately developed and no other publications were currently available for helping/accept passengers with special needs.

Participants’ data on the needs of physically challenged persons when travelling by air and how the airline fulfils those needs are summarised below:
Table 4.12  Case 3(C): summary of the needs of physically challenged persons and how the airline is fulfilling them

<table>
<thead>
<tr>
<th>Needs when travelling by air</th>
<th>CP1</th>
<th>CP2</th>
<th>CP3</th>
<th>CP4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special care. Infrastructure should be available. Equipments should be handled properly. Well trained personnel to handle them.</td>
<td>Special assistance/care from booking to disembarkation. Positive attitude to treat them as valued passengers. Proper infrastructure.</td>
<td>All touch points must be user friendly. They should be properly handled.</td>
<td>Special attention throughout the journey. Treat them as normal person</td>
<td></td>
</tr>
</tbody>
</table>

| How airlines fulfilling the needs | Special handling unit; only provide service to wheelchair-bound passengers currently. | As per IATA but will do more to attract this group in future. | None | Till now not adequately. |

Source: Developed from field data for this research

Case 1(A), 2(B), 3(C): Cross-case analysis

We have analysed the within case data collected from the respondents in case 1(A), case 2(B) and case 3(C). The cross-case analysis of research proposition 2 is presented below:
Table 4.13  Summary of cross-case analysis of research proposition -2

<table>
<thead>
<tr>
<th>Categories</th>
<th>Case 1(A)</th>
<th>Case 2(B)</th>
<th>Case 3(C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passengers travelled</td>
<td>Not many. No statistics. No data but wheelchair-bound passengers 6000 per month, deaf &amp; dumb 10–20 per month, blind 20–25 per month</td>
<td>Do not keep statistics but wheelchair-bound passengers 24 per day, deaf &amp; dumb 5 per month, blind 1 per month.</td>
<td>Do not have data.</td>
</tr>
<tr>
<td>Acceptance of passengers</td>
<td>All passengers are accepted.</td>
<td>All passengers are accepted</td>
<td>All are accepted. blind, deaf &amp; dumb with attendants.</td>
</tr>
<tr>
<td>Documentation needed</td>
<td>No documentation, only information to indicate their requirements.</td>
<td>No documentation, only medical clearance form if sick.</td>
<td>No documentation, only information during reservation</td>
</tr>
<tr>
<td>On-board facilities</td>
<td>IATA procedure. Seat near toilet. No special announcements only physical demonstration and pictograms. Seat as per type of disability. Toilet with handle bar.</td>
<td>Toilet with railing. No special announcements. Seating easy access to toilets and close to exit but not near emergency exit. Board them first.</td>
<td>No special toilet/ announcements but board/disembark in advance. Seating as per IATA. No specific seat but front row with more seat pitch and not near exit.</td>
</tr>
<tr>
<td>Deplane during emergency</td>
<td>Special seats enable them to deplane first. Seat priority by cabin crew. Ratio of travel is important. All as per IATA procedure.</td>
<td>Follow standard procedure of IATA. Unable to comment, depends on safety rules.</td>
<td>As per IATA. No comment.</td>
</tr>
<tr>
<td>Additional announcements/display</td>
<td>Nothing special.</td>
<td>Nothing special; only during boarding they will be boarded first.</td>
<td>No additional announcements. Display board with signage.</td>
</tr>
<tr>
<td>Staff trained</td>
<td>Well trained to handle them</td>
<td>Staff are well trained. Staff will be gender allocated.</td>
<td>Staff are trained. No special training imparted.</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research

Physically challenged persons need special attention at the different stages of travelling by air. Participants’ responses when questioned on the facilities offered by their airline are shown in table 4.14.
## Summary of the facilities airlines offer at different stages

<table>
<thead>
<tr>
<th>Stages</th>
<th>Case 1(A)</th>
<th>Case 2(B)</th>
<th>Case 3(C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reservation</td>
<td>Identify them. IATA procedure. Take the information &amp; give to others</td>
<td>Preferred seat Proximity to toilet. Travel agents are well informed. Someone will book for them.</td>
<td>Information received during reservation. Seat preference, meal selection.</td>
</tr>
<tr>
<td>Check-in</td>
<td>No idea. Special staff to handle them. No special desk/counter</td>
<td>No separate counter. They are checked separately. Report to passenger service unit.</td>
<td>Preferential check-in, priority given to these passengers. No special counter but check-in staff offer separate services for them. Special handling unit take care of them.</td>
</tr>
<tr>
<td>Disembarkation</td>
<td>No idea. Have high lifter for wheelchairs. No comment.</td>
<td>Greeted and assisted by staff. Stations are communicated about their travel. Staff hand over to relatives. Hardware and manpower are there to help them.</td>
<td>Special handling unit. No SOP.</td>
</tr>
<tr>
<td>Baggage delivery</td>
<td>No idea. Staff to assist them. No comment</td>
<td>Assisted by staff. Passenger service unit will assist them.</td>
<td>Special handling unit. No special procedure.</td>
</tr>
<tr>
<td>Embarkation/transit</td>
<td>No idea. Have high lifter for wheelchairs. Special labels given.</td>
<td>Special allocated area in transit. In custody of staff.</td>
<td>Special handling unit. No SOP but ground staff offer service automatically.</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research

The participants’ data on the needs of physically challenged persons when travelling by air and how airlines fulfil their needs are summarised and categorised below in figure 4.3.
Summary of the needs of physically challenged persons

**Case 1(A)**
Physical limitations at some airports. They need mental care and sufficient funds from government. Respect and recognize. Treat them as normal passengers. Give adequate attention.

**Case 2(B)**
Must be comfortable. They need assistance. Treat them as normal people and intervene when required. Use of toilets and meals. Give them service so that they are treated as normal people.

**Case 3(C)**
Special care. Infrastructure should be available. Equipment should be handled properly. Well trained personnel. Special assistance/care from booking to disembarkation. Positive attitude to treat them as valued passengers. All touch points must be user friendly. They should be handled properly. Special attention throughout the journey. Treat them as normal people.

**Need categories**
- Infrastructure
- Mental support
- Government support
- Trained staff
- Treat as normal person
- Respect and recognition (positive attitude)
- Attention and comfort
- Special assistance/care (handling of persons & equipment)

**How do the airlines fulfil these needs?**

**Case 1(A)**
As per policy and IATA guideline. With our culture and hospitality. Special handling unit.

**Case 2(B)**
As per IATA and EU recommended practices. Separate unit to handle them. Seat in convenient places in aircraft. Toilets are fixed with handle.

**Case 3(C)**
Special handling unit. As per IATA guidelines but will do more to attract them. Till now not adequately.

Source: Developed for the research from field data

The following figure 4.4 presents the similarities in the categories from the cross-case analysis in cases 1 and 2, cases 1 and 3, and cases 2 and 3, and finally some common data occurring in cases 1, 2 and 3.
The facilities airlines offer physically challenged persons at the different stages of travel are shown in table 4.14. The similarities between responses about the facilities are shown in figure 4.5.
Figure 4.5  **Similarities in the facilities airlines offer at the different stages of travel**

<table>
<thead>
<tr>
<th>Case 1 &amp; 3</th>
<th>Case 1 &amp; 2</th>
<th>Case 2 &amp; 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reservation</strong></td>
<td><strong>On-board</strong></td>
<td><strong>Reservation</strong></td>
</tr>
<tr>
<td>Information during reservation</td>
<td>Crew take care</td>
<td>Seat preference</td>
</tr>
<tr>
<td><strong>On-board</strong></td>
<td>Special seat allocation</td>
<td><strong>On-board</strong></td>
</tr>
<tr>
<td>Crew take care</td>
<td></td>
<td>Crew assist them</td>
</tr>
<tr>
<td><strong>Check-in</strong></td>
<td>No separate counter</td>
<td><strong>Check-in</strong></td>
</tr>
<tr>
<td>No separate counter</td>
<td>Special staff</td>
<td>Preferential check-in</td>
</tr>
<tr>
<td>Special handling staff</td>
<td></td>
<td>Separate unit</td>
</tr>
<tr>
<td><strong>Baggage delivery</strong></td>
<td>Baggage delivery</td>
<td><strong>Baggage delivery</strong></td>
</tr>
<tr>
<td>Staff to assist</td>
<td>Staff assist them</td>
<td>Special unit assists them</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Embarkation/transit</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff offer service</td>
</tr>
</tbody>
</table>

Source: Developed for the research from field data

### 4.6.3 Research Proposition 3

The aim of this section is to answer the third research proposition: *That Asian airlines are differentiating their products and achieving competitive advantage in this market.*

The research proposition 3 comprises of the research questions:

1. Are airlines differentiating their products by fulfilling the needs of physically challenged persons?
2. What actions can airlines take to achieve competitive advantage in this market?
In addition, the research proposition answers the following theory based questions (TQ) (Appendix D) as explained in Figure 3.5.

A. **How are the airlines achieving differentiation?**

B. **How are the airlines achieving competitive advantage?**

**Case 1(A): Within case analysis**

There are a number of techniques used by the airlines to differentiate their products. The respondents were asked about the number of differentiation techniques used by the airlines. The respondent AP1 indicated that they used hospitality and their own culture to differentiate their product. AP2 also said their culture is the most important technique used by them. AP3 has mentioned services, along with alliances, the frequent flyer programme and competitive pricing. In response to the question of how the market segment of the physically challenged persons can be used as a product differentiation strategy, AP1 said that government, public and private policies must be there. The Government could use the medical hub policy as a tool to get an advantage. AP1 emphasised that they have to act as per government policy. AP2 said “It’s difficult to say but I think we should hit the feelings of physically challenged persons”. AP3 said that the facilities are there to provide services for this passenger segment. However, passengers must be informed to be able to use the facilities and airlines must be prepared to accommodate this segment.

The preconditions for product differentiation for physically challenged persons were identified by the respondents. AP1 believed that after they make the decision of travel, they think of the specific services provided by that country. AP2 said “We need to give them a warm welcome. **We should focus we are their friends and they should come to us**”. AP3 said “We are the transport provided. So we must give them special service”.

The respondents in case 1(A) identified the barriers to implementing product differentiation for disabled persons in airlines. Those barriers are summarised in table 4.15.
Table 4.1  Case 1(A): barriers to implementing product differentiation

<table>
<thead>
<tr>
<th>Barriers</th>
<th>AP1</th>
<th>AP2</th>
<th>AP3</th>
</tr>
</thead>
<tbody>
<tr>
<td>External</td>
<td>Culture not focused of this group. The culture might hurt their feelings, which is sensitive.</td>
<td>Physically challenged persons have no money.</td>
<td>Facilities at the airport and other restrictions. Manpower needed for additional services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal</td>
<td>Not ready for their travel. Do not have policy operation. Tools &amp; support not ready.</td>
<td>Capacity of the aircraft and how many can be accepted.</td>
<td>Manpower when large group will travel.</td>
</tr>
</tbody>
</table>

Source: Developed for this research from field data

In response to the question about how the airlines can achieve competitive advantage in this segment, AP1 said “I do not know the policy of the marketing department. We can get advantage from foreigners and not from locals”. AP2 suggested the design of the aircraft needed to include special toilets. When everything is ready, programmes should be available to inform public to gain their attention so that they will choose the airline. AP3 said “We must respect and must recognize these types of passengers. Treat them as normal passengers. Adequate attention must be given. They are not to be over treated. Important to identify them first and arrange all the facilities.”

Case 2(B): Within case analysis

A question about the number of differentiation techniques used by the airlines was answered by the respondents. BP1 said that they use a frequent flyer programme, on-board meals, pricing and, most importantly, they must keep changing their differentiation techniques. BP2 iterated that they do not have special differentiation techniques for the physically challenged but they do not add on any additional surcharge for the additional services. BP3 also said they have no special policy but they do not charge passengers for the extra services provided.

In response to the question of how the market segment of physically challenged persons can be used as a product differentiation strategy to achieve competitive advantage, BP1 felt that the services they offer and fares could be used. Agreeing; BP2 said “We need to give personalised services to them”. BP3 believed that the fare level must be right; there must be
sufficient numbers of passengers and the right pricing with proper services. It is a niche market. BP3 said further “carrying them will make the airline appear socially responsible”.

The preconditions for product differentiation for physically challenged persons were identified by the respondents. BP1 cited the need for the airline to advertise and inform the public about services available to these passengers. BP2 clarified they are not differentiating this group from other passengers but they advertise to inform the public about the services. BP3 brought up the point to understand that they are passengers with special requirements so their needs can be fulfilled.

Respondents from case 2(B) identified the barriers to implementing product differentiation for disabled persons in airlines. The barriers are summarised in table 4.16

### Table 4.16 Case 2(B): barriers to implement product differentiation

<table>
<thead>
<tr>
<th>Barriers</th>
<th>BP1</th>
<th>BP2</th>
<th>BP3</th>
</tr>
</thead>
<tbody>
<tr>
<td>External</td>
<td>Airport infrastructure</td>
<td>Airport infrastructure. No relations is</td>
<td>Other people’s attitudes towards them.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>allowed inside due to security reasons</td>
<td>Infrastructure. Non-availability of</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>equipment. Non-availability of resources (manpower)</td>
</tr>
<tr>
<td>Internal</td>
<td>Nothing at this moment</td>
<td>Security restrictions by government.</td>
<td>Attitude of the employees must be to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Security measures discourage them from</td>
<td>help them. Religion also plays a role,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>travelling.</td>
<td>it teaches people to fair to everybody.</td>
</tr>
</tbody>
</table>

Source: Developed for this research from field data

In response to the question of how can your airline achieve competitive advantage from this segment, BP1 said “We can achieve advantage with service and with safety. Specially trained staff will attend this segment”. BP2 said “By giving them quality service and personalised service.” BP3 said “By giving them service so that our airline will be the first airline in their mind when they will travel. We need to advertise”.

**Case 3(C): Within case analysis**

A question about why the airline uses a number of differentiation techniques was answered by the respondents CP1, CP2, CP3, and CP4. CP1 said they use differentiation techniques “to beat other airlines; to get competitive. Airlines do not know which techniques will be
accepted by people”. CP2 said “to hold market share of that segment”. CP3 suggested that the “airline differentiates its products and design its products, according to the specific and different needs/requirements of the specific market.” CP4 put it as “capturing the market and to enhance the image to all”.

In response to the question of how the market segment of physically challenged persons can be used as a product differentiation strategy to achieve competitive advantage, CP1 agreed that it is in the commitment towards social responsibility, which could differentiate their airline from other airlines through making this commitment. CP2 said special benefits/special services from booking till disembarkation would lead to competitive advantage. CP3 was more analytical about this issue and said “the competition may be with other industries (like road transportation, trains) and also with other airlines. This market segment has different needs and requirements for travel. The different techniques used by the airlines can make a differentiation in all types of competition and variations or better offers in each of the techniques used can make products strategically different and thereby create competitive advantage”. CP4 indicated they must be provided with “the appropriate facilities as per their requirements”.

The preconditions for product differentiation for physically challenged persons identified by the respondents of case 3(C) as in cases 1(A) and 2(B). CP1 believed that they needed to be able to meet the needs of physically challenged persons. CP2 said “The segment of physically challenged persons should be identified properly. To attract this segment, there should be a special campaign highlighting the services available and given to them.” Respondent CP3 believed that human resources should be trained, airports should be equipped with appropriate technology, aircraft must be equipped with appropriate technology and the airline must have a proper marketing strategy and tools. CP4 echoed similar sentiments; there should be facilities for their travel and the airport infrastructure must be there.

The barriers to implementing product differentiation for disabled persons in airlines as identified by the participants of case 3(C) are summarised below in table 4.17.
### Case 3(C): barriers to implementing product differentiation

<table>
<thead>
<tr>
<th>Barriers</th>
<th>CP1</th>
<th>CP2</th>
<th>CP3</th>
<th>CP4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>Need more training. In-flight equipment not ready.</td>
<td>Equipment. Proper attitudes both ground and on-board. Lack of specialised training.</td>
<td>Cost of making appropriate gadget available on-board. Lack of awareness by staff about the needs and rights of disabled persons. Lack of motivation and skill to treat them with honour and dignity.</td>
<td>Lack of adequate resources (equipment/manpower) and commercial reason to tap the market. No trained manpower.</td>
</tr>
</tbody>
</table>

Source: Developed for this research from field data

In response to the question of how can your airline achieve competitive advantage from this segment, CP1 said “by providing special services to meet their needs and requirements”. CP2 commented this could be achieved through special campaigns, offers and special handling. CP3 pointed out the need to first confirm the size of the target market, determine the type of disability, and identify the needs of this target market and then go about meeting their needs. CP4 said “to provide facilities, information to this segment and provide special fares to attract them to travelling”.

**Cases 1(A), 2(B) and 3(C): cross-case analysis**

We have already performed the within-case analysis of the data collected from the respondents of cases 1(A), 2(B) and 3(C) on research proposition 3. The cross case analysis is summarised in Table 4.18.
<table>
<thead>
<tr>
<th>Action Questions</th>
<th>Case 1(A)</th>
<th>Case 2(B)</th>
<th>Case 3(C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why a number of differentiation techniques being used by the airlines?</td>
<td>Hospitality and own culture, services along with alliances, a frequent flyer programme and pricing.</td>
<td>Frequent flyer programme, on-board meal, pricing and keep changing the techniques used. Do not take an additional surcharge.</td>
<td>To beat other airlines and to get competitive as airlines do not know which technique will be accepted by people. Maintain the share of the market. Change according to the specific and different needs/requirements of the specific market. Techniques used to capture market and enhance image.</td>
</tr>
<tr>
<td>How can this market segment be used as a product differentiation strategy to get competitive advantage?</td>
<td>Government, public and private policies must be in place. Medical hub policy. Hit the feeling. Services to back up facilities; identify passenger needs and use the facilities required. Be prepared to accommodate.</td>
<td>Special services and fare. Personalised service. Sufficient passengers needed and right the price with proper service. Carrying the physically challenged will make airline socially responsible.</td>
<td>Commitment towards social responsibility. Special benefits/services from booking to disembarkation. This segment has different needs and requirements. Techniques used by the airlines themselves can make the differentiation. Variations or better offers needed in each of the techniques. Appropriate facilities.</td>
</tr>
<tr>
<td>How can airlines achieve competitive advantage from this segment?</td>
<td>Do not know the marketing main policy. Get advantage from foreigners and not from locals. Design the aircraft. Special toilets and inform public of services. Respect and recognize them. Treat them as normal passengers. Give adequate attention. Identify them and arrange facilities.</td>
<td>Service and safety. Trained staff attend this segment. Quality and personalised service. Give special service so to be the first airline in their mind when travelling. Advertise.</td>
<td>Special services to meet their needs and requirements. Special campaign, offers and special handling. Confirm the target market, determine types of disability, identify needs and meet the needs. Facilities, publicise information and give special fares.</td>
</tr>
</tbody>
</table>

Source: Developed for this research from field data
As indicated by the respondents, there are some preconditions needed for product differentiation for physically challenged persons. The summary and categories of all the preconditions mentioned are shown in Figure 4.6.

**Figure 4.6 Summary of preconditions needed for product differentiation for the physically challenged**

![Figure 4.6 Diagram](image)

Source: Developed for this research from field data

The barriers to implementing product differentiation for disabled persons in airlines were identified by the respondents. Both external and internal barriers are summarised and categorised in Figure 4.7 below:
### Summary of the barriers to implementing product differentiation

<table>
<thead>
<tr>
<th>Case 1(A)</th>
<th>Case 2(B)</th>
<th>Case 3(C)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Culture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Financial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Manpower</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Internal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Policy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Tools &amp; support</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Support equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Manpower</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>External</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Security measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Attitude</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Manpower</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Internal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Security restrictions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Attitude</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Internal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Attitude</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Financial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Government response &amp; awareness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Access to information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Communication</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Concept mapping/pattern matching

In multiple case studies, the replication is done by pattern matching. Initially three cases were studied and a subsequent case was added to compare and support the empirically based pattern derived from the original cases. Yin (2003) suggests that external validity can be achieved using replication logic in multiple case studies. This study achieved external validity by implementing replication logic in a multiple case design as explained in section 3.6.2. Three airlines (cases 1(A), 2(B) and 3(C)) were studied for literal replication and a fourth airline (Case 4(D)) were added later for theoretical replication and pattern matching.

Source: Developed for the research from field data
Case 4(D):

Research proposition -1

The aim of this section is to answer the first research proposition: That Asian airlines are aware of and plan to promote and enhance the market segment of the physically challenged persons.

Within case analysis

About the awareness of the market of physically challenged persons, DP1 stated that there is a market but it depends on the services that the airlines offer. DP2 said “Definitely there is a market. Do not know the volume. We need to have policies to treat them well. The segment needs to be addressed.” DP3 believed that there is a market but it is largely ignored and DP4 also agreed on the existence of such a market. DP5 has agreed that airlines are aware of this segment but have not shown much interest in promoting this market.

DP1 and DP3 said they follow the relevant disability discrimination act (DDA), but DP2 had no idea about it and DP4 said it did not apply to them. DP5 said “We follow it strictly not to discriminate”.

In answer to the question of “whether your airline is planning to introduce more facilities to cater these passengers?”, Participants DP1 and DP2 made No comment. DP4 said temporarily no, but DP3 indicated that they are planning to introduce new seating and on-board products, which will be used for physically challenged persons. DP5 felt that they are planning more facilities and need more attention on top of their expectation.

When asked about what procedures are in place through the airline’s website and publications to aid passengers with special needs, Participants DP1, DP2 and DP3 had no comments. DP4 only identified that there are already in the website some information of special request but DP5 agreed that their website did mention facilities/services for special needs passengers but may need improvement.

In terms of any future planning to differentiate the airline by attracting disabled passengers to gain competitive advantage over other airlines, participants DP1, DP2 and DP3 had no comments, but DP4 iterated that no airlines in the region currently offer discounts to physically challenged customers. A review and implementation of discounts for special needs
customers would win competitive advantage over other carriers in the region. DP5 mentioned that proper/improved communication was important. They needed to educate airline staff and understand the culture.

**Replication/pattern matching (research proposition -1)**

The summary and similarities of the cross-case analysis of cases 1, 2, and 3 have been shown in Table 4.3 and Figure 4.2. Respondents’ data from case 4 on research proposition 1 is also analysed above.

Figure 4.8  **Similarities of data of cases 1, 2, 3 and case 4**

![Diagram showing similarities of data for cases 1, 2, 3, and 4]

1. There is a market but do not know the volume
2. Follow the DDA
3. Airline has no plan to introduce more facilities to cater these passengers. No comment
4. Website not developed/ No comment
5. No future plans/No comment

Source: Developed for the research from field data

Figure 4.8 shows the similarities in the data for cases 1, 2, 3 and 4. The data on awareness of the market of physically challenged persons, airline plans to introduce more facilities to cater to these passengers, websites, and future plans conform across cases 1, 2, 3 and case 4.

**Research proposition -2**

The aim of this section is to answer the second research proposition:- *That Asian airlines are aware of and fulfilling the needs of physically challenged persons.*
Within case analysis

Regarding the number of physically challenged persons travelled in airlines, all respondents DP1, DP2, DP3, DP4 and DP5 indicated that they do not have the statistics.

Physically challenged passengers require facilities at different stages of travel, i.e. reservation, on-board, disembarkation, baggage delivery, check-in and embarkation/transit. Table 4.19 shows the participant’s responses on the facilities that the airline offers in the different stages of travel for case 4(D).

Table 4.19  Case 4(D): summary of facilities that the airline offers at different stages of travel

<table>
<thead>
<tr>
<th>Stages</th>
<th>DP1</th>
<th>DP2</th>
<th>DP3</th>
<th>DP4</th>
<th>DP5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reservation</td>
<td>No comment</td>
<td>No comment</td>
<td>Passenger must inform airline of type of disability</td>
<td>Register in FREMAC service, customers to provide number to enable upload preferences</td>
<td>No comment</td>
</tr>
<tr>
<td>On-board</td>
<td>No comment</td>
<td>No comment</td>
<td>Small seating wheelchair. Crew trained to help</td>
<td>Briefing on emergency procedures. On-board wheelchair and lavatories are equipped. In-flight safety video also for hearing and speech impaired customers</td>
<td>No comment</td>
</tr>
<tr>
<td>Check-in</td>
<td>No comment</td>
<td>No comment</td>
<td>No special check-in</td>
<td>Staff provide special check-in assistance. No separate counter.</td>
<td>No comment</td>
</tr>
<tr>
<td>Disembarkation</td>
<td>No comment</td>
<td>No comment</td>
<td>No comment</td>
<td>Boarded first and disembarked last. Staff provide special assistance. All staff are trained.</td>
<td>No comment</td>
</tr>
<tr>
<td>Baggage delivery</td>
<td>No comment</td>
<td>No comment</td>
<td>No comment</td>
<td>No comment</td>
<td>No comment</td>
</tr>
<tr>
<td>Embarkation/Transit</td>
<td>No comment</td>
<td>No comment</td>
<td>No comment</td>
<td>Boarded first and disembarked last. Staff provide special assistance. All staff are trained.</td>
<td>No comment</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research

In response to being questioned about the acceptance of wheelchair-boound, blind, and deaf and dumb passengers for travel and the documentation needed to accept such passengers, all
participants indicated that all these passengers are accepted for travel in their airline. DP1 and DP3 mentioned that no documentation is required, but DP2 and DP5 had no comments and DP4 suggested that the physical condition of such passengers must be disclosed in full to the staff. A relative or guardian must deliver the passenger to the check-in counter. Hearing impaired passengers should inform their condition at the time of booking and request any special assistance needed. Medical clearance is not required.

Regarding the type of on-board facilities available, procedures to safely deplane during emergencies and additional announcements for special need passengers, the respondents’ responses are summarised below:

Table 4.20  
**Case 4(D): summary of additional procedures**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>DP1</th>
<th>DP2</th>
<th>DP3</th>
<th>DP4</th>
<th>DP5</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Board facilities</td>
<td>Special toilet, Announcements for special needs passengers on arrival. No special seating.</td>
<td>No comment</td>
<td>No comment</td>
<td>At least one lavatory in each aircraft is designed and equipped to accommodate wheelchair customers. In-flight safety video specially developed for hearing and speech impaired customers. Any seat other than near emergency exit.</td>
<td>Special toilet. No announcements. Special seating but depends on equipment and IATA procedures</td>
</tr>
<tr>
<td>Procedure to safely deplane during emergency</td>
<td>Follow IATA rules</td>
<td>No comment</td>
<td>No comment</td>
<td>Cabin crew are trained. Physically challenged passengers are evacuated last.</td>
<td>Follow IATA/ICAO procedures</td>
</tr>
<tr>
<td>Additional announcements/displays</td>
<td>No comment</td>
<td>No comment</td>
<td>No comment</td>
<td>All aircraft are fitted with high tech emergency evacuation systems which will ensure blind, deaf &amp; dumb persons receive appropriate audio-visual signals to guide them to nearest emergency exit.</td>
<td>No additional announcements. Need improvement.</td>
</tr>
</tbody>
</table>
With the exception of DP2, all participants stated that their staff are well trained according to the requirements of IATA to handle these passengers. However, DP2 did not want to comment. DP1, DP2 and DP3 had no comments on the airline’s website and other publications. DP4 said that information for the physically challenged was already available on their website but DP5 said that their website has some information but it needs further improvement.

The participants’ data on the needs of physically challenged persons when travelling by air and how the airline is fulfilling those needs are summarised below:

### Table 4.21  Case 4(D): summary of the needs of physically challenged persons and how the airline is fulfilling them

<table>
<thead>
<tr>
<th>Needs when travelling by air</th>
<th>DP1</th>
<th>DP2</th>
<th>DP3</th>
<th>DP4</th>
<th>DP5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Someone to look after them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attention.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation in airport.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy access to amenities and assistance with boarding. Help on-board, and with baggage, and deplaning.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treat them as normal passengers. Access problems.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comfort, Infrastructure. Right facilities, should be treated equally, treat them as normal people.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How airlines fulfilling the needs</th>
<th>DP1</th>
<th>DP2</th>
<th>DP3</th>
<th>DP4</th>
<th>DP5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper education of crew and staff to fulfil their needs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fulfilling them about 80%.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At this moment on a case by case basis. Reactive basis.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes we are. Request must be detailed at time of booking a journey and will be provided upon request.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airlines should understand the needs. Internal structure should be there. Company must be fully committed. Monitoring and follow-up.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research

**Replication/pattern matching (research proposition -2)**

Table 4.22 shows the similarities in the data on airline procedures obtained from cases 1, 2 and 3 with that in case 4. It can be seen from the table that almost all data on procedures in case 1, 2 and 3 match that of case 4.
Table 4.22  Replication/pattern matching on procedures of airlines

<table>
<thead>
<tr>
<th>Cases 1(A), 2(B) and 3(C) Procedures</th>
<th>Common in Cases 1, 2, and 3 &amp; case 4 Procedures</th>
<th>Case 4(D) Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No data/statistics</td>
<td>1. No statistics</td>
<td>1. No statistics</td>
</tr>
<tr>
<td>2. All are accepted</td>
<td>2. All are accepted</td>
<td>2. All are accepted</td>
</tr>
<tr>
<td>3. No documentation</td>
<td>3. No documentation</td>
<td>3. No documentation</td>
</tr>
<tr>
<td>4. No additional on-board announcements</td>
<td>4. No additional on-board announcements</td>
<td>4. No additional on-board announcements</td>
</tr>
<tr>
<td>5. Emergency procedures as per IATA</td>
<td>5. Emergency procedures as per IATA</td>
<td>5. Emergency procedures as per IATA</td>
</tr>
<tr>
<td>6. Seat near toilet</td>
<td>6. No additional announcements</td>
<td>6. No special seating</td>
</tr>
<tr>
<td>7. No additional announcements</td>
<td>7. Staffs are well trained</td>
<td>7. No additional announcements</td>
</tr>
<tr>
<td>8. Staff are trained</td>
<td></td>
<td>8. Staffs are well trained</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research

The needs of the physically challenged persons when travelling by air as obtained from the respondents of cases 1, 2 and 3 have been summarised in figure 4.3. Such data were also obtained from the respondents of case 4 as stated above. Table 4.23 shows the similarities in the data obtained from cases 1, 2, and 3 with that from case 4. This conforms to the same pattern of data in cases 1, 2, 3 and 4.

Table 4.23  Replication/pattern matching on the needs of physically challenged persons

<table>
<thead>
<tr>
<th>Cases 1(A), 2(B), and 3(C) Needs</th>
<th>Common in Cases 1, 2, and 3 &amp; case 4 Needs</th>
<th>Case 4(D) Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Infrastructure</td>
<td>1. Infrastructure</td>
<td>1. Infrastructure</td>
</tr>
<tr>
<td>4. Trained staff</td>
<td>4. Recognise them</td>
<td>4. Recognise them</td>
</tr>
<tr>
<td>5. Treat as normal person</td>
<td>5. Treat them as normal person</td>
<td>5. Treat them as normal person</td>
</tr>
<tr>
<td>6. Respect &amp; recognition</td>
<td>6. Treat equally, make them feel normal people</td>
<td>6. Treat equally, make them feel normal people</td>
</tr>
<tr>
<td>(positive attitude)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Attention &amp; comfort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Special assistance/care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(handling of persons &amp; equipment)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Needs fulfilled as per IATA procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. Access to amenities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. Proper communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. Privacy/dietary requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10. Right facilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11. Needs are fulfilled on a case by case basis</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research
Table 4.24 shows the similarity of the data gathered from respondents from cases 1, 2 and 3 and with that of case 4 on the facilities airlines offer the physically challenged in different stages of travel. The data on reservation, on-board facilities, check-in, embarkation/disembarkation/transit from case 4 conform with the data from cases 1, 2 and 3.

Table 4.24  Replication/pattern matching in facilities that the airlines offer at different stages of travel

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Cases 1(A), 2(B), and 3(C)</th>
<th>Common in Cases 1, 2, and 3 &amp; case 4</th>
<th>Case 4(D)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reservation</strong></td>
<td>Reservation Information/preference</td>
<td>Reservation Information/preference</td>
<td>Reservation Information type of disability/preferences</td>
</tr>
<tr>
<td><strong>On-board</strong></td>
<td>Crew assist them</td>
<td>Crew assist them</td>
<td>Crew assist them/they are trained/ have wheel chair and lavatories</td>
</tr>
<tr>
<td><strong>Check-in</strong></td>
<td>Preferential check-in</td>
<td>No special counter</td>
<td>No special counter</td>
</tr>
<tr>
<td><strong>Special handling staff</strong></td>
<td></td>
<td>Staff assist them</td>
<td>Staff assist</td>
</tr>
<tr>
<td><strong>Baggage delivery</strong></td>
<td>Staff/special unit assist them</td>
<td>Embarkation/disembarkation/ transit</td>
<td>Board first and disembark last. Staff assists them &amp; they are trained.</td>
</tr>
<tr>
<td><strong>Embarkation/Disembarkation / transit</strong></td>
<td>Staff offer service</td>
<td>Staff assist them</td>
<td></td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research

**Research proposition -3**

The aim of this section is to answer the third research proposition:  - *That Asian airlines are differentiating their products and achieving competitive advantage in this market.*

**Within case analysis**

Why the number of differentiation techniques used by the airlines? This question was answered by the respondents DP1, DP2, DP3, DP4, and DP5. DP1 said that they “mainly focus on business. Markets have different passengers who have different needs. To differentiate, an airline can penetrate a market and solve their needs. It can capture a different segment of the market”. DP2 said “Competition is very high. One should have
unique selling points, which provide yields and customer loyalty”. DP3 believed in the need “to take the advantage over competitors. A niche carrier can be different and meet different people’s needs.” DP4 put it as “attracting a different market. Different needs, so different groups match their requirements with different products”. DP5 clarified it as the objective to maintain market share, to meet targets and to gain a new market. In response to the question about how the market segment of physically challenged persons can be used as a product differentiation strategy to get competitive advantage by the airline, respondent DP1 believed that offering the services is a necessity. Toilet facilities and crew training can differentiate the airline from others. DP2 said they should give “proper service to them. First we should cater to this market, and second, highlight unique offerings.” DP3 was more analytical on this issue and said to have differentiation for the physically challenged, they need to have appropriate “setup on the ground and on-board offerings. Meetings are needed between our airline and representatives of different physically challenged communities. They should be involved with product design, in booking and communication. Our airline is sympathetic with physically challenged persons”. DP4 view was that as a national carrier they need “connectivity to onward destinations” from the hub, “minimal transit time between connections” and “constant attractive special web deals” to ensure advantage over competitors. DP5 said “as a national carrier, we must take the lead. Meet their requirements and expectations. Appropriate price, procedures, processes and facilities can be used as strategies to get competitive advantage”.

The preconditions for product differentiation of the physically challenged persons as mentioned by the respondents are summarised in table 4.25.

<table>
<thead>
<tr>
<th></th>
<th>DP1</th>
<th>DP2</th>
<th>DP3</th>
<th>DP4</th>
<th>DP4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Commitment of services.</td>
<td>Find what the needs are</td>
<td>Treat same as others</td>
<td>Awareness of market segment</td>
<td>From check-in to arrival needs to be different from other airlines</td>
</tr>
<tr>
<td></td>
<td>Special features of airlines</td>
<td></td>
<td>Accessibility (toilet)</td>
<td>Awareness of special requirements</td>
<td>Right price</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Design product as per requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Involve them in product design (toilet</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Braille etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cabin crew must know sign language</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source:</td>
<td>Developed from field data for this research</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The barriers to implementing product differentiation for disabled persons in airlines as identified by the participants of case 4(D) are summarised below in table 4.26.

<table>
<thead>
<tr>
<th>Barriers</th>
<th>DP1</th>
<th>DP2</th>
<th>DP3</th>
<th>DP4</th>
<th>DP5</th>
</tr>
</thead>
<tbody>
<tr>
<td>External</td>
<td>Airport infrastructure</td>
<td>Highlight the features</td>
<td>Access (security points)</td>
<td>Increased taxes restrict special fares</td>
<td>Awareness Infrastructure at airport</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Limited connectivity to destinations with code share.</td>
<td></td>
</tr>
<tr>
<td>Internal</td>
<td>Attitude of staff</td>
<td>Resources (financial/human)</td>
<td>Social responsibility than purely commercial</td>
<td>Lack of discount offers</td>
<td>Awareness of staff to meet needs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Values of airlines</td>
<td>- Resources</td>
<td></td>
<td>- Need to educate/train staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Need for dedicated team</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Awareness</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Developed for this research from field data

In response to the question of how can your airline achieve competitive advantage from this segment, respondent DP1 said “offering the service and giving full attention to them”. DP2 cited that policies and procedures should be in place and that information should be provided on websites, and at outlets and airports for knowledge dissemination. Some special services and taking extra care of the physically challenged will help create competitive advantage. DP3 said “if able passengers see our airline staff treating disabled passengers well it will create competitive advantage”. Participant DP4 said “Publishing and marketing a suitable discount on fares will achieve competitive advantage.” DP5 provided further details by suggesting that special packages designed for such an audience is fully introduced to whole market. Proper communication/briefs need to be provided so physically challenged persons will feel that they are welcome. Employ them in airlines so that other physically challenged persons can be encouraged and the company can see their needs and implement them accordingly.

**Replication/pattern matching (research proposition -3)**

Replication and pattern matching for the preconditions needed for product differentiation for physically challenged persons are shown in table 4.27. The precondition categories such as
awareness and understanding of needs, awareness of market, treating them as normal people, providing special services for them, infrastructure and facilities, trained human resources are common in cases 1, 2, 3 and in case 4, thus, conforming with the pattern matching and replication of data.

Table 4.27  Replication/pattern matching on preconditions for product differentiation

<table>
<thead>
<tr>
<th>Cases 1(A), 2(B), and 3(C)</th>
<th>Common in Case 1, 2, and 3 &amp; case 4 Preconditions</th>
<th>Case 4(D) Preconditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preconditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Services available in that country</td>
<td>-Awareness of and understand the needs</td>
<td>-Commitment</td>
</tr>
<tr>
<td>-Friendly &amp; special service</td>
<td>-Awareness of and identification of market</td>
<td>-Awareness of the needs</td>
</tr>
<tr>
<td>-Treat them as normal people</td>
<td>-Treat them normal people</td>
<td>-Awareness of market</td>
</tr>
<tr>
<td>-Understand their needs</td>
<td>-Special service</td>
<td>-Treat them normal people</td>
</tr>
<tr>
<td>-Special campaign to inform the public about services available</td>
<td>-Infrastructure &amp; facilities</td>
<td>-Involve them in product design</td>
</tr>
<tr>
<td>-Trained human resources</td>
<td>-Trained human resources</td>
<td>-Cabin crew must know sign language</td>
</tr>
<tr>
<td>-Identify the segment</td>
<td></td>
<td>-Right price</td>
</tr>
<tr>
<td>-Infrastructure &amp; facilities</td>
<td></td>
<td>-Special services</td>
</tr>
<tr>
<td>-Marketing strategy &amp; tools</td>
<td></td>
<td>-Infrastructure &amp; facilities</td>
</tr>
</tbody>
</table>

Source: Developed for this research from field data

The barriers to implementing product differentiation for physically challenged persons in airlines identified by the respondents of cases 1, 2 and 3 were summarised in Figure 4.7. The respondents of case 4 also identified barriers, which have been summarised in Table 4.26. The pattern matching and replication of the barriers are shown in Figure 4.9. There are some common external and internal barriers in cases 1, 2, 3 and 4.
In this study, the data were categorised before drawing the concept maps. The concept map of the barriers to implementing product differentiation is included as Appendix E.

4.6.5 Challenges physically challenged persons face when travelling by air

The research propositions 1, 2 and 3 consist of the research questions and try to answer the theory based questions (TQ) as explained in Figure 3.5. The theory based question “what challenges do physically challenged persons face when travelling by air?” was separately in all cases (1, 2, 3 and 4) separately as it was applicable to all the propositions.

The respondents from cases 1, 2, 3 and 4 were asked about the challenges physically challenged persons face when travelling by air. The summary of responses is shown in Table 4.28.
**Table 4.28  Summary of responses on the challenges physically challenged persons face when travelling by air**

<table>
<thead>
<tr>
<th>Case 1(A) Respondents</th>
<th>AP1</th>
<th>AP2</th>
<th>AP3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Services and equipments are different in airports and aircrafts</td>
<td>Need to inform airline earlier about their requirements</td>
<td>Restriction of movement. Infrastructure. Physically challenged persons must understand the restrictions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Case 2(B) Respondents</th>
<th>BP1</th>
<th>BP2</th>
<th>BP3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Infrastructure. No proper equipment. Financial constraints.</td>
<td>Need the support of fellow passengers. Logistics problems. Cost of travel</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Case 3(C) Respondents</th>
<th>CP1</th>
<th>CP2</th>
<th>CP3</th>
<th>CP4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Need assistance at all levels. Treat them as normal passengers.</td>
<td>Improper attention. Negative attitude of fellow passengers. Infrastructure.</td>
<td>Need to maintain sense of dignity. Treat as normal human beings so they keep their pride and dignity</td>
<td>Infrastructure. Negative perceptions of fellow passengers and staff. Inadequate information</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Case 4(D) Respondents</th>
<th>DP1</th>
<th>DP2</th>
<th>DP3</th>
<th>DP4</th>
<th>DP5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adequate facilities, attitude of staff and fellow passengers. Should not put them near children or elderly. Financial constraints.</td>
<td>Infrastructure. Monetary constraints, access to medical care, support from government policies and laws to protect them. Government should have resources to implement policies</td>
<td>Need more help and care. Lack of financial resources</td>
<td>Proper communication. Infrastructure. Treat as individuals. Maintain privacy. Assistance in all levels</td>
<td>Acceptance by people. Accessibility. Attitude of staff &amp; fellow passengers. Proper communication</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research
Table 4.29 shows the challenges physically challenged persons face when travelling by air for the four cases. All the cases identified infrastructure as the major challenge (a total of 4 points); with proper equipment and logistics (3), and financial constraints, assistance, treating them as normal people and the attitude of fellow passengers/staff being other challenges (2 points each). The remaining challenges were mentioned at least once in the cases.

<table>
<thead>
<tr>
<th>Challenges physically challenge persons face</th>
<th>Case 1</th>
<th>Case 2</th>
<th>Case 3</th>
<th>Case 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper equipment &amp; logistics</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>3</td>
</tr>
<tr>
<td>Restriction of movement</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>1</td>
</tr>
<tr>
<td>Financial constraints</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Support of fellow passengers</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>1</td>
</tr>
<tr>
<td>Assistance</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>1</td>
</tr>
<tr>
<td>Treat as normal people</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>1</td>
</tr>
<tr>
<td>Improper attention</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>1</td>
</tr>
<tr>
<td>Attitude of fellow passengers/staff</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>1</td>
</tr>
<tr>
<td>Sense of dignity</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>1</td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>1</td>
</tr>
<tr>
<td>Privacy</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>1</td>
</tr>
<tr>
<td>Accessibility</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>1</td>
</tr>
<tr>
<td>Acceptance by people</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>1</td>
</tr>
<tr>
<td>Support from Govt.</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>1</td>
</tr>
<tr>
<td>Need to Inform airlines of requirements earlier</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Developed from field data for this research

4.7 Triangulation of data

Yin (1994) states that the opportunity to incorporate several sources of evidence constitutes a major strength of case study methodology. Actual triangulation occurs when the researcher is able to collect information from different sources to corroborate the same fact or phenomenon. The detailed triangulation procedure was explained in Section 3.9 and the sources of data collection in Table 3.9. Semi-structured in-depth interviews were carried out among personnel at different levels in the airlines’ management to support each case and answer the research questions. Secondary data from airlines’ documents and websites were analysed to support the views presented by airline personnel and triangulated. To justify the validity (internal/external) and reliability of the research, the interviews were carried in the respective airlines’ head-offices with officials at different management levels. Observations
on the ground and inside the aircraft also provided data for triangulation and enhanced the validity of the data collected.

The triangulation of data is shown in table 4.30. The data collected from in-depth interviews matched the data from secondary sources, documents, websites and observation. This justified the validity and reliability of the research by incorporating several sources of data collection.

### Table 4.30 Triangulation of Data

<table>
<thead>
<tr>
<th>Case Topic</th>
<th>Case 1(A)</th>
<th>Case 2(B)</th>
<th>Case 3(C)</th>
<th>Case 4(D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional announcements/sign language</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Toilets for the disabled in aircraft</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Aircraft seat map/seating on website</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Information on website</td>
<td>No</td>
<td>No*</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Other publications</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Reservation procedure</td>
<td>Yes</td>
<td>Yes#</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Data on disabled travel</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Separate check-in counter</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Documentation to accept such passengers</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Note: * website developed in March 2009 after the interview. # only wheelchair request (Special service).

Source: Developed from field data for this research

### 4.8 Conclusion

This chapter has analysed the data from the cases (1, 2, and 3) selected to answer the three research propositions. Section 4.2 summarised each individual case. Section 4.3 provided a summary of the interviewed persons and their backgrounds. Section 4.4 analysed the data
using within-case and cross-case analysis. Section 4.5 provided the emerging themes from the interview data, within-case and cross-case analyses relevant to each research proposition were presented in Section 4.6, and concept mapping with pattern matching and finally data triangulation were presented in Section 4.7. The next chapter, chapter 5, presents the conclusions for each research proposition and discusses the implications for policy and practice.
5.1 Introduction

The purpose of the final chapter is to draw conclusions on the research problem and the four research propositions stated early in chapter 1. The main objective of this chapter is to highlight the contributions of this study and to derive the model for airlines policy makers, discuss the implications of the derived model for practitioners and indicate possible directions for future research. A summary of issues covered in the first four chapters is presented below:

Chapter 1 introduces the background of the research along with justification for the research. This presents the research problem, propositions and theoretical framework and a summary of the methodology used. An outline of the research is also provided, together with the limitations and the contribution of the research to knowledge in the area of disabled travel.

Chapter 2 reviewed the literature on competitive advantage, including competitive strategies and sources of competitive advantage, and product differentiation. Definition of physically challenged persons and the disability discrimination acts of different countries were examined. The chapter shed some light on Airline and Asian airline industry and also reviewed product differentiation in airlines and product differentiation for physically challenged persons. The market of physically challenged individuals and their particular needs was also discussed. The literature review was instrumental in enabling the researcher to identify the research gap that formed the basis for the doctoral research.

Chapter 3 outlined different research strategies and paradigms, the justification of the interpretive paradigm, the difference between qualitative versus quantitative research, and details of the qualitative research approach. This chapter also included research of the airline industry under case study. The case study method as a qualitative approach and types of case study and case/sample size selection were reviewed. The relevance of the case study
approach in addressing the research problem, the criteria for judging the quality of a case study design, the data collection procedure, the triangulation for case studies and the data analysis procedures were described. In the last three sections of the chapter, practical issues in case design, limitations of case study methodology, and ethical issues in this research were explained.

Chapter 4 detailed the description of the cases, participant profiles, themes emerging from interview data and the analysis of cases. Data analyses relevant to research proposition -1, research proposition -2 and research proposition -3 with within-case and cross-case analysis, concept mapping/pattern matching and data triangulation were presented. The data collected from in-depth interviews were analysed and presented in the form of descriptions, quotations, figures and tables. There was frequent and extensive use of quotations from the respondents’ interview data to compare, contrast and support the findings.

5.1.1 Structure of Chapter 5
This chapter has seven sections. Section one is the introduction. The second section discusses the conclusions about the four research propositions and the third section presents conclusions about the central research issue. Section four presents the limitations of the research. Section five presents implications of the research and Section six discusses the implications for further research. The final section is the conclusion.

The purpose of this study is to investigate the research problem:

“How can airlines differentiate their services and achieve competitive advantage by fulfilling the needs of physically challenged individuals?”

To explore this research problem, the researcher addressed six research questions:

RQ1: To what extent are airlines aware of the market of the physically challenged persons?
RQ2: Do airlines have plans to promote and enhance the business segment of physically challenged persons?
RQ3: To what extent are airlines aware of and fulfilling the needs of physically challenged persons?
RQ4: Are airlines differentiating their products by fulfilling the needs of physically challenged persons?
RQ5: What actions can airlines take to achieve competitive advantage in this market?

RQ6: How can guidelines or a model be developed for policy makers to formulate policy in catering to the market segment of physically challenged persons?

The six research questions led to four research propositions.

RP1: That Asian airlines are aware of and plan to promote and enhance the market segment of physically challenged persons.

RP2: That Asian airlines are aware of and fulfilling the needs of physically challenged persons.

RP3: That Asian airlines are differentiating their products and achieving competitive advantage in this market.

RP4: That a guideline/model can be developed for policy makers to cater to the market segment of physically challenged persons.

5.2 Conclusions about each research proposition

5.2.1 Research Proposition -1: That Asian airlines are aware of and plan to promote and enhance the market segment of physically challenged persons.

The research proposition 1 comprises of the research questions:

RQ1: To what extent are airlines are aware of the market of the physically challenged persons?

RQ2: Do airlines have plans to promote and enhance the business segment of physically challenged persons?

The literature review in section 2.8 revealed that countries in America, Europe, and Australia have recognised barrier-free tourism as an important market segment. These countries have improved and developed facilities and services to enhance the business segment of physically challenged persons. The literature review did not provide clear information about research
proposition 1 and no country or area in Asia and the Pacific had undertaken research into the travel patterns of people with disabilities or the scope of the travel market for barrier-free tourism.

Table 5.1 shows a comparison of the literature and the research findings for RQ1 and RQ2.

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Research issue in the literature</th>
<th>Literature review findings</th>
<th>Contribution of this research</th>
<th>Contribution to knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ1</td>
<td>Awareness of Asian airlines of the market segment of physically challenged persons</td>
<td>No</td>
<td>Consistent with literature</td>
<td>The research outcomes make a contribution to knowledge as this issue had not been addressed in earlier research</td>
</tr>
<tr>
<td>RQ2</td>
<td>Plans Asian airlines to promote and enhance the market segment of physically challenged persons</td>
<td>No</td>
<td>Consistent with literature</td>
<td>The research outcomes make a contribution to knowledge as this issue had not been addressed in earlier research</td>
</tr>
</tbody>
</table>

Source: Developed for this research

**Awareness of the market** — A complete understanding of the target market is an absolute necessity, including a sound estimate of the potential market size, for successful differentiation and competitive advantage (*How well do I understand the market for my product idea? Analyze your target market*, n.d.).

It has been observed that almost all the respondents (table 5.2) indicated that there is a good/significant market, but they did not know the size of the market.
Table 5.2  Participants’ responses on awareness of market

<table>
<thead>
<tr>
<th>Participants</th>
<th>AP1</th>
<th>AP2</th>
<th>AP3</th>
<th>BP1</th>
<th>BP2</th>
<th>BP3</th>
<th>CP1</th>
<th>CP2</th>
<th>CP3</th>
<th>CP4</th>
<th>DP1</th>
<th>DP2</th>
<th>DP3</th>
<th>DP4</th>
<th>DP5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responses</td>
<td>Not focused on and never think of this segment</td>
<td>Not sure, but still have market</td>
<td>Market is not that large</td>
<td>Do have market, but not sure how big</td>
<td>Do have some market</td>
<td>Good market</td>
<td>Good market, but not sure of size</td>
<td>Significant market, but in context of travelling not significant</td>
<td>Reasonable market, but market need to travel by air</td>
<td>Good market, but not sure of size and not tapping</td>
<td>There is a market, but it depends on the services offered</td>
<td>Definitely there is a market. Do not know the volume</td>
<td>There is a market, but ignored</td>
<td>There is a market</td>
<td>Area basically ignored</td>
</tr>
</tbody>
</table>

Source: developed from field data

This is reflected in participant DP2’s comment “definitely there is a market. Do not know the volume. We need to have policies to treat them well. Segment needs to be addressed”. This provided conclusive evidence that Asian airlines are not fully aware of the market segment of physically challenged persons.

**Disability discrimination act** — All the airlines mentioned that they have strictly followed the relevant disability discrimination acts and did not discriminate the passengers. However, during the discussions with the participants, it was observed that many of these airline personnel had no in-depth idea about the DDAs of their respective countries.

**Websites and other publications** — The airline websites were not adequately developed enough to inform the public about the procedures to aid in the acceptance of passengers with special needs and there were no other publications on the topic available.

**Promoting and enhancing the market segment** — The airlines planned to introduce more facilities to cater to these passengers. Out of the 15 participants, three said there were no plans to introduce additional facilities for physically challenged persons and two participants made no comment about the issue. The data were summarised in Table 4.3, Section 4.6.4 and Figure 4.8. As shown below in Table 5.3, the respondents could not provide details about their plans to introduce more facilities.
Table 5.3  
Summary of plans to introduce more facilities

<table>
<thead>
<tr>
<th>Participant Comment</th>
<th>Case 1</th>
<th>Case 2</th>
<th>Case 3</th>
<th>Case 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>As per IATA. No plans. Co-ordinating with airport authorities.</td>
<td>Special unit with training on medical and human aspects of services. Service motto “customer first”</td>
<td>New aircraft will be equipped with all services. Training to ground/cabin staff. Will co-ordinate with airport to improve infrastructure. No plans.</td>
<td>No comment. No plans. Re-branding involving new seating and on-board products.</td>
<td></td>
</tr>
</tbody>
</table>

Source: developed for this research from field data

Some of the participants’ comments on the airlines’ plans to introduce additional facilities included special units to deal with the physically challenged, training of ground/cabin staff, new aircraft equipped with all services/facilities and coordinating with airport authorities to improve infrastructure.

5.2.2 Research proposition -2: That Asian airlines are aware of and fulfilling the needs of physically challenged persons.

Research proposition 2 comprises the following research question:

RQ3: To what extent are airlines aware of and fulfilling the needs of physically challenged Persons?

The literature review in Section 2.8 and in Table 2.2 demonstrated that the travel and tourism industry are aware of needs of the physically challenged passengers. However, there is no information that airlines, especially Asian airlines, are aware of the needs of physically challenged persons and their needs have not been identified by the airlines. Existing reviews also did not provide any information on the extent that airlines are fulfilling the needs of physically challenged persons as this issue had not been addressed in previous studies.
Table 5.4 shows a comparison of the literature and the research findings for RQ3.

Table 5.4  **Summary of research contribution (research proposition -2)**

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Research issue in the literature</th>
<th>Literature review findings</th>
<th>Contribution of this research</th>
<th>Contribution to knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ3</td>
<td>Awareness of the needs of physically challenged persons by Asian Airlines</td>
<td>No</td>
<td>New to the literature</td>
<td>This research contributes to knowledge as <strong>needs</strong> of physically challenged persons have been <strong>identified</strong>.</td>
</tr>
<tr>
<td></td>
<td>The extent to which airlines are fulfilling the needs of physically challenged persons</td>
<td>No</td>
<td>Consistent with literature</td>
<td>This research outcomes make a contribution to knowledge as this issue has not been addressed in earlier research</td>
</tr>
</tbody>
</table>

Source: developed for this research

Kotler (2003, p.30) stated “Marketing’s original mantra is to ‘find needs and fill them’”. The respondents identified the needs of physically challenged persons when travelling by air.

Table 5.5  **Need category**

<table>
<thead>
<tr>
<th>Proper Infrastructure at airport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental support</td>
</tr>
<tr>
<td>Government support (sufficient fund from government)</td>
</tr>
<tr>
<td>Trained staff to handle them</td>
</tr>
<tr>
<td>Treat as normal people</td>
</tr>
<tr>
<td>Respect &amp; recognition (positive attitude)</td>
</tr>
<tr>
<td>Adequate attention &amp; comfort</td>
</tr>
<tr>
<td>Special assistance/care (handling of persons &amp; equipment)</td>
</tr>
<tr>
<td>Access to amenities</td>
</tr>
<tr>
<td>Proper communication</td>
</tr>
<tr>
<td>Privacy/dietary requirements</td>
</tr>
</tbody>
</table>

Source: developed from field data

The respondents identified the needs of the physically challenged (as stated in Table 5.5) but could not give proper details about how they were fulfilling the needs.
Table 5.6  How are airlines fulfilling the needs of the physically challenged?

<table>
<thead>
<tr>
<th>Participant</th>
<th>AP1</th>
<th>AP2</th>
<th>AP3</th>
<th>BP1</th>
<th>BP2</th>
<th>CP1</th>
<th>CP2</th>
<th>CP3</th>
<th>CP4</th>
<th>DP1</th>
<th>DP2</th>
<th>DP3</th>
<th>DP4</th>
<th>DP5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responses</td>
<td>As per policy &amp; IATA guidelines</td>
<td>With our culture &amp; hospitality</td>
<td>Special handling unit</td>
<td>As per IATA &amp; EU recommended practices</td>
<td>Separate unit to handle them. Seated in convenient places in aircraft. Toilets with special handles</td>
<td>No comment</td>
<td>Special handling unit</td>
<td>As per IATA guidelines</td>
<td>None</td>
<td>Till now not adequately</td>
<td>Proper education of crew &amp; staff to fulfil needs</td>
<td>Fulfilling them 80 percent</td>
<td>At this moment, on a case by case basis</td>
<td>Yes. Requests must be made during booking</td>
</tr>
<tr>
<td></td>
<td>As per IATA &amp; EU guidelines</td>
<td>With our culture &amp; hospitality</td>
<td>Special handling unit</td>
<td>As per IATA &amp; EU recommended practices</td>
<td>Separate unit to handle them. Seated in convenient places in aircraft. Toilets with special handles</td>
<td>No comment</td>
<td>Special handling unit</td>
<td>As per IATA guidelines</td>
<td>None</td>
<td>Till now not adequately</td>
<td>Proper education of crew &amp; staff to fulfil needs</td>
<td>Fulfilling them 80 percent</td>
<td>At this moment, on a case by case basis</td>
<td>Yes. Requests must be made during booking</td>
</tr>
</tbody>
</table>

Source: Developed from field data

Many respondents stated that their airlines are fulfilling the needs of the physically challenged as per IATA policy or EU guidelines and that special handling units take care of these passengers. Many of the needs they identified cannot be fulfilled by following IATA or EU policy and even by having a special handling unit. This is consistent with the literature Asian airlines may be aware of the needs of physically challenged persons. However from the analysed data, it was found that the airlines are unsure about how to fulfil the needs of physically challenged persons.

**Travel data for physically challenged persons** — It is important that airlines know the number of passengers with disabilities travelling on their airline. This will not only give them an idea about the number of passengers travelling but also give them the opportunity to implement a marketing plan to cater to the market by fulfilling the needs of physically challenged persons. All the airline personnel interviewed mentioned that they did not have statistical data for the number of physically challenged persons that travelled with their airline but they did stated that their airlines accepted the wheelchair-bound, deaf, dumb and blind passengers without any additional documentation being required. The IATA has stated that (personal communication, July 11, 2007) they do not carry statistics for disabled or handicapped passengers.
Reservation — It is necessary to have the proper information inserted in the reservation system when physically challenged persons book their journeys. This alerts other departments to the need to prepare to provide services for these passengers. The interviewees’ data has indicated that the necessary information/preferences are being inserted in the reservation system. The data triangulation shown in Table 4.30 also supports the fact.

Check-in — One particular need identified for physically challenged persons is the need for special assistance/care. However, from the interview data, it was found that no airline has separate check-in counters for them.

Additional announcements/displays — Many physically challenged persons need additional announcements both on the ground and on-board. Other than boarding the physically challenged first and having display boards with signage, there were no additional announcements or displays found from the interview data. There were also no additional announcements/displays on-board other than a physical demonstration of the safety instructions being found. During observation both on the ground and on-board, the researcher also could not find any additional announcements/displays for physically challenged persons. There were also no sign languages available for deaf and dumb passengers.

Trained staff — The needs of physically challenged persons when travelling by air have been shown in Table 5.5. Having trained staff to handle these passengers is one of the needs identified. All participants have mentioned that their staff are well trained as per IATA guidelines to handle them.

Toilets in aircraft — Proper infrastructure and access to amenities are very important needs for the physically challenged persons. In all three cases, 1(A), 2(B) and 4(D) except case 3(C), the interviewees said that their aircraft were equipped with special toilets with handle bars. From observation on-board the aircraft and viewing the airline websites, the researcher endorses the participant data in this regard. This was also shown in the triangulation of data in Table 4.30.

5.2.3 Research proposition -3: That Asian airlines are differentiating their products and achieving competitive advantage in this market.

The research proposition 3 comprises of the research questions:
RQ4: Are airlines differentiating their products by fulfilling the needs of physically challenged persons?

RQ5: What actions can airlines take to achieve competitive advantage in this market?

Table 5.7 shows a comparison of the literature and the research findings for RQ4 and RQ5.

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Research issue in the literature</th>
<th>Literature review findings</th>
<th>Contribution of this research</th>
<th>Contribution to knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ4</td>
<td>Asian airlines are differentiating their services for the market segment of physically challenged persons.</td>
<td>No</td>
<td>New to the literature</td>
<td>This research contributes to knowledge of the issue as the barriers and preconditions to implementing product differentiation have been identified.</td>
</tr>
<tr>
<td>RQ5</td>
<td>Actions taken by Asian airlines to achieve competitive advantage from the market segment of physically challenged persons.</td>
<td>No</td>
<td>New to the literature</td>
<td>The research outcomes make a contribution to knowledge as this issue has not been addressed in earlier research.</td>
</tr>
</tbody>
</table>

Source: developed for this research

Product differentiation in airlines can take many forms. There are a number of techniques used by the airlines to differentiate their products. Participants in Case 1(A) and Case 2(B) indicated that the differentiation techniques their airlines use. Hospitality and own culture, alliances, frequent flyer programmes, pricing, on-board meals and having no additional surcharge for disabled passengers were some of the techniques they offered. Case 3(C) and Case 4(D) also addressed the issue. CP1 said differentiation techniques were used “to be competitive over other airlines. Airlines do not know which techniques accepted by people”. CP3 suggested that airlines differentiate their products, and design their product offers according to the specific and different needs/requirements of the specific market. CP4 said they used differentiation “to capture the market and to enhance the image to all”. DP4 elaborated that it was to “attract different markets. Different needs, so different groups match
their requirements with different products”. DP5 clarified that the objective to maintain market share, to meet targets and gain new markets.

Barriers — Barriers are facts or actions that which prevent product differentiation from becoming a reality (Haarla, 2003). The findings in Section 4.6.3, Figure 4.7 and Table 4.26 have indicated the barriers to implementing product differentiation for physically challenged persons in airlines. These are categorised in Table 5.8 as external and internal types of barriers.

Table 5.8  Barriers to implementing product differentiation

<table>
<thead>
<tr>
<th>EXTERNAL</th>
<th>INTERNAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Infrastructure:-Airport/Technology</td>
<td>- Policy</td>
</tr>
<tr>
<td>- Resources:-manpower, financial</td>
<td>- Tools and support equipment</td>
</tr>
<tr>
<td>- Attitude towards the physically challenged</td>
<td>- Resources:-manpower, financial</td>
</tr>
<tr>
<td>- Culture</td>
<td>- Security measures</td>
</tr>
<tr>
<td>- Equipment</td>
<td>- Attitude of staff</td>
</tr>
<tr>
<td>- Government awareness &amp; response</td>
<td>- Training and skills</td>
</tr>
<tr>
<td>- Communication</td>
<td>- Awareness of staff about the needs &amp; rights of the physically challenged</td>
</tr>
<tr>
<td>- Access to information and facilities</td>
<td>- Motivation</td>
</tr>
<tr>
<td>- Increase in taxes restrict special fares</td>
<td>- Commercial reason</td>
</tr>
</tbody>
</table>

Source: Developed for this research from field data

External — The lack of appropriate infrastructure at the airport/other areas, and also in aircraft and technology is considered as a major barrier. The lack of manpower needed for additional services and the limited financial resources of physically challenged persons were also considered barriers. They may not have money and may be financially unable to travel. Other people’s attitudes towards them and also a negative/indifferent attitude towards recognising their needs are barriers. As, respondent CP1 said,

“We see them as burden”.

Culture also plays a significant role as a barrier as they may not focus on this group. The non-availability of equipment at airports, other areas and in aircraft and as well as a lack of
government response and awareness, a lack of awareness by airline staff are also barriers to implementing product differentiation. Participants also mentioned the need for proper communication in contacting this group of passengers and the lack of publicity given to their services for the disabled as barriers. With the recent implementation of additional security measures in airports, the lack of access to information and facilities, especially at security points, is considered another barrier as there are no proper facilities available for physically challenged persons. The increase in various taxes has also restricted special fares for them.

**Internal** — Internal barriers are considered as those barriers within the airlines. Many airlines are not ready and do not have operational policies for meeting the needs of physically challenged persons. Tools and support equipment, including in-flight equipment, may not be ready. The capacity of the aircraft also restricts the acceptance of the number of passengers with disabilities. Lack of the required manpower to handle large groups of the physically challenged and lack of trained manpower are other barriers. The lack of financial resources at the airlines is also considered a barrier. There is a huge cost of making appropriate gadgets both on the ground and on board. Security restrictions by government and security measures also discourage disable people from travelling. There needs to be a positive attitude by staff towards helping them both on the ground and on board. Lack of specialised training is also a major barrier. There is a need for more training for airline staff. Lack of awareness about needs and rights of physically challenged persons and the lack of staff motivation to treat them with honour and dignity are other areas for improvements. Another important barrier is the commercial reason to tap the market. As participant CP4 said

“Since we do not have adequate resources, we cannot carry these passengers when we have full capacity”

However, participant DP3 differed on this issue and acknowledged as the airlines as having a “Social responsibility than being purely commercial”. Since physically challenged persons have financial limitations, the lack of discount offered by the airlines and the lack of a dedicated team to assist them were also considered as internal barriers. A concept map of the barriers to implementing product differentiation is included in Appendix E.

**Preconditions for product differentiation** — Preconditions refer to the basic requirements that must be in place before product differentiation can be realised (Haarla, 2003).
Participants in the all cases (1, 2, 3, and 4) identified the preconditions for product differentiation for physically challenged persons and these were presented in Table 4.27. These preconditions include:

- Awareness/understanding of the needs of the physically challenged
- Awareness/identification of the market
- Treating them as normal people
- Special services
- Infrastructure & facilities
- Trained human resources
- The specific services available in each country
- Special campaigns to inform the public of the services available
- Marketing strategy & tools
- Commitment of services
- Involve people with disabilities in product design
- Cabin crew must know sign language
- Appropriate pricing

**Awareness/understanding the needs** — Airlines must understand the needs of the physically challenged and must attempt to fulfil them. Understanding the special requirements of physically challenged persons and meeting them is an important precondition.

**Awareness/identification of the market** — The segment of physically challenged persons should be identified properly. To attract this segment, there should be special campaigns highlighting the services available for them. Awareness of the market segment is one of the preconditions for product differentiation.

**Treating them normal people** — People with disabilities want to live life like anyone else. They should not be treated differently from other passengers. Physically challenged persons would like to be treated like any normal person.

**Special service** — They must be given a warm welcome and special service. As AP2, said “we need to emphasise that we are their friends for them to come to us”. Airlines must have special features to serve the physically challenged. They must have the whole package from check-in to destination/arrival and these services must be different from those they receive at other airlines.
**Infrastructure and facility** — Airports should have appropriate infrastructure and adequate facilities, including auxiliary services within airports such as accessible toilets/change rooms, and phones. Aircraft should be equipped with appropriate technology. The airport terminal and aircraft should be designed to ensure easy access for physically challenged persons.

**Trained human resources** — Human resources should be trained in the proper handling of these passengers. Airlines must develop and standardise training courses for people dealing with physically challenged persons.

**The specific services available in each country** — After making the decision to travel to a country, physically challenged persons think of the specific services available in that country. These services include public transport, the built environment, the streetscape, accommodation and attractions.

**Special campaigns to inform the public of the services available** — One must advertise in the print media to inform the public about the services available for disabled passengers. Airline staff, websites, and other publications rarely provide sufficient information for disabled customers.

**Marketing strategy and tools** — The airlines must have proper marketing strategies and tools to capture this segment. They should develop their product, undertake promotional activities, look at pricing and carry out relationship management for this segment.

**Commitment of services** — There should be commitment of services to this group of passengers. Participant DP1 has rightly categorised this as “you must deliver what you say”.

**Involve people with disabilities in product design** — Product must be developed to meet their requirements. They must be involved in product design to have their needs properly addressed.

**Cabin crew must know sign languages** — To ensure proper communication with the hearing and speech impaired, cabin crew must know sign language.

**Having the right price** — One of the important barriers to implementing product differentiation for physically challenged persons is the lack of financial resources. It can be seen from the barriers indicated in table 5.8 that the ability to offer special fares has been restricted with the increase and implementation of various taxes. However, the fares for the physically challenged should be appropriate and should not be overpriced.
5.2.3.1 Using product differentiation strategies to achieve competitive advantage

The measures that need to be taken to use the market segment of physically challenged persons as a product differentiation strategy to get competitive advantage are shown in Table 5.9. All the factors been previously mentioned as barriers to implementing product differentiation, as preconditions for product differentiation and as the challenges physically challenged passengers face when travelling by air.

Table 5.9 Measures to be taken

<table>
<thead>
<tr>
<th>Measures</th>
<th>Barriers</th>
<th>Preconditions</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government, public &amp; private policies</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Appropriate facilities</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Identification of the needs of the disabled</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>and having the ability to fulfil them</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special/personalised services</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Special fares/discounts</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial reason</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Social commitment</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Involving the physically challenged</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>in product design</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: developed from data analysis

Among these factors, the need for appropriate facilities and for special/personalised services are considered the most important in product differentiation strategies for physically challenged persons as they were previously mentioned as barriers, preconditions and challenges. Government, public and private policies are also essential for encouraging physically challenged persons to travel.

One important factor is social commitment, as BP3 put it “carrying them will make the airlines appear socially responsible” and respondent CP1 mentioned that servicing the physically challenged is a commitment towards social responsibility and it could differentiate an airline from other airlines by showing this commitment. Involving physically challenged persons in the product design is also important to get right feedback and to
appropriately meet requirements. Respondent AP2 stated that they should be involved in the design the aircraft and Respondent DP3 said “They should be involved with product design”.

5.2.3.2 How can airlines achieve competitive advantage with this segment?
Airlines can achieve competitive advantage in the market segment of physically challenged persons by implementing the measures shown below in Table 5.10. All factors except employing them airlines were mentioned in the barriers to implementing product differentiation, preconditions for product differentiation and in the challenges the physically challenged face when travelling by air.

Infrastructure, equipment/facilities, Advertising/inform the public about services, giving adequate attention and special/personalised services are important factors for airlines in achieving competitive advantage from this segment. Respondent BP3 rightly said “we need to give them service so that our airline will be the first airline in their mind when they decide to travel. Participant DP3 also said “if able-bodied passengers see our airline treats disabled passengers well it will create competitive advantage”.

Table 5.10 Measures to achieve competitive advantage

<table>
<thead>
<tr>
<th>Measures</th>
<th>Barriers</th>
<th>Preconditions</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Equipment/facilities</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Advertise/inform about the services</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Trained manpower</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special/personalised services</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Identification of the target market</td>
<td></td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>Identification of the needs &amp; ability to fulfil them</td>
<td>√</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>Special fares</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treat people with disabilities as normal people</td>
<td></td>
<td>□</td>
<td>√</td>
</tr>
<tr>
<td>Respect &amp; Recognise them</td>
<td></td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>Give adequate attention</td>
<td>√</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>Employ them in airlines</td>
<td></td>
<td>□</td>
<td></td>
</tr>
</tbody>
</table>

Source: developed from data analysis
Airlines should employ physically challenged persons so that other physically challenged persons can be encouraged and the companies can see their needs and implement changes accordingly.

5.2.4 Challenges physically challenged persons face when travelling by air
Table 4.28 showed the summary of responses from the participants in cases 1, 2, 3, and 4 and table 4.29 showed the challenges physically challenged persons face when travelling by air by category. Airlines need to overcome the following challenges to differentiate their products/services to achieve competitive advantage. Many of the challenges they face also match complement the barriers to implementing product differentiation for physically challenged persons.

Proper equipments & logistics — The services and equipments are different in many airports and aircrafts.

Restriction of movement — Physically challenged persons have restrictions in travel. Airports and other facilities must be conducive to enable them to travel. They must also understand the restrictions in certain airports and countries.

Infrastructure — Infrastructure is a major challenge for them, in particular on the airport side and lack of special wheelchair. Lack of signage at different level is another challenge.

Financial constraints — The cost of travel restricts their movement. Physically challenged persons are financially challenged.

Assistance — People with disabilities need assistance at all levels. In fact after arrival in the airport they still face challenges. They need more help and care than other passengers.

Treat as normal people — They should not be treated differently from other passengers. Physically challenged persons would like to be treated like any normal passenger.

Improper attention — The improper and inadequate attention of airline staffs at different levels is also a challenge.
Attitudes of fellow passengers/staffs — Physically challenged passengers face negative attitudes and perceptions of their fellow passengers and staff. The big challenge is getting the support of fellow passengers and acceptance. As respondent CP1, said “we see them as burden”.

Maintaining sense of dignity — They need to be treated as normal human beings so their pride and dignity are maintained.

Communication — There is often inadequate information on the procedures and services available. The interview data, documents, and websites (Table 4.30) supported the view that there was no adequate information available on the airline websites. There were also no other publications with information on procedures and services for them.

Support from the government — Physically challenged persons need support from governments in terms of financial support and the formulation of policy to protect their rights. Income is a factor in travel decisions but also important are the costs related to travelling with a disability. Providing a variety of services and facilities will encourage travel by physically challenged persons.

Advance information about requirements — Physically challenged persons must inform the airlines of their requirements early; the airlines should make all efforts to get their requirements from them during reservation.

5.3 Discussions of the central research problem

This research examined the problem: How can airlines differentiate their services and achieve competitive advantage by fulfilling the needs of physically challenged individuals?”

There are numerous articles and surveys on proposals and guidelines for the air carriers and airport administrations throughout the world to facilitate the carriage of physically challenged persons. However, few academic studies have been undertaken and there have been few articles published on the growing market of physically challenged persons who could be a source of competitive advantage for the airlines provided they are able to differentiate their
products and services by not only meeting, but also exceeding, the needs of the physically challenged.

The researcher defined the research problem, the six research questions and four research propositions in an attempt to address issues relating to airlines in differentiating their services to achieve competitive advantage by fulfilling the needs of the physically challenged. The summary of the research issues in literature, the literature review, and the contribution of this research to knowledge in this area was included in Section 5.2. A number of several issues have been addressed to answer the research problem.

Yannis Vardakastanis, the President of the European Disability Forum (EDF), has stated that discrimination towards passengers with disabilities occurs every day all over Europe. Disabled air passengers are being refused to book or the right to travel on a flight due to their disability. Such discriminatory and undignified treatment is unacceptable (Evac+Chair International Ltd, 2006).

Based on the existing literature reviewed in Chapter 2, and the analysis of field data in Chapter 4, the following conceptual framework has emerged from the study. The proposed model “Airlines product differentiation to achieve competitive advantage from the market segment of physically challenged persons” is exhibited in Figure 5.10. This also concludes and answers the following research proposition:

**Research proposition 4:** That a guideline or model can be developed for policy makers to cater to the market segment of physically challenged persons.
Figure 5.1  Airlines differentiation model to achieve competitive advantage from market of the physically challenged

**External Barriers to be removed**
- Infrastructure: airport/technology
- Resources: manpower, financial
- Attitude towards physically challenged
- Culture
- Equipment
- Government awareness & response
- Communication
- Access to information & facilities
- Increased taxes restricting special fares

**Internal Barriers to be removed**
- Policy
- Tools & support equipment
- Resources: manpower, financial
- Security measures
- Attitude of staff
- Training & skills
- Awareness of staff about needs & rights
- Motivation
- Commercial reason
- Values of each airlines
- Social responsibility than commercial
- Lack of discounts
- Need for a dedicated team

**Challenges to Overcome**
- Proper equipment & logistics
- Restriction of movement
- Infrastructure
- Financial constraints
- Assistance
- Treat as normal people
- Improper attention
- Attitude of fellow passengers/staffs
- Sense of dignity
- Communication
- Support from government
- Need to inform requirements earlier

**Source:** developed from interview data
Access the market

It will be recalled from chapter 2 that the United Nations Economic and Social Commission of Asia and the Pacific (2003) has stated that the countries with the highest rates of disability are also the countries that have already recognised barrier-free tourism as an important market segment. This includes North America, parts of Europe, Australia and New Zealand. It was found that no country in Asia or the Pacific had undertaken research into the travel patterns of people with disabilities or the scope of the travel market for barrier-free tourism. Among the 60 member countries of the Economic and Social Commission for the Asia Pacific (ESCAP), no country had undertaken a national approach to researching the economic potential of the barrier-free tourism (BFT) market. Airlines must access the market of physically challenged persons. A complete understanding of the target market is an absolute and must include a sound estimate of the potential market size for successful differentiation and competitive advantage (How well do I understand the market for my product idea?, n.d).

Coordination with the governments and other agencies

Several factors, as previously shown in Table 5.9 and 5.10, indicate issues that can lead to competitive advantage from the market of physically challenged persons. Lack of infrastructure and equipment/facilities are considered as important factors. These were also noted as being factors mentioned in the barriers to implementing product differentiation, the challenges the physically challenged face when travelling by air and the preconditions needed for product differentiation. Airlines must coordinate with governments and other agencies for policies and infrastructure in airports and other areas.

Involving the physically challenged communities

Airlines should meet with representatives of the different physically challenged communities. Products must be developed according to their requirements and the physically challenged communities must be involved in product design. Airlines need to employ people from the physically challenged community to help them understand their needs and requirements in designing the products.

Challenges to be overcome

Physically challenged persons face many challenges when travelling by air. Airlines must overcome the challenges that were detailed in Section 5.2.4 so that they can differentiate their products/services and achieve competitive advantage from this market segment.
**Barriers to be removed**

The barriers to implementing product differentiation for physically challenged persons in airlines, previously as indicated in Table 5.8 and in Section 5.2.3, must be removed for successful differentiation. Internal barriers are considered those barriers within the airlines, while external barriers are external factors outside the control of airlines.

**Needs to be fulfilled**

Airlines must make all efforts to fulfil the needs of physically challenged persons as has been stated in Table 5.5 and in Section 5.2.2.

To enjoy sustainable success, the carriers must know their customers individually, differentiating them by their values and needs so that they can offer more personalised and customised actions to fit the long-term strategy of meeting these needs. Using the Maslow’s hierarchy of needs as a basis, airlines can first establish what they have in common with the needs of their customers, then design policies to meet each unique need (Chee, n.d).

The needs identified in Table 5.5 and shown in Figure 5.1 can be categorised into Maslow’s five need categories (Maslow, 1943).

<table>
<thead>
<tr>
<th>Category of needs</th>
<th>Needs of physically challenged persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self actualisation needs</td>
<td></td>
</tr>
<tr>
<td>Esteem needs</td>
<td>-Respect &amp; recognition (positive attitude)</td>
</tr>
<tr>
<td>Need for belonging &amp; love needs</td>
<td>-Mental support</td>
</tr>
<tr>
<td></td>
<td>-Treat as normal people</td>
</tr>
<tr>
<td></td>
<td>-Adequate attention &amp; comfort</td>
</tr>
<tr>
<td></td>
<td>-Special assistance/care (handling of persons &amp; equipment)</td>
</tr>
<tr>
<td></td>
<td>-Proper communication</td>
</tr>
<tr>
<td>Safety needs</td>
<td>-Proper infrastructure at airport</td>
</tr>
<tr>
<td></td>
<td>-Government support (sufficient funds from govt.)</td>
</tr>
<tr>
<td></td>
<td>-Trained staff to handle them</td>
</tr>
<tr>
<td></td>
<td>-Access to amenities</td>
</tr>
<tr>
<td></td>
<td>-Privacy</td>
</tr>
<tr>
<td>Biological &amp; physiological needs</td>
<td>-Dietary requirements</td>
</tr>
</tbody>
</table>

Source: developed for this research from Maslow’s hierarchy of needs
It is observed that physically challenged persons have needs for safety and belonging. If their safety needs are not met, they will feel anxiety, dread, and fight-and-flight behaviour. People will feel physically secure when their needs are met. When needs for belonging and love needs are not met, a person feels lonely, rejected, and rootless, and possibly has dislike or hostility towards ‘out-groups’. But love themselves and others, they can trust friends and others as their needs have been met. With self-esteem needs fulfilled, a person becomes self-confident and has self-respect (Cambridge Regional College, n.d). Hence, airlines should take into consideration the needs of the physically challenged persons and try to fulfil them.

All humans have a need or desire for self-respect, or self-esteem, and for the esteem of others. Self-esteem represents achievement and respect from other people, recognition, attention, importance or appreciation (Maslow, 1943).

Yannis Vardakastanis, the President of the European Disability Forum, has stated “Disabled people should be treated as any other passenger and as ordinary consumers” (p.23). (COMMUNIQUÉ AIRPORT BUSINESS, 2005)

**Advertise to inform the public about the availability of products and services**

When the airlines are ready to attract this segment of market, they should advertise and inform the public about the services available and procedures in place. As respondent BP3 said “we need to give them service so that our airline will be the first airline in their mind when they decide travel”. Having information on the services and procedures available is an important factor in an individual’s decision making process. Information disseminated properly will lead to increased travel by this group.

**5.4 Limitations**

Some of the limitations related to the case study research were previously presented in Chapter 3.

The study was subjected to limitations. Firstly, the purpose of this research was to investigate how Asian airlines are differentiating their services by fulfilling the needs and promoting the segment of physically challenged persons. Therefore, the findings of this research may be suitable to the Asian market, but may or may not be suitable for other regions.
Secondly, there were limitations with resources and time constraints. This research had no sponsorship and was not supported by government or any organisational funds. Hence, both expenditure and time spent on this research were limited.

Thirdly, the amount of proper literature on the issue was limited as little academic research had been undertaken and published.

Fourthly, there were a wide variety of definitions of disability in the literature, which limited the ability to define disability properly.

Finally, it was difficult to convince some of the major airlines in the Asian region to be interviewed as they cited anti-competition laws despite assurances of confidentially that no information would be asked about the airlines, procedures/operations. Some of the officials also expressed an initial willingness to participate in interviews but later withdrew due to time and schedule constraints.

5.5 Implications of the research

The research findings have been presented in the context of the research problem, the six research questions and four research propositions in the previous sections. Conclusions to the research problem were presented in Section 5.3. In this section, the implications of this research are presented.

5.5.1 Implications for theory

The main contribution of this research is that this study has enhanced the knowledge and understanding of product differentiation and competitive advantage as a phenomenon in the context of physically challenged persons, which is a new topic in airlines literature. Porter (1985) stated that the sources for differentiation are not well understood. This research provides a holistic picture of product differentiation in the context of physically challenged persons in airlines, which establishes the basis for further research.
This research has included an analysis of the major schools of thought on competitive advantage (Porter, 1980, 1985, Barney, 1991, Coyne, 1986) and product differentiation (Kotler, 1998, Chamberlin, 1965, Porter, 1985, Scheuing, 1974, Hotelling, 1929). It also has included both the economists’ view (O’Shaughnessy, 1984) and strategic view (Smith, 1956, Johnson, Schools and Whittington, 2008) of product differentiation. A further review was carried out on product differentiation in airlines and physically challenged persons. It also examined the definitions of physically challenged persons, the disability discrimination acts of some countries, the market of physically challenged persons and also their needs to have deep understanding of the issue. It was observed that airlines have adopted different product differentiation techniques to achieve greater competitive advantage but differentiation of services to achieve competitive advantage by fulfilling the needs of physically challenged persons had not been considered by the airlines. Airlines are also largely unaware of the needs of the physically challenged; in particular, Asian airlines are neither aware of the needs nor the size of the market segment of physically challenged persons. The growing market of physically challenged persons can be a source of competitive advantage for the airlines if they differentiate their products and services by fulfilling the needs of the physically challenged.

This study also endorses Porter’s, 1985 (as cited in Haarla, 2003) notion of the possible problem with differentiation: lack of awareness of the customers’ real needs.

Differentiation and competitive advantage from physically challenged persons in airlines is a relatively new topic in airlines literature. The absence of an established theoretical framework and empirical research prompted the researcher to explore this complex topic in depth to generate ideas to enhance understanding of the issues rather than to test theory.

The literature review enabled the researcher to identify the research issue and objectives. The findings reconfirmed the relevance of the research problem and the research questions, which endorsed the formulation of the research objectives and the shaping of the research propositions. The research issue was examined from the data collected from in-depth interviews followed by analysis. A model was developed from the outcomes of the research and was presented in Figure 5.1. This model may further examined by extended research.
The interpretivist orientation of this study is inductive theory/model building. As such, aims to generate or inductively develop a theory or pattern of meaning instead of starting a theory (Creswell, 2007). The literature review in chapter 2 found no previous theories or models relating to the topic of this study. The purpose of this study was to develop a model from the emerging data. Such a would illustrate in-depth knowledge and understanding of how airlines differentiate their products to achieve competitive advantage by meeting the needs of physically challenged persons. This study has confirmed that the case study is the only research methodology that focuses on contemporary events over which the researcher has no control and where the research problem is a ‘how’ and ‘why’ question is a viable alternative to a deductive approach.

5.5.2 Implications for government

Many countries have taken legislative action to promote the rights of people with disabilities. Almost all the legislation has an anti-discrimination perspective to avoid discrimination in certain areas. Government policy makers working with people with disabilities may be interested in the research outcomes in Section 5.2.3 (preconditions for product differentiation), Section 5.2.4 (challenges), Table 5.5 (needs) and Table 5.8 (external barriers). Some important factors as presented in Table 5.12 have emerged from this study which government should consider taking action.

Table 5.12  Recommendations for government action

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<tr>
<th>DEVELOP</th>
<th>ACTIONS TO BE TAKEN</th>
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| Policy  | ➢ Formulate and implement legislation to protect the right of persons with disabilities. Legislation must be reviewed and improvements to be made in view of changes in the tourism sector.  
➢ Meet representatives of different disability groups and organisations as they are more aware and knowledgeable on the disability issues. |
| Awareness| ➢ Create among physically challenged persons and public on the rights of the disable persons.  
➢ People in travel industry and physically challenged persons on barrier-free travel. |
| Infrastructure | ➢ Improve airports and other areas.  
➢ Involve physically challenged persons in product design |

Source: developed from data analysis
This research provides useful information for governments and represents an important contribution to the topic.

5.5.3 Implications for policy makers

Differentiating services to meet the needs of the physically challenged persons in airlines is a new phenomenon. Policy makers may want to note the research outcomes in terms of the travel needs of physically challenged persons, the barriers to implementing product differentiation for airlines, the measures to be taken to be able to use this segment for product differentiation, and get competitive advantage. Policy makers should also consider reviewing Section 5.2.4 (the challenges physically challenged persons face when travelling by air), and Section 5.2.3 (the preconditions for product differentiation). Together, these outcomes increase knowledge of how to encourage product differentiation for physically challenged persons using airlines, and so provide a source of important information for policy makers formulating policy to cater to the physically challenged. A proposed product differentiation model for physically challenged persons using airlines has been formulated and shown in Figure 5.1.

5.6 Implications for further research

This research has raised some questions that should lead to further research into airlines differentiating their services by fulfilling the needs and enhancing and promoting the segment of physically challenged persons.

As discussed in Section 5.4, this research could be extended to airlines in Europe, Africa or the Americas, for comparing outcomes in different parts of the world. Additionally, an increased number of cases and using an enlarged sample of airline personnel from the airlines for in-depth interviews may uncover more in-depth knowledge into the issue of airlines differentiating their services by fulfilling the needs and promoting the segment of physically challenged persons.

This study worked with a definition of physically challenged persons that comprised of the wheelchair-bound, blind, deaf and dumb persons. As discussed in chapter 2 and Section 5.4, there are a wide variety of definitions of disability. This study could also be extended to include other types of people with disability, including the over weights and senior citizens.
This study adopted a qualitative methodology that involved a case study research and in-depth interviewing to develop a model from the emerging data. The findings therefore currently only apply to the Asian market and may or may not be suitable for other regions. These findings would be given more credibility by conducting further research involving other research methods to evaluate the model. This study was conducted, and the model was developed, from the airlines’ point of view to get more in-depth knowledge into the issue of airlines differentiating their services to promote the market segment of physically challenged persons. The model should be tested for a comparison of outcomes and to uncover the needs, barriers, challenges, and preconditions for product differentiation in airlines from the physically challenged persons’ point of view.

This research has included a number of findings. As previously discussed, theoretical model of how airlines could go about product differentiation for physically challenged persons has been proposed in Figure 5.1; this could provide basis for further research.

5.7 Conclusion

The objectives of this chapter, as set out in Sections 5.1 and 5.1.1, have addressed the conclusions about each of the research propositions and have discussed the central research problem. This chapter has also presented the implications of this study for theory, governments and policy makers.

1. The research has expanded the knowledge and understanding of product differentiation and competitive advantage as a phenomenon; particularly in the context of physically challenged persons, which is a new topic in airlines literature.

2. The research outcomes make a contribution to knowledge on the issue of Asian airlines’ awareness and plans to promote and enhance of the market segment of physically challenged persons, which has not been undertaken in earlier research.

3. The needs of physically challenged persons when travelling by air have been identified, which is a research contribution to knowledge.

4. The research outcomes also contribute to knowledge about the extent to which airlines are fulfilling the needs of the physically challenged; this has not been undertaken in earlier research.
5. This research has identified the barriers implementing product differentiation and the preconditions for creating it in relation to the market of physically challenged.

6. This research has examined Asian airlines’ actions to achieve competitive advantage from the market segment of physically challenged persons; this area has not been previously studied in earlier research.

7. The important contributing factors for product differentiation for physically challenged persons in airlines have been outlined. These research outcomes have implications for theory, governments and policy makers so also represent a contribution to existing knowledge.

8. The literature review in chapter 2 found no previous theories or models on the phenomenon under study. As previously mentioned, product differentiation and competitive advantage from physically challenged persons in airlines is a relatively new topic in the airlines literature. The use of case studies in the airline industry in the context of the physically challenged is a methodological contribution.

9. The successful completion of this research enabled a model/framework to be derived for further research into the issue of airlines differentiating their services by fulfilling the needs and promoting the segment of physically challenged persons.


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Interview protocol

“Differentiation of services to achieve competitive advantage — airlines meeting the needs of physically challenged persons.”

Background:
Product differentiation is a competitive business strategy whereby firms attempt to gain a competitive advantage. Airlines employ differentiation strategies to gain a competitive advantage over other airlines in order to better position their products. People with disabilities, together with careers, constitute a large potential consumer market segment for the tourism and hospitality industry. The disability discrimination acts (DDA) of different countries protect all people with a disability from unfair and unfavourable treatment. Disability affects 15 — 20% of every country’s population. Differentiation of services could provide competitive advantage if airlines can meet the needs of physically challenged persons.

The purpose of this study is to find out:
- how much airlines are aware of the market segment of physically challenged persons
- whether airlines are aware of the needs of physically challenged person
- to what extent airlines are fulfilling the needs of physically challenged persons
- the actions airlines are taking to differentiate their products and to achieve competitive advantage for this market.

The definition of physically challenged persons used in this study:
Passengers with a physical disability or with a medical condition, who require individual attention or assistance on enplaning/deplaning and during ground handling that is normally
not extended to other passengers. In particular, I refer to wheelchair-bound, blind, deaf &
dumb persons in this context.

1. Why are a number of differentiation techniques being used by the airlines?

There are a number of techniques being used by the airlines to differentiate their products. Some examples of the differentiation techniques used by the airlines are listed below:

(This information gathered from various publications and the writer’s experience)

1. Price
2. On-board service
3. Loyalty programmes
4. Alliances with other airlines
5. Digital revolution
6. Human resources
7. Airport presence
8. Other

Comment.

-------------------------------

2. What are your thoughts on the market segment of physically challenged persons?

2(A) How big is the market?

3. How can this market segment be used by the airlines as a product differentiation strategy to obtain competitive advantage.

4. What are the preconditions for product differentiation in the market of physically challenged persons?

5. What do you think are the barriers to implementing product differentiation for disabled persons in airlines?
6. How many of the following types of passengers travelled with your airline in last three years:

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Wheelchair</td>
<td></td>
<td></td>
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<tr>
<td>b. Deaf &amp; dumb</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Blind</td>
<td></td>
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</table>

7. Disabled persons need special attention in the different stages of travelling. What facilities does your airline offer in the following stages:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Reservation</th>
<th>On-Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disembarkation</td>
<td></td>
<td>Baggage delivery</td>
</tr>
<tr>
<td>Check-in</td>
<td></td>
<td>Embarkation/Transit</td>
</tr>
</tbody>
</table>

8. How does your airline follow the relevant **Disability discrimination act** to protect people with disability from unfair & unfavourable treatment?

9. Do you accept the following types of passengers for travel?

- Wheel-chair
- Blind
- Deaf & dumb

9. What **documentation** is needed to accept such passengers?

11. What type of “**on board facilities**” are available for the comfort/convenience of physically challenged passengers?

- Toilets
- Announcements
- Seating
12. What **procedures** are in place to safely deplane disabled passengers in case of emergency?

13. What additional **announcements/Displays** are available for special needs passengers?

14. Is your airline **planning** to introduce more **facilities** to cater these passengers?

15. How well trained are your **staff** to handle these passengers?

16. What procedures are in place through **websites and publications** to aid in the acceptance of passengers with special needs?

17. What **future planning** have you done to differentiate your airline by attracting disables passengers to gain competitive advantage over other airlines?

18. How can your airline achieve a **competitive advantage** from this segment?

19. What do you think are the **needs** of Physically challenged persons when travelling by air?

20. How is your airline fulfilling those needs?

21. What **challenges** do physically challenged persons face when travelling by air?
SOUTHERN CROSS UNIVERSITY

INFORMATION SHEET

NAME OF THE PROJECT

“Differentiation of services to achieve competitive advantage — airlines meeting the needs of physically challenged persons.”

My name is Md. Shafiquur Rahman. I am conducting research as part of my Doctorate degree in Business Administration at Southern Cross University under the supervision of Dr. Yong Ngee Keith Ng.

You are invited to participate in a study being conducted that seeks to examine the extent to which airlines are fulfilling the needs of physically challenged persons and differentiating their products and also airlines’ plans to promote and enhance this segment. This research paper will develop some guidelines for policy makers to formulate policy based on this segment.

Product differentiation is a competitive business strategy whereby firms attempt to gain a competitive advantage. Airlines employ differentiation strategies to gain a competitive advantage over other airlines in order to better position their products. People with disabilities, together with careers, constitute a large potential consumer market segment for the tourism and hospitality industry. The disability discrimination acts (DDA) of different countries protect all people with disabilities from unfair and unfavourable treatment. Disability affects 15-20% of every country's population. Differentiation of services could provide competitive advantage if airlines can meet the needs of physically challenged persons.
The purpose of this study is to find out

- how much airlines are aware of the market segment of physically challenged persons
- whether airlines are aware of the needs of physically challenged persons
- what extent airlines are fulfilling the needs of physically challenged persons
- the actions airlines are taking to differentiate their products and achieve competitive advantage for this market

The definition physically challenged persons used in this study

Passengers with a physical disability or with a medical condition, who require individual attention or assistance on enplaning/deplaning and during ground handling that is normally not extended to other passengers. In particular, I refer to wheelchair-bound, blind, deaf & dumb persons in this context.

Procedure to be followed

The research will consist of an in-depth face, to face, interview that will take roughly 60 minutes. Questions will be asked to gather information on the above issues. No personal information will be collected by the researcher.

Participation will be purely voluntary and no financial remuneration or incentives will be offered for taking part in this research.

Responsibilities of the researcher

It is our duty to make sure that any information given by you is protected. It is essential that you sign a consent form before you participate in the study. The information will be presented as overall data.

Discomfort or risk

Because this research is presented on an expedited ethics application, it is considered to be low risk. A risk is a potential for harm, discomfort or inconvenience. It involves:

- the likelihood that a harm (or discomfort or inconvenience) will occur; and
- the severity of the harm, including its consequences.

The expression “low risk research” describes research in which the only foreseeable risk is one of discomfort.
Freedom of consent

If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time. However, we would appreciate you letting us know your decision. If the results of this research are to be published, the participants should be aware of this and be able to give permission on the consent form.

Inquiries

This form is yours to keep for future reference. If you have any questions, please get in touch with us. If you have any additional questions at any time please ask:

Md. Shafiqur Rahman       Dr. Yong Ngee Keith Ng (Supervisor)
Graduate College of Management       Management Development Institute of
Southern Cross University       Singapore

Email: m.rahman.18@scu.edu.au       Email: keith.ng@scu.edu.au

The ethical aspects of this study have been approved by the Southern Cross University Human Research Ethics Committee. The approval number is ECN-08-127. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Ethics Complaints Officer, Ms S. Kelly, (telephone (02) 6620 9139, fax (02) 6626 9145, email: sue.kelly@scu.edu.au).

Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.
CONSENT FORM

(This consent form is based on the National Statement on Ethical Conduct in Human Research (National Statement/NS)

Title of Research Project: Differentiation of services to achieve Competitive Advantage — airlines meeting the needs of physically challenged persons.

NOTE: This consent form will remain with the Southern Cross University researcher for their records.

Tick the box that applies, sign and date and give to the researcher

I agree to take part in the Southern Cross University research project specified above. Yes ☐ No ☐

I have been provided with information at my level of comprehension about the purpose, methods, demands, risks, inconveniences and possible outcomes of this research. I understand this information. Yes ☐ No ☐

I agree to be interviewed by the researcher Yes ☐ No ☐

I agree to allow the interview to be audio-taped and/or video-taped Yes ☐ No ☐
I agree to make myself available for further interview if required Yes ☐ No ☐

I agree to complete questionnaires asking me about the “Differentiation of services to achieve competitive advantage — airlines meeting the needs of physically challenged persons.” Yes ☐ No ☐

I understand that my participation is voluntary. Yes ☐ No ☐

I can choose not to participate in part or all of this research at any time, without consequence. Yes ☐ No ☐

I understand that any information that may identify me, will be de-identified at the time of analysis of any data. Therefore, I, or any information I have provided cannot be linked to my person/company. (Privacy Act 1988 Cth) Yes ☐ No ☐

I understand that neither my name nor any identifying information will be disclosed or published, except with my permission. Yes ☐ No ☐

OR

I give permission for identifying information to be published or disclosed. Yes ☐ No ☐

I understand that all information gathered in this research is confidential. It is kept securely and confidentially for 5 years at the University (unless there are special circumstances, that have been explained to me). Yes ☐ No ☐
I am aware that I can contact the supervisor or other researchers at any time with any queries. Yes ☐ No ☐

I understand that the ethical aspects of this research have been approved by the SCU Human Research Ethics Committee. Yes ☐ No ☐

The ethical aspects of this study have been approved by the Southern Cross University Human Research Ethics Committee. The approval number is ECN-08-127. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Ethics Complaints Officer, Ms S. Kelly, (telephone (02) 6620 9139, fax (02) 6626 9145, email: sue.kelly@scu.edu.au).

Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

I wish to receive the research results: Yes ☐ No ☐

Participant’s name:

Participant’s signature:

Date:

Contact Tel:

Email:
## Theory based questions (TQ)

<table>
<thead>
<tr>
<th>Interview Questions</th>
<th>Awareness of market</th>
<th>Extent airlines fulfilling needs</th>
<th>Challenges they face</th>
<th>Differentiation</th>
<th>Competitive advantage</th>
<th>Plans to promote</th>
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Appendix E

Product Differentiation for Physically Challenged Persons in Airlines

Barriers that prevent implementation

INTERNAL

- Manpower
- Financial
- Resources
- Motivation
- Value of airlines
- Policy
- Employees
- Attitude
- Higher fares/No discounts
- Security measures
- Awareness
- Employees
- Training & Skills
- Aircraft
- Airlines
- Commercial reason

EXTERNAL

- Airport
- Technology
- Infrastructure
- Other areas
- Aircraft
- Manpower
- Financial
- Resources
- Attitude
- General People
- Fellow Passengers
- Culture
- Equipment
- Increase taxes restrict special fare
- Communication
- Govt. awareness & response
- Access
- Information
- Infrastructure