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**Strategic Challenges Facing Airports in Gaining
Competitive Strengths:
Lessons from the Practice of Dubai International Airport**

.....

by
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A Doctoral Thesis
Submitted in partial fulfilment of the requirements for the award of
Doctor of Philosophy of Loughborough University

.....

October 2010

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ACKNOWLEDGEMENTS

I would like to take this opportunity to thank my supervisor Dr. David Pitfield for his continued guidance and willingness to assist throughout the research, and Dr. David Gillingwater for his help and suggestions to improve the quality of this work.

Thanks to all of those who in some way contributed to the success of this research, especially all of the respondents from Dubai International Airport including: Mr. Ghassan Amhaz, Mr. Lewis Naim and Mr. James Robinson, who gave up their time, contributed their knowledge, and showed enthusiasm and openness in replying to the research questions during the interviews.

I also wish to thank Ms. Amal Bufalasi, my central contact at Dubai International Airport, for providing me with valuable material about the airport without any hesitation.

Special thanks go to my wife and my parents for their patience, encouragement and support provided during all these years to make this day possible.

But the greatest thanks and appreciation is due to Mr. Ahmed Aoun. Without his support and help I would not have had the chance to come to study in the UK.

ABSTRACT

The anticipated increase in competition among airports means that there is now a greater need for strategic thinking in the airport business industry. In order to succeed, airport management will have to implement new strategic initiatives and identify their key competitive strengths. While many airports are now more active in following strategic directions, there is some deficiency and inconsistency in the literature in this regard. This research relates the theories of strategic management to the case of airports in order to explore the issue of whether the airport business industry is able to apply the different strategies adopted by other industries in order to achieve growth. The research provides an in-depth analysis into the strategies that Dubai International Airport has pursued. This carefully selected case study involves the collection of qualitative data through conducting semi-structured interviews as a primary source of information. Data collected are applied to different well-known business tools including the PESTEL Analysis, the Five Forces Model and the Resource-based View (RBV) of the firm. The research found that there are some strategic differences between the airport industry and other industries. While it is possible for airports to adopt certain strategies, some strategic theories are not very practicable for airports. While Dubai International Airport is not considered very different from other airports, there are some differentiated characteristics in its ownership and management that led it to outperform its rivals. The research proposes that there are a number of key success factors derived from four core areas that led Dubai International Airport to obtain strategic strengths over other airports. These four areas include: General Condition, Competitive Situation, Resource Acquisition and Strategic Direction. These areas are also classified as No Control, Least Control, Some Control and Most Control, respectively. This thesis contributes to the development of a best practice conceptual model that can help airport managers understand and improve their key competitive strengths and success factors.

Keywords: Dubai; Airport; Business; Strategy; Management; Competitive; Strength; Advantage; Sustainable; Environment.

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ABBREVIATIONS

€- Euro

ACI - Airport Council International

ADCCI - Abu Dhabi Chamber Of Commerce & Industry

AED - Emirati Dirham (Currency)

AMS - Amsterdam Airport

AOA - Airport Operators Association

ASD - Air Service Development

ATC - Air Traffic Control

ATL - Atlanta Airport

BA - British Airways

BAA - British Airport Authority

BKK - Bangkok Airport

CAA - Civil Aviation Authority

CDG - Paris Charles de Gaulle Airport

CDM - Collaborative Decision Making

CEO - Chief Executive Officer

CIA - The Central Intelligence Agency

DAFZ - The Dubai Airport Free Zone

DAFZA - The Dubai Airport Free Zone Authority

DCAA - The Dubai Civil Aviation Authority

DEN - Denver Airport

DP - The Dubai Ports

DPA - The Dubai Ports Authority

DPI - The Dubai Port International

DTCM - The Department Of Tourism AND Commerce Marketing

DXB - Dubai International Airport

e. g. - Example given

EFC - Executive Flights Centre

EK - Emirates (Airline)

et al. - and others

etc - Continuing in the same way
FRA - Frankfurt Airport
FTZ - Free Trade Zone
GA- Mr. Ghassan Amhaz (Interviewee)
GAC - The Gulf Agency Company
GAO - The General Accounting Office
GCAA - The General Civil Aviation Authority
GCC - The Gulf Cooperation Council
GDP - Gross Domestic Product
GSA - General Services Administration
HDI - Human Development Index
HKG - Hong Kong airport
HND - Tokyo Airport
IATA - The International Air Transport Association
Ibid - in the same place
ICAO - The International Civil Aviation Organisation
ILO - The International Labour Organisation
IMF - The International Monetary Fund
JFK - New York Airport
JR - Mr. James Robinson (Interviewee)
KPI - Key Performance Indicator
LCC - Low-cost Carrier
LGW - London Gatwick airport
LHR - London Heathrow Airport
LN - Mr. Lewis Naim (Interviewee)
MEM - Memphis Airport
NRI - Networked Readiness Index
PEST - Political, Economic, Social and Technological
PESTEL - Political, Economic, Social, Technological, Environmental and Legal
R&D - Research and Development
RBV - Resource-based View

RFID - Radio-Frequency Identification
ROR - Rate-of-Return
RPI - Retail Price Index
RPK - Revenue Passenger Kilometres
SIN - Singapore Airport
SWOT - Strengths, Weaknesses, Opportunities and Threats
TEU - Twenty-foot Equivalent Unit
UAE - The United Arab Emirates
UASC - United Arab Shipping Company
UK - The United Kingdom
UN - The United Nation
UPU - The Universal Postal Union
US - The United States
US\$ - United States Dollar
VIP - Very Important Person
VP - Vice President
WHO - The World Health Organisation
WIPO - The World Intellectual Property Organisation

CHAPTER 1 INTRODUCTION

1.1 SIGNIFICANCE OF THE RESEARCH

While airports have traditionally acted as uncompetitive infrastructure suppliers, owned and operated by their local governments in order to enhance the social benefit, the deregulation of the air transport industry, as well as the commercialisation and privatisation of a large number of airports around the world have encouraged airports to function more efficiently as commercial-oriented organisations. This alteration in the airport business means that airports have to strongly compete with one another more than at any time in aviation history (ACI, 2006). The anticipated increase in competition among airports means that airport operators are now facing challenges as they have to change their management practices (Barrett 2000, Jarach 2005) and to undertake different activities in order to attract airlines, not only by upgrading their existing infrastructure, but also by carrying out other incentive programmes (Kraus and Koch, 2006). In addition, the current global economic instability, which has had a major impact on lowering demand for air travel and the growth level for many airports (Airport Magazine, 2010), means that there is now a greater need for strategic thinking in the airport business industry.

While studies (e.g. Porter, 1980, Barney 1997 and Grant 2008) in the area of strategic management have emphasised that firms in different industries have to develop business plans in order to succeed, researchers (e.g. Graham 2004, Williams 2006) in the field of aviation have found it difficult to apply strategic management techniques to the case of airports. Due to some business and product characteristics, such as the presence of passengers as second customers to the airport product, airports are seen as a unique case and different from other industries (Graham, 2004). Nevertheless, some authors (e.g. Park 2003, Jarach 2005, Albers et al. 2005) have stressed the need for airport management to implement new strategic initiatives and to identify and understand the sources of their competitive strengths. In order to succeed, an airport must perform and function in a way that is difficult to replicate by other competitors. Although many

airports around the world are trying very hard to generate more traffic and attract air carriers, they do not possess any extra advantage (Kraus and Koch, 2006).

The area of strategic management in the case of airports is considered as a recent concern (Lopez, 2001). The analysis of competitive advantages for some major hubs is regarded by authors (e.g. Williams, 2006) as in its very early stages. This topic has attracted only marginal attention in the academic literature and there is a particular dearth of literature on the significance of developing business strategies in order for airports to gain and sustain strategic strengths. Only a limited number of detailed studies (e.g. Park, 2003) were undertaken to explore this area. While many airports are now more active in following strategic trends, there is some deficiency and inconsistency in the literature on how airports can better understand their key strengths and success factors. Authors (e.g. Graham, 2004) emphasise the need for an in-depth analysis in order to measure the effectiveness of applying strategies to the airport business industry. Therefore, studying and relating the area of strategic management to the case of airports is a necessary addition to the body of existing literature that has neglected some of the issues concerning airport strategic management.

This research seeks to relate the theories of strategic management to the airport industry to explore the issue of whether airports, in the face of the increased competition among them and in the light of the current global economic instability, are able to apply the different business strategies adopted by other industries in order to achieve growth. This thesis provides an in-depth analysis into the strategic direction that one of the leaders in the airport industry has followed in order to succeed. It carefully selects Dubai International Airport (referred to as DXB throughout this thesis) to be used as a case study for this exploratory research.

1.2 RESEARCH FOCUS

This thesis focuses on DXB as the primary area of research for many reasons. DXB has succeeded in attracting more airlines and became the world's fastest growing

hub in 2007 (Airport international, 2008). Over the past few years, DXB succeeded in becoming a significant passenger traffic hub and one of the busiest cargo hubs in the world. Despite the global economic downturn, which has driven down the number of passengers and revenues at many airports around the world (Airport Magazine, 2010), DXB has experienced year-on-year growth in passenger and freight traffic over the last few years. As can be seen from table 1.1, the number of airlines using DXB has risen from 92 in 2000 to 125 in 2008. The number of destinations that the airport links has increased from 135 in 2000 to reach 205 in 2008. The airport has witnessed a dramatic increase in the number of passenger and freight movements during the same period. While the airport handled around 12.32 million passenger and 562.590 tonnes of cargo in 2000, it handled more than 37.4 million passenger and more than 1.82 million tonnes of cargo by 2008. Throughout the indicated period, the airport maintained a remarkable passenger growth rate of between 9% and 20.2%, and between 8.6% and 25% in terms of cargo movement. Figures 1.1 and 1.2 demonstrate the dramatic growth curve of DXB in terms of passenger and cargo movements. Given the overall economic conditions during this period, these figures represent significant achievements in terms of maintaining growth rates and competitive position in the market.

Table 1.1: Traffic data and growth rates at DXB

Year	Number of airlines	Number of destinations	Number of passengers	Growth rate	Tonnes of cargo	Growth rate
2000	92	135	12,320,660	14.6%	562,590	18.5%
2001	95	137	13,508,073	9.6%	610,866	8.6%
2002	102	140	15,973,391	18.3%	764,193	25.1%
2003	105	145	18,062,344	13.1%	928,758	21.5%
2004	107	160	21,711,883	20.2%	1,111,647	19.7%
2005	110	175	24,782,288	14.1%	1,333,014	19.9%
2006	113	195	28,788,726	16.2%	1,503,688	12.8%
2007	118	200	34,348,110	19.3%	1,668,505	11.0%
2008	125	205	37,441,440	9.0%	1,824,991	9.4%

Source: Data compiled by Author from Dubai Airports (2009)

Figure 1.1: DXB passenger level of growth

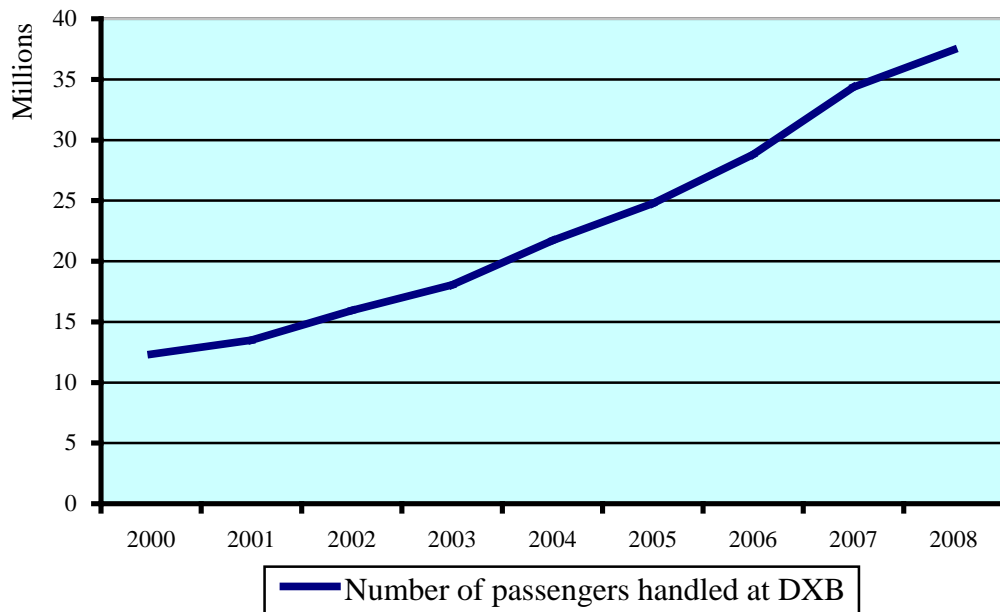
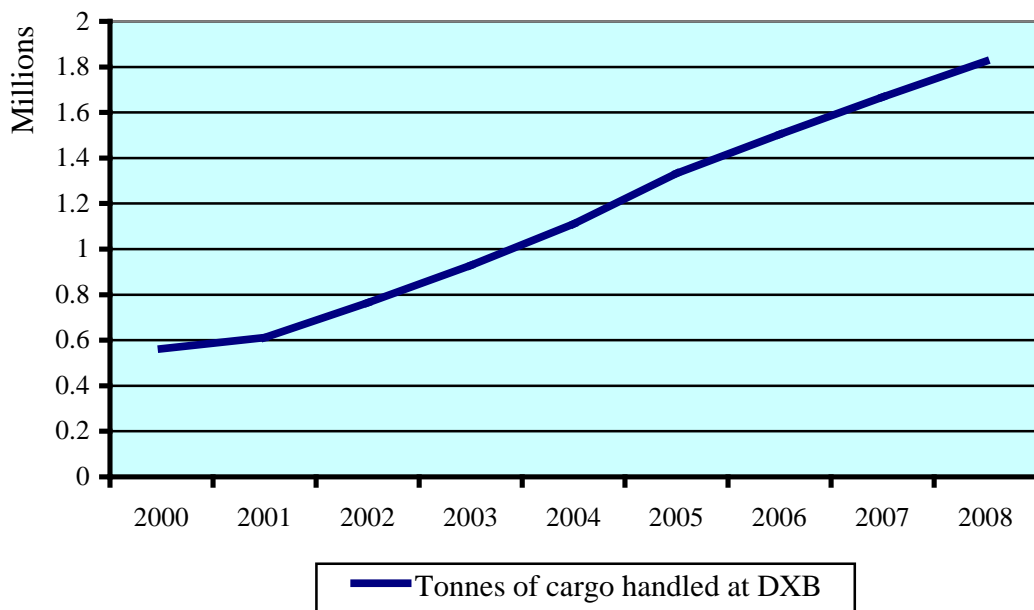


Figure 1.2: DXB cargo level of growth



DXB has also become a powerful hub competitor for many other major airports worldwide (ACI, 2006). Tables 1.2 and 1.3 illustrate that while some airports around the world witnessed substantial growth in terms of passenger and cargo movement, they also went through a period where they hardly achieved any growth. This was the case in

airports like Hong Kong where its passenger numbers grew at 35.5% in 2004 and then this number declined to 1.7% in 2008, and like Memphis where cargo traffic rose at 28.8% in 2002 and achieved zero growth the following year. Other airports like Atlanta maintained a relatively little growth rate throughout the period. In comparison, DXB witnessed a continued higher year-on-year growth level than the other major airports for both passenger and cargo movements during the indicated period, as shown in figures 1.3 and 1.4.

Table 1.2: Passenger growth rate at selected world's major passenger hubs

Airport/Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Atlanta (ATL)	2.7%	5.4%	1.3%	2.9%	5.7%	2.8%	1.2%	5.3%	0.7%
London (LHR)	3.8%	6.0%	4.3%	0.2%	6.1%	0.8%	0.6%	0.8%	1.5%
Tokyo (HND)	3.8%	4.1%	4.1%	2.9%	0.9%	1.6%	4.4%	1.1%	0.2%
Frankfurt (FRA)	7.6%	1.6%	0.2%	0.2%	5.7%	2.2%	1.1%	2.6%	1.3%
Paris (CDG)	10.6%	0.5%	0.7%	0.3%	6.3%	5.0%	5.7%	5.4%	1.6%
Amsterdam (AMS)	7.7%	0.2%	3.0%	1.9%	6.5%	3.8%	8.7%	3.8%	0.8%
Denver (DEN)	1.9%	6.9%	1.2%	5.2%	13.0%	2.6%	9.1%	5.4%	2.8%
London (LGW)	4.9%	2.8%	5.0%	1.3%	4.8%	4.2%	4.2%	3.1%	2.9%
Hong Kong (HKG)	10.2%	0.6%	4.1%	20.0%	35.5%	9.7%	8.9%	7.3%	1.7%
Singapore (SIN)	9.8%	1.8%	3.2%	6.9%	23.0%	6.8%	8.0%	4.8%	2.7%

Source: Data compiled by author from ACI

Table 1.3: Cargo growth rate at selected world's major cargo hubs

Airport/Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Memphis (MEM)	3.2%	5.7%	28.8%	0.0%	4.8%	1.2%	2.6%	4.0%	3.8%
Hong Kong (HKG)	13.4%	7.4%	19.3%	6.6%	16.9%	9.9%	5.2%	4.5%	3.0%
New York (JFK)	5.1%	21.3%	6.3%	2.5%	3.1%	2.6%	0.3%	1.9%	9.8%
Tokyo (HND)	6.3%	13.0%	19.1%	7.6%	7.1%	3.2%	4.8%	1.9%	0.1%
Bangkok (BKK)	7.3%	3.1%	13.7%	0.7%	11.3%	7.8%	3.6%	3.2%	3.9%
Amsterdam (AMS)	3.4%	2.6%	4.4%	5.1%	8.4%	2.0%	4.7%	5.4%	3.0%
Paris (CDG)	13.2%	1.2%	2.2%	6.0%	8.9%	7.2%	6.0%	7.9%	0.8%
London (LHR)	3.4%	9.9%	3.7%	0.8%	8.6%	1.6%	3.3%	3.9%	6.5%
Frankfurt (FRA)	11.1%	5.7%	1.1%	1.2%	11.4%	6.7%	8.4%	1.9%	2.7%
Singapore (SIN)	12.0%	10.3%	8.5%	1.7%	10.0%	3.3%	4.2%	0.7%	1.8%

Source: Data compiled by author from ACI

Figure 1.3: Comparison between DXB passenger growth rate and other major airports

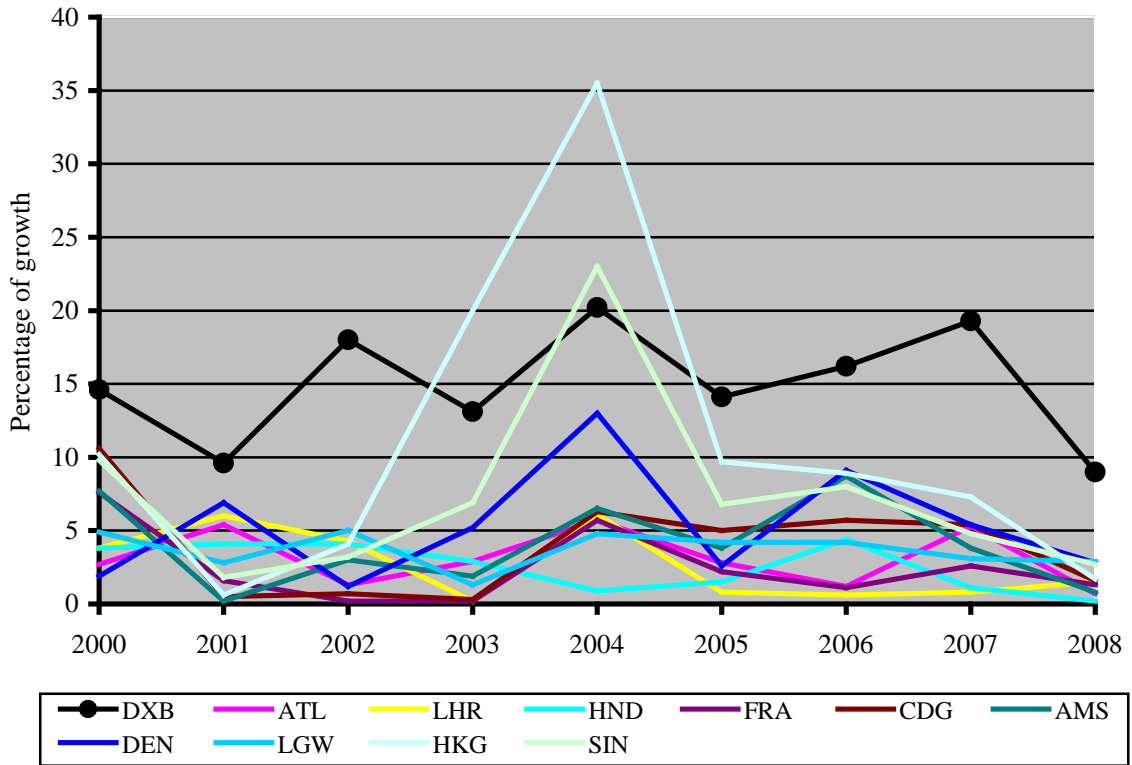
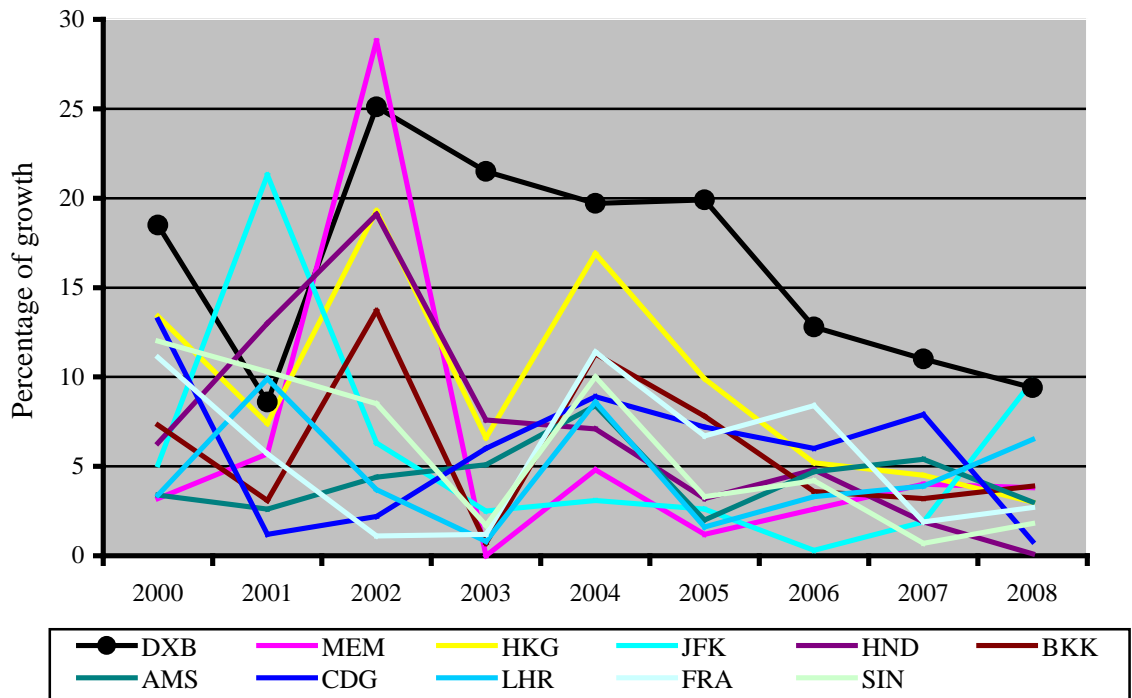


Figure 1.4: Comparison between DXB cargo growth rate and other major airports



Despite the importance of studying DXB as a best practice example so that other airports can learn from its experience, the existing literature does not provide a comprehensive analysis into this case and the reasons behind DXB's success. Therefore, DXB can be considered as an interesting case that is worth studying in more detail. While this study can be considered as significant today, it will become of more importance in the future with the rise in the number of airports competing against each other, and the increase in need for gaining and sustaining competitive strengths. Therefore, the research seeks to contribute to the field of aviation through elaborating the literature and addressing the strategic challenges facing airports due to the increase in competition among them.

1.3 RESEARCH CONTRIBUTION

Conducting DXB as a case study for this research allows for an in-depth analysis and provides the researcher with different sources that could be used as supporting evidence. The case study involves the collection of primary and secondary data. Qualitative methods, through conducting semi-structured interviews with members of DXB's management team, are used as the main source of reliable information to explore the strategic direction the airport is following to achieve growth. Data collected from these sources are applied to different business tools including the PESTEL Analysis, the Five Forces Model and the RBV Theory to explore the impact of the external and internal environments on DXB's strategic direction and to identify the airport's key success factors and their sustainability.

This research found that airports are most suited for strategies such as product differentiation, product development and market penetration. The latter is achieved mainly through providing better service quality, reducing airport charges and airport marketing. Vertical alliance and cooperation with airline companies is found to be vital for the survival of an airport. Diversification is also pursued by some airports. These are the main business strategies chosen by DXB and are proven to be a suitable approach that led the airport to gain and sustain competitive strengths.

There are some strategies that are not very practicable for airports. For example, cost-leadership strategy and market expansion strategy are not widely pursued by airports including DXB. There is little evidence for the beneficial use of horizontal strategic alliances by airports. These are the main strategic differences between airports and other industries. In addition, the strong government support, the geographical fixed locations and the limited ability to expand physically are also other distinctive features in the airport industry, as compared to other industries.

DXB has overcome many challenges and achieved continued growth over the past few years. This, however, does not mean that DXB's strategic strengths are so unique. In terms of strategic goals and directions, DXB is very similar to the airports profiled within the literature review. Strategic directions followed by DXB are also adopted by many other airports, meaning that DXB is not a special case in this regard. While DXB is not considered very different from other competitors, there are some characteristics in its ownership and management that led it to outweigh its rivals. Many of DXB differences are found to be driven from its unique integration with the country's other aviation players. The airport, as with many other large transport-related organisations in the UAE, is currently owned and controlled by the government. Organisations including DXB, the DCAA and Emirates Group are all overseen by one person, who is also a member of the royal family - HH Sheikh Ahmed bin Saeed Al-Maktoum. DXB's business model can be regarded as among the success stories of recent aviation history and, as will be demonstrated in this research, there are a number of positive and effective lessons that can be learned from this case as well as some strategic practices that are more problematic.

In this research, it is argued that there are a number of key success factors driven from four core areas that can lead an airport to gain competitive strengths over other competitors. These areas include: the airport's General Condition; Competitive Situation; Resource Acquisition; and Strategic Direction. Factors in the general condition and the competitive situation are associated with the airport's external

environment, whereas both the resource acquisition and strategic direction are related to the airport's internal environment. These core areas are also classified respectively as No Control; Least Control; Some Control; and Most Control, according to the degree of power an airport has over factors in these areas. This conclusion contributes to the development of a best practice competitiveness model that can help airport managers realise and improve their key strengths and success factors.

1.4 RESEARCH QUESTIONS

The research aims to address the following questions:

- What is the general understanding of the concepts of strategic management?
- What is the current state of practice in the airport business industry?
- Do strategic management theories work for airports?
- Is the airport industry different from other industries?
- How has DXB achieved and sustained its growth?
- What are the key strengths and success factors of DXB?
- Is DXB different from other airports?
- What can other airports learn from the DXB experience?

1.5 RESEARCH OBJECTIVES

The objectives of this research are to:

- Study the theories of strategic management and relate them to the airport industry in order to understand their effectiveness in enhancing the airport business.
- Carry out a case study to investigate and describe the strategic direction that one of the leaders in the airport industry has pursued.
- Apply different business tools to the case study to explore the impact of DXB's external and internal business environment on its growth and success.
- Identify DXB's current strategic practices, its main sources of strengths and the key factors behind their sustainability.
- Design a best practice conceptual model for a competitive airport company.

- Evaluate the area of strategic management in the airport business and highlight what other airports can learn from DXB experience.

1.6 THESIS STRUCTURE

The thesis is structured in nine chapters. **Chapter 1:** gives an introduction to the research and describes its importance, contribution, aim, objectives and structure. **Chapter 2:** presents a comprehensive review of strategic management theories and their implications for the airport business industry. **Chapter 3:** outlines the process and methods used to undertake this research. **Chapter 4:** analyses the general environment of DXB using the PESTEL Analysis. **Chapter 5:** explores the competitive environment of DXB using the Five Forces Model. **Chapter 6:** investigates the internal environment of DXB using the RBV of the firm. **Chapter 7:** looks into the strategies that have been followed by DXB. **Chapter 8:** highlights the airport's key success factors and their challenges, and draws a model that can help managers realise their sources of strengths. **Chapter 9:** provides a conclusion to the thesis and indicates what other airports can learn from the case of DXB; and gives recommendations for further studies.

CHAPTER 2 STRATEGIC MANAGEMENT THEORIES AND THEIR IMPLICATIONS FOR AIRPORTS

2.1 INTRODUCTION

To achieve the objectives of the research, a comprehensive literature review covering the theories of strategic management was undertaken. The aim of this literature study is to provide the basis of this field and to establish the overall context of the study. The literature study began with the collection of a mixture of published sources ranging from textbooks, academic journals, reports and surveys from organisations, associations and other institutional bodies; as well as other reference materials discussing the area of strategic management. Information relative to airport business practices was also gathered and related to the literature study. The chapter covers different areas of strategic management theories and practices, and begins by defining and understanding the concepts of strategy. This included definitions for strategy, strategic management and competitive advantages. Methods and techniques for strategic business analysis are identified, studied and related to the airport business industry in order to understand their effectiveness in analysing the external and internal environment of the airport. Finally, the area of strategy formulation and implementation is also considered and linked to the airport business industry.

2.2 DEFINING STRATEGY, STRATEGIC MANAGEMENT AND COMPETITIVE ADVANTAGE

Although the overall concept of strategy is considered as essential for the success of organisations and preferred by managers who consider detailed plans as inapplicable (McGahan 2004), there is no straightforward and general definition for strategy (Barney 1997, Wit and Meyer 1998, Henry 2008). While some definitions focus on the relationship between strategy and targets of firms, others stress the need of firms to cope with the external environmental issues through the utilisation of their internal resources and capabilities.

The traditional definition of strategy relates the concept of strategy to a firm's mission, objectives and tactics (Barney, 1997). Strategy therefore, is defined as:

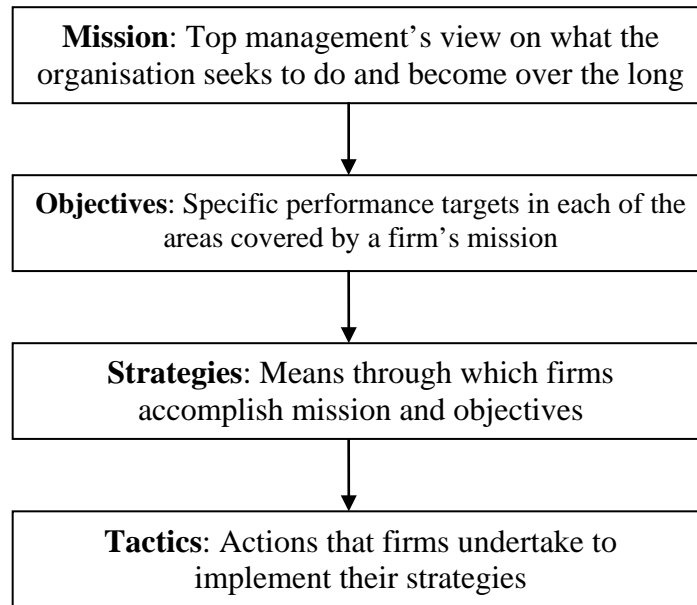
The formulation of basic organisational missions, purposes, and objectives; policies and program strategies to achieve them; and the methods needed to ensure that strategies are implemented to achieve organisational ends (Steiner and Miner, 1977, quoted in Barney, 1997, p. 9).

In other words, strategy is about formulating the way in which a firm is going to compete, defining its missions and identifying the tactics needed in order to achieve its objectives.

The mission is what managers consider as the purpose of their organisations and what they would like to achieve in the future. It is often written down in the form of a mission statement and, unlike objectives and tactics, it does not change over time (Henry, 2008). Objectives are targets for a firm in which they set out what the firm desires to accomplish within a given timeframe, and they are typically focused on market growth, market share, increasing profits and cash flow (Oxford University, 2007). The particular actions undertaken by an organisation to implement its strategy are considered as 'Tactics' (Barney, 1997).

The procedure of bringing a strategy together is regarded as strategic management (Barney 1997, Henry 2008). Therefore, strategic management is about deciding a firm's mission and objectives, analysing a firm's situation and formulating and implementing a business plan. The hierarchical definition of strategic management is shown in figure 2.1.

Figure 2.1: The hierarchical definition of strategic management



Source: Barney (1997)

Porter (1985) argues that a firm with a clear business strategy will have the opportunity to gain an outstanding performance through the achievement of competitive advantage¹.

Competitive advantage grows out of the value a firm is able to create for its buyers that exceeds the firm's cost of creating it. Value is what buyers are willing to pay, and superior value stems from offering lower prices than competitors for equivalent benefits do or providing unique benefits that more than offset a higher price (Porter, 1985, p. 3).

However, he believes that working in an extremely competitive environment means that a competitive advantage is rarely unique and the source and nature of these advantages often changes rapidly. Competitor firms will always try to imitate, duplicate, and surpass any move by a firm to gain a competitive advantage, which makes every advantage attained by the firm temporary (Schnaars, 1994).

¹ Competitive Advantage can also be referred to as Competitive Edge, Distinguishing Features, Unique Selling Position, Discriminators and Differentiators (Smith, 2006).

To achieve above-average performance, Porter (1985) suggests that a firm needs, not only to continuously create new competitive advantages, but also to sustain² those advantages. Sustainability is considered as fundamental to succeeding in the competitive environment and without it a firm will find it extremely difficult to compete in the market (Flouris and Oswald, 2006). Barney (1991, p. 102) comes up with this definition:

A firm is said to have a sustained competitive advantage when it is implementing a value-creating strategy not simultaneously being implemented by any current and potential competitors and when these firms are unable to duplicate the benefits of this strategy.

It is, therefore, assumed (Wharton School, 1997) that there are no longer any sustainable advantages except for firms with a strong reputation and highly experienced people. Firms that act as monopolists³ or have near monopoly power can also sustain their advantages (Smith, 2006).

More recent definitions consider strategy as activities that the firm undertakes in order to react to the environment. Strategy is defined by Barney (1997, p. 27) as:

The strategy that neutralizes threats and exploits opportunities while capitalizing on advantages and avoiding or fixing weaknesses.

This definition emphasises the importance of analysing the firm's external environment in order to determine what can be achieved internally. Both strengths and weaknesses are related to the internal environment, whereas opportunities and threats are related to the external environment of the firm. The analytical tool used to distinguish these four factors is known as SWOT (Strengths, Weaknesses, Opportunities and Threats) (Oxford

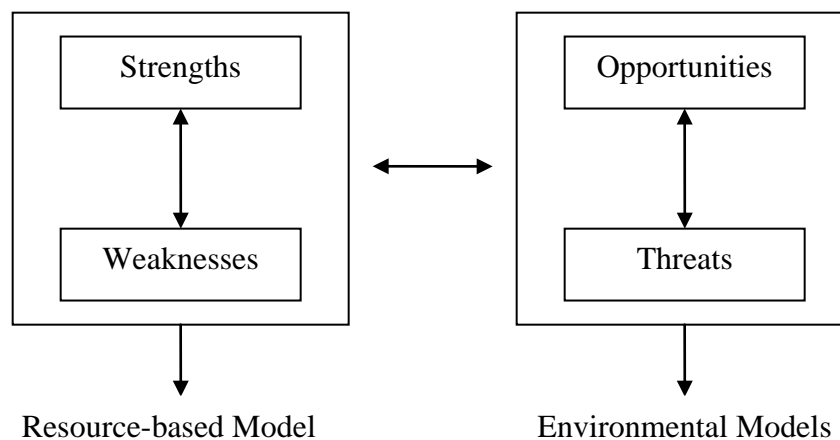
² Sustainability means that a competitive advantage cannot be competed away as other rivals are unable to imitate it.

³ Monopoly is a situation where at least quarter of a specific product or service is provided by one dominant company (Dibb et al. 2006).

University, 2007). While strengths refer to factors inside the firm and the resources available to undertake activities to be able to compete effectively, weaknesses are features that place the firm at a disadvantage in the market and in the view of its customers (Dibb et al. 2006). The opportunities and threats are the anticipated events and trends that may occur in the environment and outside the company, which may alter the competitive position of a firm (Jobber, 2007).

Factors in a firm's environment can be analysed using a wide range of techniques. While the external environment can be analysed using environmental models, the internal environment can be analysed using a resource-based model which examine the resources and capability of a firm (Barney, 1991). The relationship between the internal and external environments and their four factors are illustrated in figure 2.2.

Figure 2.2: The relation between the internal and external environments



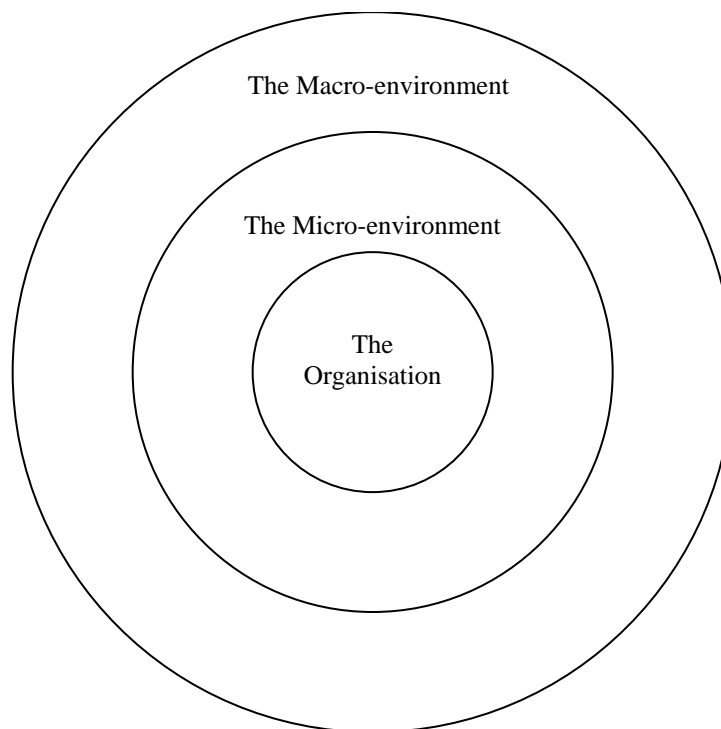
Source: Barney (1991)

Although changes in the external environment are usually out of a company's control and are difficult to predict (Wharton School, 1997), researchers in the field of strategic management (e.g. Porter 1980, Barney 1997, Wit and Meyer 1998, Grant 2008, Henry 2008) point out that organisations should continuously analyse the impact of trends in their external environment that may indicate future changes in their business. A strategy should allow a firm to use its internal resources and capabilities either to profit from

opportunities or to respond to threats in the external environment (Wharton School 1997, Barney 1997, Wit and Meyer 1998, Henry 2008). Industries with low degrees of threats and high degrees of opportunities are considered to be more attractive and profitable for firms than industries where there are high degrees of threats and low degrees of opportunities (Porter, 1980). Threats can lead firms to incur higher costs, decrease their profits and reduce their overall business performance (Barney, 1997).

The external environment of an industry can be classified into two categories: Macro-environment and Micro-environment; also referred to as General Environment and Competitive Environment (Henry 2008). While the analysis of the general environment takes into account the changes that may not have an immediate impact on a firm, the analysis of the competitive environment involves looking at the other competitor firms in the industry. Figure 2.3 shows the relationship between the organisation and its macro and micro-environment.

Figure 2.3: The relation between the organisation and its environment



Source: Henry (2008)

2.3 THE EXTERNAL MACRO-ENVIRONMENT

Although factors in the external macro-environment may not directly interfere with the competition between firms, these factors do drive firm policy and set the conditions of market demand, regulation, and political influence under which the firm is required to operate. Thus, this general environment may play as much of a role in the development of the competitive environment as the direct competitive factors in some cases, and almost always has a significant role in the competitive nature of the industry. In order to assist the analysis of the general environment firms require a functional tool such as the PEST or the extended PESTEL Analysis, which distinguishes between, Political, Economic, Social, Technological, Environmental and Legislative factors (Oxford University, 2007). Components of the PESTEL Analysis are explained in sequence below. Their relevance and impact on the airport business industry are also discussed in detail.

2.3.1 POLITICAL FACTORS

Political forces can have a direct impact on firms and industries. Political influences such as deregulation and liberalisation of the air transport industry have had a great impact on opening up markets to competition in the aviation industry in the past few decades (Freathy, 2004). Governments are seeking to build and develop airports not just to improve the infrastructure of the country, but also to encourage local and regional development by creating opportunities to increase the economic growth of surrounding areas (Jarach, 2005). Airports present an international gateway to the global market and an important spur to social and economic benefit (ACI, 2006). Besides the economic development generated from establishing an airport within a region, such development is considered preferable by some governments who believe that it will give their countries leading roles in the region (Kraus and Koch, 2006). In this sense, airports may be strongly supported by their national governments.

While some political trends have the ability to enhance competition, political instability, on the other hand, could alter travel throughout the world and impact on the aviation

system (Flouris and Oswald, 2006). Therefore, government stability must be taken into account in some places around the world (Henry, 2008). Shocks and events such as the terrorist attack of September 11, the conflicts in the Middle East and the health concerns in some parts of the world, have had a significantly negative impact on the numbers of people travelling by air over the last few years (Freathy, 2004). Such events could also result in shifting traffic from one airport to another (Tretheway & Kincaid, 2005).

2.3.2 ECONOMIC FACTORS

While political factors influence the ways in which a firm can do business and may influence the degree to which foreign and domestic firms are willing to engage in investment, economic factors in a region are directly related to the amount of demand the firm can expect to face and how well the firm can expect to do during a specific time period (Grant, 2008). Economic factors that could impact on a firm performance include: inflation, business cycles, interest rates, economic growth, unemployment, money supply, disposable income, energy availability and general income (Johnson, 1999). Change in the economic state affect and are affected by forces including supply and demand, buying power, willingness to spend and consumer expenditure levels (Dibb et al. 2006). Since economic situations fluctuate and differ from one region to another, firms tend to select the economic influences that are relevant to their business and monitor them (Jobber, 2007).

The growing globalisation of business and trade is a primary factor shaping the demand for air travel around the world (Williams, 2006). A study by Lin and Hong (2006) finds that the operational performance of airports is related to the economic growth in the country in which it is located. The Airport Council International (ACI) put it this way:

No progressive region can sustain growth and prosperity without good airport infrastructure and convenient connections to the global marketplace (ACI, 2006, p. 6).

Therefore, the development of an airport would be likely to allow the region in which the airport operates to become of greater economic importance. In return, the airport will benefit from the economic activities undertaken within the region. International business and trade activity is also needed for the success of an airport. It is argued (Tretheway & Kincaid, 2005) that the development of Free Trade Zones (FTZs) within airports can have a significant influence on generating and encouraging the development of wide range of business activities.

2.3.3 SOCIAL FACTORS

Unlike the political and economic factors involved in the PESTEL Analysis, the social and cultural factors involved can impact not only on the attractiveness of the product but can also determine what challenges the firm will face during the current time in operations (for example, getting and keeping workers or branding challenges due to customer attitudes). Changes in the social environment can influence the demand for a firm's products and the availability of workforce (Jobber, 2007). There are a number of social and cultural forces that may have an impact on industries including: Population demographic, attitude to work and leisure, level of education, culture differences within and between nations, social mobility, lifestyle change, and the influence of consumerism⁴ (Jobber, 2007).

Demographic and population factors are important considerations in the overall competitive environment of the airport industry, as such factors drive consumer demand, which will determine what level of supply of airports is required for the overall market, as well as what types of strategic movements are likely to be effective. While demographic factors are important, social and cultural differences, educational levels, lifestyles, and attitudes toward work as well as levels of consumerism are all factors that would be likely to play an important role in the overall competitive environment of an airport company.

⁴ Consumerism is any organised actions undertaken by a group of local people and organisations against undesired business practice.

2.3.4 TECHNOLOGICAL FACTORS

While political, economic and social factors drive the firm's ability to compete in terms of intangible issues, technological factors involved in the environment can impact on the firm's ability to achieve the efficiency level required to compete (Grant, 2008). Technology can have a great influence on firms' competitive situation and can be defined as:

The application of knowledge and tools to solve problems and perform tasks more efficiently (Simon, 1973, quoted in Dibb et al., 2006, p. 78).

This knowledge often comes from scientific research and development (R&D) programmes undertaken by universities, businesses and other organisations to resolve a particular problem (Dibb et al., 2006).

Technological factors that could affect a firm include government and industry focus on technological efforts, government spending on research, new developments, speed of technology transfer, and rate of obsolescence (Johnson, 1999). The change of technology can have a great and broad effect on allowing new industries to emerge, new firms to enter the market at a lower cost, thus influencing customers' buying decisions and the way in which existing industries compete (Henry, 2008).

The aviation industry is widely affected by the introduction of new technologies, which is occurring more quickly than any time in the aviation history (Fife & Mcnerney, 1998). Technology and innovation are required by the aviation industry in order to challenge the current global downturn and to be prepared for the anticipated growth in the future (Cream, 2009). Technological change may be one of the forces driving the transformation of the airport industry. For example, the development of new larger aircraft such as the recently introduced Airbus A380, which requires longer runways and larger gates as well as different operational procedures, has changed the way that

airports operate (Forsyth, 2005). Advanced aircraft technology that overcomes the barrier of long distances has given some airports, such as those located in the East Asian region, a major source of competitive advantage (Williams, 2006). Another example is the development of alternative measures that decrease the reliance on fuels to run aircraft, which if successfully achieved, may be considered as a significant technological change in the aviation industry (Fife & Mcnerney, 1998). Such technological alterations in the aviation industry may transform the operation and competitive situation at airports.

2.3.5 ENVIRONMENTAL FACTORS

Environmental factors are a relatively recent concern regarding the competitive environment in most industries, but an increasingly important issue. People in society do not want to have just the basic requirements of life; they also desire to achieve the highest standard of living and quality of life. Concerns over issues that have a great impact on the environment and people's lives such as global warming, pollution control, waste disposal and conservation of energy and other scarce resources are growing (Upham, 2003). Thus, society's concerns have a very significant influence on creating both threats and opportunities for industries (Dibb et al. 2006). Environmental factors may include the impact of the industry on the environment, environmental concerns regarding competitive structures, legislative and regulatory environments, and necessary changes in the industry due to environmental concerns.

The impact of the aviation on health issues is seen to have increased with the global growth in the number of aircraft (Upham, 2003). Airports and their airline customers are among the contributors to noise and air pollution, although with a small amount in comparison with other mode of transportation in large metropolitan areas (Fife & Mcnerney, 1998). One major concern is the issue of the carbon footprint of airline flights, which is estimated by some researchers to be one of the most dramatic impacts on global warming, with a total contribution of approximately 6% of greenhouse gases to the atmosphere (Bakic, 2008). Such environmental concerns are the forces driving the

transformation of the airport industry (Delfmann et al., 2005). It may be considered as one of the main reasons why some airports located in or close to cities are unable to expand their infrastructure and operations.

2.3.6 LEGAL FACTORS

Legal factors can include conventions, agreements, and legislation which industries and individual firms are subject to (Grant, 2008). Legislative concerns can restrict specific strategies or can make others less effective. A number of regulations and anti-trust laws may dramatically affect the performance and the profitability of firms in an industry. The aim of such regulations is often to encourage competition and to discourage practices such as monopolies that allow firms to act in a way that is against the social benefit (Oster, 1994).

In the aviation industry, besides the international aviation conventions and agreements such as the Chicago Convention which is established as an international regulatory air transport system that deals with many aspects of aviation, there are other organisations such as the International Civil Aviation Organisation (ICAO) and the International Air Transport Association (IATA) which have the right to introduce a number of recommendations on the international level. These international regulatory bodies can influence the way the main aviation players perform (Doganis, 1992). In addition, countries usually have specific laws and regulations, usually in the form of government body like the Civil Aviation Authority (CAA), to prevent airports from over pricing their facilities and from abusing their market power (Button 2005, Oum et al. 2004). The degree of market power of an airport is determined largely by the availability of other airports in close proximity (Starkie, 2002), and the ability of airlines to switch to an alternative airport (Graham, 2004). Imposing pricing rules and formulas that limit the maximum amounts that an airport is allowed to charge airlines for using its facilities is a way to prevent airports from being monopolists. The form of price regulation varies from an airport to another, with the most popular implemented being Rate-of-return (ROR) and Price-cap (Graham, 2003).

The ROR form of regulation can be in two forms: *explicit* or *de facto*, and it is argued (Oum et al. 2004) that this form of regulation can lead to inefficient investment as it does not allow managers to reduce costs and improve efficiency. On the other hand, the price-cap system can be in the form of *Single-till* or *Dual-till*. This form of regulation has been widely adopted by countries including the UK and Australia. The single-till approach takes into account both charges related directly to the processing of aircraft and their passenger/cargo (*aeronautical*) and income derived from commercial services (*non-aeronautical*) available at the airport as a single income source when setting charges. Under the dual-till approach, airport revenues would be divided into aeronautical and non-aeronautical revenues.

Other airports, such those in the US, may be subject to either the *compensatory* pricing or *residual cost* pricing system (Graham, 2002). Airports implementing the compensatory pricing system charge airlines only the full cost of facilitating and servicing them. Under the residual cost pricing airports charge airlines the total revenue of the airport minus all revenue collected from non-aeronautical activities. These pricing mechanisms are quite similar to single-till and dual-till, but there are some differences. Under the residual pricing system airlines have to sign long-term airport use agreements that entitle them to cover any financial shortfall that may occur (De Neufville and Odoni, 2003).

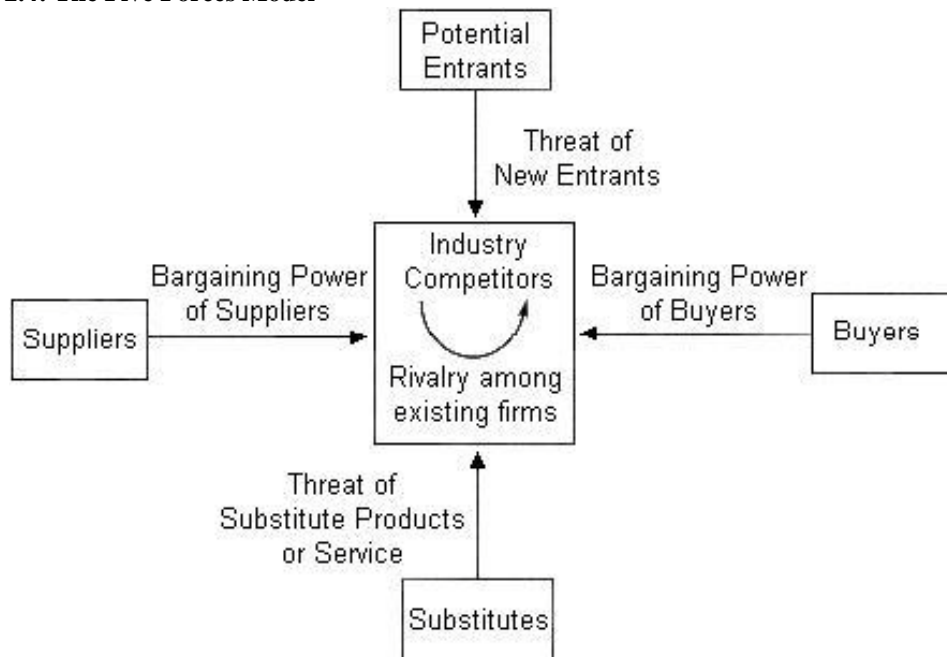
2.3.7 LIMITATIONS TO THE USE OF THE PESTEL ANALYSIS

As with many other business analytical tools, the PESTEL Analysis has some limitations with its implementation including the need for deep consideration for each of the factors that may change suddenly and are usually difficult to predict (Henry, 2008). Nevertheless, it is considered as a useful business tool that is widely used to analyse the macro-environment (Oxford University, 2007).

2.4 THE EXTERNAL MICRO-ENVIRONMENT

The competitive environment can be analysed using the Five Forces Model developed by Porter (1980). Authors (e.g. Oster 1994, Barney 1997, Wharton School 1997, McGahan 2004, Grant 2008) assert that the Five Forces Model is a vital, and the most influential, tool in analysing the competitive environment. As shown in figure 2.4, Porter (1980) argues that the state of competition in an industry depends on five competitive forces including: Rivalry among current competitors, Threat of entry, Threat of substitution, Bargaining power of buyers and Bargaining power of suppliers. He believes that recognising the strongest force is important in terms of formulating competitive strategy, and the combined intensity of these five forces determines the potential for profitability in an industry.

Figure 2.4: The Five Forces Model



Source: Porter (1980)

2.4.1 INTENSITY OF RIVALRY

Porter (1980) argues that competition amongst existing rivals takes place largely when a firm or firms in one industry seeks to improve their position and their financial

performance. In some industries where one or few large firms have market power, the other small firms can act like followers to the leader firms. They are not likely to compete due to their extensive production experience and much lower output cost (Schnaars, 1994). However, when there are a large number of small firms or there are a small number of equally balanced firms within an industry, it is argued (Porter, 1980) that rivalry is likely to be very intense. Any move by one firm to attract more customers would affect other firms and would be likely to give an incentive for competitors to act quickly to defend themselves. Such responses from competitor firms may intensify and escalate over time.

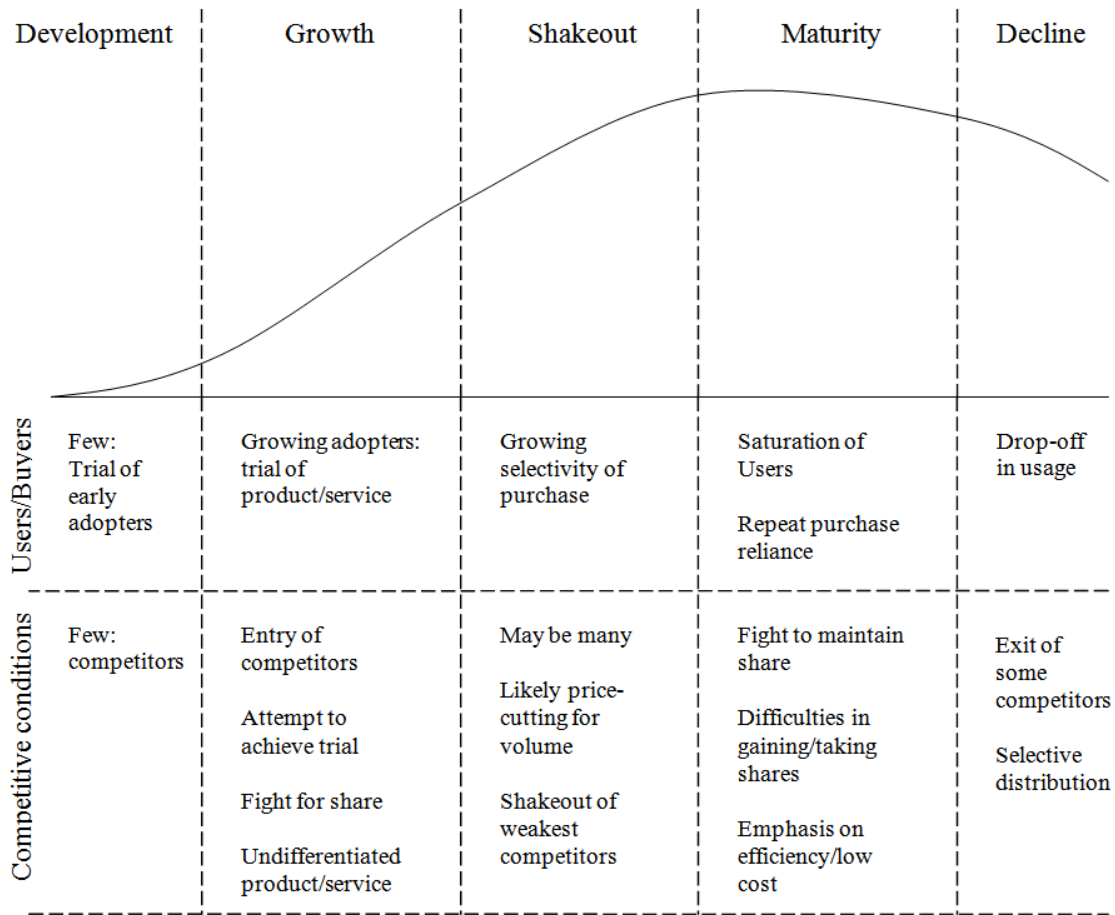
When firms fall under different groups with diverse characteristics and have different goals, they may have dissimilar views and may develop different sophisticated methods to compete (Wharton School, 1997). Porter (1980) believes that firms, mainly those that strive to establish their robust position on an international level to gain worldwide reputation, may even have the potential to give up profits and incur losses in order to achieve their goals. Therefore, intense rivalry among firms in an industry will drive them to compete on prices, which in return will reduce average profitability (Porter, 1980). Furthermore, when there are a large number of firms in a given market, there is a greater uncertainty about relative costs and other operating factors, which may reduce opportunities for cooperation between firms (Oster, 1994).

In the case of airports, it is argued (Doganis, 1992) that the concentration of traffic at a large number of small airports within a region will result in increasing the operational cost of each of the airports due to the spread of traffic between them and the increase in unit costs. Doganis (1992) assumes that when there is a small number of large airports serving a region, airports will find it more profitable to operate, as unit cost would be likely to be lower for each of the airports. The intensity of the rivalry among existing airports is usually dependent on airports' locations and their proximity to each other (Starkie 2002, Graham 2004). Barrett (2000) argues that the overlap of the catchment areas, which can be determined by the depth of the market and the production technology (Starkie, 2002), is likely to cause significant rivalry among airports. Studies

by Cranfield University (Fewings 1999, cited in Barrett 2000), covering 13 countries and 431 airports, found that in countries like the UK, France, and Germany there are respectively, 34, 32, and 28 airports located within an hour's surface access of another airport. In the remaining 10 countries, the study shows that there are 131 airports within one hour surface travel and 369 in one to two hours journey time. Another example is the enormous overlaps between the major airports in the Asia-Pacific region (ACI, 2006). Conversely, in situations where an airport is located in distant areas or in an island where there is no other competitor airport in close proximity, the amount of rivalry is likely to be very low (Graham, 2004).

Since industries pass through different stages, known as the Market Life Cycle (Development, Growth, Shakeout, Maturity and Decline), each of these stages has an impact on a firm's competitive situation and the intensity of rivalry (Porter 1980, Johnson 1999, Henry 2008), as illustrated in figure 2.5. It is essential for firms to understand their industry's life cycle in order to formulate strategies that match the needs of each of the stages. In the case of the airport business industry, Graham (2004) argues that the airport business is still in the growth stage and has yet to reach its maturity. This assumption means that the competitive situation in the airport industry is likely to be less intense than other industries operating in shakeout, maturity or decline stages. Therefore, airports in general are able to achieve growth more easily due to the availability of market shares.

Figure 2.5: The Life Cycle Model



Source: Johnson (1999)

In some industries, where high fixed costs are incurred, firms tend to use every available means such as lowering their prices to attract more customers and to fill their under-utilised capacity, which leads to higher intensity among existing rivals (Porter, 1980). Constructing a green field airport or developing an existing one in order to satisfy aviation demand or to accommodate a new type of traffic requires substantial capital investment that is likely to be in the form of fixed cost and would create efficiency problems in relation to investment cost-recovery (Forsyth, 2005). A firm with high fixed assets will find exit from particular markets quite difficult and will have to perform even if they are achieving low profitability (Porter, 1980). Assets are not just the infrastructure and the resources possessed by a firm, but can also be a brand name or information about the way a specific business works (Oster, 1994). Since an airport's infrastructure has no alternative uses except for its purpose and cannot be transferred to

another place, they might be thought to be highly specific assets. It is argued (Forsyth, 2005) that the imposition of higher airport charges, reflecting the user's willingness to pay (Button, 2005), will pose difficulties in ensuring the efficient use of airport facilities and would be likely to lead to under-utilisation of airports. Therefore, in order for an airport to avoid this efficiency problem its charges should be either kept at the same level or lowered so that users are attracted to use its facilities (Forsyth, 2005). Lowering airport user charges, although it will reduce revenues over the short-term, will improve airport efficiency over the long-run, when the demand for the facility becomes higher (Zhang and Zhang, 2001). Discounted airport charges for airlines starting new routes or services from an airport for a limited time to fill up under-utilised airport capacity are now broadly used by airports (Clayton, 1997). Such airport discounts if adopted by large number of airports, and if taking place for a long time, may cause higher intensity among existing airports.

2.4.2 THREAT OF ENTRY

Easily accessible and profitable industries are likely to attract new entrants which may lead to intense levels of competition (Wharton School, 1997) with profits declining for some existing firms due to forcing prices down (Porter, 1980). The accessibility of the market and the threat of new entrants are dependent on the number of entry barriers that may discourage potential entrants and lower their profit prospects. In some industries, in order to be able to compete, the entry to the market requires significant capital costs, not only to be spent on resources and facilities but also on advertising and R&D (Porter 1980). Such financial requirements may deter new entrants who are not willing to participate in such investment.

In the case of airports, the construction of a new airport or even the building of a new terminal requires large investment on land, facilities and equipment, as well as on qualified people to operate and handle aircraft, passengers and goods. The cost of such airport development projects can differ significantly depending on size, location and objective of the company. For example, while the expansion of a terminal building in

Lima, Peru, required a capital investment of US\$1.2 billion, the development of a Greenfield airport in Bangalore, India, required an investment fund of only US\$180 million (Kraus and Koch, 2006). Another example is the current Zagreb Airport in Croatia, which is currently undergoing an expansion in order to increase its capacity from its current 2 million passengers per year to 3.3 million passengers per year (Airport Technology, 2007). This three-year project, which will add a second terminal building to the current airport, is expected to cost between €280 million and €300 million before its completion in 2012 (Airport Technology, 2007). Likewise, the expansion of Muscat International Airport in Oman is projected to cost US\$1.7 billion for expansion of the existing terminal and building a second terminal in order to accommodate 12 million passengers per year (Airport Technology, 2009). Therefore, the substantial capital cost required to build a new airport can deter firms from entering the airport market (Cream, 2009).

Government policy can limit the entry of new competitors through imposing some regulations and restrictions on some industries. In some industries, the entry of a new firm can also be controlled by governments that impose rules to protect incumbents. Licenses and patents can prevent and deter the entry of new firms and create imbalances between existing firms and potential entrants (Oster, 1994). As outlined earlier when reviewing the macro-external environment, industries may be controlled and monitored by government bodies or authorities that would be likely to demand control requirement which may expand the capital needed in order to enter the market. There are usually long, expensive and complicated planning procedures that need to be followed in order to obtain an approval for a new airport development, which may act as barriers to participating in the airport business (Cream, 2009). Furthermore, the involvement of national government in determining the prime hubs can also form a barrier for other secondary airports to establish their position in the market (Williams 2006). The limited availability of land sites for airport development and expansion projects is also another barrier to the airport market (Cream, 2009).

On the other extreme, some government policies may encourage the entry of new competitors. For example, decisions by government to convert military airfields to civil airports, due to reducing military requirements, may influence the operation performance and competitive situation of existing airports (Barrett, 2000). Airport privatisation, which is driven mainly from the need to make airports more self-sufficient and to minimise government spending on capital investment (Delfmann et al., 2005), may also encourage the entry of new competitor airports to the market.

It is argued (Johnson, 1999) that for some industries, economies of scale⁵ are extremely important and can discourage new entrants through forcing them to enter either at a large scale and thus having the risk of strong response from existing competitors or at a small scale and having cost disadvantages. Neither of these situations is acceptable to firms (Porter, 1980). Due to the nature of their infrastructure and fixed costs, it is argued (Doganis, 1992) that airports can benefit from marked economies of scale. Economies of scale can lead airports to gain an advantage over other rivals (Cream, 2009).

A number of studies have highlighted the relationship between airport traffic volume and unit cost. A study by Doganis and Thompson (1973, cited in Doganis, 1992) indicates that as traffic grows beyond a level of about 3 million passengers, unit costs flatten out and do not seem to vary with airport size. In other words, as traffic builds up at an airport, facilities are better utilised and their costs are spared over a larger number of users. ICAO undertook a study and found that work unit costs for an airport of less than 300,000 passengers averaged US\$15, and around US\$9.4 for airports with passenger throughput between 300,000 and 2.5 million, and around US\$8.00 for airports handling traffic between 2.5 million and 25 million (Graham, 2003). Salazar (1999, cited in Graham, 2003) conducted a study for larger airports and found constant average costs in the range of 3.5 to 12.5 million passengers per year. He argues that the average unit cost increases if airports become congested. Researchers (e.g. Helm and Thompson 1991, Doganis 1992) also believe that airports can benefit from significant

⁵ Economies of scale is identified as the decline in product unit cost due to an increase in a firm's output by expanding its scale of operation (Oster, 1994).

economies of scale unless they overinvest in their infrastructure, which is likely to lead to a greater unit cost over the short-term due to the increase in operational costs. Therefore, they suggest that airports should delay any development programme as long as it is possible to keep their unit costs down. However, studies (e.g. Starkie, cited in Graham, 2004) indicate that economies of scale have no impact on deterring new airport entrants. The entry of a new competitor airport, which will take traffic away from the congested one, would be likely to lead to a more efficient allocation of flights at airports (Forsyth, 2003), which in turn would lead to lowering the unit cost at the congested airports.

2.4.3 PRESSURE FROM SUBSTITUTES

A firm in an industry is also competing with other firms in other industries which produce substitute products or services. Porter (1980) identifies a substitute product or service as a product or service in one industry that can be substituted for a product or service in a different industry. He suggests that some substitute firms can be seen as direct competitors as they impact on the profitability of a firm by placing a limit on the prices that the firm can charge. Porter points out that one way to identify substitute competitors is by examining and analysing other products that can function as the product of the industry. Wharton School (1997) believes that substitute can be viewed from either a demand-side or a supply-side perspective. While the demand-side perspective looks for all the ways in which customers can satisfy their needs, the supply-side perspective includes all the rivals with the ability to serve these customers.

Airports are competing against other modes of transportation such as rail, roads and seaports, hence these services can be considered as substitutes (Williams 2006, Cream 2009). In North America, following the act of 9/11, short-haul airlines competed with road travel which has increased by over 25% in some regions (ACI, 2006). In addition, the increase in fuel prices in North America has led to the diversion of air freight to road and rail transport (ACI, 2006). Fuel costs have the ability to encourage or discourage people to drive long distances using their own transport (Cream, 2009). In Europe, the

major development in rail services, aiming at reducing the time necessary to travel by rail, is likely to cause a threat to airlines and airports, especially those that provide short-haul and regional services (Pitt and Brown, 2001). These services may act as substitute to feeder flights and local airports through connecting hubs with points outside the catchment area.

Pitt and Brown (2001) argue that airlines, mainly short-haul carriers, are competing against rail operators on the grounds of price and time. They believe that while the process of getting into the airport, checking in for flights and boarding the aircraft can be very complicated and time consuming, the process of boarding the correct train at the correct time is considered much simpler. Therefore, unlike travelling by air, a train traveller can arrive just a few minutes before the train departure and, in the case of missing the train, the traveller can still board the next one within a short time with only a slight delay. Although trains might have some impact on the demand level of airport mainly regional and short-haul services (Dennis, 2001), this may not be the case for airports providing long-haul traffic where flying may be the only available option. In addition, flying can be considered as a more attractive and cheaper way of transportation (Graham, 2004). Therefore, the threat of substitutes in the case of airports may be considered as relatively high and of greater importance for regional and local airports, whereas it can be regarded as relatively low for airports providing long-haul services that cannot be substituted by other means of transportation. Furthermore, the presence of reliable ground transport facilities is essential for airports in order to increase the number of potential passengers through enlarging the airport's catchment area (Cream, 2009).

2.4.4 BARGAINING POWER OF BUYERS

The buyer group can be classified as all the companies or individual buyers that purchase a product or service from one seller firm in the market. Powerful buyers are able to not only force down product prices but also have the capability to influence product quality levels (Oster, 1994). In the airport industry, airlines are seen as the main

buyers of the airport product (Cream, 2009). Airlines can have a significant power over an airport if there are a limited number of airlines serving that airport (Graham, 2004). At some airports, a strong home based carrier may account for most of the traffic which creates a strong dependency of the airport on the national carrier. Flag and major air carriers can have a great influence on airports, particularly if it is influenced by governments' decision to encourage economic and social activities (Williams, 2006). This may be the case at some airports in the US where some airlines are dominant and create an entry barrier to other small carriers trying to get access to major airports like Chicago's O'Hare Airport (Pitt, 2001).

Because some investment projects are pre-financed at some airports in the US by the major airlines, it is argued (Oum et al., 2008) that these airlines experience significant market power over airports' decisions on capacity investment, user charges, and other key strategic decisions. A study by Brueckner (2002) to analyse airport pricing when airlines have market power finds that airlines with monopoly power can set fares at airport as they choose. In addition, larger and well established alliances between airlines could lead them to possess considerable market power over airports (Graham, 2004). More recently, the economic downturn has allowed airlines, mainly low-cost carriers (LCCs), to further negotiate airport charges, which demonstrates the power that such airlines possess over airports (Cream, 2009).

2.4.5 BARGAINING POWER OF SUPPLIERS

Suppliers are all companies that provide component parts to the overall product produced by a firm, and may possess significant power over that firm if such parts are essential for the final product (Porter, 1980, Flouris and Oswald 2006). Ground handling, catering, fuelling, air traffic control, commercial facilities, police, immigration and custom checks are all activities that are essential for the operation of an airport. Activities such as ground handling and commercial facilities can be supplied either by a third party or by the airport itself. Other activities, including immigration and security, are normally not the airport's responsibility and they are usually decided,

controlled and financed by national governments. The power of suppliers in the case of airport can differ considerably depending on whether the services are provided by the airport itself or by other supplier companies (Graham, 2004). If products and services such as aircraft ground handling and ground support equipment are provided by the airport itself, then the bargaining power of suppliers is considered to be low. Whereas, when other companies supply such services, the power of the supplier group can be relatively high.

2.4.6 LIMITATION TO THE USE OF THE FIVE FORCES MODEL

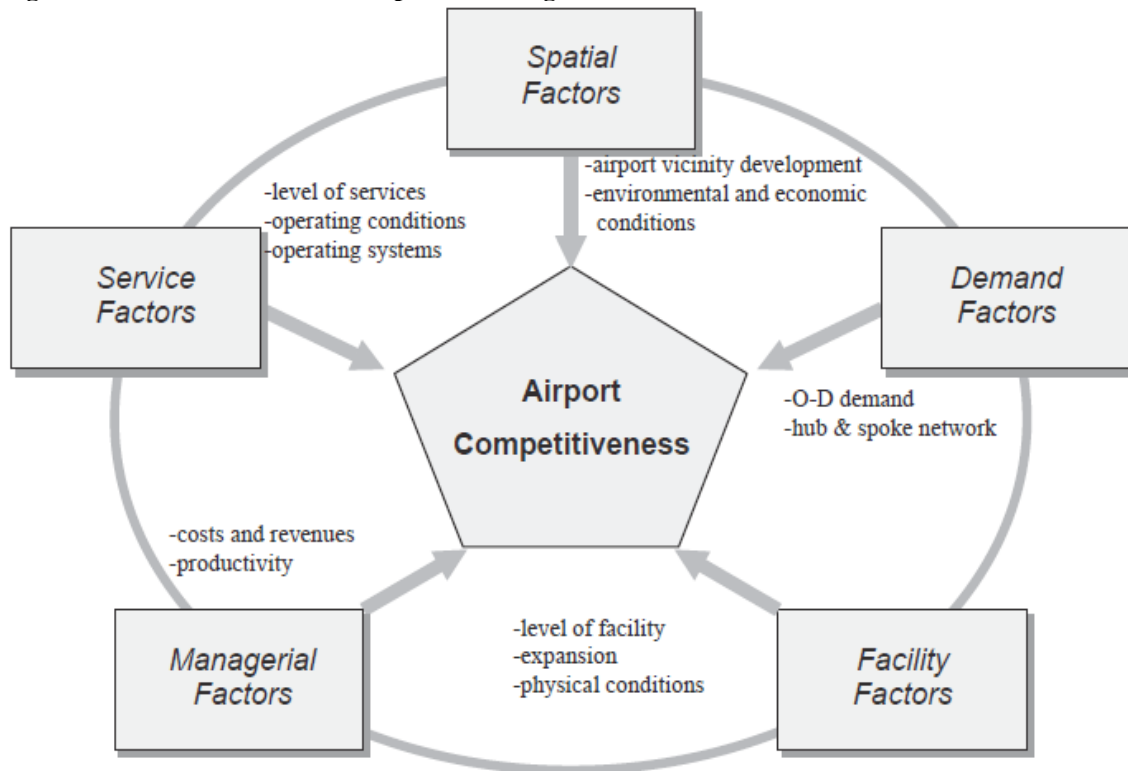
Although authors (e.g. Oster 1994, Barney 1997, Wharton School 1997, McGahan 2004, Grant 2008) assert that the Five Forces Model is a powerful tool in analysing the competitive environment, they argue that the model has some weaknesses and limitations when applied to industries. Wharton School (1997) states that the Five Forces Model does not take into consideration factors such as: government and regulatory intervention, technological change and growth and volatility of market demand. Oster (1994) argues that Porter's model ignores other important factors that may impact on the level of profitability such as industry history and institutions. Grant (2008) asserts the importance of factors such as complementary products and services provided by a firm, and believes that suppliers of such complements create value for the industry and have the ability to exercise bargaining power. He, therefore, includes 'Complements' as a sixth force to the Five Forces Model. Adding such a sixth force could make the framework more defensible and precise as it allows firms to recognise their interdependencies (Henry, 2008). McGahan (2004), on the other hand, argues that this model does not explain where changes come from, when changes are systemic, and how firms can respond to these changes effectively. Barney (1997) suggests that in order to enable managers to better understand their industry the Five Forces Model must be combined with another theoretical framework that analyses change in the macro-external environment.

2.4.7 IMPLICATIONS OF THE FIVE FORCES MODEL ON AIRPORTS

In an attempt to apply the Five Forces Model to the airport business industry, Graham (2004) points out that there are some difficulties and limitations to applying the model. She believes that while forces including threats of new entrants and substitutes can be considered as very low, forces including existing rivalry, power of suppliers and power of buyers are difficult to generalise.

Park (2003) applies the Five Forces Model to some major Asian airports and finds that the competitive strengths of an airport company depend on five core factors including: Spatial, Demand, Facility, Managerial and Service. Figure 2.6 illustrates the five core factors model of airport competitiveness.

Figure 2.6: The five factors of competitive strengths



Source: Park (2003)

Park (2003) argues that demand is the most important factor for East Asian Airports and consists of elements including the level of origin and destination demand and that of

transit and transfer traffic volumes for hub and spoke network development. He argues that service factor is the second most important factor of competitive strengths. Service factors may include the levels of service provided to passengers and types of airport operations. Spatial factors, including the airport geographical location and the level of regional development around the airport, are a major source of strength that an airport can possess over other competitors. He also finds that airport facilities that are provided in order to serve airlines and passengers and to process baggage can be a source of competitive strengths for an airport. In addition, he argues that managerial factors, which may include airport ownership, productivity, operating cost, revenue structure, and the ratio between aeronautical and non-aeronautical revenue can form a major strengths for airports.

2.5 THE INTERNAL ENVIRONMENT

Writers (e.g. Porter 1985, Barney 1997, Johnson, 1999, Fahy 2001, Barenly and Clark 2007, Grant 2008, Henry 2008) also emphasise the importance of analysing the firm's internal environment, which can be analysed through understanding a firm's internal resources and capabilities. They believe that resources and capabilities can lead firms to gain competitive advantages.

2.5.1 THE RESOURCE-BASED VIEW OF THE FIRM (RBV)

The RBV of the firm holds that in order to build a competitive advantage, the firm must be able to lay claim to specific resources that it can use to build this advantage, This view suggests that the key to profitability is through exploiting differences and the uniqueness of a firm's resources (Barney 1997, Fahy 2001, Barenly and Clark 2007). However, resources are only weakly defined in the RBV of the firm (Priem and Butler, 2001) and there is no general classification in the literature of what can be claimed as firm resources (Wit and Meyer, 1998). Barney (1997, p. 142) suggests that "*any of a wide range of firm attributes can be considered resources.*" Grant (2008, p. 130) identify resources as "*The productive assets owned by the firm.*" Daft (1983, quoted in Barney, 1997, p. 142-143) identify resources as:

All assets, capabilities, competencies, organisational processes, firms attributes, information, knowledge, and so forth that are controlled by a firm and that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness.

Capabilities, which are also referred to as competencies, can be defined as: “*the attributes that firms require in order to be able to compete in the marketplace*” (Henry, 2008, p. 129). An organisational capability is also defined as “*a firm’s capacity to deploy resources for a desired end result*” (Helfat and Lieberman, 2002, quoted in Grant, 2008, p. 135). The term Core Competencies⁶ is used to distinguish those capabilities and activities fundamental to a firm (Barney, 1997). Core competencies can be defined as “*a cluster of attributes that an organisation possesses which in turn allows it to achieve competitive advantages*” (Henry, 2008, p. 129).

Barney (1997) argues that firm resources can be classified into four categories: Financial Capital, Physical Capital, Human Capital and Organisational Capital. Resources can also be classified as Tangible and Intangible resources (Grant 2008). Tangible resources are similar to those identified by Barney as financial and physical resources, and they are considered the easiest to identify (Grant 2008). Resources such as the firm’s reputation, technology and cultural assets are regarded as intangible (Grant 2008). Intangible resources can be of more significance than tangible resources, mainly because they can be a major source of sustainable competitive advantage (Oster 1994, Johnson 1999, Grant 2008).

2.5.1.1 Financial Capital

Barney (1997) identifies financial capital as all the money resources that the firm can employ to carry out its strategies. He points out that financial capital can come from retained profits, entrepreneurs, equity holders, bondholders and banks. Due to the large

⁶ *Distinctive Competencies, Distinctive Capabilities or Strategic Capabilities* are also terms used to refer to activities these are performed by a firm in a way much better in relation to its competitors.

amount of capital required for airport development projects, financing is seen as an area of concern for airports (Winston 1991, Doganis 1992, De Neufville and Odoni, 2003, Graham 2003, Wells and Young 2004, Forsyth, 2005, Oum et al. 2008). Funds generated from airport revenues are, in most cases, not sufficient to cover major airport investments (Doganis 1992, Wells and Young 2004). Therefore, the availability of borrowing capacity for airports, as well as their internally generated revenues, could be crucial sources of internal advantage.

There are different sources of airport financing that can be identified including: outright government grants, special-purpose user taxes, low-cost loans from international and national development banks, operating surpluses, loans from commercial banks, general-obligation bonds, revenue bonds and private financing against specified rights to airport revenues (De Neufville and Odoni, 2003). The different sources of financing can impact on airport costs in two ways: *“First, they affect the annual level of interest charges and also the annual depreciation costs. Second, they influence the level and timing of investments and thereby affect an airport’s operating costs”* (Doganis 1992, p. 168). Large numbers of world airports have been subsidised by their national governments (ibid.). As discussed earlier, airports are seen by governments as a crucial part of infrastructure (Kraus and Koch, 2006). However, the growth in the number of airports, their physical size and operational complexity, as well as the increasing emphasis on airports to become self-sufficient have had an impact in reducing the willingness of governments to finance airport projects in recent years (De Neufville and Odoni, 2003).

At some airports, there is a great emphasis that money for additional capacity must come from the airport revenues (CAA, 2005). Park (2003) argues that the airport’s internally generated revenues and its cost structure are one of the main sources of competitive strengths for airports. Airport revenues have traditionally consisted of charges including landing, terminal navigation, air-bridge, ground handling, passenger, cargo, parking, etc. Table 2.1 demonstrates the main aeronautical charges at airports. Airports have also introduced more complex systems of charges including surcharges

and rebates for users requiring special services and operational procedures to encourage or discourage some types of traffic (Doganis, 1992). Those systems may be related to type or distance of flight, night and peak operations, noise and emission levels, and other facilities that are used to process passengers on ground such as buses, mobile lounges and air-bridges. For example, surcharges are introduced at some airports on intercontinental flights, with rebates on domestic flights reflecting the higher ability of long-haul customers to pay (Toms, 1994).

Table 2.1: Main aeronautical charges at airports

Charge	Common basis for charging	Income to airports?
Landing	Weight of aircraft	Yes
Terminal Navigation	Included in landing charge or based on weight of aircraft	Sometimes
Air-bridge	Included in landing charge or based on aircraft movement	Yes
Passenger	Departing Passenger	Yes
Security	Included in passenger charge or based on passenger numbers	Yes
Parking	Weight of aircraft per hour or 24 hours after free period	Yes
Ground handling	Different charges for different activities	Sometimes
Fuel	Volume of fuel	No
Government taxes	Departing passengers	No

Source: Graham (2003)

Besides the airside facilities provided by airports for landing and departing aircraft, there are commercial facilities, usually operated by concessionaires, and provided for passengers, meeters and greeters, airlines (e.g. offices, check-in desks and crew members), airport employees, airport visitors, residents of the area, and the business community (Doganis, 1992). The increasing need to reduce aeronautical charges has led airports to focus more on generating non-aeronautical revenues (Cream, 2009). Revenues from concessionaire activities have become a significant source of profit for many major airports around the world and have grown faster than revenues from aeronautical activities over the past two decades (Oum et al., 2004).

In an attempt to analyse the ratio between aeronautical and non-aeronautical revenues, Doganis (1992) finds out that non-aeronautical revenue reached 75-80% of total

revenue at airports in the US. More recently, a study for 50 major airports worldwide conducted by the Air Transport Research Society (2000, cited in de Neufville and Odoni, 2003) also indicates that concession revenues accounted for up to 80% of total revenues at US airports. It is clear that non-aeronautical activities are crucial for sustaining the airport business and succeeded in making airports more profitable. They are the source of revenue that can be easily adjusted in order to meet any increase in operational cost or any fall in returns (Graham, 2003).

The growing importance of commercial activities has led scholars to study the economic inefficiency of cross-subsidising aeronautical activities with revenue obtained from non-aeronautical sources. Zhang and Zhang (1997) argue that the single-till approach does not provide an incentive for an airport to either control cost or maximise the exploitation of non-aeronautical income opportunities. Starkie (2001) found that unregulated profit-maximising airports are likely to have a strong incentive to lower airport charges as long as they combine both aeronautical and non-aeronautical activities.

At some airports, like those in North America, airlines are contributing toward future airport investment through paying extra fees for pre-financing purposes (GAO, 2002). In the US, airport investment can be financed through revenue bonds guaranteed by the major tenant airlines (Oum et al., 2008). It is argued (Winston, 1991) that pre-financing can help airports avoid large increases in charges when the infrastructure starts to function. However, this form of financing is considered to be unacceptable in some countries (Graham, 2003). Agreements may be difficult to reach when there is more than one user group (Turvey, 2000). It can also be difficult to determine the amount of money that each airline should pay to contribute to airport development projects (Forsyth, 2005). It is, therefore, argued (Winston, 1991) that pre-financing of airport investment projects can form an entry barrier for some airlines that seek to use an airport.

Furthermore, some airports around the world have been invested in and operated by air carriers. Investments in airports by airlines may be due to the strong indication of the

high quality and profitability of airport business (ACI, 2006). Examples of airlines investing in airports include, BA, who own a terminal building at JFK (Pitt, 2001), and Lufthansa, who purchased a block of Fraport (ACI, 2003). However, this is not yet the case at some other airports where the cost of getting into the airport market and the regulatory environment will act as a barrier to the entry of an airline to the airport business (Pitt, 2001).

2.5.1.2 Physical Capital

Physical Capital may include the firm's geographical location, equipment, plant, technology and accessibility to raw materials (Barney, 1997). As highlighted earlier, Park (2003) argues that the airport's geographical location and the level of regional development around the airport are important sources of strengths that an airport can possess. This view is supported by other studies in the aviation field such as that undertaken by Dennis, (1994, cited in Gardiner, 2005) which shows that the location of an airport is crucial for the operation of passenger airlines, and the one conducted by Lin and Hong, (2006) which demonstrates the importance of the airport location and the existence of hub operation to the airport's business performance. It is also assumed (Kraus and Koch, 2006) that the lowest total flying time for passengers is a major factor in choosing to use a hub airport. Kraus and Koch (2006) believe that the best location for a transfer airport is to be as close as possible to the direct line between the origin and destination. They argue that airports located far from the direct line are considered disadvantageous and cannot be compensated by other competitive means. However, it is asserted that some passengers will choose to fly indirect, even if direct service is available, depending on ticket prices (Dennis 2001) and the quality of the connection network (Burghouwt and Veldhuis, 2006).

Since the main component of the airport product is the infrastructure provided to serve aircraft, an airport's infrastructure and facilities provided to handle aircraft can impact on its competitive position (Tretheway & Kincaid, 2005). The ability of an airport to focus on its fundamental infrastructure resources and core competencies can create value for the airport company (Cream, 2009). However, this may be a challenging task

as airports will need to invest in a wide range of rather expensive facilities in order to satisfy their airline customers. The development of one facility capable of satisfying the different airport users is a difficult and complicated task (Pitt and Brown, 2001). Airlines are unpredictable and can alter their strategies frequently and rapidly, which is making it difficult for airport managers to plan for future airport development (ACI, 2006). Airports are complaining that airlines, due to concerns of giving an advantage to a competitor, do not give adequate advanced notification of alterations in their business strategies that could affect the operation of the airport (Wells and Young, 2004).

Although passengers' choice of an airport is usually dependent on the airline serving that airport (Papatheodorou, 2006), there is a great emphasis on airports to provide better quality of service for the passengers (Graham, 2003). Park (2003) argues that airport service factors, which may include the levels of service provided to passengers and types of airport operations, can play an important role in the overall competitiveness of an airport. Since the operation of an airline from an airport depends on the demand made by passengers, airports should offer airlines and their customers a good service standard. Therefore, airports and airlines have the same goal of satisfying their passenger customers. It is argued (Tretheway & Kincaid, 2005) that facilities provided for passengers are an increasingly crucial area in which an airport can achieve a competitive advantage. Factors affecting the choice of airports from the passengers' perspective include:

Destinations of flights, image of airport, flight fare, frequency of service, flight availability and timings, image and reliability of the airline, airline alliance policy and frequent-flyer programmes, range and quality of shops, catering and other commercial facilities, and surface access cost and ease of access to airport/car parking costs (Graham, 2003, p. 242).

In order to investigate passengers' selection decision of an airport, the UK CAA (CAA, 1997, cited in Barrett, 2000) surveyed passengers at London airports and found that Heathrow Airport was chosen by passengers as the most preferred airport due to the

flights and packages available at the airport followed by its connecting flights and then its closeness to their home. London Gatwick Airport was the second preferred airport and chosen by passengers because of the availability of flights and packages, followed by its closeness to where they live, and because it is cheaper. According to the study, Luton and Stansted, which are primarily served by LCCs, were chosen because of their near home location followed by their lower cost. Hess and Polak (2005) analyse the choice of airports by passengers and find that, although there are significant differences across travellers in their sensitivity, the most significant influences are access time, fare and frequency of service.

Park (2003) argues that airports with the ability to develop and expand their infrastructure in order to receive more aircraft and schedules can be more attractive to airlines and have competitive strengths over other airports. In fact, the large size of land needed to expand the airport infrastructure can be regarded as a challenging task for airport development (Cream, 2009). This means that airports with limited possibility to grow and to improve their facilities due to environmental controls and legal constraints face more challenges in terms of growing physically.

2.5.1.3 Human Capital

Human capital includes the skills, experience, training, relationships, intelligence and sound judgement of the decision makers and employees within a firm (Becker, 1964 cited in Barney, 1997). The effectiveness of employees is related to the training and skills offered to them (Barney 1997, Grant 2008). Therefore, this involves providing staff members with the necessary knowledge and training, as well as keeping them up to date with new information and technology required at all levels of the organisation. Grant (2008) argues that firms should rely more on motivation, attitude, potential and learning capacity of their employees, rather than their qualifications and experience.

Studies in the area of strategic management have assumed that general managers and organisational leaders can have a great and direct impact on firms' internal performance (Barney, 1997). Park (2003) points out that the managerial factors are amongst the most

important sources of competitive strengths for airports. He argues that the particular form of airport ownership can be one of the major managerial factors. Different forms of airport ownership have been adopted in different countries over the last two decades. The common three types of ownership are: Private Ownership, Mixed Public and Private Ownership, Public Ownership (Lin and Hong, 2006). Since owners may have different goals and different incentives (e.g. profitability, efficiency, quality) ownership can influence firm performance differently (Oum et al., 2008). While the objective of most publicly owned airports is to maximise the social-welfare and the economic situation of the airport's surrounding environment, airports under private ownership are likely to operate as profit-maximising companies. Nevertheless, it is argued (Jarach 2005, Lin and Hong 2006, Oum et al. 2008) that the form of airport ownership is not importantly linked to operational performance and profitability. In recent years, differences in management between public and private ownership are reducing due to the fact that public airports are now more aware of the need to be more business-related (Lopez, 2001).

2.5.1.4 Organisational Capital

Organisational capital refers to the firm's organisational processes, procedures, and organisational culture (Barney, 1997); and may include "*A firm's formal reporting structure, its formal and informal planning, controlling, and coordinating systems, its culture and reputation, as well as informal relations among groups within a firm and between a firm and those in the environment*" (Tomer, 1987, quoted in Barney, 1997, p. 144).

The ability of employees to perform better depends not only on their skills but also on organisational structures (Grant 2008). Organisational charts offer a framework that shows how management functions can be performed, what position and role each of the employees has, and the advantages of the work relations and cooperation between departments (Wells and Young, 2004). The form of airport organisational chart can be simple or complex depending upon the size, ownership and management arrangement of the company (Wells and Young, 2004), and must reflect areas of activities including:

legal, financial, planning, public communication, administration, human resources, environmental, technical, commercial and operational (De Neufville and Odoni 2003). The shape of the organisation chart significantly reflects the relations and cooperation between employees and among departments, and hence has an important influence on the overall operational and financial performance of a company (Ibid). It is argued (Park, 2003) that the form of organisation structure can be an important source of competitive strength for airports. However, the static characteristic of organisation charts is considered as a major limitation to their use by airport companies (Wells and Young, 2004). The airport environment is dynamic and airports need to continually change their management style in order to adapt to such alterations.

In addition to the internal cooperative relationships, it is important for firms to keep good relations with other firms in the environment as part of its organisational culture. Jarach (2005) argues that the integration and the close relation between an airport and other actors involved in the value chain leads airports to gain competitive advantages.

2.5.2 THE RESOURCE-BASED ANALYSIS

Due to the fact that many of the resources outlined above may be shared in common with other firms in an industry, the RBV theory suggests that a resource must fulfil four requirements to form a source of sustainable competitive advantage – it must be Valuable, Rare, Inimitable, and Organised (VRIO) (Barney 1997, Barney and Clark 2007). The VRIO is a resource-based framework structured in a series of four questions to examine whether resources meets these four categorise of competitive advantage, as shown in table 2.2. Table 2.3 demonstrates how the VRIO Framework can assess the competitive implication of resources.

Table 2.2: The four questions of the VRIO

<p>The Question of Value: Do a firm's resource and capabilities enable the firm to respond to environmental threats and opportunities?</p> <p>The Question of Rareness: How many competing firms already possess particular</p>

valuable resources and capabilities?

The Question of Inimitability: Do firms without a resources or capability face a cost disadvantage in obtaining it compared to firms that already possess it?

The Question of Organisation: Is a firm organised to exploit the full competitive potential of its resources and capabilities?

Source: Barney (1997)

Valuable refers to the ability of the firm to leverage the resource into a competitive strategy that creates value for the firm (Fahy, 2001). A resource is considered as valuable if it assists the organisation to meet an external threat or to exploit an opportunity in the environment (Barney and Clark, 2007). A firm resource can be considered as valuable if it “*enables a firm to increase the economic value it creates by increasing the willingness of customers to pay, decreasing its costs, or both*” (Barney and Clark, 2007, p. 58).

The second characteristic of the resource as a competitive advantage is that it should be rare. If a valuable resource is not widely obtained by other competitors then it is rare. If a resource is common, then it is unlikely to provide a competitive advantage to any given competitor (Barney and Clark, 2007). In essence, this resource goes from a characteristic that may provide a competitive advantage to one that is required to compete within the industry on the whole (Fahy, 2001).

The third characteristic that a resource could find a competitive advantage characteristic in is inimitability, or restriction of the resource to a single firm. Valuable and rare resources cannot provide a firm with sustainable competitive advantages unless they are inimitable (Barney and Clark, 2007). An inimitable resource is a resource that is hard for another firm to possess or substitute, and they are usually a result of historical, ambiguous, or socially complex causes (Scott, 2007). If the resource can easily be substituted for another, then it will not maintain its competitive advantage (Fahy, 2001). Intangible resources or capabilities such as reputation or corporate culture are very hard to imitate and so they are inimitable.

The final characteristic of the resource as a competitive advantage is that it should be organised. Valuable, rare, imitable resources and capabilities can be sources of sustainable competitive advantages if the firm is organised to exploit their potentials (Barney and Clark, 2007).

Table 2.3: The VRIO Framework

Valuable	Rare	Imitable	Organised	Competitive implication
No	—	—	No	Competitive disadvantage
Yes	No	—		Competitive parity
Yes	Yes	No		Temporary competitive Advantage
Yes	Yes	Yes	Yes	Sustainable competitive advantage

Source: Barney (1997)

2.5.3 LIMITATION TO THE USE OF THE RBV OF THE FIRM

One of the main weaknesses of the RBV theory is its inability to address unpredictable changes in the external environment that may occur suddenly and may change the value of a firm's resources making competitive advantages less sustainable (Barney, 1997). The RBV has also been criticised as being a static approach which lacks detail (Priem and Butler, 2001), and does not address the dynamic role played by individuals within the firm (Henry, 2008). Another limitation to the use of the RBV is that the analysis of each individual resource and capability requires access to intra-organisational information which can be difficult to obtain (Barney, 1997).

2.5.4 THE VALUE CHAIN ANALYSIS

Porter (1985) argues that in order to analyse and identify a firm's capabilities, activities should be classified and separated. The Value Chain Analysis is an approach that is developed by Porter to analyse all the activities a firm performs (e.g. designing, producing, marketing, delivering and supporting) and how these activities are

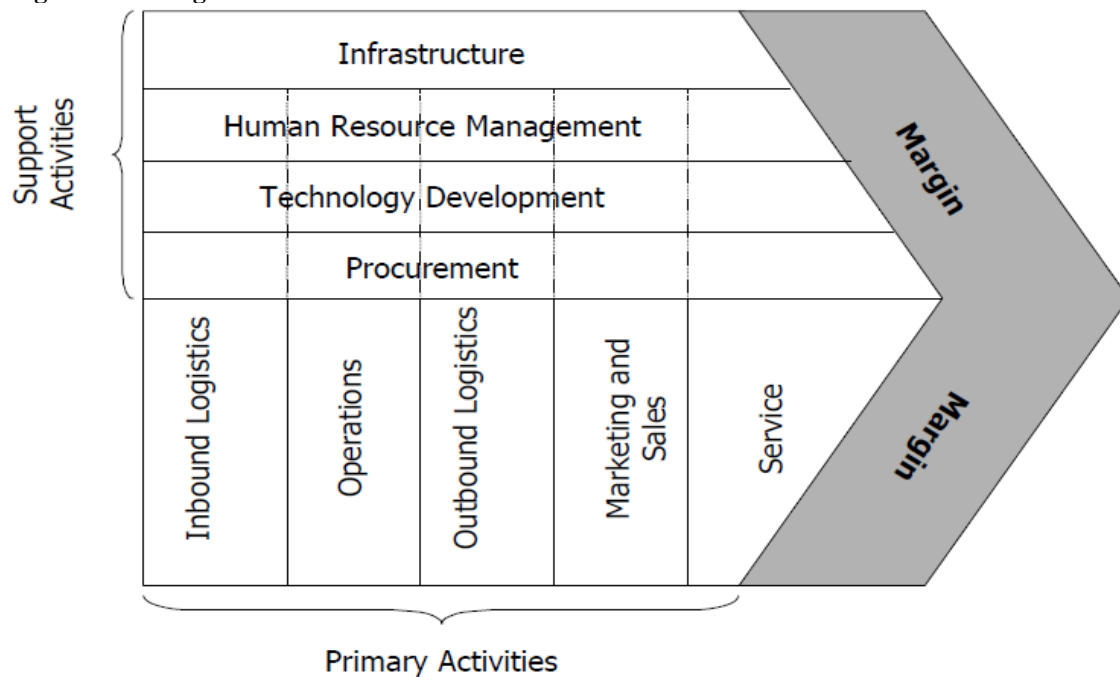
interacted. This technique can help a firm realise the source of competitive advantages through understanding the firms' core competencies (Grant, 2008). Prahalad and Hamel (1990, cited in Henry, 2008) argue that there are three tests that can be applied to core competencies in an organisation. They suggest that core competencies should: *“provide access to a wide variety of markets, make a significant contribution to the perceived customer benefits of the end product, and be difficult for competitors to imitate”* (Prahalad and Hamel, 1990, quoted in Henry, 2008, p. 130). Analysing a firm's core competencies will allow for a better understanding of whether the resources and capabilities fit the business environment and how they can be stretched in order to exploit any existing opportunities (Johnson, 1999).

Porter (1985) identifies two types of value activities: Primary activities and Support activities. He describes primary activities as the main activities undertaken by a firm and can be divided into five main areas: Inbound Logistics, Operations, Outbound logistics, Marketing and Sales, and Service. Inbound logistics are the activities concerned with obtaining, classifying and distributing the inputs to the product or service (e.g. material handling, stock control and transport). Operations refer to transforming these different inputs into the final product or service (e.g. machining, packaging, assembling and testing). Outbound logistics is concerned with gathering, storing and spreading product to clients (e.g. storage, dealing and transporting). Marketing and Sales which is the way to make customers aware of the product and service a firm provide (e.g. advertising, communicating and selling). Service includes all the activities aims to enhance and maintain the value of the product or service (e.g. installation, training and fixing)

Support activities are identified by Porter (1985) as the activities undertaken to support and improve the effectiveness of the primary activities. They are grouped into four main areas: Procurement, Technology Development, Human Resource Management and Firm Infrastructure. Procurement is concerned with the processes of acquiring the different resource inputs to the primary activities. Technology development is related directly to the product, the processes or a particular resource. Human resource management refers

to activities such as managing, recruiting, supervising, training, developing, promoting and honouring people working within the firm. Firm infrastructure is concerned with planning, funding, assuring quality and managing information. Activities and areas of the generic value chain are shown in figure 2.7.

Figure 2.7: The generic value chain



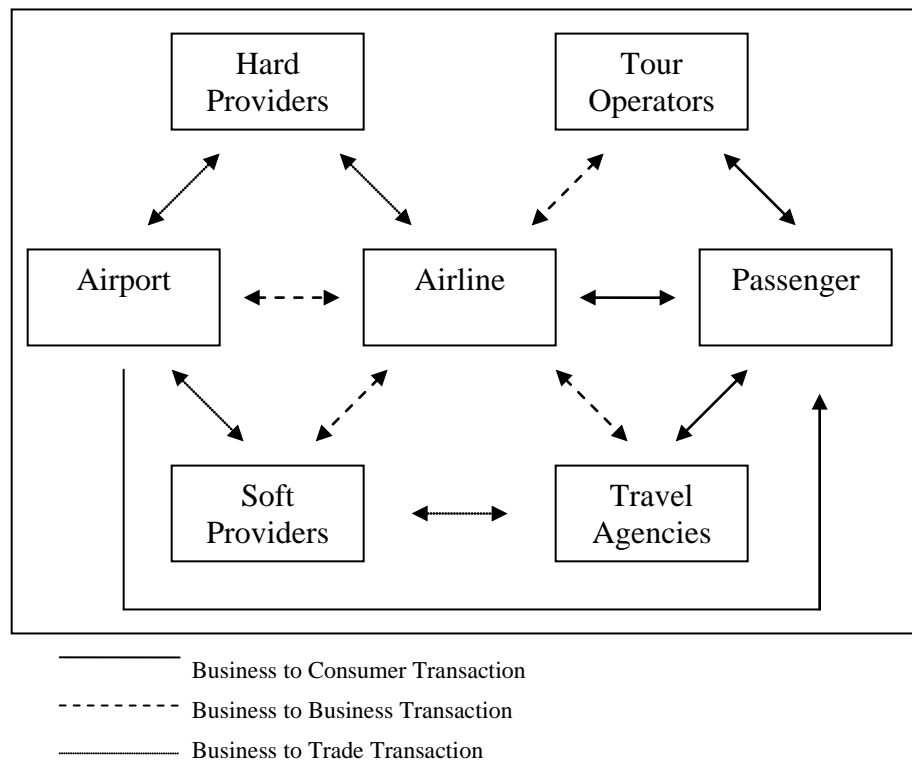
Source: Porter (1985)

Porter (1985) suggests that within each of these categories of primary and support activities there are a further three types of activities that play a different role and impact on competitive advantage; these are: Direct, Indirect and Quality Assurance. While direct activities involve creating value for the customers, indirect activities allow direct activities to take place. Quality assurance is to make sure that the quality of the other activities is asserted.

In an attempt to apply the concept of the value chain to the air transport industry, Jarach (2005) outlines the main actors involved in the value chain including: airport operator, airline operator, hard providers (aircraft manufacturers, airport engineering companies), soft providers (GSAs, in flight catering firms, handling operators, car rentals, aircraft

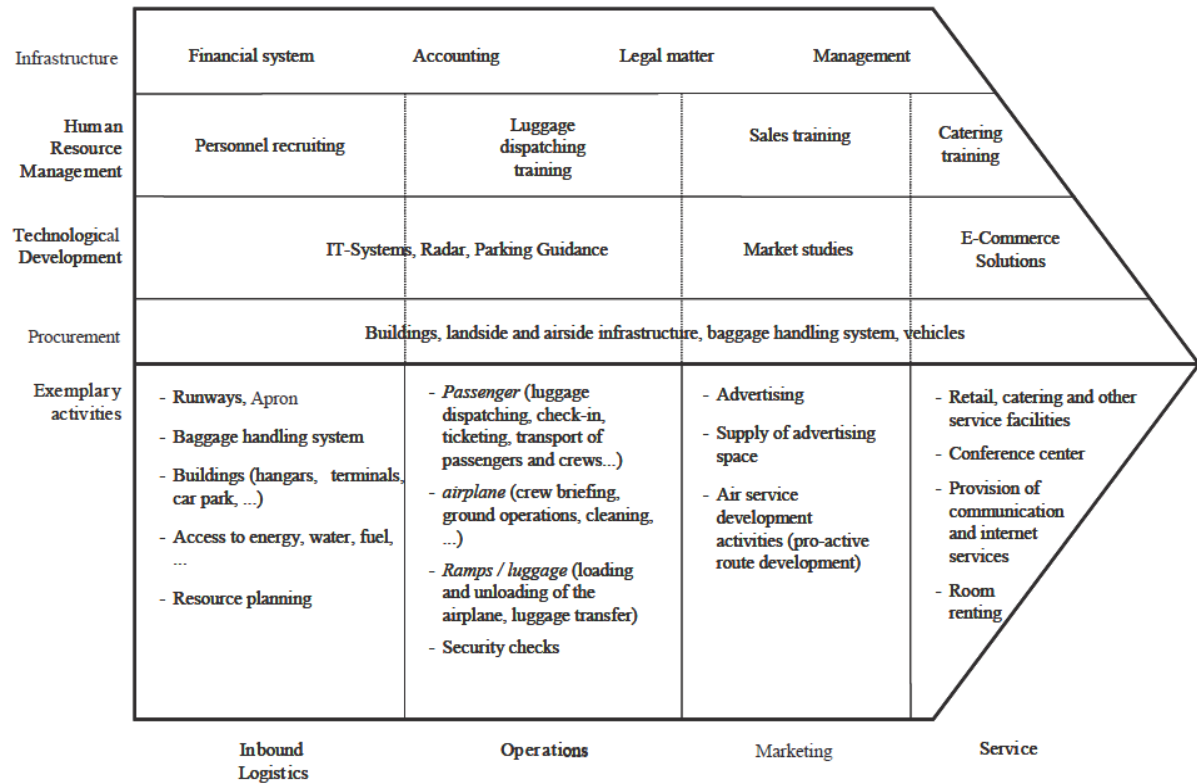
lessors, handling agents, air charter brokers), tour operators, travel agents and end customers. Jarach (2005) argues that there are three types of transaction between these players: Business to Consumer; Business to Business; and Business to Trade Transaction. Figure 2.8 shows the transactions between all the players in the air transport value chain. Albers et al. (2005) illustrate the primary and support activities for a generic airport company as shown in figure 2.9.

Figure 2.8: The transactions between the main actors in the air transport value chain



Source: Jarach (2005)

Figure 2.9: The value chain of a generic airport company



Source: Albers et al. (2005)

2.5.5 LIMITATION TO THE USE OF THE VALUE CHAIN ANALYSIS

One of the limitations of the Value Chain Analysis is that it does not adequately capture the value-creation logic of service industries (Stabell and Fjeldstad, 1998). It has also been criticised as not very applicable in the context of service industries (e.g. hospitals, banking, telecommunications and insurance companies) where customers cannot be isolated from the operation process; it is more suitable for analysing manufacturing industries which essentially buys raw materials and transforms these into physical products (Gabriel, 2006).

2.6 COMPETITIVE STRATEGIES

Porter (1985) addresses many ways in which firms could make best use of their competitive advantages and argues that there are three generic strategies that can be adopted by a firm in order to cope with the five competitive forces presented earlier. Namely they are: Cost Leadership; Differentiation; and Focus. Porter (1985) states, each of these generic strategies is a fundamentally different approach in terms of creating competitive advantages, and firms must choose one of these competitive strategies. He points out that failure to adopt any of the generic strategies would lead firms to become ‘Stuck in the Middle’. He also argues that the pursuit of more than one generic strategy is also possible under some circumstances. For instance, while it is possible for a firm to achieve cost leadership and differentiating, at the same time, it is not usually possible to follow all three generic strategies at the same time. Figure 2.10 illustrates the choices of generic strategy that a firm can adopt.

Figure 2.10: Porter’s Three Generic Strategies

		COMPETITIVE ADVANTAGE	
		Lower Cost	Differentiation
COMPETITIVE SCOPE	Broad Target	1. Cost Leadership	2. Differentiation
	Narrow Target	3A. Cost Focus	3B. Differentiation Focus

Source: Porter (1985)

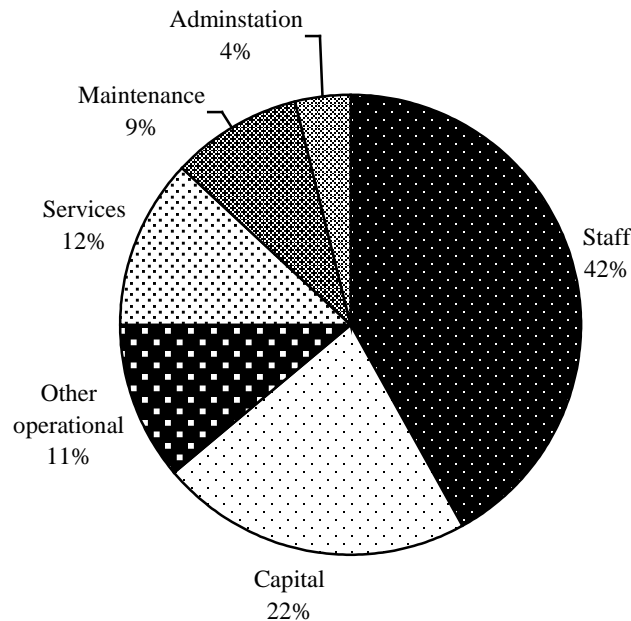
2.6.1 COST LEADERSHIP

The first generic strategy emphasises the need for achieving cost leadership in an industry. Porter (1985) argues that achieving lower cost relative to other competitors in

the industry requires high attention from an organisation towards cost control. He points out that attaining a low cost position will allow the firm to defend itself against: rivalry, powerful buyers, powerful suppliers, new entrants and substitutes.

It is argued (Cream, 2009) that providing the lowest prices possible to airline customers, in particular LCCs, leads airports to gain competitive advantages through meeting their customer requirements of lower charges and benefiting from higher passenger throughputs generated from their airline customers. Barrett (2000) argues that for an airport to become a cost leader, functions such as passenger and baggage handling, freight handling, catering and shops, which are traditionally performed by the airport itself, will have to be carried out by concessionaires. For example, while airports like East Midlands has achieved 50% discounts on handling charges compared with airports like Heathrow, others, such as Dublin, have the ability to achieve profitability even if it reduces its charges by as much as 90% (UK Monopolies and Mergers Commission, 1985, cited in Barrett, 2000). If such activities are not subject to competitive bidding by specialised companies, staff costs are likely to be considerably higher for airports (Barrett, 2000). A study was undertaken by The Polytechnic of Central London (cited in Doganis, 1992) to analyse the average cost structures for Western European airports identifies a number of airport cost components including labour, capital, maintenance, administration, services and other operational costs, and finds that labour is the largest cost for running an airport company of around 42% of the total cost followed by the capital cost of around 22%, as shown in figure 2.11.

Figure 2.11: Average cost structures for western European airports



Source: Polytechnic of Central London (cited in Doganis, 1992)

Since the main aim of acting as cost leader is to become the lowest cost producer and to offer customers the lowest price possible, it is vital to garner some opinions on the importance of airport user charges from the airlines' perspectives. While airport charges may influence airline operation quite differently depending on the type of service they provide (Graham, 2003), studies indicate that airport charges could be of some significance for passenger, cargo and short-haul carriers. Berechman and De Wit (1996, cited in Gardiner, 2005) undertook a study to determine the impact of airport charges on airline decisions on using an airport and found that airport prices have a significant impact on passenger airlines' decision of selecting an airport. Gardiner (2005) indicates that airport charges are one of the most influential factors for a cargo airline when choosing an airport. Cargo carriers can easily shift to an alternative airport due to their high sensitivity to airport charges (Tretheway & Kincaid, 2005). Another study by Warnock-Smith and Potter (2005) indicates that airport charges are among the most important choice factors for LCCs when choosing to fly from an airport.

Studies have also shown that fees levied by airports on airlines for using their facilities represent some amount of the total airline's operational cost. A research by the Institute du Transport Aerien (Wrobel, 1997, cited in Barrett, 2000), which aimed to examine airport charges at 37 European airports to compare these with ticket prices, found that the share of airport charges on a return airline ticket is around 9.3%. Another study of traffic in the UK suggested that a 50% increase in all airport charges would result in a 7.5% reduction in total traffic demand (Graham, 2003). However, traffic demand may be affected largely by other operational costs such fuelling, which accounts for about a third of the cost of long-haul tickets (Delfmann et al., 2005). IATA (cited in O'Connell, 2006) asserts that global airlines pay around US\$42 billion each year towards airport and ATC charges, which represent around 10% of the air carriers' total operating costs.

These figures show that airport charges represent some portion of the total airline operational cost, although relatively smaller than other operation costs. This means that adopting the cost leadership strategy by an airport in order to attract airline customers, mainly those more price sensitive, by offering them the lowest price possible may have some impact on the airline's decision to switch from one airport to another. Nevertheless, there is no clear evidence of airports pursuing the cost leadership as their business strategy (Graham, 2004). It is argues (Graham, 2004) that the fixed locations and limited economies of scale of airports are limiting the use of cost leadership strategy by airports.

2.6.2 DIFFERENTIATION

Since being the cost leader is not often possible or desirable for some businesses those that are interested in making larger profits (Smith, 2006), in his second generic strategy, Porter (1985) stresses the need for such firms to differentiate their products or services. He argues that the differentiation strategy can lead a firm to achieve above-average returns through providing different and unique products or services to loyal and less price sensitive customers. Therefore, he believes that both loyalty and uniqueness

provide a firm with a better position against rivalry and substitutes, as well as creating higher barriers to entry.

It is argued (Jarach, 2001) that competitor airports have to get some market differentiation in order to gain competitive advantages. Since the demand for airports is made by different airlines, for example low-fare, full-fare, cargo, charter services and non-aviation, which vary in the following: aircraft size; performance; number of passengers; and market served, airlines require a somewhat different level of service and facilities (Wells and Young, 2004). Table 2.4 and 2.5 illustrate the differences between LCC and network carriers, and the facilities required for both types of carriers. Therefore, it can be assumed that the development of an airport that is designed to handle a special type of carrier can be one way of differentiation (Graham 2004). There are clear examples of airports adopting differentiation as their business strategy. An example is the development of airports which are designed specially to handle and accommodate LCCs. In terms of passenger customers, Graham (2004) argued that the development of airport facilities with close proximity to city centres can be regarded as unique, and hence such airports are employing differentiation strategies. Airports that are specially designed to handle special segments of passengers such as transfer passenger can also be considered as another way of differentiating the airport service.

However, studies (e.g. Barrett, 2000, Delfmann et al., 2005, Kraus and Koch 2006) have shown that the dependency of airports on a single group of buyers, for instance LCCs or a major home-based airline may involve some risks. For example, if an airline decides to lower their level of operation or if it becomes bankrupt the airport serving that airline may suffer significantly. There are some cases from airports around the world that illustrate the unpredictability of the airline industry. One example is the economic collapse recently experienced by airports in Zurich and Brussels (Delfmann et al., 2005). Both airports had built major hub terminals for their weak national airlines, Swissair and Sabena. After the terrorist attack of September 11 both airlines had been through a period of financial instability resulting from lack of traffic, which led the two airports to close down the incomplete facilities generating high fixed costs.

Another example is the closure of American Airlines at Raleigh/Durham Airport, which resulted in heavy losses for the airport that had been left with highly specialised under-utilised facilities (Kraus and Koch, 2006). This was also the case with Alitalia when it had moved most of its operation, mainly long-haul, from other airports to Milan Malpensa Airport when it opened its new Terminal 1 (Jarach, 2001). Furthermore, while many LCCs have enjoyed a good reputation and profitability in recent years, some went broke (Barrett, 2000).

This means that any attempt from an airport to provide any special facility is considered as a risky strategy (Kraus and Koch, 2006). Any major changes in an airline's strategy may create a threat to the airport if it was heavily reliant on such an airline. It is, therefore, argued (Delfmann et al., 2005) that for an airport to survive it is important to ensure that it serves a wide range of varied customers in all sectors including passenger, cargo, low-cost and non-aviation.

In addition, a strategy of differentiation can be a challenging task for airport managers since services provided to airport users should be provided in a fair manner to all customers serving the airport (ACI, 2006) and any attempt to pass charges to other airport users to discourage them may be considered as a discriminatory act (Doganis, 1992). For example, at Luton Airport extensive terminal work has been criticised by the LCC Easyjet, which has deemed increased airport charges, as needless (Pitt, 2001).

Table 2.4: Differences between low-cost and network carriers

Low-fare carrier strategy	Network carrier strategy
<i>Product</i>	
Low fares on a higher percentage of seats, fairly simple structure No frequent flyer programme	Complex fares and yield management system Frequent flyer programme (crucial to retaining loyalty of high yielding passengers)
Cheaper product design (no assigned seating; no free food or drink)	Differentiated product offering seen as means of adding value
<i>Schedule</i>	
Use of secondary airports with excess capacity (lower charges and less congestion means airlines can increase punctuality rates and gate turnaround times)	Use of primary airports (focus on high yield and business class segment of the market necessitates direct service to major business and population centres)
Non participation in alliances (code sharing and baggage transfer services lowers punctuality and aircraft utilisation rates raise handling costs)	Participation in alliances
"Point to point"	Integrated scheduling (maximise connection possibilities and frequency)
<i>Operations</i>	
Standardised fleets (lower training and maintenance costs)	Range of aircraft types (due to wider range of route types and lengths flown, though many carriers are now concentrating on buying all Boeing or all Airbus fleets)
Maximise aircraft utilisation (due to emphasis on fast turnarounds, use of uncongested secondary airports etc.)	Utilisation may be less than optimal (due to a combination of varied sector lengths, use of more congested hub airports, arriving and departing bank of flights etc.)
Reduce customer service costs (outsource capital intensive activities, e.g. passenger and aircraft handling)	Prioritise customer service (customer service seen as an integral element of the airline's brand differentiating it from others)
<i>Strategy</i>	
Concentration of leisure and VFR passenger	Priority given to high yield, business class
Segments	Passenger segment
Uncompromising pursuit of cost elimination throughout the value chain	Cost only one element in complex service/product mix
Minimise personnel costs	Personnel costs often higher
<i>Distribution</i>	
Lower travel agent fees (reduce travel agent commission, encourage direct reservations via Internet and telephone booking)	Travel agents still viewed as important retail agents though many carriers now investing heavily in Internet sites with direct sales capabilities

Source: Aer Rianta (1999, cited in Pitt and Brown, 2001, p. 55)

Table 2.5: Facilities expectation of low-cost and network carriers

Low-fare carrier facilities requirement	Network carrier facilities requirement
<i>Access</i>	
Location of secondary importance. Good road and rail links not essential but preferable	Convenient location essential to service, particularly for non-economy passengers
<i>Terminal</i>	
Small ticketing area only (concentration on low cost sales over Internet)	High profile ticketing desk reflecting corporate image and presence
Fast check in preferred but quality of location is a secondary issue.	Check in convenience and profile is of great importance
Control of speed essential	
Terminal services (such as food, etc.) of secondary importance	Important that passengers feel purchasing needs are met
Terminal facilities not important	Image of major international hub with good facilities preferable
<i>Gate</i>	
Low tech gate facilities (air steps)	High tech gate facilities (air bridges)
Power in and out of gate (eliminating wasting push back time)	Air-bridge essential to product image wherever possible
Economy lounge facilities only	Business and first class lounges required in addition to economy space (separation of different classes essential to product)
Ability to separately route incoming and outgoing passengers preferable to save time	Long turn around times provide ample time to route passengers in appropriate manner
<i>General</i>	
Minimal catering facilities required	Facilities for preparation of in-flight food essential as forms part of package
Cleaning staff required less frequently. Minimal facilities requirement	Aircraft cleanliness essential part of package
No standby aircraft parking during daytime	Standby aircraft require parking
Efficient removal and loading of aircraft baggage and cargo	Efficient delivery of arriving baggage to customer a priority

Source: Pitt and Brown (2000b, cited in Pitt and Brown, 2001, p. 57)

2.6.3 FOCUS

The third strategy highlighted by Porter (1985) emphasises the need for focus. Focus strategy, also known as Niche Strategy, can take place where a firm pursues either a cost leader strategy or a differentiation strategy but to a very limited segment/group of the market. He argues that focusing on a specific segment of the market would lead firms to be more able to meet its customers' needs. Developing a focus strategy will allow a firm to become an expert in a particular market (Flouris and Oswald 2006), and hence it would achieve a competitive advantage (Henry, 2008). Three main ways to segment a market exist: Geographical Niche, where a firm focuses on a specified region; Customer Type Niche, where a firm concentrates on defined customer group; and Product-line Niche, where a firm centres on a determined and unique product line (Flouris and Oswald 2006).

Focus strategy in the case of the airport industry may be achieved through concentrating on a particular group of carriers or specific geographical area to serve. For example, some regional airports may adopt cost focusing strategy through providing special price offers to airlines serving certain geographical locations. An example of airports adopting differentiation focusing strategy is London City Airport which provides specialised facilities to serve short-haul business travellers (Graham, 2004). However, as discussed earlier, there is a risk involved when becoming dependent on one small segment of airlines. If a new airport opens or significantly upgrades its infrastructure and an airline with the majority of shares decides to move its traffic to the new airport, the existing airport serving that airline would be likely to suffer financially.

2.7 GROWTH STRATEGIES

While the discussion above highlights the three generic strategies of competitive advantages, this part focuses on the matrix of growth strategies developed by Ansoff to analyse the different directions a firm can follow in order to grow. Ansoff (1965, cited in Henry, 2008) assumes that firms in an industry can pursue a number of different strategies, and argues that there are four strategies including: Market

Penetration; Market Development; Product Development; and Diversification, as shown in Figure 2.12.

Figure 2.12: Ansoff's Growth Matrix

		Product/Service	
		Present	New
Market	Present	Market Penetration	Product Development
	New	Market Development	Diversification

Source: Ansoff (1965, cited in Henry, 2008)

2.7.1 MARKET PENETRATION

This strategy is about maintaining the focus on the same existing market while aiming to increasing market share through attracting more customers. It is always achieved by improving product quality and level of service, as well as investing in advertising to convince customers in the market to try a product or service a company provides (Henry 2008). A firm may choose to offer special promotions or discounts in order to do so. Market Penetration strategy involves low risk as it relies upon the firm's existing resources and capabilities (Henry, 2008).

An airport can achieve market penetration through lowering its aeronautical charges, so that airlines are more attracted to use its facilities (Graham, 2004). Discounted airport charges for airlines starting new routes or services for the first few years are common in the airport industry (Clayton 1997, Zhang and Zhang, 2001, Cream 2009). A market penetration strategy can also be achieved through undertaking marketing schemes and developing a brand name. Well established firms with well-known brand names can

gain a strong reputation and customer loyalties (Oster, 1994, Grant 2008). Reputational assets can be of more significance to firms mainly because they can be a major source of sustainable competitive advantage (Oster 1994, Johnson 1999, Grant 2008). Jarach (2005) argues that the introduction of passenger loyalty programmes, aimed to attract more passengers, can be a source of sustainable competitive advantage for airports.

2.7.2 MARKET DEVELOPMENT

Market development is achieved when a firm decides to introduce its existing product or service into a new market. The new market can be a new customer market or a geographically different market (Flouris and Oswald, 2006). As with market penetration strategy, market development depends upon the existing resources and capabilities. However, it carries some higher risk due to lower experience in the new market (Henry, 2008).

Airports can expand geographically by promoting surface access to enlarge the airport catchments area. This can be done by supporting or investing in services such as roads, buses and trains (Graham, 2004). An example is the construction of the rail link between London Paddington and Heathrow Airport by BAA (Freathy, 2004)

2.7.3 PRODUCT DEVELOPMENT

When a firm decides to introduce new products to its existing customers, the firm is said to pursue a product development strategy. The ability of a firm to develop a new product is crucial when operating in a market with rapidly changing consumer behaviour and when products have shorter life-cycles (Henry, 2008). A new product can be introduced as a complementary product, cheaper product or more up-scaled version of the existing product (Flouris and Oswald, 2006). However, Product Development strategy can be very risky and expensive to implement (Henry, 2008).

Common schemes for product development strategy by airports include encouraging specific types of traffic such as long-haul or low-cost (Auerbach and Koch, 2007). An

example of such a scheme has been practiced in airports like Vienna when the airport decided to use financial discounting schemes to position itself as a long-haul hub between Europe and Asia (Auerbach and Koch, 2007). Other examples can be an airport offering less expensive facilities and lower airport charges for LCCs, or providing facilities designed specially to handle transfer passengers which can lower the total time and the inconvenience involved at an airport. A strategy of product development is essential for an airport undertaking differentiation strategy in order to keep it ahead of competitors when they try to copy its strategy (Graham, 2004).

2.8 DIVERSIFICATION STRATEGIES

Diversification refers to a firm “*that operates in a number of different markets*” (Oster, 1994, p. 184). Ramanujam & Varadarajan (1989, p. 525) defined it as:

The entry of a firm or business unit into new lines of activity, either by processes of internal business development or acquisition, which entail changes in its administrative structure, systems, and other management processes.

They point out that firms can diversify in different lines: technologies, products or services, geographic markets, customer segments and distribution channels. A strategy of diversification can be in one of two types: Related Diversification and Unrelated Diversification (Henry, 2008).

2.8.1 RELATED DIVERSIFICATION

Related Diversification, also referred to as “Concentric Diversification,” is pursued when a firm’s activities are undertaken in more than one market or industry in which it has some or full linkages between its business activities. Firms implementing related diversification can support and complement one another. Marketing, research and production are areas where related businesses can achieve synergy (Oster, 1994).

Barney (1997) argues that related diversification can be a source of competitive advantage. However, he also argues that a diversification strategy needs to be not just valuable but also rare and difficult to imitate in order to be a source of sustainable competitive advantage. He argues that sustainability can be attained through creating “Economies of Scope”⁷ that any individual business investors find very costly and difficult to create. Economies of Scope exist when it is cheaper to develop a specific product or service when two businesses are brought together (Oster, 1994). It is argued (Jarach, 2001) that airport management should be able to diversify the airport service in order to succeed.

While market penetration, market development and product development growth strategy can be adopted most effectively if the industry an organisation operates in is in the growth stage (Henry, 2008), ‘Integrative Strategies’ can work better when the market is in its mature stage in which it is becoming more intense with limited opportunities (Flouris and Oswald, 2006). Such strategy will be of less effectiveness if the market is in the introduction and the growth stage due to the availability of market share accessible to all firms in the industry. Related diversification strategy can take one of two forms: Vertical Integration and Horizontal Integration.

2.8.1.1 Vertical Integration

Vertical integration can be applied by a firm to possess a competitive advantage by engaging in various businesses at the same time and is identified as:

The compensation of technologically distinct production, distribution, selling and/or other economic processes within the confines of a single firm (Porter, 1980, p. 300).

Vertical integration means that the firm would choose to rely on its internal workforce to carry out its economic processes instead of arranging it with other contractors. If a

⁷ *Economies of Scope* is a more specific expression of *Synergy* often thought of in the cost context.

firm decides to gain more control of output or distribution, the firm is said to pursue Forward Vertical Integration (also referred to as Downstream Integration); whereas, when a firm engages in stages that allow it to gain control of input or suppliers, the firm is said to pursue a Backward Vertical Integration (also referred to as Upstream Integration) (Flouris and Oswald, 2006).

When a firm vertically integrates with other firms, it is involved in the individual steps within the industry's value chain. A firm's level of vertical integration, therefore, is dependent on the number of stages in the value chain activities (Barney, 1997). A firm can become more vertically integrated by engaging in more stages of the value chain and less integrated if it chooses not to. Grant (2008) points out that vertical integration can be in the form of either full, where the product is processed from one stage to another without the interference of a third part, or partial where the firm is not internally self-sufficient.

Formerly, players in the aviation industry integrated vertically with hotels, tour operators, restaurants and car rental companies (Lafferty and Fossen, 2001, cited in Lohmann et al. 2009). While this form of integration is now considered as very limited (Lohmann et. al. 2009), strategies of forward vertical integration have been followed by some airports in the recent years. Some examples are airports like Cardiff and Norwich in the UK which have pursued a strategy of forward vertical integration through developing local travel agencies as a marketing scheme in order to attract more passenger customers to use their facilities (Graham, 2004). Cream (2009) argues that airports need to establish partnerships with travel agencies in order to market leisure air travel to passengers. Since some airports provide services such as aircraft ground handling and traffic control themselves, it is argued (Graham, 2004) that airports' backward integration exists by nature, and hence, is not considered as a strategic method that has been pursued by airports.

2.8.1.2 Horizontal Integration

While a firm seeking to integrate vertically needs to invest in new capacity, a firm that wishes to integrate horizontally has to move to a new market through purchasing and acquiring other existing firms offering similar products and services (Henry, 2008). The acquisitions of competitor firms already in business can allow the dominant firm to gain a greater market share through expanding the company as well as reducing the number of competitors.

While airports have traditionally been owned and run by their governments to act as infrastructure suppliers, they are now increasingly seen as commercially-oriented enterprises that can generate profits. The loosened links between airports and their governments and the move towards commercialisation have led to the privatisation of a large number of airports around the world. The strong growth of the airport business, the high entry barriers to the airport market, the relatively limited competition among airports and between airports and other modes of transportation are all factors that have made airport companies more attractive to investors (Graham, 2008). Private organisations with significant aviation involvement are now more aware of opportunities to acquire airports in order to enhance their business performance. Airport privatisation has taken place in countries like the UK since the 1980s when BAA owned airports including Heathrow, Gatwick, Stansted, Aberdeen, Edinburgh, Glasgow and Prestwick (Graham, 2008). Full and partial privatisation of airports is now more popular and has been pursued in different countries around the world. There are also some cases where acquisition of airports by others has been achieved. Such horizontal integration has been followed by airports such as Copenhagen which owned 49% of Newcastle Airport in the UK in 2001, BAA which purchased (and subsequently sold) 75% of Budapest Airport in 2005, Meinl which acquired Mukhino Airport in Russia in 2007, and Fraport which bought 25% of Xi'an Airport's shares in China in 2007 (Graham, 2008).

2.8.2 UNRELATED DIVERSIFICATION

A firm is conducting an unrelated diversification, also known as “Defensive or Conglomerate Diversification”, when it engages in more than one industry in which it has no associated relation between its business activities at all (Henry 2008). The firm may do so in order to improve its overall prospects if the industry in which it is operating has low profitability and is unattractive (Flouris and Oswald, 2006); this is particularly the case in saturated and declining industries (Henry, 2008).

While related businesses can support and complement one another, unrelated businesses have limited chances to make use of their joint expertise and resources (Oster, 1994); hence, unrelated diversification is usually not very valuable to firms (Barney, 1997). Furthermore, since it represents a greater difference from the current industry, unrelated diversification strategy carries a higher degree of failure (Freathy, 2004).

Unrelated diversification strategy has been carried out by a number of airports. For example, after privatising the BAA in 1987, the authority has diversified itself into many unrelated areas including developing hotels, investing in property buying a freight forwarding company and investing in train services (Freathy, 2004). However, BAA soon decided to scale back its investment and concentrate on its original business (Graham, 2004). Another example is Dublin Airports Authority (formally known as Aer Rianta), which owns and operates a group of hotels in Ireland (Freathy, 2004).

2.9 STRATEGIC ALLIANCES AND COLLABORATION

Strategic alliances take place where a firm chooses to collaborate with one or more other firms in order to achieve its objectives. The benefits of strategic alliances and cooperation between airport companies, such that between Fraport and Schiphol airport (Graham 2004, Albers et al., 2005) and between Dusseldorf and Cologne Bonn airports (Delfmann et al., 2005), are two rare examples of this kind of alliance that have not yet proven to be beneficial (Graham 2004, Albers et al. 2005, Delfmann et al. 2005). As each airport operates within a unique framework, determined by different factors

(e.g. ownership, political situation, regulation, etc), synergy between airports can be a complex task (Delfmann et al., 2005). It is also argued (Delfmann et al., 2005) that the sales synergies that can be achieved between airlines as a result of alliances cannot be transformed to the airport industry. Alliances between airports are driven merely from knowledge transfer, financial resources and joint bidding (Graham, 2004).

However, since airports and airlines involve vertical relationships with the same target of providing service to their passenger customers, it is argued (Freathy 2004, Albers et al. 2005, Auerbach and Koch 2007, Cream 2009) that strategic partnership between airports and their airline customers can provide a sustainable competitive advantage for both allied partners. Benefits that alliances can create for both partners involved may include:

A dramatic cut in both the scope of financial support needed and in the level of risk compared to a stand-alone situation; a mutual sharing of operational and marketing costs associated with the business venture; a chance to enter or have a better coverage of some value-adding markets and demand clusters; and the evolution of the behavioural patterns of the industry, from a publicly-regulated monopoly or oligopoly to a players-driven industry (Jarach, 2005, p. 61).

Strategic alliances can be in the form of contracts and long-term use agreements, and have the ability to positively affect the airport business performance (Albers et al. 2005, Cream 2009). Such collaborative contracts with major airline companies can be very effective when airport investment is very lumpy and there are not many potential users as this helps airports ensure that investments in infrastructure are efficiently evaluated (Button, 2005). This approach will allow not only for opportunities to negotiate prices with airlines rather than present a fixed set of airport charges (Barrett 2000, Cream 2009), but also for reducing the risk of investment through assuring financial gains that will cover all the capital costs related to infrastructure investment (Button, 2005).

Clayton (1997) argues that closer relations between airports and their users will ensure that airport charges are as low as possible, airport facilities are sufficient for the needs of airlines and that investment projects are planned and built in time to satisfy aviation demand. It is argued that collaboration allows partners to combine their distinct resources and capabilities, and to create innovative products and solutions for their passenger customers (Albers et al. 2005). In addition, since cooperation can open doors for international markets by collaborating with overseas organisations (Henry, 2008), collaborative firms will have the ability to develop management skills through overseas experience and increase purchasing power (Freaty, 2004).

Some airport and airline companies have adopted such a strategy with one or more partners in order to gain a sustainable competitive advantage. Examples are the case of strategic alliance between Lufthansa and Munich airport (Albers et al. 2005, Lufthansa Consulting 2006), and between Cologne Bonn airport and the LCCs, Germanwings and Hapag-Lloyd Express (Delfmann et al., 2005). Albers et al. (2005) argue that the areas of cooperation among airline and airports are classified as three main categories: Capacity-oriented, Marketing-oriented, and Security-oriented Cooperation. They suggest that capacity-oriented cooperation is the most promising area as its activities and their outcomes can be designed and anticipated relatively easily. They assume that, unlike capacity-oriented cooperation, marketing-oriented cooperation centres on image transfer between airlines and airports and is determined by a number of external factors. While security-oriented cooperation is important, they argue that it does not involve long-term commitment between airlines and airports and neither does it have a strategic nature. Table 2.4 illustrates possible cooperation strategies between airlines and airports.

Table 2.6: Possible cooperation strategies between airlines and airports

Strategy	Landside example	Airside example
Marketing-oriented		
Air service development	Joint Development of additional Air Services	
Marketing	Joint Marketing initiatives (advertising, co-branding, joint exhibiting)	

Passenger well-being	Establishing a Passenger Well-being Program	
Capacity-oriented		
Expansion	Common Terminal Operation	
Process re-design	Passenger Flow Management	
Process innovation	Check-in kiosks operated by airports on behalf of key carriers	Collaborative decision making
Security-oriented		
Co-operation more a legislative duty than a free, independent move.		

Source: Albers et al. (2005)

Auerbach and Koch (2007) point out that air service development (ASD) and collaborative decision making (CDM) are possible fields for cooperation between airports and airlines. They argue that substantial benefits can be gained from establishing such cooperative approaches without the need for large investments. Delfmann et al. (2005) argue that the partnership between Cologne Bonn Airport and Germanwings and Hapag-Lloyd Express have had a very positive impact on the airport business and made the airport the fastest growing in Germany in 2003. Collaboration between airports and airlines is encouraged in the UK under a framework called “Constructive Engagement” which is established by the CAA and designed to give airports and airlines an opportunity to discuss issues such as traffic projections, capacity requirements and investment projects (CAA, 2005).

2.10 SUMMARY

This review of literature demonstrates that while the theoretical notions of strategic management have been widely addressed in the academic literature over the past decades, there are few studies supporting its conceptual contributions in the airport business industry. These studies tend to be more recent (e.g. Park 2003, Graham 2004, Albers et al. 2005, Jarach 2005, Williams 2006).

There are a variety of methods and analytical techniques that have been used in different industries over the past few decades. The SWOT Analysis, the PESTEL Analysis, the

Five Forces Model, the RBV Theory, the VRIO Framework and the Value Chain Analysis, are influential tools that proved to be useful in anticipating competitive challenges and can help managers better understand their external and internal environment. However, each of these tools has limitations and weaknesses when applying to industries.

Different business strategies that can enhance organisations' performance and profitability are also studied and discussed here. It is clear that there is now more emphasis on firms to analyse their competitive advantages in order to succeed. The increase in competition by airports means that there is a greater need to understand their key strategic strengths and success factors. However, studies in the area of airport business have shown that gaining competitive strengths is not usually the central focus for airports. This is mainly because large numbers of airports are owned by their local government and operate in a context with less competitive pressure.

Nevertheless, some airports, mainly those encouraged by their local government to act as commercial-orientated businesses, are now in a strong position to adopt some business strategies and to benefit from competitive advantages. Differentiation, market penetration, product development, diversification, vertical strategic alliances and cooperation are all strategic methods that have been followed by airports in order to attract new customers to use their facilities. The literature has also shown that the implication of some of these strategic methods for the case of the airport is limited and complex. For example, the use of horizontal strategic alliance between airport companies is seen as unnecessary.

One of the more in-depth analyses of competitiveness in the case of airports was undertaken by Park (2003). However, while he finds that the competitive strengths of an airport company depends on five core factors (Spatial, Demand, Facility, Managerial and Service), Park neglects the importance of some factors such as cooperation and strategic alliances between airports and their airline customers. The latter have been studied more recently by other authors (Albers et al. 2005, Auerbach and Koch, 2007)

who argue that such factors can be a major source of competitive advantage for airports. Furthermore, it is not well-defined whether the airport business industry has the ability to uphold strategic strengths, and what are the most crucial sources of sustainability.

It is obvious that the area of strategic management in the airport industry has attracted only marginal attention in the academic literature and is in need of further research. Therefore, this research seeks to contribute to the field of aviation through elaborating on the existing literature that has neglected some of the issues concerning airport strategic management.

CHAPTER 3 RESEARCH DESIGN AND METHODS

3.1 INTRODUCTION

Having studied and understood the literature covering the area of strategic management and related its theories to the airport industry in the previous chapter, this chapter specifies the methods that are used to achieve the aim and the objectives of this research. It highlights the different techniques and tools used in this study, as well as outlining the research design and how the process developed in order to satisfy the research objectives. The chapter also illustrates how methods are employed and analysed.

3.2 THE SELECTION OF METHODS

The research methods used in any study should reflect and answer the research questions sought to be answered (Yin, 1994). Due to the fact that the area of strategic management is not well studied and examined in the literature, answers to the research questions aim to provide a deeper and clearer perception into the area of strategic management in the airport business industry. Since the focus of this research is to gain a deeper understanding and insight on a particular subject, this type of study is considered by authors (e.g. Yin 1994, Brewer 2007) as exploratory research. Exploratory research typically involves case studies, participant or non-participant observational techniques, and collection and analysis of historical data, while quantitative and qualitative techniques may be involved (Brewer, 2007).

In order to achieve the aim and the objectives of this research, a number of criteria are addressed to select methods for the research. It is important that the selection of research methods should allow the researcher to relate the findings from the literature to the airport industry. The literature review has shown that it is important to study the different external and internal factors, as well as the strategic methods that could have direct impacts on airports and their sources of competitive strengths. This can be

achieved through gaining direct access to an airport organisation in order to better investigate the issue and to capture its best practice and experience. Taking into account these criteria led the author to use the case study in the research methodology.

The case study method is often used to study a single organisation in order to identify factors involved in specific aspects or behaviour (Ghauri and Gronhaug, 2005). The development of a case study provides the researcher with different sources that could be used as evidence. The case study is essentially a detailed account of a particular example of a phenomenon, experience, event or situation (Brewer, 2007). Scapins (1990, cited in Brewer, 2007) argues that the case study may be appropriate in a number of situations including cases where:

- The objective is restricted to describing current practice.
- Existing theories are used to understand and explain what is happening.
- The research examines the difficulties in implementing new methods or techniques in an organisation or industry.
- The research intends to illustrate new practices that have been adopted by a particular industry.
- There is insufficient knowledge to enable hypotheses to be established and/or where there is lack of theorisation.

Yin (1994) points out that a single comprehensive case study can be as effective as multiple case studies. Therefore, in this research, it was decided to undertake and focus on a single case study in order to reflect the exploratory nature of the research. The use of the case study is considered as a logical and appropriate research method that could be used to undertake this exploratory research.

3.3 THE SELECTION OF THE CASE STUDY

Giving the fact that a single case study is used in this research, it is very important that the chosen case study is carefully selected in order to fulfil a number of certain criteria and research prerequisites, which take into account the fact that the

airport is a major international hub, has attracted airlines to use its facilities, and has witnessed a dramatic traffic growth over the past few years. DXB was selected as a case study for this research because it meets all the criteria and pre-requisites outlined here.

Chapter 1 provided detailed statistical data that showed the growth level of DXB in comparison to other major airports worldwide in terms of passenger and cargo traffic, the number of airlines and flight destinations. While it was difficult for many airports around the world to maintain their growth, mainly due to the current economic downturn which has knocked down the profitability of many airports worldwide, an airport like DXB has succeeded in attracting more traffic to its facilities over the past few years and has become a significant passenger and cargo hub. DXB has become one of the world's fastest growing airports and is now seen as a powerful competitor to many other major airports in the world. The airport has also received many awards over the years indicating that the airport is one of the best in the world and in the region. Table 3.1 demonstrates the awards that the airport received between the years 2004 and 2008.

Table 3.1: Awards DXB received over the years

<p>2008</p> <p>Newsweek (Arabic) The Single Largest Development in Aviation History in the Region</p> <p>Selling long haul magazine Best Long Haul Airport in 2008</p> <p>Business Traveller Germany Best Airport in the Middle East</p> <p>Neseba MENA Awards, Doha Fastest Growing Airport, Middle East</p> <p>Dubai Government Excellence Programme Best Team Award (Dubai Airport Team for Dubai Routes)</p> <p>Construction World, Gulf Award 2008 UAE's top Developer Award</p> <p>Business Traveller ME 2008 Best Airport in the Middle East, Best airport in ME for Duty Free Shopping</p> <p>Supply Chain and Transport Award 2008 (SCATA) Air Cargo Hub of the Year</p> <p>World Travel Award 2008 Middle East's Leading Airport</p> <p>Aviation Business Awards 2008 Airport of the Year</p> <p>2007</p>

<p>World Travel Award World's Leading Airport & Middle East's Leading Airport</p> <p>Business Traveller Germany Best Airport Middle East</p> <p>Aviation Business Award (ABA) Best Airport of the Year</p> <p>2006</p> <hr/> <p>Super Brands Award Outstanding Brand Name</p> <p>Condé Nast Traveller Award Best Airport Worldwide</p> <p>2005</p> <hr/> <p>Business Traveller Germany Best Airport Middle East</p> <p>Selling Long Haul, UK Best Airport World Wide</p> <p>Buying Business Travel, UK Gold Award, World Wide Airport</p> <p>World Travel Awards World's Leading Airport & Middle East's Leading Airport</p> <p>ACI AETRA Award Best Airport Middle East & Africa</p> <p>2004</p> <hr/> <p>OAG (Official Airline Guide) Best in the World</p> <p>IATA Global Airport Monitor Best Airport Worldwide, Best in the Region; Best in Size</p> <p>Business Traveller Middle East Best airport Middle East</p> <p>Business traveller Germany Best airport Middle East</p> <p>Condé Nast Traveller Readers World's favourite Airport</p> <p>Routes Forum Airport Marketing Award</p> <p>Condé Nast Traveller Readers Best Design/Layout in the world; Best Duty Free Facility</p>

Source: Dubai Airports (2009)

In addition to those statistical figures and awards, which demonstrate how significant the case of DXB is, another reason for selecting this airport is that, to date, there is no paper or document in the literature gives a comprehensive analysis into the case of DXB and the reasons behind its continued growth. Only certain articles exist which provide reasonable background information about the airport. However, it is not clear whether there are strategies or other factors that have led DXB to become a pioneer in its industry. Its competitive strengths and their key sources are not obvious. It is also not

apparent if it is possible for other airports to follow the footsteps of DXB. Therefore, this case study will help pinpoint all these different issues. Choosing DXB as a case study allows the researcher to describe the strategic direction that the airport has pursued and identifies the airport's key strengths and success factors.

3.4 DATA COLLECTION METHODS

It is important to determine the data collection methods for the research. In addition to the data collected for the literature review, which covers the area of strategic management and relates its theories to the case of the airport industry, the case study relies on data collected from different sources of information. There are two different types of data that are used to undertake this research including primary data and secondary data. Researchers often need to combine these two sources to explore a certain phenomena or in order to solve a problem (Lancaster, 2005).

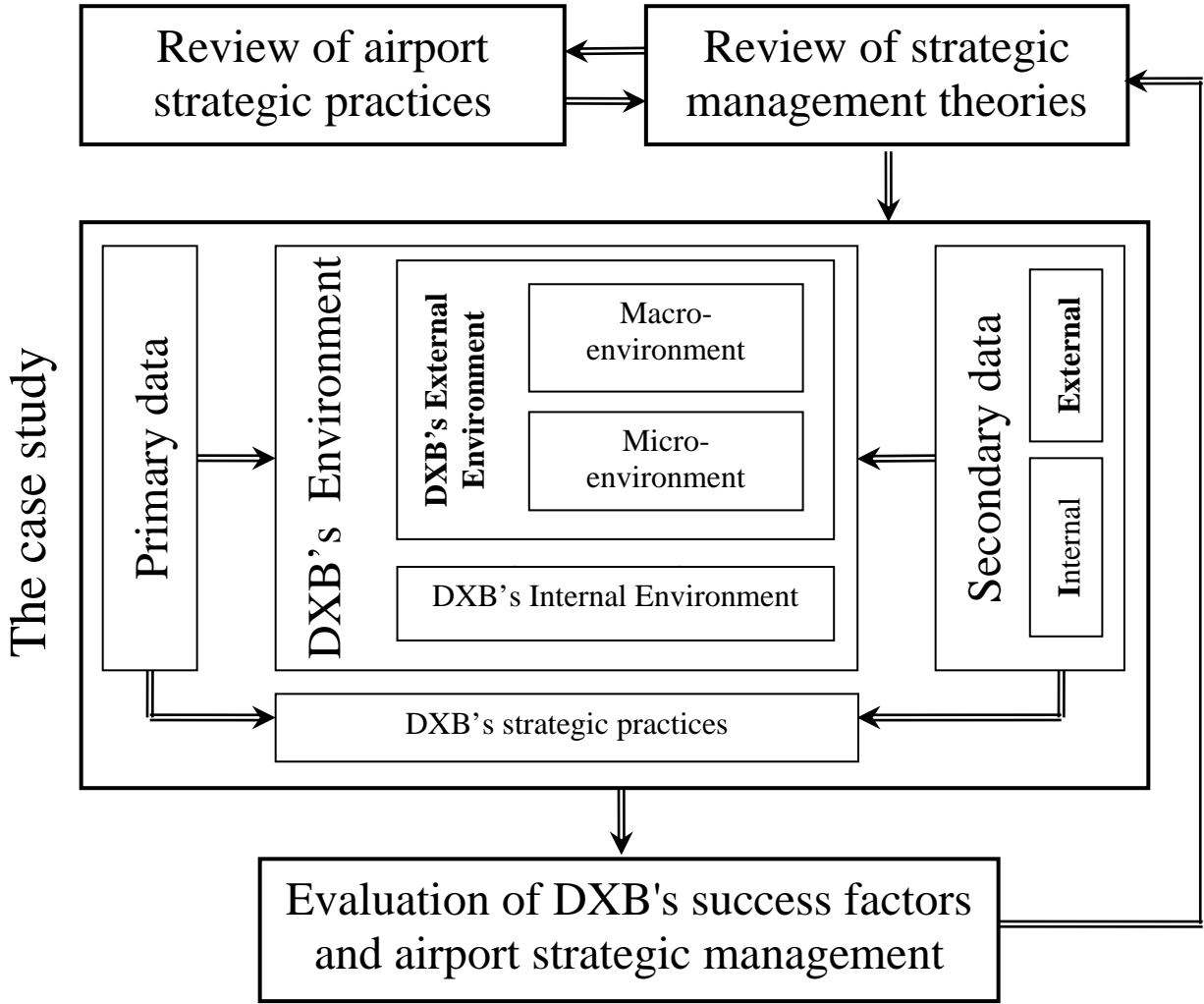
Primary data for an exploratory research study often requires the collection of either quantitative or qualitative data, or both (Lancaster, 2005). In this research, and under the umbrella of the case study, qualitative methods are used in preference to quantitative techniques. Qualitative methods are applicable in situations where the phenomenon is difficult to quantify (Lancaster, 2005). Unlike the quantitative technique that relies on statistical results, the qualitative technique seeks the collection of data in the form of ideas and opinions of people. The qualitative approach exchanges numbers with subjects, themes and categories that help explore and describe the issue rather than testing an existing theory (Brewer, 2007). Qualitative methods provide a wide range of data to be gathered and permit for a better understanding of the current strategic situation at DXB. Nevertheless, some quantitative statistical data is used as background information for the case study.

On the other hand, secondary data is the source of information that already exists and the start point for the research, and is usually gathered from two different sources: internal and external data (Lancaster, 2005). External secondary data, in the form of

publications, government reports, magazines, research papers, published articles, and other appropriate credible and trustworthy materials, are considered as a useful source of information and are collected to add some value to this research. Internal secondary data, such as written reports, annual reports and historical traffic data that has been gathered over the years to be used for forecasting and planning purposes, are also obtained from the airport and used as evidences and background information. Figure 3.1 draws a research design that demonstrates the involvements of primary and secondary data in the research.

The figure shows that following the review of the relevant literature and relating the area of strategic management to the airport business industry, the case study is commenced by involving primary and secondary (internal and external) data. These data are used to explore DXB's external (macro and micro) and internal environment, and subsequently to investigate the airport's strategic practices. Findings from the analysis of the case of DXB help define the airport's main sources of strengths, draw a best practise competitiveness model for an airport company, and evaluate the area of strategic management in the case of airports. To better evaluate this area, findings from the case study are related to the literature review in order to determine why airports can be considered as different from other industries, how DXB, particularly, differs from other airports, and what other airports can learn from the case of DXB.

Figure 3.1: An overview of the research design



3.5 INTERVIEWS

The qualitative technique used in this research relies on data collected from personal interviews with people working at the airport. Kvale (1996, p. 70) considers qualitative interviews as:

A uniquely sensitive and powerful method for capturing the experiences and meaning of the subject's everyday world.

This approach is usually undertaken in circumstances where:

There are a large number of questions to be answered; the questions are either complex or open-ended; and the order and the logic of questioning may need to be varied (Jankowicz, 2005, quoted in Saunders et. al., 2007, p. 385).

The views of individuals who are involved in the everyday life of an organisation allow for a deep investigation into the area from a management perspective and provide a more reliable source of information to explore this phenomenon. The use of personal interviews is crucial for this research as they permit better communication with persons who are closest to day-to-day operations and business activities, and who are involved in making decisions at the airport. Interviews involve a face-to-face meeting in which the researcher asks a series of questions to interviewees in order to elucidate the information gathered from the literature and from secondary sources.

Interviews may be classified into three types: structured interviews; semi-structured interviews; and unstructured (also known as in-depth interviews) (Saunders et. al. 2007). While structured interviews are usually used to obtain quantifiable data through the use of questionnaires and identical set of questions, semi-structured and unstructured interviews are often referred to as qualitative research interviews (King 2004, cited in Saunders et. al. 2007). Both semi-structured and unstructured qualitative interviews are considered as very useful to undertaking exploratory research, particularly in situations

where a case study is involved (Saunders et. al. 2007). In this research, it was decided that semi-structured interviews would be conducted. Unlike unstructured interviews that do not require a list of questions to be answered, semi-structured interviews often involve a list of themes and questions to be covered in which the order and the number of questions can be changed depending on the conversation (Saunders et. al. 2007).

Semi-structured interviews are used in this research in order to allow the researcher to ask each interviewee the same set of questions, ask different questions if they arise during the interview and ignore the questions that have already been addressed. Although the questions asked are particular to the information needed to be answered, the form of questions is open-ended. An interview guide was used to indicate the questions that need to be asked and their sequence, as shown in appendix (1).

Before conducting the actual interviews, pilot-testing of qualitative interviews was undertaken with Dr. David Gillingwater, who is a current researcher and a former lecturer in the Transport Studies Group at Loughborough University. Undertaking such pilot interviews is considered (Kvale, 1996) beneficial in testing the questions and increasing the researcher confidence through practice. Following the experimental interview, Dr. Gillingwater was asked to comment on how he understood the questions and where improvement was needed. One of his first comments was that the questions were too long and needed to be narrowed down to focus more on the area. He suggested that the questions should allow for a more flexible approach such as asking interviewees about their names and positions. He proposed that the questions should be re-ordered according to their importance, so that, in case time does not permit, all the questions that need to be asked, the researcher will still be able to cover the main key themes. He also believed that sensitive questions such as that related to the political situation of the country should be asked at the end of the interview. Therefore, an adjustment to the questions was followed up before the actual interviews.

3.6 THE SELECTION OF INTERVIEWEES

There is no general agreement between authors on the ideal number of interviews that are needed for better results. Kvale (2007) believes that a researcher should interview as many people as necessary to find out what he or she needs to know. Nevertheless, he also argues that if too many people are interviewed, this will lead to misinterpretations of ideas. In this research, it was decided that three interviews needed to be conducted with people from DXB. One of the main reasons for choosing those interviewees was to allow for a variety of ideas from individuals working at different departments with different responsibilities. This approach allows the researcher to gain a much better understanding of different aspects and to cover the research topics. This, however, does not mean that there are a different set of questions to be asked. Interviewees were invited to express their ideas on the different areas. Specific questions that may not be related to one interviewee were better explained by another who was more involved in that area.

The first interview was conducted with Mr. Lewis Naim (referred to as LN): Head of Marketing and Brand Management at DXB. The second interview was conducted with Mr. James Robinson (referred to as JR): Head of Strategic Planning. The third person interviewed was Mr. Ghassan Amhaz (referred to as GA): Press Relations and External Communications Manager in the unit of Marketing and Corporate Communications. Conducting interviews with these three people, who are involved in day-to-day business of the airport, has provided reliable information that can be considered as essential in providing high quality primary data to fill out any absent details from the secondary sources and to carry out this research. Interviews allowed for a deeper investigation into the case study and significantly assisted in answering the research question. Answers obtained from interviewees helped identify the best strategic practices and success factors that have been adopted at DXB.

It is worth saying that the interviews were conducted face-to-face at the airport site. The visit to the airport has not only provided direct contact with people who have responsibility at DXB, but also allowed the researcher to walk around and observe

facilities and activities directly. This approach is considered as valuable evidence and support to the answers obtained from interviews. Yin (1994, p. 93) points out that “*Observational evidence is often useful in providing additional information about the topic being studied.*”

It is also worth mentioning that while the first interview lasted for about 1 hour and 20 minutes, the second was the shortest interview and lasted about 1 hour and 5 minutes, and the final and the longest interview took 1 hour 30 minutes. Interviews were recorded using a digital voice recorder so that they were saved and referred to later when analysed. The interviews commenced by asking broad questions, this allowed the interviews to start in a more flexible form, and thus allowed for much general information to be gathered. Following the general questions, further focused questions were asked in sequence as shown in the interview guide in appendix (1). In order to establish a clearer understanding of the topic and to get much more accurate results, answers from the interviews were transcribed by the researcher himself.

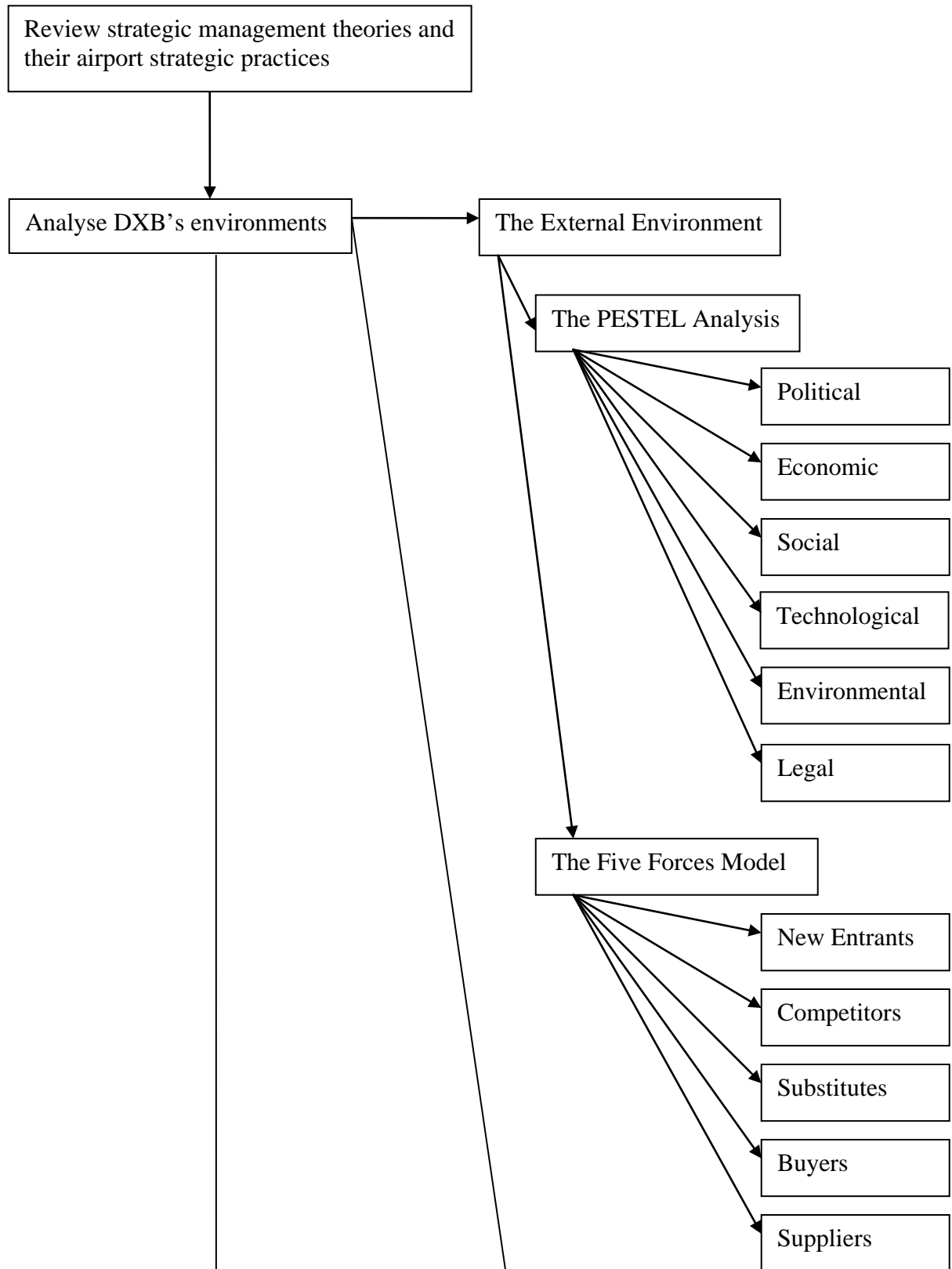
3.7 CASE STUDY ANALYSIS

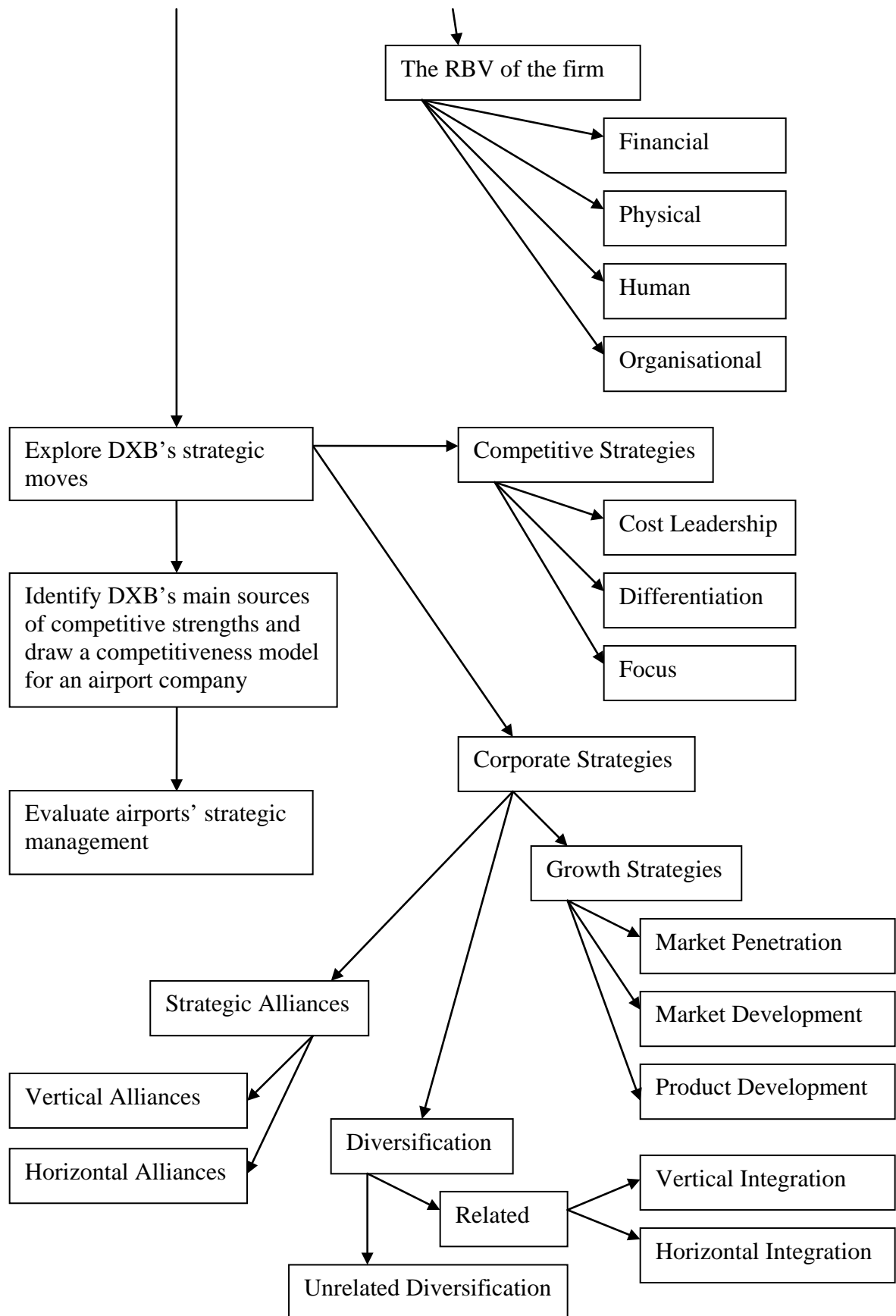
It is argued (Yin 1994) that the analysis of the data gathered during the case study approach is not an easy task. Therefore, it is important to determine a method for data analysis. In order to deduce findings about the airport’s external and internal environments, primary and secondary data collected for the case study were analysed by applying them to three different well-known business tools. Namely they are: the PESTEL Analysis; the Five Forces Model; the RBV of the firm. The PESTEL is considered as a reliable business tool and was used in this research to analyse the airport’s general environment (external macro-environment). The Five Forces Model is a powerful tool that is used to examine the airport’s competitive environment (micro-external environment) and, therefore, was employed in this case study. The RBV is a theoretical concept that was used to analyse the airport’s internal environment.

The combined use of these generic business tools allows the researcher to build up a better understanding of DXB's business environments. They are used to evaluate data gathered from primary and secondary sources. The overall findings of these different tools helps the researcher explore the strategic direction that DXB is following, identifying the main factors behind the continues success of DXB, and to draw up a conceptual model that can help managers realise and understand their key sources of strengths. Therefore, the use of these methods of analysis allows the researcher to make an in-depth investigation into the area of study in order to evaluate the strategic management in the case of airports, thus to answer the research questions. Figure 3.2 demonstrates the steps followed to undertake the research.

Although the Value Chain Analysis is a very powerful business tool that is used to analyse the competitive advantages of firms, it was not chosen as an analytical tool in this research mainly due to the difficulties in applying this method to service industries such as airports. The limited availability of financial data on the airport cost and revenue structures, as well as other essential internal information, is another reason for not selecting the Value Chain Analysis. The VRIO Framework is used in this research as a part of the RBV Theory of the firm.

Figure 3.2: An overview of the research process and plan





3.8 LIMITATION TO THE CASE STUDY

Due to the fact that the area of strategic management in the case of airports is still considered as a new field of research, there are only a limited number of published papers and articles that outline this issue. In addition, there are no documents in the literature give a comprehensive overview of DXB. The lack of literature covering these aspects posed some difficulties in gaining better background information and applying some analytical methods. This led to the collection of large amounts of external secondary data obtained from different sources of information, which were combined in order to gain an insight into the topic. This was apparent in the use of tools such as PESTEL Analysis, which requires the collection of a wide range of data related to factors in an environment that is often changeable, which is a major limitation to the use of such tool by airports.

The other major limitation to the case study of DXB is the unavailability of specific information. Difficulty in obtaining some internal secondary sources of information from the airport is mainly due to the confidentiality of such sensitive business data. For example, financial figures that could help the researcher to better determine the precise level of profitability for the airport company were not obtained. This makes it difficult to quantify the level of financial resources available to the airport from the local government and the internal generated revenues. DXB's organisational structure was also difficult to come by, which makes it somewhat difficult to determine the level of organisational capital. Although such secondary data were not obtained, the researcher used primary data from interviews as a support and evidence to fill the gaps left by the missing information.

3.9 SUMMARY

This chapter shows that there are various methods and techniques that can be used to undertake a research. Conducting a case study for this research allows for an in-depth analysis and provides the researcher with different sources that could be used as supporting evidence. The case study involves the collection of primary and secondary

data as support and evidence. Qualitative methods through conducting semi-structured interviews with three members of DXB's management team are used as the main source of reliable information to explore the strategic direction the airport is following. Data collected from these sources are applied to different business tools including the PESTEL Analysis, the Five Forces Model and the RBV of the firm to explore the impact of DXB's external and internal environments on its strategic direction. The use of these analytical methods also helps the researcher identify the airport's key success factors, draw a model that can help airport managers understand their competitive strengths, and evaluate the area of strategic management in the case of airports.

CHAPTER 4 ANALYSIS OF DXB'S GENERAL ENVIRONMENT

4.1 INTRODUCTION

The tool that is used to provide a primary analysis of the general environment of DXB is the PESTEL, which identifies and discusses the impact of different environmental factors that could impact on the development of an industry as well as the individual firm's strategic management. This analysis examines six factors in relation to the DXB environment in order to determine which external macro-environmental factors have had an impact on the overall competitiveness of DXB. The six macro environment factors involved in the PESTEL Analysis include Political, Economic, Social, Technological, Environmental, and Legal issues.

4.2 POLITICAL FACTORS

As discussed earlier, political factors within the macro-environment can include a variety of factors including political incentives or disincentives that may impact on the firm's operations, the regulatory climate that the firm operates under, as well as any other particular political factors involved in the overall environment in which the firm operates. The primary political environment that DXB is currently operating under is that of the United Arab Emirates (UAE). The overall political climate of the UAE and the political impacts that could influence DXB's ability to compete in the market have been identified and examined.

4.2.1 OVERALL POLITICAL ENVIRONMENT OF THE UAE

The UAE is structured as a federation of seven emirates (Abu Dhabi, Ajman, Sharjah, Dubai, Ras Al Khaymah, Fujairah and Umm Al Qaiwain), in which each has its own ruler (UAE INTERACT, 2007). The UAE's government is constructed on a parliamentary model with a president and prime minister (who also holds the title of

vice president) comprising the main body of the executive and legislative branch of government (UAE INTERACT, 2007). The country's current president is Sheikh Khalifa bin Zayed Al Nahyan, who is also the ruler of Abu Dhabi: the UAE's major oil producer. Sheikh Mohammed bin Rashid Al-Maktoum is the vice president, prime minister, minister of defence and the ruler of Dubai the largest city and the commercial centre of the UAE (UAE INTERACT, 2007). Each emirate has considerable power and control over revenues and resources such as oil and gas, and a significant percentage of each Emirate's revenue is given to the central budget of the UAE (UAE INTERACT, 2007).

The UAE has set up diplomatic ties with more than 60 countries worldwide and it is a member of international organisations including the UN and several of its specialised agencies (e.g. ICAO, ILO, UPU, WHO, WIPO): the World Bank, the IMF, the Arab League, the Organisation of the Islamic Conference, and the Non-Aligned Movement (U.S Department of State, 2007). It has also played a moderate role in the UN, the GCC, the Organisation of Petroleum Exporting Countries and the Organisation of Arab Petroleum Exporting Countries (U.S Department of State, 2007). Discussion with people from DXB revealed that the establishment of these diplomatic relationships with other countries can be considered as one of the key reasons behind the success of the UAE. Interviewee GA states that:

From its establishment in 1971, the UAE was a peaceful country that has strong ties and friendships with many other countries and has an excellent reputation worldwide. So, I think political factors have had a great influence on the growth of the UAE and Dubai.

Economic development is currently a very strong focus of the government, with much of the energy of the government going toward identifying ways in which the UAE can become more competitive in the world market in all areas, including the development of FTZs and the promotion of tourism resources, which placed DXB in a strong position to benefit from political support in this area (UAE Interact, 2008). Sheikh Mohammed Al-

Maktoum has a strong view regarding delivering the best customer experience. He believes that:

A world class government is essential to face global competitive pressures and expectations for greater transparency, accountability, efficiency, equity and responsiveness to the public in terms of customer service excellence (quoted in The National Newspaper, March, 2009).

His views demonstrate the importance of the government of the UAE in supporting and influencing the growth of different local industries. The influence on DXB of top people in the government was highlighted in the interviews, with respondent JR indicating that:

The highest-level people understand the importance of aviation. Our chairman Sheikh Ahmad is a member of the executive council and there is a keen interest from Sheikh Mohammed.

This indicates that political factors could be one of the key drivers which have had a great impact on DXB's operational performance over the past few years.

4.2.2 FOREIGN TRADE POLICIES AND FREE TRADE ZONES

The development of FTZs has been a primary focus for the development of economic growth in the UAE, as it intends to bring foreign direct investment into the region and diversify the country's economy away from reliance on oil and petroleum products (National Media Council, 2008). The FTZs have a number of advantages particularly for foreign owners, as they are one of the main ways in which foreign firms can gain access to the business environment of the UAE (UAE Interact, 2008). These FTZs are highly designed to appeal to these foreign firm owners, with 100% foreign ownership, 100% import and export tax exemption and repatriation rights for capital and profits, no corporate taxes for up to 30 years, no personal income taxes, and business setup incentives (National Media Council, 2008). In addition, double taxation treaties exist

between the UAE and some countries which are designed to make the UAE a more attractive destination for those people and companies who come from countries with high tax rates (Al Tamimi, 2004).

The complete freedom of capital movement and the numerous FTZs established in the country has opened more business opportunities for companies from all over the world. They represent a strong desire to encourage foreign business involvement in the UAE while still maintaining the traditional rules regarding foreign ownership of firms within the country, and have been highly effective in drawing in international businesses to the country (National Media Council, 2008). There are now thousands of foreign companies that have set up businesses in the UAE and are contributing to its growth (Knorr and Eisenkop, 2008). The UAE's non-oil exports have grown at a record rate of 42% (UAE Interact, 2009). The country is the third most important re-export centre in the world after Hong Kong and Singapore, which provides a substantial one-third of the entire trading sector in the country (ADCCI, 2009).

A substantial portion of these re-export trade activities is taking place in Dubai (O'Connell, 2006), which is the country's commercial centre and the leading trading hub where it forms an even bigger part of the UAE total income (UAE Interact, 2008). According to the Global Financial Centre's Index published in London, Dubai is now among the top ten most competitive financial centres in the world (Arabian Business, 2008). Dubai's non-oil foreign trade has risen by 38% in 2008 from the previous year, to reach AED 934.7 billion (UAE Interact, 2008). The discussion with interviewee GA reveals that *“around three-quarter of Dubai's business is re-exporting.”*

Dubai has a number of FTZs including Dubai Airport Free Zone (DAFZ), the Jebel Ali Free Zone, the International Financial Centre, the Internet and Media Cities and Maritime City (UAE Interact, 2008). Each of these FTZs offers special economic incentives to attract investors and commercial activities such as no-taxation for many years, subsidised energy rates, and full repatriation of capital and profits (UAE Interact, 2008). DAFZ, which is governed by the Dubai Airport Free Zone Authority, (DAFZA),

was established in 1996, and according to the governor authority it is “*one of the fastest growing free zones in the region*” (DAFZA, 2009).

In addition to the standard incentives mentioned earlier such as tax exemptions and foreign ownership, this free zone offers substantial services, incentives, and facilities to those that establish their businesses there including the licensing and leasing of facilities, business facilities (e.g. conference rooms, lecture halls, lounges, etc), logistics and transportation services (such as cargo clearance and access to freight forwarders and logistics companies), internet services, and other employee related services (such as recruitment and management), as well as 24-hours a day, 7 days a week operation time (DAFZA, 2009). The establishment of such FTZs, which makes it simpler to do business in the region, has proven to be exceptionally popular with international businesses, and is a primary focus of political involvement within the region due to its importance to the local economy (Al Abed, Vine, Hellyer, & Vine, 2008). Thus, this free zone offers substantial amenities due to its proximity to the airport and can be considered crucial in enhancing Dubai’s economy and its strategic position. This can be regarded as a major political force that has had a great positive impact on the operational performance of DXB, which gains substantially from its location.

4.2.3 GOVERNMENT PROMOTION OF DXB

Because the Dubai Civil Aviation Authority (DCAA) operates DXB, it can be presumed that the overall promotion of the airport should be handled within this group. However, this is not necessarily the case. The UAE government is a substantial promoter of Dubai and DXB, with one of the interviewees declaring that “*Dubai has a budget of AED 200 million each year to be spent on promoting itself worldwide (GA).*”

Dubai is increasingly becoming an attractive and successful business, tourism and transport hub, mainly as a result of its “*visionary leadership, high quality infrastructure, an expatriate-friendly environment, zero tax on personal and corporate income and low import duties*” (Bagaeeen, 2007). A survey by Airbus (2007) reveals that

75% of worldwide passengers travelling long-haul would prefer to travel through 32 major cities, which include Dubai, as shown in figure 4.1. This means that the image and reputation of Dubai acts as a growth driver for the airport.

Development in the aviation sector is part of Dubai's growth and development strategy (Knorr and Eisenkop, 2008). In addition, the development of the airport's services and facilities is a key factor in the government's development strategy, with future plans indicating that they strive for one of the most modern airports in the world (U.S. Department of State, 2007). Interviewee GA believes that:

Due to the vision and the wisdom of Sheikh Mohamed bin Rashid, who opened the doors of Dubai to people from all over the world, Dubai city and Dubai Airport have become what they are now.

The following statement highlights the importance of DXB to the government of Dubai, "Sheikh Mohamed believes that the airport is the heart of Dubai" (LN). The government supports DXB through financial and capital support, driving development and otherwise ensuring that it is competitive (National Media Council, 2008).

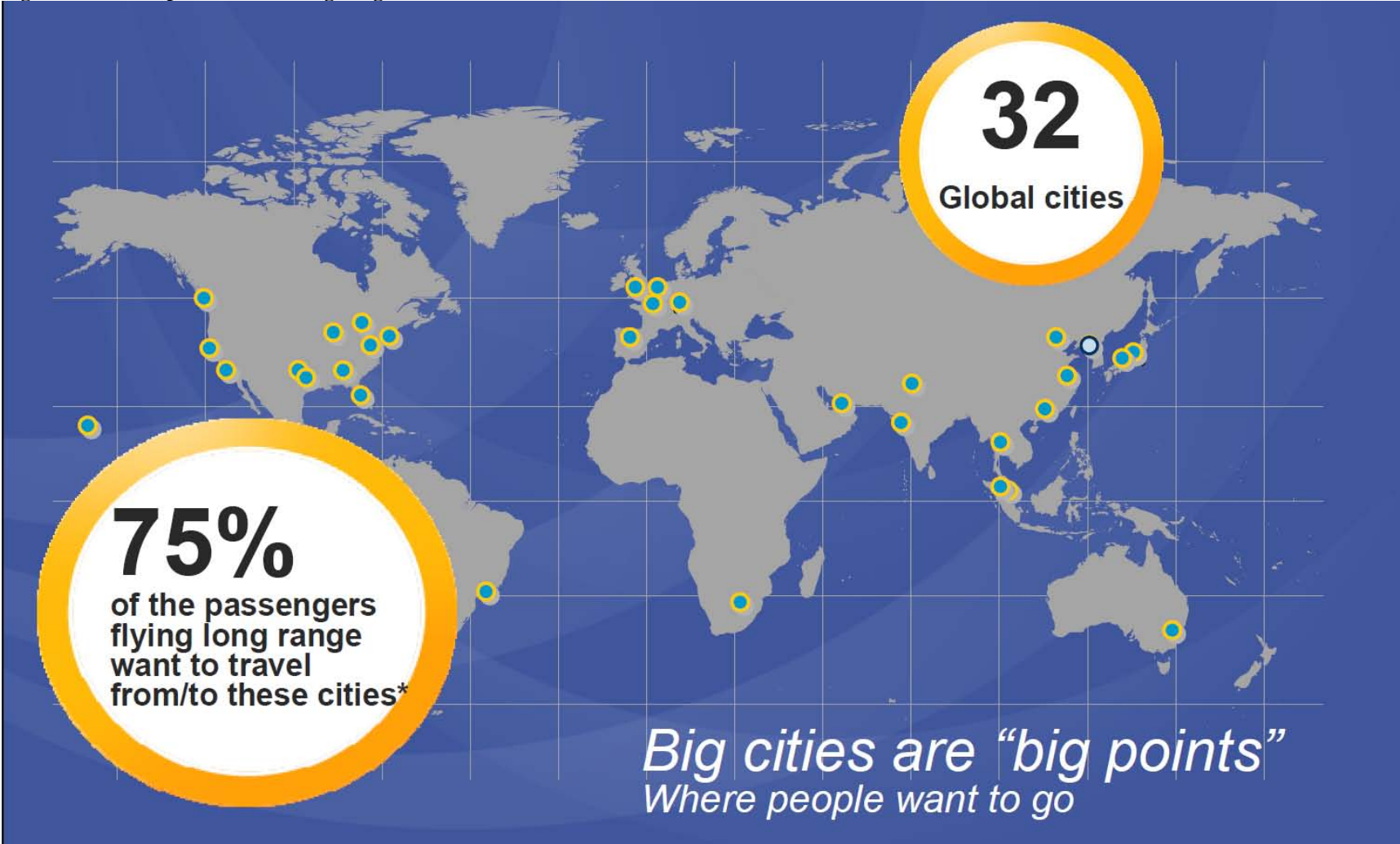
This view is aligned with DXB's vision and mission that aims to become amongst the best airports in the world by 2012 and to be able to manage other airports worldwide, through enabling growth and prosperity and enhancing global standing (Dubai Airports, 2009). Respondents asserting that their aim is to:

Become one of the top five airports and within the top largest airports in the world not only in terms of passengers but also in terms of potentials (LN).

Become the world's top airport in terms of customer satisfaction (GA).

Provide world class facilities (JR).

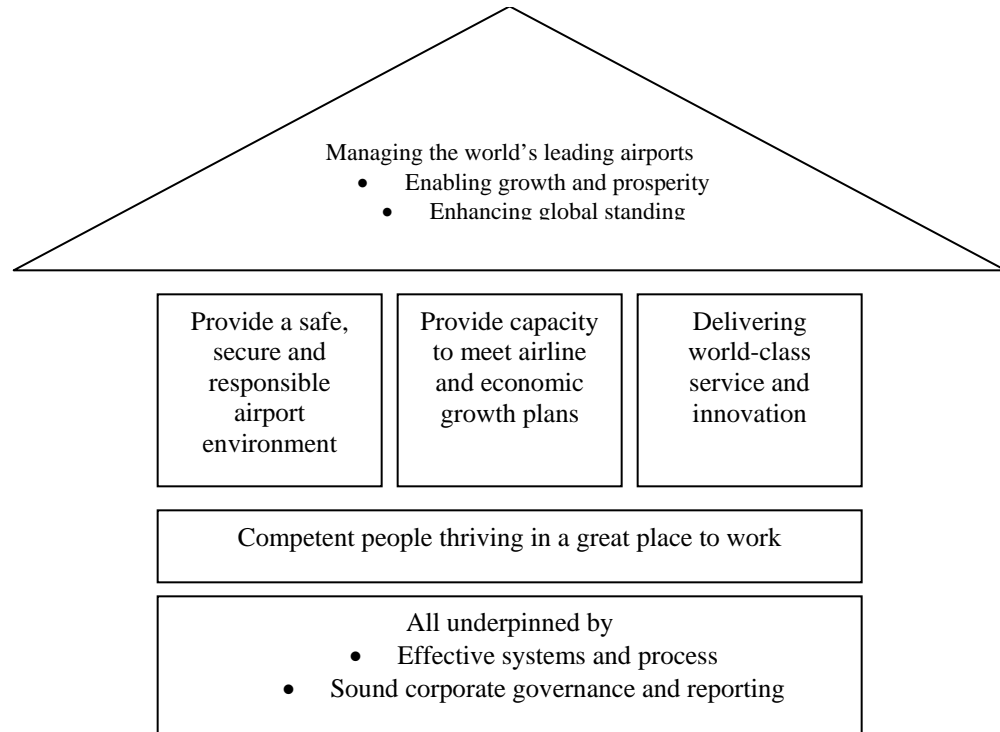
Figure 4.1: Cities preferred for long range traffic



Source: Airbus (2007)

In order to be able to achieve its aim the airport has set a number of strategic pillars and objectives including: providing a safe, secure and responsible airport environment, providing the capacity to meet, not only airline demands, but also economic growth plans, and delivering world-class service and innovation (Dubai Airports, 2009). Figure 4.2 illustrates the vision and strategic pillars of DXB.

Figure 4.2: DXB’s vision and strategic pillars



Source: Dubai Airports (2009)

These aims are also influenced by top leaders’ decisions to encourage DXB and the home based carrier: Emirates (referred to as EK throughout the research), in order to enhance economic and social activities in Dubai. Interviewee GA states:

Our goal is driven from the goal of Dubai and the view of Sheikh Mohamed Ben Rashid of making Dubai the favourite commercial hub in the world.

Interviewee JR feels the same toward this and says:

Our business plan has been formed and it integrates with the business plan of Dubai, so you cannot separate the airport from the benefit it brings to Dubai.

Therefore, this strong support can be expected to reflect well on the development and future government support of DXB. In fact, political factors may influence the amount of funding the airport would expect to receive from the government.

While the government is involving itself in the development of DXB, the main advertising traffic is not necessarily driven only by government promotion of the airport. The most active support of branding initiatives and other issues identified as key for the development of the airport brand name are driven from specific agencies such as EK, duty free shops and the Dubai Board of Tourism. This is discussed in more detail later in this research.

4.2.4 REGIONAL AND LOCAL CONFLICT ISSUES AND INSTABILITY

Although the UAE can be considered as a politically stable country, the region in which it resides has been turbulent in recent years; with a growing level of political strife and instability existing within the Middle East (Freathy 2004, O'Connell 2006). It is, therefore, important to consider these regional factors as well, as DXB is a regional air transport hub and one of the largest airports in the region. This is particularly true because DXB has a high probability of being the target of a planned or actual terrorist attack, which could impact, not only on the airport's operations, but also on its long term strategic capabilities (U.S. Department of State, 2007).

The first Gulf war in the Middle East had discouraged many European travellers to flyover and stopover in the Gulf States, including the UAE (Hollier 1991, cited in O'Connell 2006). Despite this political turbulence, the air travel market in the gulf region continued to grow and the region has become the world's leading region in aircraft purchasing (O'Connell, 2006). In addition, in 2008 the Middle East reported the highest growth rate at 5.8% followed by Africa at 4.9%, Latin America and the

Caribbean at 2.1%, and Asia Pacific and Europe at only 1.2%, whereas North America reduced by 3.1% (ACI, 2009).

Regional issues including increasing levels of drug trafficking as well as increasing levels of extremist violence have had relatively low effects on the UAE due to high regulation and strict laws (National Media Council, 2008). However, there has been some increased pressure from drug trafficking and money laundering in the region, due to the lack of regulation of the informal banking structures (CIA, 2009). Overall, political instability within the region, including increasing insurrections, the US' military expeditions in the region, and other challenges, have left the UAE largely untouched (U.S. Department of State, 2007). This is due to the close relationship of the UAE and western government as well as a strong alignment of the UAE's traditional values with those of other Middle Eastern countries, which has placed it in a somewhat privileged position in terms of foreign relationships (U.S. Department of State, 2007).

The area of political stability and its impact on the growth level of DXB was also raised during the interviews. Interviewees claim that the UAE can be considered as a largely politically stable environment. One of the interviewees believes that "*it is a very safe and politically stable country*" (GA). Interviewee LN believes that the political stability of the UAE has had a great positive impact on the growth level of DXB over the past few years:

The UAE has shown that it is a very stable environment politically... The more the country is stable politically the more it progresses and, automatically, the more the airport progresses. You do not see a lot of airports expanding in politically unstable areas. Giving eyes to the success in the last few years that we have seen, if we were in a different environment the scenario would be quite different.

Therefore, while this political aspect may form a potential threat that may impact on DXB in its future growth, it has not yet become a significant issue in the competitive capabilities of DXB, and hence it is not considered as a disadvantage.

4.3 ECONOMIC FACTORS

This section of the analysis focuses on the UAE's economic growth rate, current economic indicators and the development of consumer demand and buying power during the current period, as well as examining the potential impacts of the UAE's economic status on the performance of DXB.

4.3.1 THE GROWTH OF THE UAE AND DUBAI

The UAE is structured as an open capitalist economy, and has a substantial trade surplus at most times (National Media Council, 2008). While the UAE was highly reliant on oil revenues to finance their projects in the 70s and 80s (Arabian Business, 2008), in recent years the country has developed plans to increase the diversification of the structure of its economy and to enhance the role of the private sector in order to reduce its reliance on oil. This diversification was mainly influenced by the drop in crude oil prices in 1986, which led the UAE to take some measures to improve its economic situation (Kazim 2005, cited in O'Connell 2006). Under this diversification strategy, sectors including transportation, tourism, trade, banking, real estate, have witnessed dramatic growth in the past few years.

Although the majority of the economy is still based in the petrochemical market, the country has achieved a high place in terms of non-oil sectors' contribution to the structure of the national income. Industries including transport and tourism have been widely developed in the country and are now seen as an important source of income (Lohmann et al., 2009). While the tourism industry was regarded as less important in the past mainly due to the political instability in the Middle East, there are now increasing levels of economic activity occurring in the UAE, which is now, along with

Saudi Arabia, the largest tourist destinations in the region, with the latter being more focused on religious tourism (O'Connell, 2006).

Information from the Department of Tourism and Commerce Marketing of Dubai (DTCM, 2010) indicates that Dubai is one of the most attractive and active cities in the world with a substantial number of established and projected tourist attraction sites including the artificial Palm Islands (Deira, Jumeirah & Jebel Ali), the World Islands, Burj Al Arab, Burj Khalifa, Wild Wadi Water Park, Ski Dubai, Jumeirah Al Fattan Palm Resort, Dubai Dolphinarium, Dubai Land, Snow Dome, Aqua Dunya Dubai, Emirates Park Towers Hotel & Spa, etc. Dubai has a number of specialised cities including Dubai Healthcare City, Dubai World Central City, International City, Dubai Sport City, Dubai Maritime City, Dubai Golf City, Children's City, Motor City, and so on. Figure 4.3 shows a map of Dubai (refer to appendix 2 for some images of landmarks of Dubai).

There are a large number of shopping centres such as Dubai Shopping Centre, the Mall of the Emirates, Deira City Centre, Abu Hail Shopping Centre, Souk Al Bahar, Jumeirah Plaza, Al Mulla Plaza, Al Manal Centre, Al Ghurair City, Century Mall, Al Gazal Mall, Oasis Centre Mall, Al Rais Shopping Mall, BurJuman Centre, Al Khaleej Centre, Al Bustan Centre, Holiday Centre, Wafi Shopping Mall, Abraj Center, Al Dhiyafah Centre and Beach Centre, etc. It is also famous for its sports and activities including the Dubai World Cup, Tennis, skiing, fishing, diving, windsurfing and sailing races, etc.

The city also holds different events around the year including the Dubai Shopping Festival, Dubai Summer Surprises, Outdoor Adventure Dubai, International competition of the Holy Quraan; as well as other national and international exhibitions such as the Private Label Middle East Exhibition, the Premium Exhibition, the Middle East Pool & Spa Exhibition, the Gulf Cleantech Exhibition, Dubai International Jewellery Week Exhibition, Arab Oil & Gas Exhibition, Cityscape Exhibition, Middle East Electricity Exhibition, Gitex Computer Shopper & Home Electronics Show, etc.

Figure 4.3: Map of Dubai



Source: Department of Tourism and Commerce Marketing (DTCM, 2010)

Data from the Department of Tourism and Commerce Marketing (DTCM, 2008) demonstrates that there are a significantly growing number of people visiting Dubai in recent years. The number of established hotels and available rooms has increased from 258 hotels and 17,046 rooms in 1998 to 319 hotels and 32,617 rooms in 2007. The number of Dubai hotel guests has risen from around 2.1 million visitors to more than 5.8 million during the same period. The city aims to attract 15 million tourists annually by the year 2020 (Bagaen, 2007).

It was mentioned during the interviews that the UAE is working very hard to attract tourists and visitors:

The UAE has invested billions to develop its infrastructure and the tourism sector to attract people and business from all around the world. It is now has the largest number of hotel rooms in the region of around 70.000 (GA).

However, the UAE is not alone in this development race. There are other countries in the Gulf region that are trying very hard to benchmark the UAE, with Qatar and Bahrain engaged in the construction boom aiming to attract international businesses (Bagaen, 2007).

4.3.2 THE OVERALL ECONOMIC GROWTH OF THE UAE

Despite the diversification in the UAE's economy, oil still plays a crucial role in its growth rate. The UAE is the world's 4th largest player in the oil industry, which accounts for 80% of the country's revenue and 70% of its exports (Gulf News, 2008). The country has benefited from the rise in oil prices over the last few years. The oil and gas sector contributed as much as 35% of the UAE's Gross Domestic Product (GDP) in 2007 (Gulf News, 2008). The UAE's real economic growth rate, which excludes the direct impact of changes in oil prices, is among the highest in the world (UAE Interact,

2008). Despite the current global economic crisis, the UAE has somewhat maintained its economic growth and made economic gains in various sectors, mainly due to the measures that were undertaken by the government to handle the international crisis (UAE Interact, 2008). The UN HDI index ranking indicates that the UAE is a developed country that ranks highly in terms of income equality as well as other development issues (UNCTD, 2009). Nevertheless, recent figures showed that the UAE is not immune against the global financial crisis, with a city like Dubai extremely hit by the economic downturn which led to debts of up to US\$80 million (Dubai Investments, 2009).

A study by Global Research points out that the UAE attained a compound annual growth rate (CAGR) of 9.3% from 2003 up to 2008 (Gasworld, 2008). Due to the reasonably stable economic situation in the UAE, the GDP growth level is predicted to rise over the coming years. According to the Abu Dhabi Chamber of Commerce and Industry, the growth rate for the UAE's economy over the coming years is forecasted at 13% (ADCCI, 2009). While this indicates a high reliance on oil as a source of income for the country, it also shows a strong potential for growth of the demand for passenger and airfreight services in the future. Table 4.1 below represents significant economic indicators from the years between 2003 and 2008, derived from the Dubai Statistics Centre as well as supplementary data from the World Bank. It demonstrates a number of characteristics that should be considered as important in the examination of the economic status of the country. This table includes growth rate data that demonstrates how the overall economy of the UAE is growing.

Table 4.1: Key economic indicators and selected growth rates, 2003-2008

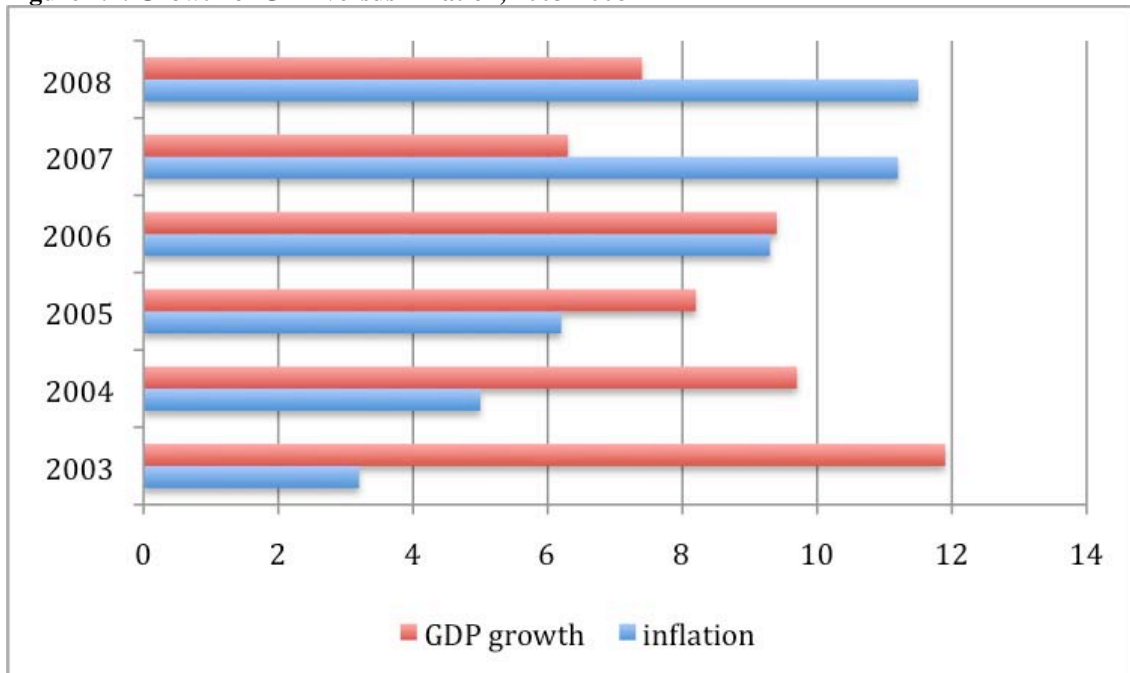
Categories	2003	2004	2005	2006	2007	2008	Growth
Annual rates of inflation	3.2	5	6.2	9.3	11.2	11.5	3.6%
Current account balance	7586	9801	24291	37079	28986	41090	5.42%
Current account balance as % of GDP	2.3	2.5	4.9	6.2	4.1	4.1	1.78%
Consumer expenditure as % of GDP	43.2	41.7	38.5	35.9	34.4	28.2	- 0.65%
Consumer price index	122.1	128.2	136.1	148.8	165.5	184.4	1.51%
Total GDP	326701	394072	496515	602672	700507	1011380	3.10%
Real GDP growth	11.9	9.7	8.2	9.4	6.3	7.4	

Money supply	58262	80818	104449	120020	181664	203137	3.49%
Exports	67135	90997	117287	142505	154000	159747	2.38%
Imports	52073	72082	84654	97863	121100	132718	2.55%
Trade balance	15061	18915	32633	44641	32900	27029	1.79%
Annual gross income	199272	235880	277527	315201	354150	412355	2.07%
Annual disposable income	183887	217500	255710	290283	325979	379325	2.06%

Sources: Data compiled by author from Dubai Statistics Centre and the World Bank

As can be seen from the table above, the economy of the UAE grew rapidly over the period shown. However, this growth started to slightly slow by the end of this period, indicating that this growth rate could be in a downward stage, which is likely the result of the extreme global financial downturn. Figure 4.4 below demonstrates the growth in real GDP as compared to the growth in inflation over the time period shown in the table above. As can be seen, real GDP growth exceeded inflation until 2006, but in 2007 dropped substantially below inflation rates and stayed there.

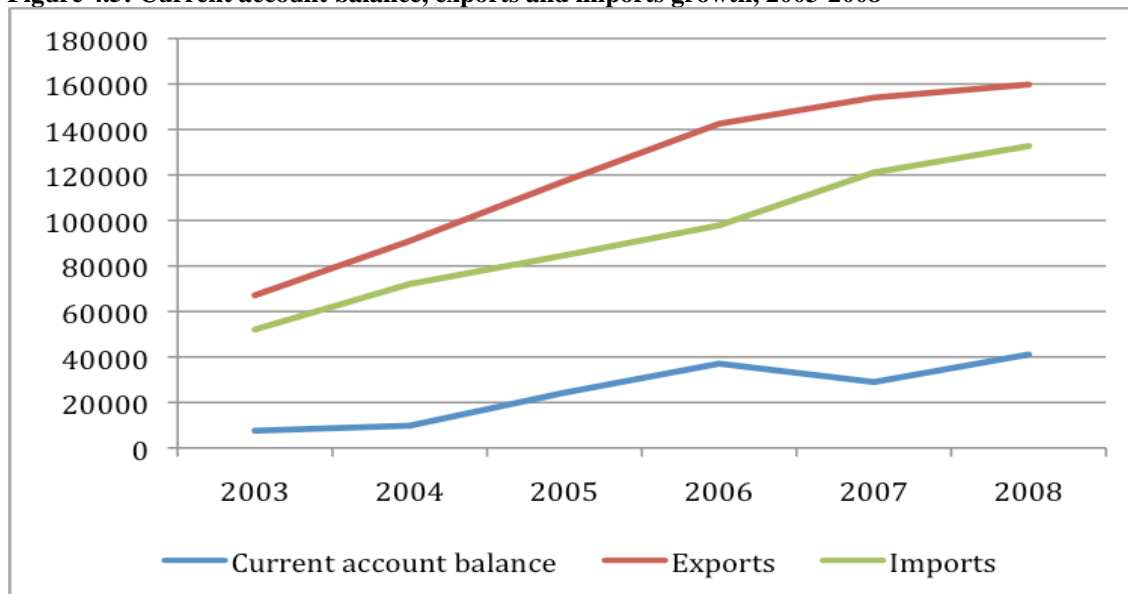
Figure 4.4: Growth of GDP versus inflation, 2003-2008



Other characteristics also show that there is a dramatic spike over the past few years. Figure 4.5 shows the growth in the current account balance, which, as can be seen, is positive thus indicating a trade surplus as compared to growth rates of imports and exports. This chart demonstrates that these figures have grown approximately in concert

with each other, indicating a good balance of exports and import growth that do not leave the country import-dependent.

Figure 4.5: Current account balance, exports and imports growth, 2003-2008



The overall economic wealth of the individual workers within the UAE was similarly structured, with a steady overall growth rate throughout the period, resulting in an increase of 2.07% in annual gross income and 2.06% in disposable income, which is income after taxes and other required payments. There were no significant changes in the overall structure of the UAE employment taxation schedule over the past few years, which account for the approximate straightness of these two lines together. As can be seen in figure 4.6, the difference between annual gross income and annual disposable income, is very small ranging between 8.4% and 8.8% of total income. This demonstrates that the UAE's workers have on average the majority of their income to spend. However, there is little evidence that the UAE's consumers are spending rapidly in order to make up the difference between their increasing incomes and current expenditure rates.

Figure 4.6: Growth in annual gross income and annual disposable income

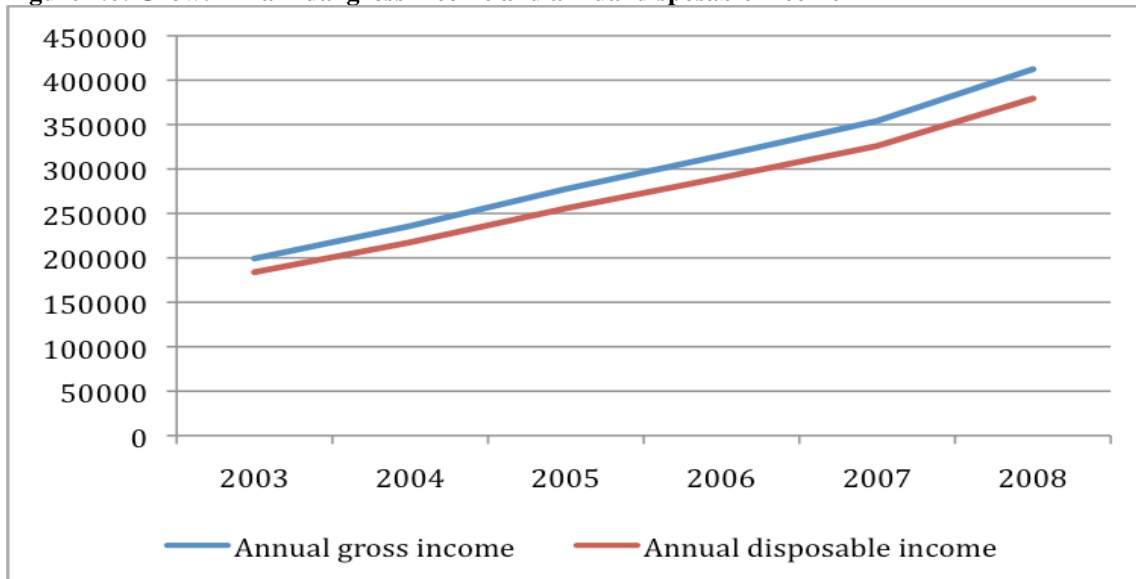
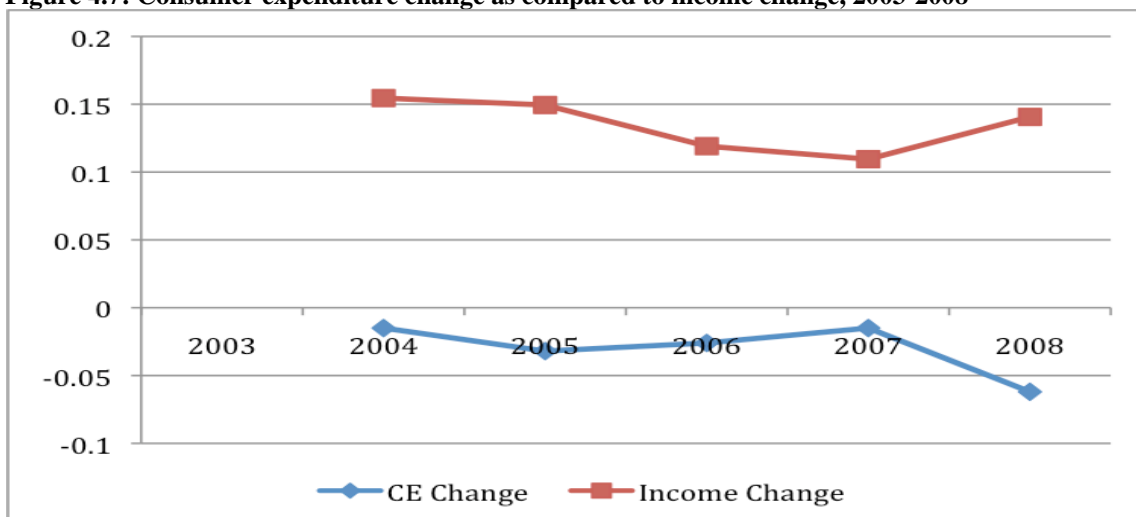


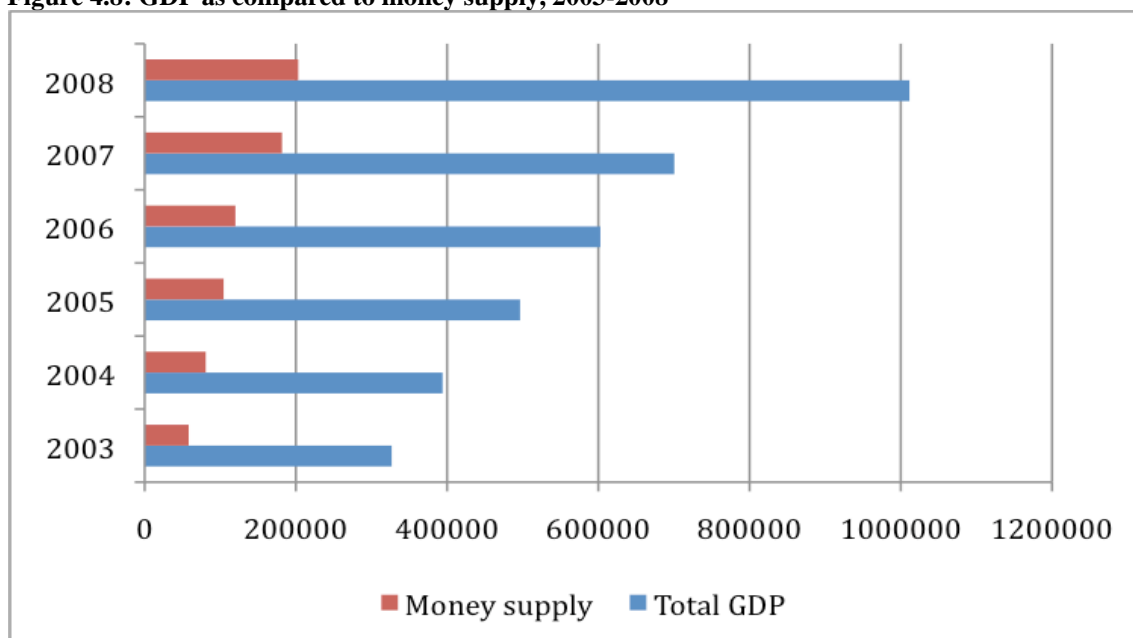
Figure 4.7 below shows that while there was an increase in consumer expendable incomes of between 10.95% and 15.45% annually between 2003 and 2008, there was a decrease in the consumer expenditure as a percentage of GDP between 1.5% and 6.2% annually during the same period. Because of this, it cannot be assumed that the UAE consumers are willing to spend at rates that are in line with increases in their personal income and economic proposals, which means that these figures should be treated with extreme care.

Figure 4.7: Consumer expenditure change as compared to income change, 2003-2008



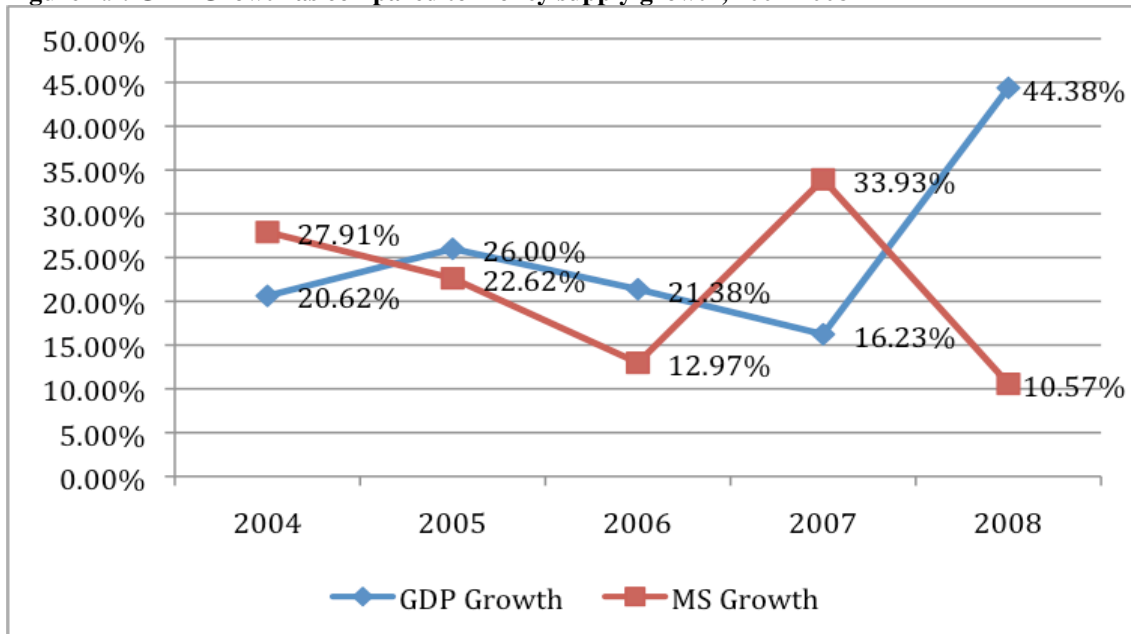
The final area of consideration is the growth in macroeconomic indicators in the UAE, including GDP and money supply. GDP was addressed above and it can be seen that while GDP was growing at a high rate, this cannot be expected to continue indefinitely. The bar chart in figure 4.8 demonstrates the growth rate of the GDP as compared to the growth rate of the money supply during the same period. As can be seen from this chart, both the GDP and the money supply witnessed continued growth over the period, with GDP growing at a higher rate in the last year.

Figure 4.8: GDP as compared to money supply, 2003-2008



As can be seen from figure 4.9 below, the growth in GDP and money supply are largely opposite to each other and do not display a direct connection to each other in terms of overall growth. However, the overall growth trends that are witnessed through this period in the UAE are the reason for strong economic growth, which is a positive sign for the overall development of DXB.

Figure 4.9: GDP Growth as compared to money supply growth, 2004-2008



4.3.3 RELEVANCE OF THE UAE AND DUBAI GROWTH TO DXB

The performance of DXB is related directly to the growth level of the UAE, in particular to the emirate of Dubai. This is mainly due to the strong involvement of the airport in cargo operation and tourism based air services, both of which are related directly to the economic growth of the UAE, as well as to the overall level of development and economic activity going on in the city of Dubai. The figures shows that the overall development of the UAE economy is strong indicating a strong level of consumer income growth, consumer expenditure growth, and economic growth in general which drives the development of the aviation industry.

DXB is integrated into the overall economic structure of the region in a number of ways. For example, its FTZs are directly dependent on positive economic growth in order to continue to be effective, due to the strong development of international and foreign involvement in the UAE markets. This involvement means that DXB's cargo operations are dependent on the overall economic growth of the region, due to the requirement to maintain flight levels of goods coming in and out. Since a large volume of the imported and exported goods is transported by air carriers using DXB, the airport

is likely to play a vital role in the country's re-exporting process. Growth in passenger traffic is largely affected by the overall disposable incomes of the region, which is shown to be relatively high.

The success of Dubai was considered by respondents while conducting the interviews as vital to the growth of DXB, with interviewee LN indicating that:

Around 97% of arrivals to Dubai come through the airport. So, we are interlinked in terms of progress. As the country progresses as more people come to this country as everybody benefits from that, whether you are talking about business perspective or tourism industry or the Dubai shopping festival in the early days and how it is started and how it is now driving traffic.

Respondent JR asserts the importance of regional tourism and business development for the success of DXB:

Well, you just need to look around and see Dubai and the sort of miracle of Dubai and the investment they have made to make Dubai as a tourism and business financial hub. Our business plan has been formed and it integrates with the business plan of Dubai.

This means that the UAE's economic indicators directly affect the overall growth level of the air transport industry, so it should be considered strongly as a key source of success in the case of DXB.

4.4 SOCIAL FACTORS

This section explores the issues involved in the demographic, social and cultural landscape of the UAE and Dubai in order to examine how these factors could potentially influence the outcomes of DXB's competitive effort.

4.4.1 POPULATION AND DEMOGRAPHIC FACTORS

Table 4.2 below presents a general overview of the recent demography of the UAE and establishes the overall characteristics of its population. This information was obtained from sources including the National Media Council, the Dubai Statistics Centre, and the CIA, and they are from the years between 2005 and 2009 (years are noted where appropriate in this discussion).

Table 4.2: Demographic characteristics of the UAE

Characteristic	Size
Population (total)	5.066 million (according to 2009 Census)
National and Non-national Population	20.1% / 79.9%
Major Ethnic Groups	Emirati (19%), Arabic and Iranian, South Asian
Population Makeup (by age groups)	
0-14 years	20.4%
15-64 years	78.7%
65+ years	0.9%
Urban/rural population	78% urban, 22% rural
Genders	67.6% male / 32.4% female
Population Growth Rate	2.7%
Life expectancy	76.11 years
Fertility Rate	2.42 children per couple
Languages (Official and Other)	Arabic (official), Persian, English, Hindi, Urdu
Official Religion	Islam
UN Human Development Rank Index	0.903 (31 st as of 2006)
Women in the labour force	22.4%
Literacy Rate	91%

The table above shows that almost 80% of the population in of the UAE are non-nationals. This is one of the most dramatic defining characteristics of the overall structure of the demographic environment. Table 4.3 below demonstrates the UAE population by city for the year 2009. This table shows that the city of Dubai has the highest rate of population of over 1.7 million followed by Abu-Dhabi and Sharjah. The table also indicates that the majority of the UAE's inhabitants are males with Dubai at a considerably higher rate. From the total 1.7 million capita living in Dubai, there are less than 0.4 million females. It should be noted that while there is a dramatic difference between the male and female population rate, this is not due to cultural issues, rather

birth rate and the amount of children under the age of 15 are almost the same between males and females and are within statistical differences. The difference began during the last few years when a large number of male immigrant workers from Asia began to move into the UAE for temporary work in the resorts and other economic centres in the region (National Media Council, 2008).

Table 4.3: The UAE population by city

Emirate	Male	Female	Total
Dubai	1,327,000	395,000	1,722,000
Abu Dhabi	1,060,000	568,000	1,628,000
Sharjah	674,000	343,000	1,017,000
Ajman	162,000	88,000	250,000
Ras Al Khaimah	151,000	90,000	241,000
Fujeirah	96,000	56,000	152,000
Umm Al Quwain	34,000	22,000	56,000

Source: Ministry of Economy (cited in Government of Dubai, 2009)

Interviewees believe that the culture of Dubai has attracted people to the country, stating that:

Dubai has done a fantastic job of creating a city of the future based on Middle Eastern and Islamic culture, which has attracted people from all around the world to come here to experience this opportunity... The UAE is very interesting because of the multi cultural society that we have here. The Emirates are only 20% of the population and there are 80% from people all over the world all sort of working together (JR).

A lot of people are discovering that Dubai is culturally open to a lot of societies whether you are from the Middle East or you are from Europe or any other country (LN).

Dubai is open to people from any nationality and would like to learn from the experience of others. Sheikh Mohamed says Dubai has learned from the

mistakes of others... People from 170 nationalities live in Dubai, and people from 35 do not need a visa to enter the UAE (GA).

Table 4.4 below shows the growth in population in the city of Dubai between the years of 1975 and 2009. The population of the city grew from around 0.18 million in 1975 to more than 1.7 million in 2009. This number is estimated to increase to 4 million people by the year 2017 (Bagaeeen, 2007). It is clear that the city has witnessed continued growth in population, in particular in the last few years.

Table 4.4: Population in the city of Dubai between the years 1975 and 2009

Year	Population
1975	183,187
1980	276,301
1985	370,788
1993	610,926
1995	689,420
2000	862,387
2002	960,950
2003	1,014,379
2004	1,070,779
2005	1,321,453
2006	1,366,000
2007	1,478,000
2008	1,596,000
2009	1,722,000

Source: data compiled from Bagaeeen (2007) and Government of Dubai (2009)

4.4.2 SOCIAL AND CULTURAL FACTORS

Issues of inequality between populations, including men and women, nationals and non-nationals, and different ethnic groups reflect strong cultural and social influences. These influences are likely to have some affect on the overall competitive environment as well as driving attitudes and spending toward or away from DXB's main centres of interest. They could also impact on the ability to gain access to workers, which is likely to create a competitive pressure within the macro-environment. This explains why social and cultural factors should be considered in this case.

One particular challenge in the social and cultural environment of the UAE is the division of labour between nationals and non-nationals creating a multi-cultural society. Again, this is mainly the result of the UAE opening its doors for businesses and people from all over the world, as well as the high income available for workers. However, the division of labour between nationals and non-nationals in the UAE has posed some difficulties in the labour markets (UAE Interact, 2006). In particular, the work attitudes of nationals employed in the private sector indicated that up to one third of nationals of those surveyed in a study chose jobs out of necessity rather than choice, indicating that they may have a higher turnover rate. Thus, nationals often prefer to work in the public sector, which has a higher salary rate than the private sector (UAE Interact, 2006).

There are also many of the usual problems as observed with working within a multicultural environment, including challenges regarding discrimination and difficulties involved in integration (UAE Interact, 2006). One particular challenge in this case is that the non-national work force tends to be the highly skilled people due to the legal requirements for seeking out national workers for specific jobs before advertising them to the non-national work force (UAE Interact, 2006). This was also highlighted by one of the interviewees who revealed that:

Priority of employment, especially top positions, is offered to people from the Emiratis (GA).

These rules thus drive the hiring of workers for highly skilled jobs rather than for lower wage jobs. There are strong social welfare programmes in place to help those that cannot participate in the work force as well as, which increase national income as well as per capita individual income, with the government spending 1% to 2% of GDP on social welfare programs (UAE Interact, 2006).

Education is a vital component in the social and cultural landscape of the UAE in terms of DXB's competitiveness mainly due to the need for skilled and trained workers at the airport. Currently, education is provided for free by the UAE's government and is

required to the ninth grade (UAE Interact, 2006). Secondary school is also highly utilised, with the UAE University, Zayed University, and a system of higher colleges of technology being supplemented by smaller universities and foreign universities (UAE Interact, 2006). Currently, 62% of higher education students are female. Women's rights and women's needs are also a central component of the development of social and cultural economy in the UAE (UAE Interact, 2006).

Discussion with interviewees has shown that while the UAE has such a mixture of social and cultural factors, this may positively influence the growth level of DXB. Interviewees state that the initiatives of the UAE and Dubai to become the world's business hub have attracted many people and visitors to the country, which drives more traffic to DXB:

The social aspect of Dubai drives a lot of traffic that the country gets as a whole. So, as the country progresses and as the population grows, you will get a lot of socio-economic factors that would drive more interest and visitors into the country (LN).

The culture of Dubai and the mix of people that we have here are making Dubai one of the world's favourite destinations (GA).

This shows that social and cultural issues, including the presence of mixture of non-national workers, are important factors that may have had an influence on the growth level of DXB. In addition to the demand that is generated from the growth of the population and from travellers visiting friends and family working and settled in the UAE, there is a greater demand for air traffic generated at DXB from Dubai's position as an important tourist and business hub, as noted earlier. Furthermore, there is a large demand coming from the strategic location of DXB as a major transfer hub. More details on this issue are provided later in the research when analysing the internal environment of DXB.

4.5 TECHNOLOGICAL FACTORS

This section examines the current state of the UAE's infrastructure, technology spending and research, as well as the influence of technology in the competitive environment of DXB and technology's influence on competitors.

4.5.1 TECHNOLOGY IN THE UAE

Technology is a major focus of government spending and provision, as well as being a significant private sector issue. The country's power and telecommunications infrastructure is fully modernised, with landlines, mobile telephony, and fibre-optic integrated voice and Internet communications services available across the country (CIA, 2009). International communications connectivity is provided by satellite, land-based microwave relay, and international submarine cables, which provide robust connectivity across the region (CIA, 2009).

The World Economic Forum ranks the UAE at the top of its Networked Readiness Index (NRI) in the Middle East and at number 29 out of 122 worldwide as of 2007 (Al Abed et. al., 2008). Technology is also a major focus in education, with computers and internet connectivity being leveraged as tools to equip the next generation for the use of a technology-driven economy as well as to encourage the current workforce to establish many of the same skills (Al Abed et. al., 2008). The use of technology is popular as well, with around 800,000 Internet subscribers, as of 2007, totalling approximately 20% of the population; however, this does not include internet users that gain access in other ways, such as children that can access the internet through the use of parents or schools (Al Abed et. al., 2008).

The UAE's policy on internet and telecommunications has been driven in policy and spending in much the same way as the FTZs. Dubai Internet City and Dubai Media City have used the free zone model to encourage involvement in the economic sectors from printing and media publication services as well as internet-based business and development (UAE Interact, 2006). Dubai Internet City describes itself as:

A strategic base for companies targeting emerging markets in a vast region extending from the Middle East to the Indian subcontinent, and Africa to the CIS countries, covering 2 billion people with GDP \$6.7 trillion (DIC, 2009).

In addition to the usual incentives offered to firms, the Dubai Internet City environment offers an incubator environment that is highly focused on internet companies attempting to build synergy between firms and provide training for nationals in the skills required by those firms. This scheme is counted as a highly successful model of technological development, as a number of western companies have followed in the footsteps of Dubai Internet City Zone. However, the researcher could not find any significant study relating to technology transfer between those firms and national firms, which may be due to the isolated nature of the private sector technology development. Regardless of this, it can be stated that the technology environment in the UAE is fully developed and encouraging the development of strong ties between technology companies and the UAE economy.

4.5.2 TECHNOLOGY IN THE AVIATION INDUSTRY

There have been a number of technological advances in the airport and airline industry that have improved the overall position of DXB in terms of providing air service to all the regions in the Middle East, as well as other parts of the world. One such development is that of advanced aircraft technology such as the Airbus A380, whose expanded range and increased passenger and cargo payload has placed DXB within easy reach of the world's network of larger airports (UAE Interact, 2008). Other developments in aircraft technology have included the Airbus A330-200, A340-600 and Boeing 777-300ER, which have dramatically improved cargo carrying capacity, which has in turn further increased the overall cargo movement at DXB (UAE Interact, 2008).

These dramatic improvements have shifted DXB from a position as a regional hub airport to a central position in worldwide air transport, which has been taken advantage

of by the national carriers EK and SkyCargo (UAE Interact, 2008). EK is one of the first airlines to order the Boeing A380, which has a passenger capacity of up to 853 passengers and a flight range of 15,200 kilometres. This long-range aircraft opens up a wide range of potential networks and routes for DXB to take advantage of in terms of network connectivity (UAE Interact, 2008). The development of regional airlines has also benefited from the growth in technology in the region, with regional budget carrier Air Arabia being able to take advantage of the Airbus A320 aircraft (UAE Interact, 2008).

However, the development of the new high capacity cargo and passenger aircraft has resulted in some increased strain on DXB and the surrounding regions, as these jets require. The physical size of the aircraft has had an impact on the infrastructure at most airports, as such a large aircraft requires wider runways and gates as well as higher passenger and cargo handling capacity (de Barros and Wirasinghe, 2002). DXB is currently undergoing an expansion intended to allow it to process 80 million passengers per year and an increase in the amount of cargo travel, as well as the addition of a third terminal. This is to be complemented by the development of a second airport site, Al-Maktoum International Airport in Jebel Ali (also known as Dubai World Central).

This demonstrates that the overall growth in technology is leading to the consolidation and expansion of international air travel, which will be a strong factor in the development of DXB's challenges and growth. Interviewees were asked for their opinion on whether technology is considered as vital for their airport business. Comments included:

To keep our competitive advantage we always look at technology and innovative solutions. In fact, we have created a unit within the strategy called 'innovation' to look at technological improvements and apply innovative solutions, particularly in IT, to improve the movements of throughput, create a more relaxed environment for the passenger, reduce delay and increase revenue (JR).

We try to create efficient systems and better use of energy and resources efficiently. Technology is important, not just from the social aspect but also from the economical aspect, so we always look at technology to drive a lot of savings (LN).

These statements indicate that technology and innovation are core aspects in the airport operation, scheduling and profitability. In fact, delivering world-class service and innovation is one of the airport's main objectives (Dubai Airports, 2009). The use of technology and its effectiveness in influencing the airport's operation and capabilities is referred to later in more details when analysing the physical resources of DXB.

While technological factors have had a great influence on the growth level of DXB over the last few years, this may change in the future. Advanced aircraft technologies and designs may alter how the aviation sector plays out in the future. The development of larger aircraft that can overcome long distances is likely to enhance point-to-point airport operation rather than hub-and-spoke networks. Thus, the role that some airports play at the moment as connection hubs, connecting one side of the world to another, may be taken by other competitors. This statement was pointed out by interviewee JR when discussing the threats that may face DXB:

I think, the risk is maybe new generation aircraft that over fly the hubs and are getting more point-to-point markets.

Therefore, technological factors and their impacts should not be considered as irrelevant and should be considered carefully.

4.5.3 TECHNOLOGY'S IMPACT ON PASSENGERS

There are two significant impacts of technology on airport passengers. One such technology, which is the increasingly long range that passenger airlines can fly, is

addressed above. This technology increases the potential for DXB to serve as a regional airport within reach of European and American major airports, which will increase the overall competitiveness of DXB in drawing passengers. However, the Internet offers a consumer side incentive to flying into and out of DXB as well.

The increasing use of flight aggregators such as Priceline, Orbitz, and other online services that track flights and optimise flight patterns for customers will increase the overall viability of DXB as a central hub airport for the Middle East and Asia due to the ability to easily plan routes through the region (Cowen, 2009). The use of these sites has the potential to increase the overall market position of DXB because, rather than relying on consumer-driven routings; these sites will often seek out less expensive routes. Thus, consumers will find themselves automatically routed to and through DXB as an entry point to the Middle East and Asia, rather than requiring consumers to have clear choice of the airport itself. This could provide a significant strategic strength for the firm, if exploited, by keeping costs low. Therefore, this shows that technological aspects are directly related to the airport's internal resources and capabilities such as its strategic locations and its ability to offer the lowest prices to its airline customers.

4.6 ENVIRONMENTAL FACTORS

This section examines the UAE's environmental concerns as well as environmental concerns regarding the air travel industry as a whole in order to determine what issues must be taken into account in this regard.

4.6.1 THE UAE'S ENVIRONMENT AND CONCERNS

There are a number of environmental control measures introduced by the UAE in recent years, which are intended to provide some amount of control over environmental issues. Major sources of pollution in the UAE include the oil and gas industry, chemical production, waste disposal and power generation (U.S. Department of State, 2007). One of the significant environmental challenges is the lack of fresh water in the UAE, in which most drinking water and water for other purposes is desalinated seawater (U.S.

Department of State, 2007). However, wastewater disposal is not treated similarly; rather, it is treated and used to turn desert areas into future agricultural land (U.S. Department of State, 2007).

Waste-management programs are also strong, with 40% of all forms of solid waste being recycled within the country, in which it is either turned into fertiliser or recycled and placed back into the industrial input stream (U.S. Department of State, 2007). Individual firms are also taking responsibility for waste-management. For example, Abu Dhabi National Oil Company has instituted a Health Safety and Environment policy that addresses issues of environmental requirements and concern (U.S. Department of State, 2007). Air pollution, the primary concern facing the airline industry as a whole, is primarily seen as a result of automotive and energy generation policies in the UAE and is subject to strict regulation regarding this level of pollution.

Because of this, the UAE can be expected to have high considerations for environmental issues, and the overall business strategy of the airline industry in the UAE must take this into account. This is a significant factor in the development of DXB business strategy, as well as the overall strategy of airlines that are associated with the airport. Respondents emphasise the importance of taking into consideration environmental factors in their airport strategic decisions:

We are surrounded by a lot of residential areas around the airport. Obviously, we are very concerned about how we operate as an airport. So we take great care to make sure that we comply with the international standards for social responsibility whether it is related to airline pollution or noise and so on (LN).

I think we should be doing whatever we can just like everybody else in the world to reduce our carbon foot print. That is also indoctrinating into sort of environmental sustainability objective of the airport (JR).

4.6.2 AIRLINE AND AIRPORT RESPONSES TO ENVIRONMENTAL CONCERNS

In addition to the environmental concerns regarding Dubai's environment specifically, there are also a number of concerns regarding the environmental impact of the airline industry as a whole. One such concern is the issue of the carbon footprint of using aircraft. There is significant concern that the overall structure of the global airline industry is not contributing to environmental control. However, there have been a number of airline responses to the issue of global warming and environmental damage that have reduced the potential impact of environmental damage in this instance. For example, the use of larger aircraft such as the Airbus A380 which has been, designed specially to be environmentally friendly and to dramatically decrease the carbon footprint of the airline industry (Airbus, 2009). DXB is in a strong position to benefit from these changes in the industry due to its position as the main hub for EK, which is one of the earliest and strongest buyers of the Airbus A380, and has purchased a large number of these airlines for its fleet. The use of larger, longer-range aircraft, not only positions DXB in an advantageous position to take advantage of the overall growth in air travel in the region, but also reduces its overall carbon footprint.

There are different measures that have been taken by DXB in order to minimise environmental impacts. These are not only required legally in order to ensure that the political and legal issues involved in the development of the airport are attended to, but also in order to ensure that the cultural demand for increased attention to environmental concerns is accounted for. There are two initiatives that have been set in place recently by DXB in order to improve its noise and emission impacts for the benefit of passengers, surrounding residential areas and the environment. In terms of noise, the airport has developed the first 'Silent Airport' project which attempted to significantly limit the number of announcements made at the airport terminals, which claimed to be more confusing rather than informing (Dubai Airport, 2010). The other initiative aimed to reduce emission levels. DXB has announced that airlines using category I and II aircraft (as classified by ICAO) will be prohibited from operating cargo flights from 31 October 2010 and passenger flights from 27 March 2011, as they do not comply with

international noise and emission standards (Dubai Airport, 2010). These two examples demonstrate the continued responsibility and involvement of DXB in providing environmental friendly operations, which is also one of the airport's main objectives towards achieving its aims.

The airport management practices also encourage the use of other environmentally friendly materials and techniques. Interviewees claim that some measures have been taken at DXB to reduce its environmental impacts, as indicated in the following statements:

These are things that we are constantly looking into to make sure that we try to reduce the impact on the environment at least within the airport itself. Looking at things like air conditioning within the airport terminal, recently we reduced air conditioning by 1 degree which turned out to be phenomenal saving in the amount of carbon footprint. Looking into lighting, we have here sensors which we recently installed that would turn off the lights if you are out of your office (LN).

In terms of noise, we follow industries' best practices from Europe and the US to analyse noise, and ICAO recommendation on reducing noises in sort of restricting certain types of aircraft into the airport. In terms of ground handling, we try to use electrical type equipment to reduce noise and pollution, as well as reduce costs and save money. We have growths and these are policies that have to be implemented over time so we have to work with the local government for the population around the airport to understand what the impacts and the future potentials and that we have procedures in place to protect them (JR).

Buildings near the airport were designed in a way that isolates noise as much as possible. We also keep looking at more ways to reduce noise and improve the quality of life for people living nearby (GA).

This indicates that DXB has undertaken different measures in order to ensure that its environmental impacts are reduced as much as possible. These involvements also enhance the airport’s ability to expand and grow physically, which is another internal asset that is discussed in more detail later in this research.

4.7 LEGAL FACTORS

This section explores the legal factors involved in the overall competitive environment. In particular, it examines the issues of international aviation conventions and agreements, government regulation and anti-trust laws, as well as the direction of CAAs in terms of regulating the monopoly powers of the airport.

4.7.1 INTERNATIONAL AVIATION CONVENTIONS AND AGREEMENTS

There are a number of international aviation conventions and agreements to which DXB and the operators that fly out of its terminals are subjected. These conventions are handled at a number of different levels. Table 4.5 demonstrates the aviation and air travel conventions and agreements in which the UAE, DXB, or the airlines that fly out of the airport, are signatories. However, this should not be taken as a complete list, as the number of potential multilateral treaties involved in this area is much larger. Because most of these treaties and conventions are handled at the national level, it can be assumed that the airlines and the airports within the UAE are all subject to the same convention.

Table 4.5: Selected treaties which the UAE is a part of

Agreement	Date of agreement	Effective date
Convention on International Civil Aviation	April 25, 1972	May 25, 1972
International Air Services Transit Agreement	April 25, 1972	May 25, 1972
International Air Transport Agreement	April 25, 1972	May 25, 1972
Protocol on the Authentic Trilingual Text of the Convention on International Civil Aviation		May 25, 1972
Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface	February 12, 1990	May 13, 1990

Convention for the Unification of Certain Rules relating to International Carriage by Air	April 4, 1986	July 4, 1986
Protocol to Amend the Warsaw Convention of 1929	October 18, 1983	January 16, 1994
Convention for the Unification of Certain Rules relating to International Carriage by Air (Montreal)	July 7, 2000	November 4, 2003
Convention on Offences and Certain Other Acts Committed on Board Aircraft	April 16, 1981	July 15, 1981
Convention for the Suppression of Unlawful Seizure of Aircraft		
Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation	April 10, 1981	May 10, 1981
Convention on the Marking of Plastic Explosives for the Purpose of Detection	December 21, 1992	June 21, 1998
Convention on International Interests in Mobile Equipment	April 29, 2008	August 1, 2008

Source: ICAO, 2008

It should also be noted that the UAE is a signatory to the ICAO's Biometric Passport Policy, which sets specifications for the construction and use of passports with biometric data embedded in an RFID chip, and will begin issuing passports with this information encoded soon (ICAO, 2008). This is a significant factor in the overall flexibility of international agreements, and should be considered to be an important factor in this case. This also has a connection with the technology factor, as the development of this technology has driven the adoption of biometric data and passports and can be considered to be essential in the management of airport facilities and the processing of passengers.

4.7.2 REGULATION AND ANTITRUST LAWS

The main legislative and regulatory concern in the case of DXB is the monopoly and antitrust regulation, as it currently maintains the majority position in the development of air travel in the UAE as well as regionally. Therefore, it is strongly positioned to be subjected to antitrust legislation. It should be noted that the law of the UAE is somewhat inconsistent on the issue of monopoly power. In many cases, there are official state-owned or state-regulated monopolies that control some or all businesses within a

specific region (U.S. Department of State, 2007). However, the government has begun to break up some of these monopolies, as it seeks ways to increase the opening of the economy. For example, the monopoly of Etisalat, the former national telephone company, was ended in 2004 and the market was opened to limited competition from other parties (U.S. Department of State, 2007).

Increasing the potential for competitive power and the reduction of monopoly power are one of the strategic goals of the government's current economic policy, which is intended to increase overall competition within the country (UAE Interact, 2008). While the government's strategic plan for 2015 states that its goal regarding the economic laws is to "*Align Dubai's economic regulations with international best practices and standards*" (Government of Dubai, 2008), there are not currently any anti-trust laws specifically in place. This means that there is no sign that the airport industry may become a target for specific anti-trust regulations and legislation that are now being considered for the reduction of monopoly power.

Discussion with people from DXB has proven that the airport is not subject to any regulations or pricing rules such as those introduced by other government authorities around the world to limit airport companies from abusing their market power and charging airlines higher prices. Respondent JR states:

We do not have price caps because we are integrated with Emirates which is a large share of our traffic and we do not want to scare away other airlines. The competitive forces at play here in terms of controlling our prices, so we cannot raise our prices based on the condition of usage.

When interviewee GA was asked whether legislation and restrictions were interfering with DXB's planning, operation and business, he declared that the airport is rather having a support by the government,

Previously we haven't had any problem of this kind and this is mainly due to the encouragement and the support of the government of Dubai.

As the main owner of DXB is the government of Dubai, it is likely that it is not going to be subjected to substantial amounts of anti-trust or monopoly break-up actions. However, this does not mean that DXB is not subject to the oversight of the government.

4.7.3 THE INFLUENCE OF THE GCAA AND CAA

There is a supervision provided by the General Civil Aviation Authority (GCAA) which oversees flights across the UAE, as well as the DCAA, which oversees flights within the city of Dubai. The mission of the GCAA is

To improve the civil aviation sector in the United Arab Emirates by establishing and developing the policies and rules related to the Organisation of air navigational services, enhancing safety and security levels and ensuring quality implementation of the same in line with the civil aviation approved regulations and the best international standards and practices (GCAA, 2009).

The role that the GCAA plays in the country's airport industry was pointed out while conducting the interviews by respondent JR, who asserts,

We have a regulatory environmental of the GCAA which monitors our safety and ensures that we comply with ICAO regulations and international conventions.

In contrast, the mission of DCAA is:

To undertake development of Air Transport Industry in the emirate of Dubai and to oversee all aviation related activities (DCAA, 2009).

This mean that while the GCAA focuses on the issue of safety, certification and other issues, the DCAA focuses on managing policies and practices of air transportation, managing foreign air transport issues, signing and agreeing to agreements and conventions, monitoring air crew and maintaining air space, and otherwise, engaging in activities that involve management of the overall aviation industry in Dubai from the perspective of both the airports and the airlines involved in the industry. DCAA also manages issues such as training and certification, safety management, regulation of transportation of dangerous goods, management of the strategic operation of the UAE aviation industries in general, and other industrial management operations. However, DCAA also has a significant potential conflict of interest in this area, as it is also involved in maintaining and enhancing Dubai's airlines' hub status. Because of this, the agency must manage conflicting requirements and organisational demands that threaten conflict within its internal departments and procedures (DCAA, 2009). This could reduce the organisation's overall effectiveness in reducing monopoly power. However, this is not seen as an issue at this time as the organisation has succeeded in maintaining fair practices.

The discussion here illustrates that DXB, unlike many other airports, is not currently subject to any major restrictions regarding pricing and fair competition which must be taken into account when engaging in setting its strategic goals. This shows that DXB can benefit from this area as it can set its prices in the way that suits its business. However, this does not mean that the airport is likely to increase its charges; rather, it means that it can manage its financial resources in ways that are more suitable. This is evidenced by the relatively low prices levied on airlines using DXB, which are examined later in the research.

4.8 SUMMARY

The analysis above has demonstrated that the environment in which DXB competes is very complex and can be regarded as very strong at this point of time. A

number of factors within this environment have a strong potential to impact on the airport's ability to use specific strategies, as well as providing competitive strengths. Very strong factors in the current DXB competitive environment are as follows: the government support for the airport including the establishment of FTZs and financial supports; the political stability of the UAE; the sustainability of the UAE's economy; and the growth in air travel demands driven from the increase in business and tourism activities; all key factors in the success of DXB. However, there is a potential threat that the global downturn in traffic demand will begin to affect the Middle East market, thus decreasing revenues for the airport. Therefore, although DXB may not be immediately affected by drop in passenger travel, there is a significant potential that it could be vulnerable to this traffic downturn if the current global financial crisis continues. Similarly, while the current political condition seems to be very stable, any dramatic change may alter the way DXB operates and competes. Nevertheless, these potentials are not seen as an issue at this point.

The increasing technological development that tends to drive customers to the airport, either through the use of automated routing procedures or through longer-range flights facilitated by better airlines, is also a strong environmental factor. However, this is seen as an advantage that is more related to airlines that use DXB and their operational schedule. While environmental concerns are likely to increase the competitive pressure within the environment, DXB found many ways to monitor and reduce its environmental impact dramatically. In addition, the economic structure of the UAE is increasingly open, which could pose some potential for monopoly regulation for some industries. However, these are not considered to be negative factors since the airport is not subject to any pricing rules and environmental constraints.

As we can see, the analysis of the external macro environment using the PESTEL requires large amounts of information to be obtained from different resources related to factors in the external environment. Such information is often changeable, which is a major limitation to the use of this framework by industries. However, the macro-environment is only one element in the external environment of the firm, and only one

way in which the firm can gain or lose competitive strengths over other competitor firms. The analysis in the next chapter (Micro-environment) refines the macro-environmental analysis by identifying specific factors involved in the industry itself and identifies competition factors that further impact on DXB's ability to engage in specific strategic paths and goals.

CHAPTER 5 ANALYSIS OF DXB'S COMPETITIVE ENVIRONMENT

5.1 INTRODUCTION

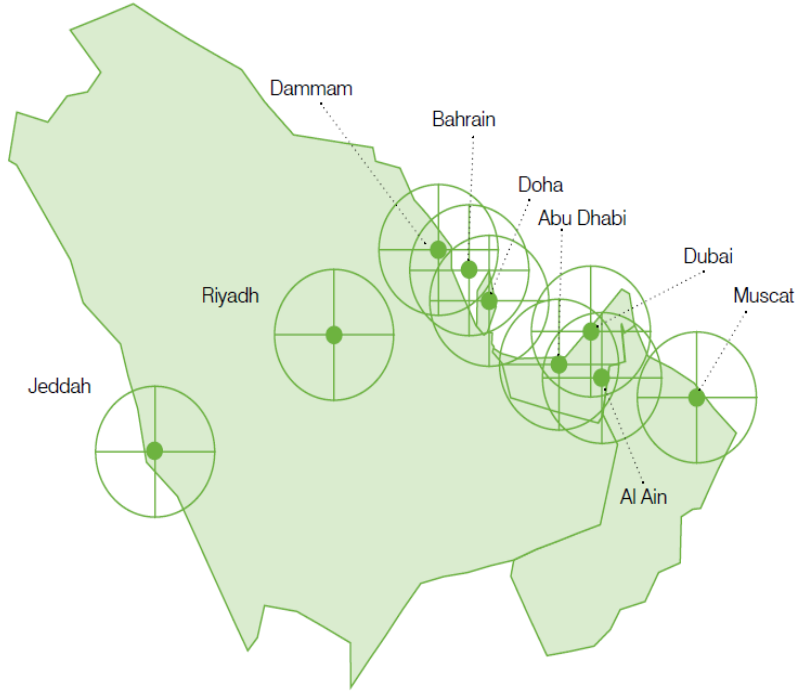
One of the major components of a firm's competitiveness is the external micro-environment, or the environment in which the firm directly competes. This specifically refers to the industrial conditions under which the firm operates, which provide a major influence on how the firm will be able to leverage its resources as well as what competitive strengths it will require to sustain the ability to compete. It is also a measure of how competitive the industry is overall, as well as the areas which pose particular competitive challenges for the airport. This discussion examines the external microenvironment of DXB using the Five Forces Model. The information obtained from the analysis of these five individual forces is used to address the overall level of competition of DXB and the key strengths driven from these areas.

5.2 COMPETITION BETWEEN DXB AND OTHER AIRPORTS

As studied in the literature review, the rivalry of airports is largely limited by locational factors and the number of airports serving a specific catchment area. As shown in figure 5.1 below, there are nine main airports in the Gulf region: Dubai, Abu Dhabi, Doha, Bahrain, Riyadh, Jeddah, Dammam, Muscat and Al-Ain. The airports that overlap in the catchment area of DXB, which is measured in 2.5 hours drive radius, include Abu Dhabi, Doha and Al Ain. DXB is the largest in the region in terms of capacity, passenger numbers and aircraft movements. While Doha and Abu Dhabi may be considered as competitors to DXB in terms of numbers of passengers, an airport like Al-Ain, which overlaps with these three airports in the catchment area, is handling only a tiny volume of passengers if compared to the other airports (as can be seen from the size of the bobble in the figure). In this sense, there are only two large airports that overlap and compete directly and strongly with DXB. Therefore, the overall intensity of rivalry within the industry can be considered as relatively low in the case of DXB.

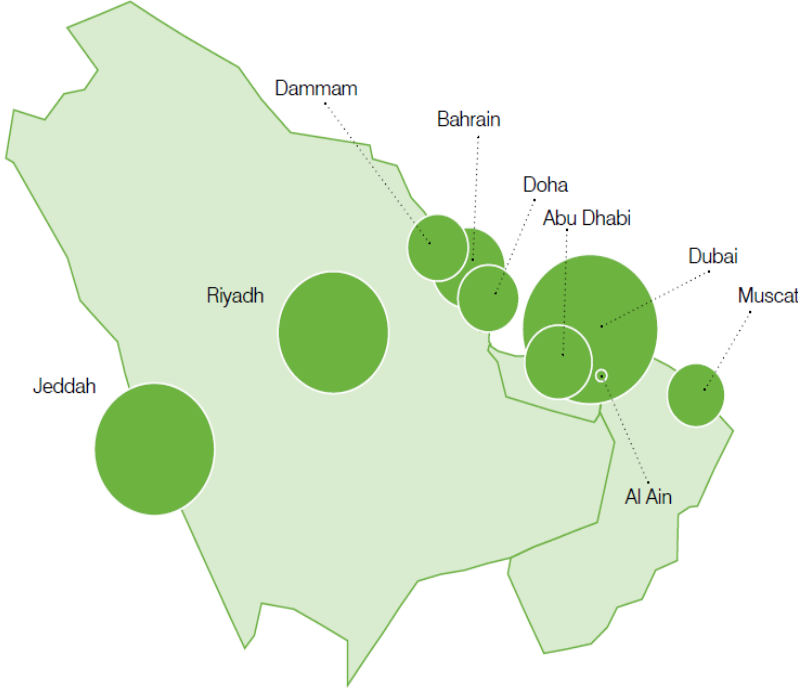
Figure 5.1: Catchment population and passenger traffic in main Gulf airports

CATCHMENT POPULATION OF MAIN GULF AIRPORTS



⊕ Catchment population in a radius of a 2.5-hour drive

PASSENGER TRAFFIC IN MAIN GULF AIRPORTS (2005)



● Size of the bubble represents number of passengers

Source: Booz and company (2008)

Large amounts of time were spent on the interviews discussing the current competition that DXB faces. Different views and responses were obtained and the most obvious answer was that DXB has a limited number of relatively weaker competitors in the region. As noted earlier, both Doha and Abu Dhabi are seen by two interviewees as the only regional competitors to DXB,

I think we are faced with competition particularly from Doha and Abu Dhabi and we continually assess that (JR).

Dubai Airport has a large share of air traffic in the Middle East of around 27% and it is number seven in the world in terms of international passenger movement. Taking these figures into consideration, I think Dubai Airport is not competing strongly with any other airports... The only two airports that may be considered as competitors in the region are Abu Dhabi and Doha. However, we currently handle more than 37 million passengers a year while Abu Dhabi and Doha handles only 6 and 3 million (respectively) (GA).

This view is not supported by respondent LN who believes that DXB is not competing with any airport in the region, stating:

From a regional perspective, if you look at the figures, Dubai is occupying number one position. We have around 38 to 39 million year-on-year traffic and based on that if you look at the closest rival is probably about 5 to 6 million.... I do not think that airports compete in terms of direct competition. At the end of the day, the airlines decide where their market is and where their passengers are. Different airlines service different airports for different passengers.

This interviewee also assumes that airports in the same region may act as complementary to each other, not as competitors:

If you look at Dubai and Abu-Dhabi airports, I think we sort of complement each other in terms of services. The routes that Dubai and Abu-Dhabi fly might not overlap so we complement each other... I think if there are two airports it does not mean they are competing. It is actually about what is on offer in the airport. It is a bit like looking at Rolls-Royce and Toyota Corolla; both will take you from one place to another but which would you like to spend more time in. So, I do not think that there are airports within the vicinity that can take away our passengers from us (LN).

The increase in competition among the world's major transfer hubs in recent years means that the intensity of rivalry among airports is not usually limited to their location and proximity to each other. The increase of the number of airports acting as feeder to other larger hubs and the introduction of larger aircraft means that the overlap of the catchment areas is far larger than that measured by one or two hours journey time. Although DXB is far away from other major Asian hubs, it competes with other major Asian hubs for European and Australian through traffic and it handles around one-sixth of all passengers travelling between Europe and Australia (ACI, 2006). The main challenge in regard to competition in the case of DXB is the potential substitution of other international airports in the region for travellers passing through from Europe to Asia and North America. These other international airports could pose a significant competitive pressure for DXB.

On the International level, there are a number of airports that may be considered as substitute locations for DXB which could impact on its overall traffic flow. Interviewee LN sees Singapore Airport as a strong international competitor to DXB,

The closest competitor is Changi Airport in Singapore. We see that as a competitor because it offers similar products to ours.

However, his view does not echo the view of respondent JR who believes that such competition is very limited,

Singapore may be to a certain degree but not really because they are so far a field of our market.

The latter considers some other major international European hubs as competitors to DXB for North American traffic:

In some ways we are competing more with Schiphol, Heathrow and Charles de Gaulle for North American traffic. They see this region as a threat for their hubs because they are more congested and delayed, so it becomes more attractive to travel through the Middle East and that is evidenced by the recent data and the economic downturn. While their growth has slowed we still have positive growth (JR).

This indicates that in situations where the airport is acting as a transfer hub, airport operators should not look at airports within close proximity as their only competitors. Therefore, besides its regional competitors, DXB is also seen as a competitor to other major hubs in Europe and Asia. However, because connecting airports are not typically considered to be interchangeable, and because airlines, rather than individual passengers, make the primary decision regarding connecting airports, this is not considered to be a significant competitive pressure at this time.

Although DXB is seen as a competitor to some strong hubs like Doha, Abu Dhabi, Singapore, Schiphol, Heathrow and Charles de Gaulle, the overall competition between these major airports is not considered as very tough because not all of them are competing at the same arena. For example, while DXB competes with Dubai and Abu Dhabi for traffic between Europe and Asia, it competes with Singapore for traffic between Europe and Australia. In comparison, it competes with the other airports in Europe for North American traffic. This means that while DXB may see all of these airports as rivals, some of them do not regard each other as competitors, as they are not

targeting the same sort of traffic. This shows that the overall competitiveness is not very intense.

As mentioned earlier in the literature review, rivalry among current competitors can also be determined by the stages of the market life cycle. Industries in the growth stage are likely to face less competitive pressure. Since the airport business industry is still in the growth stage, this means that the intensity of rivalry in the case of DXB is likely to be less intense. This is evidenced by the dramatic growth level that DXB has achieved in the past few years despite the economic downturn. Operating in a growing industry means that airports do not compete against each other intensively like other industries operating in mature or declining markets.

The degree of rivalry is also determined by the level of fixed cost and the size of investment incurred by a company, which is likely to drive it to reduce its prices. Although the airport business requires substantial capital investment to be spent on infrastructure, facilities and equipments, there are no clear signs that lowering airport charges for airlines to meet their underused capacity has been adopted by airports in the region. This may be because many airports in the region are owned and subsidised by their national governments, by which the issue of efficiency and cost recovery is not seen as essential. Therefore, in this case, fixed prices and over-investment cost are not directly related to intensifying the competition between airports, thus it is not seen as a competitive pressure for DXB.

Because competitor airports are usually originated from different countries with diverse missions and management objectives, it can be difficult to realise and predict each other's competitive moves. Since DXB is competing with airports like Doha and Singapore, which are located in other countries and may have rather different views and experiences, the intensity of rivalry within this group may be higher than competing with national airports like Abu Dhabi which is owned and operated by the same government as DXB. The presence of diversified competitors can be seen as a significant element that may lead to intensive rivalry among competitors. Although this

may not be seen as an issue at this period of time, it may place more pressure on DXB in the future when competition becomes more intense.

5.3 POTENTIAL COMPETITORS TO DXB

As stated in the literature review, the capital cost is likely to be the most aggressive barrier to entry to the airport business industry. Figures have shown that airport investments require substantial capital costs to be placed in the form of fixed cost. Even a small international airport is likely to be an exceptional capital expenditure. This can be compared to DXB's current expansion projects (including Al-Maktoum Airport), which demonstrates the exceptionally high cost that would be incurred to build a competitor of the magnitude as DXB. Therefore, the large capital cost of building a new airport can deter competitors from entering the airport market.

The second biggest barrier to entry within this industry is the government regulation of airports. Government regulation and ownership of large international airports is a common situation around the world. This form of regulation is intended to address significant safety and security concerns in airport management as well as to ensure compliance with international and national laws. In many cases, there is the added regulation of state-owned businesses, which do not allow for free market competition. This is certainly the case in Dubai, where the ownership of DXB as well as the planned Al-Maktoum Airport is government based and planning is centrally conducted by the government. It is also the case in the surrounding region, where all governments strictly control the building and operation of airports. Therefore, government regulation may deter new airport entrants.

There were mixed views when discussing whether interviewees see risk from a new airport that may enter the market and act as a competitor to DXB. The threat was regarded by two interviewees as very low:

I do not think that the region will see any new airports any time soon. Airport development is rather expensive and takes years. Even if this was the case, the new airport will not be as powerful as Dubai Airport and will not be able to compete with it (GA).

I think Dubai, Abu Dhabi and Doha are the main players in the region and I think what will be interesting is to see how that plays out in the future. I do not think anybody has an answer in terms of the capacity that has been provided amongst those three airports and who is going to be the winner and who is going to be the loser (JR).

Interviewee LN believes that there is always a risk of new entrants:

Of course, there is always a potential risk from new competitors; that is why Dubai Airport is continually pushing the envelope and setting standards so much so a lot of airports are coming here and try to benchmark us saying we want to be like you, can you show us how? And we are quite open to do that. So, it is always looking, not at where we are now, but where do we want to be in the future.

LN also believes that the airport is well prepared for any increase in competition, especially with the development of Al-Maktoum Airport in place:

This is the strategy we are taking with Al-Maktoum International Airport: looking at technology, looking at shortening distances for passengers and their queuing time, and how to make everything a little bit more seamless and their experience more enjoyable at the airport. That is something which is always progressing, and we never stop.

The combination of the exceptionally high cost of building a new international airport the size of DXB and the involvement of the UAE government in the airport business

greatly reduces the threat of new entrants to the market. Therefore, the threat of new airport entrants that may act as rivals to DXB can be considered to be very low. In addition, operating in a region that has high entry barriers with less potential competitors gives DXB an advantage over other airports operating within regions that encourage more market competition and freedom of airport entry, which is likely to make airports' competitive situation very risky and ever changing.

5.4 SUBSTITUTES FOR DXB

There are a number of rail, road and sea based transport facilities that may be considered as substitute products for airports. One of the major profit centres of DXB is air cargo transport. The main competitors for air cargo transport include cargo transport by road, rail, and freight cargo ship, many of which can be cheaper, although not faster, than air cargo transport. The overall level of rail transport penetration in the Middle East region is very low, with only 16.930 miles of railway line throughout the region, a total coverage density of 0.006 km/km² (Held, 2009). Although this is slightly more than Australia's rail density penetration, it is not substantial when compared to areas with high rail transport coverage, such as the UK (with 0.15 km/km² of coverage); and the majority of this coverage is in countries including Turkey, Egypt and Iran (Held, 2009). Overall, rail coverage in the Middle East is less than 3% of paved road coverage (Held, 2009). In the UAE, a 700km rail system project is being researched to connect Dubai and Abu Dhabi with the other emirates (Ministry of Economy, 2007). Thus, rail cargo transport cannot be considered to be a major substitute for air cargo transport.

The UAE's main cities are connected with each other by a good transport system of highways and roads covering around 4,000 km, which also connect the UAE with neighbouring countries like Saudi Arabia and Oman (Ministry of Economy, 2007). Road transport in the region is widely used and may be the short-range substitute for air cargo transport (Held, 2009). However, the length of time required to transport goods by road limits the potential for competition in this area.

The competition from sea freight transport is the strongest potential substitute product in this area. There are 15 commercial ports in the UAE with a capacity of more than 70 million tons of cargo (Ministry of Economy, 2007). Amongst the most important seaports in the UAE are Port Zayed in Abu Dhabi, Port Rashid and Port Jebel Ali in Dubai, as well as Port Khalid and Port Khor Fakkan in Sharjah (The UAE Government, 2009). Ports in the UAE are primarily focused on oil and petroleum products transport, and there is a strong component of other goods transport (Held, 2009). There are a large number of shipping companies that provide services to and from the UAE. The United Arab Shipping Company (UASC), which is partly owned by the government of the UAE along with other members of the GCC, is the leading freight transporter in the Middle East (Ministry of Economy, 2007). The Gulf Agency Company (GAC), which is one of the largest shipping agencies in the world, also originates from the UAE and is based in Jebel Ali Port in Dubai (Ministry of Economy, 2007). Both Port Rashid and Port Jebel Ali; the latter, the world's largest seaport, are operated by DP World (established in 2005 from the integration between Dubai Ports Authority (DPA) and Dubai Port International (DPI), and in 2008 they handled 11.8 million TEU (Twenty-foot Equivalent Unit); this represents 11% growth in throughput from the previous year (DP World, 2009). These figures demonstrate that a substantial amount of cargo is being transported by sea. Although sea transport is generally seen as a slow and old-fashioned mode of transport (Blauwens et. al., 2008), which cannot act as a full substitute to air transport, it can be considered as a substitute service for airports for less 'time critical' cargo shipments.

Many of the same substitutes for air cargo transport also apply to air passenger transport. However, for the same reason and in the same magnitude as air cargo transport, air passenger transport is unlikely to be replaced by rail passenger transport simply because coverage is not complete enough to allow this to be a viable and convenient option. Additionally, while road transport is likely to be acceptable to passengers for short distances, it is unlikely to be acceptable for longer trips, mainly due to the extreme weather temperature and the desert land covering a large part of the

region. This would reduce any possibility that passengers would choose to travel into the region via road in significant numbers and on a regular basis.

As noted above, the issue of sea transport is an open issue. The region has active ports that are used for long and short distance passenger travel as well as cargo shipping and receiving (Held, 2009). However, the relatively high cost of passenger travel through the ocean, as well as the length of the travel process as compared to air travel, also makes sea transport an unlikely substitute for most passenger travel. Nevertheless, there are likely to be a small number of cruise and adventure passengers that may choose sea transport. However, they are unlikely to make a significant impact on the growth level of the airport.

Interviewees were asked whether substitute services such as rail, roads and seaports have had an impact on their operational level and they responded:

If you look at our traffic figures, most people travelling through Dubai Airport are coming and going to places that are difficult to reach by car, train or even by ship. So, I do not think that Dubai Airport can be substituted (GA).

98% of people who come to Dubai have to fly here (JR).

While cargo transport through seaports is seen as the only major substitute for DXB, this substitute is seen as insignificant in these statements. This shows that the threat of substitute services that may be regarded as competitors to DXB can also be considered as very limited.

In addition, interviewee JR highlights the importance of integrating with other means of transportation for the success of the airport and for the attractiveness of Dubai. JR asserts:

I think in terms of inter-modality rail, roads and seaports facilities should be taking into account in any future plans to insure that they are integrated to take advantage of them. This will also provide a good level of service and provide proper future terminal facilities, for example remote check-in which will reinforces the attractiveness of Dubai. In the cargo side there is a logistic supply chain opportunity for integrating the seaport with the airport.

This means that the integration of the airport with other transport facilities enhances the airport's catchment area and provides a higher quality of service for the airport users, which can be regarded as one of the airport's strengths.

5.5 POWER OF DXB'S BUYERS

The bargaining power of buyers is focused on the airlines that fly to and from DXB, and this represents a major centre of competitive force within the micro-environment of DXB. As discussed earlier in the literature review, dominant and major home based airlines can have an enormous market power over airports. In the case of DXB, because they account for the largest amounts of traffic at DXB, both home based airlines: EK, and the budget carrier: Flydubai, are likely to be powerful buyers of the airport's products. The following statements from interviewees show the significance of these two carriers to the airport business:

Around 70 percent of our traffic comes from Emirates and Flydubai (JR).

Our main customers are Emirates and Flydubai (GA).

EK represents the vast majority of traffic at DXB which means it is the airport's most powerful buyer. EK has a fleet of 130 wide-bodied aircraft that handled 22 million passengers at DXB in 2008 (Dubai Airports, 2009); that is more than half the total number of passengers handled at the airport. It is a powerful air carrier in the region, and despite the global financial turbulence, the airline achieved 11% growth in 2008

(Emirates, 2010). Table 5.1 indicates that there are 179 destinations served by EK to and from DXB. This also shows that a substantial portion of DXB's traffic is generated from EK. In addition, the airline has an order book for 163 aircraft worth US\$55 billion which will enable it to launch new routes and increase frequencies at existing ones in the next few years (Dubai Airports, 2009). In fact, EK is the first and the only carrier that flies to six continents non-stop from DXB (Dubai Airports, 2009).

Table 5.1: Destinations served by EK at DXB

EK operates regular flights from DXB to....		
Aberdeen (ABZ)	Abidjan (ABJ)	Accra (ACC)
Adelaide (ADL)	Ahmedabad (AMD)	Addis Ababa (ADD)
Amsterdam (AMS)	Asuncion (ASU)	Amman (AMM)
Atlanta (ATL)	Auckland (AKL)	Athens (ATH)
Bangalore (BLR)	Bangkok (BKK)	Bahrain (ATL)
Basel (BSL)	Beijing (BJS)	Barcelona (BCN)
Belfast (BFS)	Belo Horizonte (BHZ)	Beirut (BEY)
Billund (BLL)	Birmingham (BHX)	Berlin (BER)
Boston (BOS)	Brasilia (BSB)	Bordeaux (BOD)
Brisbane (BNE)	Brussels (BRU)	Brest (BES)
Budapest (BUD)	Buenos Aires (BUE)	Bucharest (BUH)
Cairo (CAI)	Calgary (YYC)	Cairns (CNS)
Cape Town (CPT)	Casablanca (CAS)	Canberra (CBR)
Catania (CTA)	Chennai (MAA)	Chicago (CHI)
Christchurch (CHC)	Colombo (CMB)	Copenhagen (CPH)
Curitiba (CWB)	Dallas/Fort Worth (DFW)	Damascus (DAM)
Dammam (DMM)	Dar Es Salaam (DAR)	Darwin (DRW)
Delhi (DEL)	Denver (DEN)	Dhaka (DAC)
Doha (DOH)	Dublin (DUB)	Durban (DUR)
Dusseldorf (DUS)	Edmonton (YEA)	Entebbe (EBB)
Frankfurt (FRA)	Fresno (FAT)	Geneva (GVA)
Glasgow (GLA)	Goa (GOI)	Goiania (GYN)
Guadalajara (GDL)	Guangzhou (CAN)	Hamburg (HAM)
Hanover (HAJ)	Helsinki (HEL)	Helsinki (HEL)
Hobart (HBA)	Hong Kong (HKG)	Houston (HOU)
Hyderabad (HYD)	Islamabad (ISB)	Istanbul (IST)
Jakarta (JKT)	Jeddah (JED)	Jersey (JER)
Johannesburg (JNB)	Karachi (KHI)	Khartoum (KRT)
Kochi (COK)	Kolkata (CCU)	Kozhikode (CCJ)
Kuala Lumpur (KUL)	Kuwait (KWI)	Lagos (LOS)
Lahore (LHE)	Larnaca (LCA)	Las Vegas (LAS)
Lille (LIL)	Ljubljana (LJU)	London (LON)
Los Angeles (LAX)	Luanda (LAD)	Lusaka (LUN)
Lyon (LYS)	Madrid (MAD)	Male (MLE)
Malta (MLA)	Manchester (MAN)	Mangalore (IXE)
Manila (MNL)	Mauritius (MRU)	Melbourne (MEL)
Mexico City (MEX)	Miami (MIA)	Milan (MIL)
Mombasa (MBA)	Monterey (MRY)	Monterrey (MTY)
Montevideo (MVD)	Montreal (YMQ)	Moscow (MOW)

Mumbai (BOM)	Munich (MUC)	Muscat (MCT)
Nairobi (NBO)	Nantes (NTE)	Newcastle (NCL)
New York (NYC)	Nice (NCE)	Orlando (ORL)
Osaka (OSA)	Oslo (OSL)	Ottawa (YOW)
Palm Springs (PSP)	Paris (PAR)	Perth (PER)
Peshawar (PEW)	Phoenix (PHX)	Portland (PDX)
Porto Alegre (POA)	Prague (PRG)	Pune (PNQ)
Raipur (RPR)	Reno (RNO)	Rio De Janeiro (RIO)
Riyadh (RUH)	Rome (ROM)	Sacramento (SAC)
Salvador (SSA)	Sanaa (SAH)	San Diego (SAN)
San Francisco (SFO)	Santa Barbara (SBA)	Santiago (SCL)
Sao Paulo (SAO)	Sapporo (SPK)	Seattle (SEA)
Seoul (SEL)	Seychelles (SEZ)	Shanghai (SHA)
Singapore (SIN)	Sofia (SOF)	Stockholm (STO)
Sydney (SYD)	Sylhet (ZYL)	Taipei (TPE)
Tehran (THR)	Thessaloniki (SKG)	Thiruvananthapuram (TRV)
Tokyo (TYO)	Toronto (YTO)	Townsville (TSV)
Tripoli (TIP)	Tucson (TUS)	Tunis (TUN)
Vancouver (YVR)	Venice (VCE)	Vienna (VIE)
Washington (WAS)	Wellington (WLG)	Winnipeg (YWG)
Zagreb (ZAG)	Zurich (ZRH)	

Source: Compiled by author from data available from Emirates (2010)

The importance of EK for the success of the DXB business model was apparent during the interviews, with interviewees commenting:

Latest figures have shown that while most airline companies are losing in the current economic crisis, Emirates is making a profit and its payload is more than 80%... It is the third in the world in terms of fleet size and number eight, the sixth not so long ago, in terms of passenger volume. Emirates has been a successful business model and a threat for many other airline companies for many years. It has been a competitor for the world's strongest airlines, like Lufthansa, Air France, Air Canada and Qantas airways (GA).

Even though in the light of the current economic crisis, Emirates still intends to acquire a large amount of aircraft over the next few years including 58 Airbus A380 (LN).

An airport like DXB should work closely with its airline customers in particular with EK in order to be capable of accommodating their needs so it is less likely that they look elsewhere. Interviewees were asked about the significance of good relations

between DXB and its airlines as the main buyers of the airport product. Comments included:

We have a special and different relationship with Emirates (LN).

Well, we need good relations particularly with Emirates and Flydubai. We are interrelated and we have traditional lines of communications (JR).

We have a strong buyer which we have to keep a good relation with (GA).

It seemed clear in the minds of interviewees that DXB and EK are very integrated and depend heavily on each other. In fact, it was considered crucial that the progress of DXB is related to the successes of EK. Interviewees comment on this issue by saying:

Emirates will never leave Dubai because it is part of Dubai. It is a bit like saying I am going to take off my two arms and I will go to work without them. The airport has Emirates embedded in it. It is a big part of Dubai Airport that cannot be ignored (LN).

I do not think that Dubai Airport would exist without Emirates. I think without Emirates you and I would not be here talking. It is an interrelationship between the carrier and the airport. They are hand in hand (JR).

There is no way Emirates leaves Dubai Airport and goes to another airport (GA).

This, therefore, is likely to create a strong dependency of DXB on EK and *vice versa*. While examples in the literature from worldwide airports have shown the risk of becoming dependent on one major airline and the possibility that the airline could move to other airports if their needs are not met, this is not likely to be the case for DXB, mainly due to the involvement of the government in deciding the main players in the

UAE's aviation sector, and the robust integration between DXB and EK. The operational efficiency of EK is also seen as an important source of revenue for Dubai, *"One of the main sources of income for Dubai is from Emirates which represents around 40% of the total income"* (GA). Thus, maintaining the operational efficiency of DXB for EK is likely to be highly important for the competitiveness of both the airport and the airline, and this can be considered to be a major component in the overall competitive environment.

While the discussion in this part of the research illustrates the significance of working with the home-based airlines for the growth of DXB, it is vital to understand this cooperative relationship from EK's viewpoint, and whether the airline sees DXB as important for its performance. The dependency of the airline on its home based airport determines how much these two organisations are integrated and what are the chances of EK leaving DXB. To better understand this, the researcher has drawn on some external secondary data mainly from interviews with EK's CEO, Tim Clark (also known as the president of Emirates), as well as other available and reliable sources of information.

In a speech to the AOA (Airport Operators Association) Annual Dinner (Emirates, 2010), Mr Clark highlights the importance of information sharing with DXB, and how their traffic projections and visions are linked to DXB,

By 2030, Dubai Airport forecasts passenger traffic at its fields will reach 150 million per annum along with seventeen million tonnes of cargo and 750,000 yearly aircraft movements and these numbers mirror our own forecasts... Emirates is no perfect airline and nor is our home airport... but I am proud of our success.

In the following statement, in an interview by IATA (IATA, 2009), he draws attention to the optimistic view of EK towards DXB and how the construction of Terminal 3,

which is dedicated to handling EK's A380 aircraft, is a key factor in achieving operational performance for both the airline and the airport.

We continue to see encouraging news at Dubai International Airport... Emirates has just completed the first year of operation at Terminal 3 at Dubai International, exclusive to Emirates' customers. More than 15 million passengers passed through this facility in the 12 months since its opening on 14 October 2008. In time, this will be followed by Concourse 3, providing no fewer than 18 A380 gates. These massive infrastructural projects will boost the airport's overall passenger capacity to 75 million.

The importance of operating from a world class airport like DXB that takes into account passengers and the quality of service provided to them is highlighted by Mr. Clark in this statement:

Our operations at Emirates Terminal 3 have been an unmitigated success, thanks to a well-orchestrated, phased move; strong collaborative effort by all stakeholders; and the unstinting support of our passengers. The new terminal is an invaluable national asset, which Emirates will leverage to its full potential to fulfil our strategic plans. Our customers are benefiting from the ease, convenience and luxury the new terminal represents and we are currently basking in their extremely positive and encouraging response (Dubai Airports, 2008).

In a radio interview (AME Info Radio, 2008), EK' CEO was asked, to what extent he thought that Terminal 3 was essential to the airline and its passengers. He replied:

Well, it is of course extremely important; we have waited for it for a long time. The airline is certainly ready for it in terms of our size. The facility at this huge terminal, which is twice the size of Terminal 5 (at LHR), allows us to do a much better job in terms of our ground product; it allows us to do a much

better job in terms of transfer product; and it allows us to do a much better job in terms of the hub elements of our business model, which drive everything we do. At this particular terminal we have 5 stands, A380 compliant, which means we can board our premier passengers straight from a lounge like we are sitting in at the moment on to the upper deck of the aeroplane... so we will have three air-bridges on to the aircraft which allows us to get the aircraft loaded and de-planed very quickly.

The airline's website also clarifies the value of having a special terminal built to handle EK's passengers. As a way of marketing EK's product to its customers, the website demonstrates the products and services offered to their passengers while at Terminal 3; ranging from World Class Amenities, Lounges, Hotel, Food and beverage outlets, etc (more detailed information available on www.emirates.com). This means that the quality of services that DXB provides to passengers can be considered as an advantage for the airline. In this sense, DXB can be regarded as an important factor for the growth of EK (appendix 2 illustrates layout maps for Terminal 3 building at DXB).

While EK benefits from DXB in terms of sharing traffic information, the quality of service provided to their customers and the operational performance of its fleet at Terminal 3, it is also worth mentioning that the airline also profits financially from being based at DXB. EK benefits from the relatively low charges levied by its home airport compared to other large European hubs which usually charge additional costs for ATC, noise, security, etc (Airlines e-zine edition, Karamanlis 2008). EK's overall airport charges are considerably lower than other European airlines such as BA, Air France and KLM (O'Connell, 2006). This is mainly because infrastructure, facilities and the other services provided at DXB is financed by the UAE government, and airlines based and flying into DXB are not required to pay any extra charges for using facilities or as a way to mitigate environmental issues (Knorr and Eisenkop, 2008). This means that EK profits from operating at DXB, and this also can be seen as an advantage for the carrier.

An increasingly important area that has to be considered within this interrelationship is the impact of DXB's growing traffic and congestion on the performance of EK. This is a growing issue in the near future, before the transition to the new Al-Maktoum Airport, especially with the large order of Airbus A380s that EK has placed, which may result in dramatic overcrowding and traffic delays. Such transformation in the level of service provided by the airport to EK's passengers would be likely to have an impact on their strategic alliance. While this can be seen as a limitation factor, in the view of EK this has never been a big issue. The carriers' CEO states:

Dubai International is sufficient for our immediate needs (IATA, 2009).

He also declares that they and their hub airport “*just have to make more intelligent use of the space. There is a lot of work going on in that regard*” (The National, 2010).

In the long term, the problem of congestion can be easily sorted by moving EK to the new planned airport. However, the timing and decision-making in this regard is in the hands of the government, according to Mr. Clark:

Any move of EK operations to Al-Maktoum International, and the timing of such a shift, is a decision for the government of Dubai, which is also the owner of the airline (IATA 2009).

All these statements from EK's CEO show the close relation between DXB and EK which seems to be unlikely to be jeopardised in the future.

5.6 POWER OF DXB'S SUPPLIERS

As noted earlier, the power of supplier companies is largely determined by whether services are provided by the airport itself or by other external firms. Major suppliers for DXB include the ground handling operation (DNATA), airline and airport catering services (Emirates Carting), fuel services, and Dubai Duty Free. These are

different bodies which are managed and operated separately within the airport. However, DNATA, the handling company, is owned by Emirates Group and a large share of the Emirates Carting is also owned by Emirates Group (Dubai Airports, 2009). Furthermore, the chairman of DXB is also the chairman of Emirates Group and Dubai Duty Free.

Interviewees emphasise the importance of establishing good relations and integrating with supplier companies.

We have a very close relationship with DNATA, Emirates catering and the fuel services. We work with our supplier companies to make sure that our airline customers are happy. So, even though we do not physically own them or run them, we do work together and plan together to make sure that the delivering of service is seamless (LN).

Well, DNATA is our sole ground handler and they are part of Emirates group and they are integrated in our government structure. They are partners with us in terms of delivering the product of safety, capacity and world class service. We do have commercial arrangements with them and they are obligated to meet our planning process and we establish KPIs for level of services (JR).

There is a forum held once a year called 'Suppliers Forum' where representatives from around 600 companies supplying Dubai Airport and Duty Free, including airport police and immigration, meet with Sheikh Ahmed to look at how they can enhance their relations and to resolve any problems. This meeting also aims to provide the airport and the Duty Free with the best products at the lowest prices (GA).

Immigration services, customs services, and the airport police are also considered as airport suppliers and they are run by the government of Dubai. The airport also aims to keep good relations with these bodies.

The bigger challenge is immigration and government agencies; they are separate organisations; we try as we can to influence them and educate them to provide better level of service to passengers (JR).

In this case, the bargaining power of suppliers is almost non-existent, as DXB is currently the largest international airport in the UAE. Most of the service providers for DXB are intended to specifically provide support for airport services, and do not allow for any substantial ability to find other customers. Although in-airport catering concessions do have other options with regard to placement, few of the other suppliers would be able to find alternative customers. The unique integration between the airport and its supplier companies means that they have less power over the airport. Thus, the overall bargaining power of suppliers is also relatively low.

5.7 SUMMARY

The analysis of the competitive environment of DXB in this chapter indicates that the overall level of competition within the airport industry is relatively low. This is mainly due to the geographical location requirement of the industry, as well as the government regulation involved in the majority of international airports. The threat of new entrants is minimal, due to regulatory involvement and the exceptionally high cost of entry to the field. The supplier power for DXB is relatively low as well, as the majority of suppliers have limited potential customers. This is due to the low density of international airports in the region and distance between them, as well as the specialisation of many of the suppliers involved. Additionally, some of the suppliers are provided by the government expressly for operations at DXB, which means that these suppliers have relatively little choice over their supply. The threat of substitutes is also low, although there is some limited probability of substitutes for cargo traffic through the sea. The major competitive dimension that can be identified is the bargaining power of buyers. As airlines are highly dependent on efficient operations at airports they serve to maintain their own competitive advantages. The potential threat that an airline may

switch airports to serve a region if these needs are not met may be high. However, the integration between DXB and its home based airlines means that it is unlikely that EK would switch to another airport. The relatively limited level of competitiveness overall within most of these dimensions indicates that the general industrial competitiveness of the airport industry can be said to be somewhat low, although it might be stronger at other regions.

CHAPTER 6 ANALYSIS OF DXB'S INTERNAL ENVIRONMENT

6.1 INTRODUCTION

While the discussion in chapters four and five focused on DXB's external environments, an equally important part of the firm's overall effectiveness is the internal environment. Using the RBV theory of the firm, this part of the research discusses the available internal resources for DXB. Potential issues in the competitive position and resources of the firm are discussed, as these form significant challenges to DXB's overall competitiveness. This analysis has been constructed using publicly available information, a collection of internal documents and reports from DXB and primary data from discussion with interviewees. A number of resources have been identified within DXB including financial resources, physical resources, human resources, and organisational resources. Each of these categories of resources provides specific sources of competitive advantages and increases understanding of how the organisational has gained its strengths and achieved growth.

6.2 DXB'S FINANCIAL RESOURCES

This section explores the financial resources available to DXB. As noted earlier in the literature review, financial resources can include cash and cash equivalents, as well as investment funds accessible by the company. Both the financial support of the government and the internally generated revenues are seen as important financial capital available to DXB.

6.2.1 GOVERNMENT SUPPORT

The major ownership and government resource that DXB holds is its position of being owned by the government of Dubai. This provides a position in which the airport can expect regulatory and financial support from its owner, as well as active involvement in

terms of the development of aviation and passenger air transport in Dubai. Government ownership has not been allowed to impact on DXB's efficiency or operations, with management of the company firmly in the hands of the airport itself, which is currently run as a commercial organisation, rather than as a government organisation, focusing more on profits, efficiency, costs and quality. In addition, this powerful position enables the airport to benefit from reduced level of competition, as it is the government who decides whether a new airport is needed or not. This also assists DXB because the airport receives preference in government licensing and other issues.

The availability of government funds for financing expansion and upgrade projects is seen as a major resource of the government ownership for DXB. Discussions during the interviews revealed that DXB's financing, like other major development projects in the UAE, was primarily performed through government funds.

We are a government organisation and the government currently finances us (LN).

Because large investment requires large amount of money, there is support from the government in the form of capital programme (JR).

Our current profits do not cover the expansion and the development taking place that costs around US\$4.3 billion, so we rely on funds from the government of Dubai (GA).

Although specific effects on DXB operations are not known, due to lack of disclosure regarding this financial performance, theoretically, the existing literature indicates that state financing reduces interest charges and affects annual depreciation, as well as influencing the timing of investments and operating costs. One example of this influence on investment timing can be seen in the development of the third terminal for the EK A380 fleet, which was a cooperative development and funded by the government. Another example is the expansion of Terminal 3 Concourse 3, currently

projected to cost US\$4.5 billion, which is an exceptionally high capital expenditure for any firm (Dubai Airports, 2009). This expenditure would not be possible without the support of the UAE government.

The government support of the airport can be assumed to be a valuable and unique financial resource. In fact, since it is usually difficult for other competitor airports to have access to such a very substantial resource, this resource can be considered as inimitable. The airport has exploited this resource to build modern and state of the art facilities (refer to appendix 4 for images showing the facilities provided at DXB), which have contributed to the growth level of the airport, and therefore, this resource can also be regarded as organised.

While this financial resource is seen as sustainable at this time, it is probably not infinite. Dubai's government is currently seeking support for bond issuance from the UAE government, which demonstrates a certain amount of potential financial distress on the part of the government which could impact on the government's ability to continue to offer strong financial support to DXB (Abi-Habib, 2008). In addition, there is some emphasis from the government of Dubai to make DXB a privatised and self-funded organisation able to cover its development and running costs. This was apparent in the following excerpts from interviews, with respondents indicating:

There is talk of possibly becoming a private company but I do not think it is going to happen any time soon. Even though we are government institution we try to run like private institution so that eventually when things do happen and we have to become a private institution we are already set in place with the right planning and budget to do that (LN).

We are expected to become a profitable company (JR).

6.2.2 INTERNAL REVENUES

The growth of the firm's internal revenues and profits is also an important aspect of creating an internal strength, as it allows the firm to leverage its competitive advantage effectively, but also provides some challenge to the strategic direction of the firm. Income to DXB comes from different sources; mainly landing charges, duty-free shops, the terminal hotels, car parking, and other concessions activities. The literature has demonstrated the growing importance of non-aeronautical revenues as a major source of income for airports. The financial support available to DXB from the government led the airport to focus highly on non-aeronautical activities on its business strategy. This is being achieved by the development of a wide range of duty free shops and other facilities that target wealthy travellers. The airport generates a substantial amount of revenue from duty free facilities, with interviewee GA indicating that:

The income from the duty free facility alone up to 2008 was AED 2 billion and we expect that income from duty free over the next two years to be around AED 1 billion a year.

DXB's duty free facility is globally ranked at third position in terms of turnover with sales of over US\$565 million in 2005, which is a 19% increase on the previous year (O'Connell, 2006). Al Majlis facility had generated revenues of AED 33.13 million in 2007, serving a total of 70,000 passengers at a per-passenger revenue of approximately AED 475 (approximately US\$130) (Dubai Airport, 2008). Another source of income for DXB is driven from the in-terminal hotels and the other facilities aimed to serve passengers in transit. In fact, DXB's commercial revenues are much higher than the average revenues generated at other airports in the regions of African and the Middle East (Graham, 2009).

It is therefore, believed that these sources of income are valuable and rare financial assets that DXB holds. The internally generated income can be considered as a unique financial source that DXB holds as not many airports have the ability to generate such large revenues. However, it is difficult to consider this financial resource as inimitable.

6.3 DXB'S PHYSICAL RESOURCES

As studies in the literature, the physical resources of the airport may include the infrastructure and the facilities provided to handle aircraft, passengers and cargo, the airport's ability to expand in order to accommodate more traffic, the strategic location of the airport, the number of destinations served and the connectivity between flights.

6.3.1 INFRASTRUCTURE AND FACILITIES

The physical infrastructure of the airport includes an air traffic control tower, two runways (set parallel to each other), three passenger terminals, a cargo terminal and a general aviation terminal (Dubai Airports, 2009). There are three airlines currently based at DXB, including EK, SkyCargo (the cargo business unit of Emirates), and Flydubai (a budget airline serving primarily the Middle East, Africa and South Asia) (Dubai Airports, 2009).

Terminal 2 is the primary terminal for mid-range and regional flights, while Terminals 1 (also known as Sheikh Rashid Terminal) and 3 handle long-distance flights. Terminal 1 and 2 are used by a total of 122 airlines serving over 200 hundred destinations (Dubai Airports, 2009). Tables 6.1 and 6.2 demonstrate lists of airlines using Terminal 1 and 2. Terminal 3 building, which include concourses 2 and 3, is dedicated to EK's passenger traffic. Since most of the traffic within the airport is international, all passenger terminals are equipped with immigration and customs facilities, which eases the congestion that can be caused by under-provision for international traffic in other terminals (Dubai Airports, 2009).

Cargo facilities include the Dubai Cargo City, which provides not only cargo terminal services but also business support services, and the Dubai Flower Centre, which is designed to handle the special needs of flower cargo and has not yet been completed (Dubai Airports, 2009).

Table 6.1: Airlines using DXB's Terminal 1

Terminal - I Airlines			
2B	BAHARAIN AIR	KU	KUWAIT AIRWAYS
2Z	VASO AIRLINES	VV	AEROSVIT
4L	AIR ASTANA	LH	LUFTHANSA
A9	GEORGIAN AIRWAYS	LN	LIBYAN ARAB AIRLINES
AF	AIR FRANCE	ME	M.E.A.
AH	AIR ALGERIE	MH	MALAYSIA AIRLINES
AI	AIR INDIA	MS	EGYPT AIR
AZ	ALITALIA	NL	SHAHEEN AIR INT'L.
B8	ERITREAN AIRLINES	OA	OLYMPIC AIRWAYS
BA	BRITISH AIRWAYS	OS	AUSTRIAN AIRLINES
BG	BANGLADESH BIMAN	PK	PAKISTAN INT'L AIRLINES
BI	ROYAL BRUNEI AIR LINES	PS	UKRANIAN INT'L AIRLINES
BR	EVA AIR	QR	QATAR AIRWAYS
CI	AIR CHINA	QS	TRAVEL SERVICE
CV	CARGOLUX	RA	ROYAL NEPAL AIRLINES
CX	CATHAY PACIFIC	RB	SYRIAN ARAB AIRLINES
CY	CYPRUS AIRWAYS	RJ	ROYAL JORDANIAN AIRLINES
CZ	CHINA SOUTHERN AIRLINES	RO	TAROM ROMANIAN AIRLINES
D3	DAALLO AIRLINE	S7	SIBERIAN AIRLINES
D9	AEROFLOT DON	SD	SUDAN AIRWAYS
DL	DELTA AIRLINES	SQ	SINGAPORE AIRLINES
EK	EMIRATES	SK	SCANDINAVIAN AIRLINES
ET	ETHIOPIAN AIRLINES	SHE	GREAT WALL AIRLINES
EI	AIR LINGUES		SILVERJET
FC	FALCON EXPRESS	SR	SWISS AIRLINES
GF	GULF AIR	SU	AEROFLOT
HY	UZBEKISTAN AIRWAYS	SV	SAUDIA
HU	HAINAN AIRLINES	TG	THAI AIRWAYS
IR	IRAN AIR	TK	TURKISH AIRLINES
IC	INDIAN AIRLINES	TU	TUNIS AIR
IY	YEMEN AIRWAYS	U6	URAL AIRLINES
J2	AZERBAIJAN AIRLINES	UL	SRILANKAN AIRLINES
J9	JAZEERA AIRWAYS	UN	TRANSAERO
JU	JAT AIRWAYS	UM	AIR ZIMBABWE
KE	KOREAN AIR	VS	VIRGIN ATLANTIC
KL	KLM	WY	OMAN AIR
KQ	KENYA AIRWAYS		

Source: Dubia Airport (2009)

Table 6.2: Airlines using DXB's Terminal 2

Terminal II Airlines			
2G	CARGO ITALIA	JX	JET8 AIRLINES CARGO

2K	ALKHAYAL AIRLINES	KHH	ALEXANDRIA AIRLINES
5X	UPS AIR COURIER	LT	L T U LUFT TRANSPORT
4Q	SAFI AIRWAYS	MP	MARTIN AIR
4J	SOMON AIR	XU	AFRCAN EXPRESS AIRWAYS
6Y	LAA CHARTER	IA	IRAQI AIRWAYS
7B	KRASNOYARSK AIRLINES	IRX	ARIA AIR
7D	DONBASS AERO	IX	AIRINDIA EXPRESS
7G	MK AIRLINES	K4	KALITTA AIR
7X	VIM AIRLINES	MHD	YAS AIR
ABE	ABAN AIR	MH	MALAYSIAN CARGO
AHC	AZALVIA CARGO	MJ	MIHIN LANKA
AZQ	SILKWAY AIRLINES	NR	PAMIR AIR
AY	FINNAIR	PHW	AVE.COM
B9	IRAN AIR TOURS	QFZ	QESHM FARAS AIR
BGK	BRITISH GULF INTL	RQ	KAM AIR
C2	CASPIAN AIRLINES	SS	DHL AVIATION
DT	TAAG ANGOLA	STR	STARLINE
ED	AIR BLUE	U8	ARMEVIA AIRLINES
EP	ASSEMAN AIRLINES	UKR	UKRAINE INT'L AIRLINES
FG	ARIANA AFGHAN	VGF	AEROVISTA GULF EXPRESS
FX	FEDERAL EXPRESS	W5	MAHAN AIR
GMG	GMG AIRLINES	Y9	KISH AIR
HU	HAINAN AIRLINES	Z5	GMG AIRLINES

Source: Dubia Airport (2009)

It was clear in the literature that airports, as infrastructure suppliers, should have a wide range of facilities and equipment. DXB provides different facilities that can be considered, not only as valuable, but also as rare resources. Accommodation of the Airbus A380 wide-body aircraft has been a recent concern at DXB, as EK is the largest buyer and one of the first to receive this type of aircraft (Dubai Airports, 2009). DXB has a first-mover advantage as it is one of the airports in the world to develop its infrastructure to accommodate this large aircraft, which requires larger space for landing and holding, in order to accommodate EK's large fleet.

In addition to the facilities provided by the airport in order to be able to accommodate and handle passenger and cargo traffic, hotel accommodations are also important aspects of DXB's physical resources. Although there are a large number of hotels close by, the Dubai International Hotel is the hotel that is directly owned by the airport. This hotel, which is directly adjacent to Terminal 1 arrivals hall, offers a total of 88 rooms,

and has a full complement of modern hotel services, including a business centre and other services (see appendix 4 for some images) (Dubai Airports, 2009).

There are also other valuable facilities including the Al-Majlis VIP and Dubai Cargo City, which provide targeted services to specific types of airport users in order to increase the desirability of the airport. The Al-Majlis facility aims to serve the special needs of affluent, corporate and leisure travellers; those who are arriving, departing and transiting through DXB (Dubai Airports, 2009). It provides services such as private lounges and duty-free services and expedited and escorted immigration. The Executive Flights Centre (EFC) is a similar facility that serves private aircraft, and has features such as accommodation for a large number of private jets, hangar space, VIP car park, limousine service from Terminal 2 to the aircraft, a business and conference centre, and private lounges (Dubai Airports, 2009).

In addition to the specialty ancillary services for VIP and business visitors, DXB has a wide variety of ancillary and passenger support facilities in terminals for the support of all passengers. These facilities include extensive duty free outlets totalling 15,000 square metres in total, two open-air gardens, lounge areas and children's play areas, gaming areas, and extensive passenger specialty services as well as airline-provided services such as first-class and business-class services (Dubai Airports, 2009). The airport also offers extensive ground transportation links, including vehicle rental, taxis, bus, and rail transportation.

The ancillary infrastructure and facilities provided at the airport offers a strong competitive strength for DXB. Interviewees were also asked whether physical resources are considered as vital for their airport's operation performance. Comment from interviewee JR included:

Well, we have recently opened Terminal 3, Concourse 2, which is one of the largest terminals in the world. Just prior to the opening we had a lot of congestion and growth and a lot of complaints from passengers. So certainly,

building world class facilities have reflected our ranking in passenger surveys, which was declining. Now that we have got additional capacity and world class facilities our ranking is beginning to go back up.

Interviewee GA also expressed a similar view, stating:

Our ranking has declined from number 1 to number 26 in terms of passenger satisfaction because we did not finish our third terminal in time, so yes, the facilities and services we provide are extremely important to our success.

Respondent LN argued that there were three elements of a successful airport company:

...that plans well for the future because if you do not see it you will be left behind; that cares about its customers, the airlines and is able to adopt and create solutions to them; and that cares about its passengers and their experience.

These statements indicate that the facilities and equipment provided at the airport helped to speed up the processing of aircraft and passengers so that delay and turnaround times were reduced as much as possible. They also demonstrate that facilities and services provided draw further passengers to the terminal, and because of this, they not only represent an immediate competitive strength but also increase the overall competitive position of the airport. However, while these physical resources can be considered as valuable and rare at this time, they cannot be considered as inimitable since other competitor airports are able to follow the footsteps of DXB and develop similar facilities in the future.

6.3.2 DXB'S ABILITY TO EXPAND

DXB's physical facilities are currently in a phase of constant upgrades. As noted earlier, providing capacity to meet airline and growth demand is one of the main airport

objectives. The Terminal 3 addition, completed in 2008, increased the capacity of the airport to about 60 million, but a further increase of up to 75 million is currently planned (Dubai Airports, 2009). Traffic into the airport is expected to approximately double over the next decade, and expansion projects, currently planned through to 2018, are being planned to account for it (Airport Technology, 2009). These upgrades and expansions are required due to the increasing number of airlines flying into DXB, as well as an increasing number of passengers on those planes due to the introduction of superjumbo aircraft such as the Airbus A380 and, once it is completed, the Boeing Dreamliner. Additionally, the airport has plans for runway expansions in order to allow for the increase in airport traffic capacity (Dubai Airports, 2009).

The airport is undergoing expansion and extensive renovation of concourse 3 in order to accommodate EK's large fleet of A380s; this upgrade will include passenger and freight operations facilities intended to accommodate the increased passenger capacity per flight of the A380 without a significant reduction in flight processing time (Dubai Airports, 2009). Expansions planned for such aircraft include finger piers (intended to allow for docking of the large airliners), larger gate rooms and air bridges, increased baggage handling capacity as well as runway expansions, and is expected to be complete in 2011 (Dubai Airports, 2009). Current infrastructure and operations expansions that are in progress also include expansion of the Cargo Mega Terminal, the Flower Centre and Export Centre, as well as upgrades of the aprons and taxiways.

Cargo capacity at the airport is also an important physical aspect, as it is also one of the major focuses of the airport operation. According to airport internal statistics, total cargo growth increased by 10.96% through the airport in 2006-2007, and a further 9.38% in 2007-2008. This indicates a strong need for continued support from physical resources in this area. This is currently implemented in the ongoing expansion operations, which are intended to increase the cargo capacity of DXB from the current 1.8 million tonnes to 3 million tonnes by 2018 (Airport Technology, 2009). There are also plans to renovate the cargo terminal in order to accommodate the cargo configuration of the A380 - the A380-800F (Dubai Airports, 2009).

DXB has also recently had an upgraded landing system (CATIIB) approved by GCAA and DCAA, which is seen by the airport management as an innovative and unique system in the region:

We are the first airport in the Middle East to introduce CATIIB auto landing system (GA).

This landing system, which allows for aircraft operations to continue in visibility conditions of as low as 50 metres, is expected to improve the operations capacity of the airport by reducing the potential for delay during the foggy months which will almost completely eliminate landing delays at the airport (Dubai Airports, 2009). This upgrade follows rapidly on the upgrade to a CATIIIA landing system in 2008, which allowed the airport to operate in 200 metre visibility conditions (Dubai Airport, 2008). This system further enhanced the ability to reduce overall delays at the airport; however, according to CEO Paul Griffiths, there is no need to upgrade to the CATIIIC system which would allow for landing in zero visibility (Dubai Airport, 2008).

These upgrades are only the current stage in expansion, as long-range planning is intended to bring the airport up to 100 million passengers capacity by 2025 (Airport Technology, 2009). This is in addition to the building of the major long-term project of Al-Maktoum International Airport, which when opened will become the largest airport in the world with five runways, four terminal buildings and capacity to handle up to 160 million passengers and 12 million tonnes of cargo (Dubai airport, 2010). This secondary airport was opened, for cargo traffic only, in July 2010 in order to take some of the growth pressure off from DXB (Dubai airport, 2010).

As highlighted in the literature, the ability of an airport to undertake such major and continuous upgrades is regarded as a competitive advantage. This aspect was also emphasised by interviewees who believe that the ability of the airport to plan ahead and

to extend its facilities on time is one way of gaining a competitive advantage, with interviewee GA stating that:

Late and delayed airport development is one of the things that can impact on the airport business. Airports should look ahead of time. Investing and expanding the airport in advance is an advantage.

Respondent LN declares that airport development projects are based on growth forecasts:

We go hand in hand with the expansion story; at the same time we make sure that we are always forecasting the expansion and the figures. We do not create infrastructure to expand; it is the other way around: we forecast the expansion then we build the airport that is going to service this expansion.

Interviewee JR agrees with this and states that their business plan is based on the growth of their home based carriers:

In terms of growth plans, we work very closely with Emirates and Flydubai and their business plans, which are logically driven by the acquisition of aircraft. For example, even in the light of the current economic crisis, Emirates still intends to acquire a large amount of aircraft over the next few years including 58 Airbus A380s. So we have to provide facilities at a high level of service.

This indicates that the ability of the airport to expand in order to accommodate more traffic can be also identified as valuable, rare and often costly and difficult to imitate physical asset, mainly due to the large financial capital and the long planning process required to undertake such development projects. It is also regarded as an organised resource since it has been highly exploited by the airport. This is apparent in the

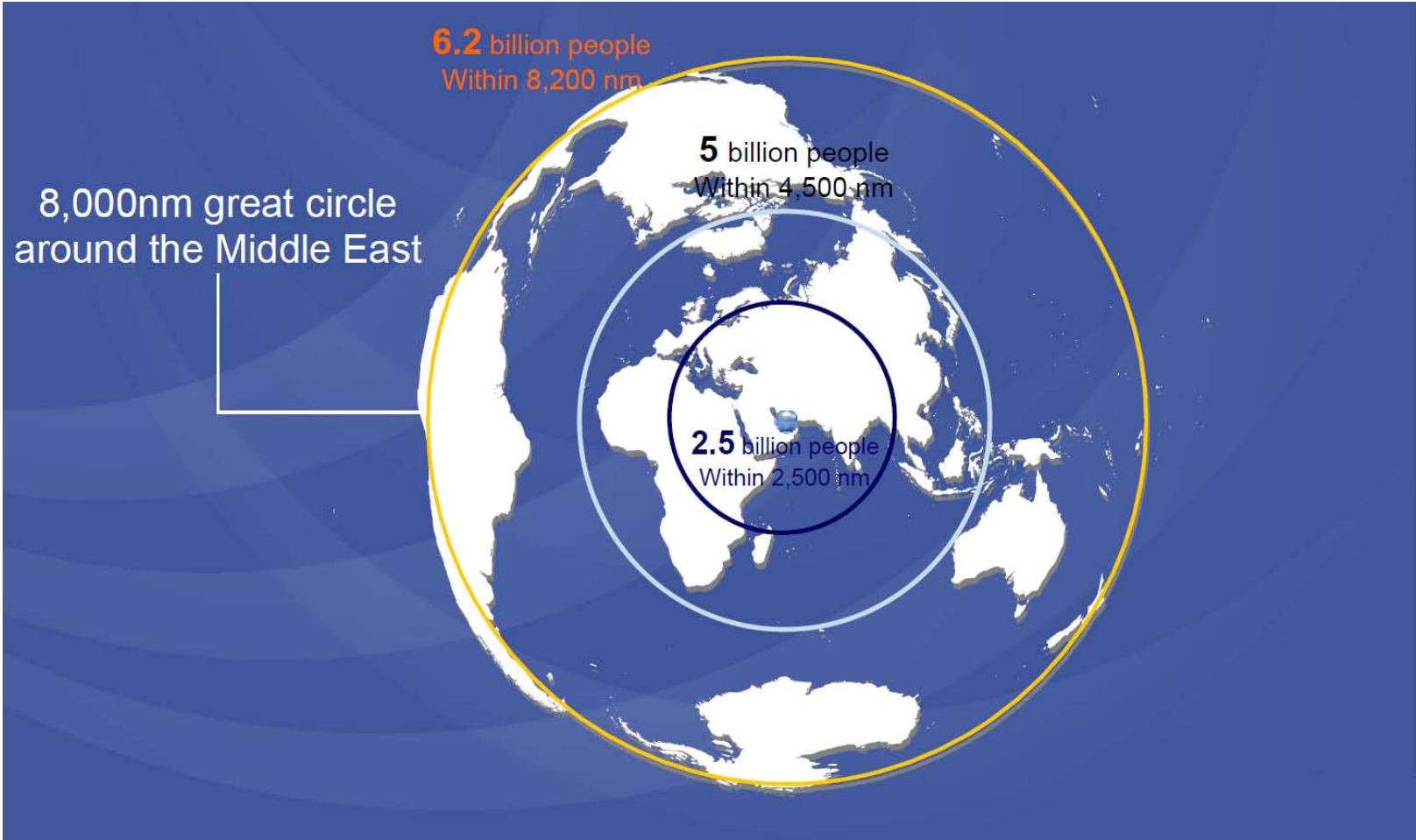
continued upgrades of the current airport infrastructure and in the development of Al-Maktoum Airport.

6.3.3 THE STRATEGIC LOCATION OF DXB

In addition to the buildings and facilities provided by DXB, the airport's geographic location is a strong physical resource that can be also highlighted as a key source of advantage. The airport is the closest airport to the city of Dubai, which is a highly popular vacation spot as well as a business hub, and also easily serves the rest of the UAE and the neighbouring countries (Dubai Airports, 2009). Figure 6.1 illustrates the geographical location of the Middle East in relation to the world's population. The central international location of DXB in the Middle East is crucial to its growth. This region has witnessed a dramatic growth in passenger and cargo movements over the years and is expected to see further increases in the future. While the aircraft manufacturer company Airbus forecasts that airlines in the regions of the Middle East and North Africa will need to operate around 950 aircraft by 2022, Boeing predicts that airlines serving the Middle East region will double the number of their passengers by 2014 (O'Connell, 2006). In addition, the Middle East is regarded as one of the most profitable for airlines in terms of aircraft operation with traffic data by IATA (2006, cited in O'Connell 2006) demonstrating that the region had recorded the world's highest growth in Revenue Passenger Kilometres (RPK) in 2005.

The airport is a convenient location for European airlines as a stopover point for long-haul flights for refuelling, which is in most cases required for trips from Europe to Australia or Japan. Because DXB is strategically located between the East and the West, which may allow for a lower total flying time between destinations in Europe and Asia, it provides an excellent opportunity for this. It can be considered as a desirable connecting point, both for airlines in order to minimise fuel costs, and for passengers in order to minimise flying time. In addition to this, while the central location allows a high catchment area, the integration into the local and regional transportation networks allows the airport to be highly integrated into the regional transportation structure.

Figure 6.1: The geographical location of DXB



Source: Airbus (2007)

Throughout the interviews, the respondents placed a strong focus on the geographical location of DXB and its impact on the airport's growth level. This physical resource has been highlighted by respondents as a significant source of competitive advantage for DXB, with respondent JR stating:

If you draw a circle around Dubai within 8 hours flight distance, we cover two thirds of the population of the planet... I think that the geographical location of Dubai in the Middle East and its accessibility from Europe and Asia and the cross flow of traffic is a major contributor to Dubai as financial and tourism hub. And now with the larger longer distance aircraft North and South America are also becoming markets available to us.

This view is supported by the other interviewees who asserted:

If you look at where Dubai is we have about one third of the world's population living within 3 to 4 hours flying distance and I think that is a great advantage to the country. So, from the geographical perspective, I think we are situated in the right place (LN).

Dubai Airport is the Middle East central hub. We serve an area of large population of around one and a half billion... In fact, the geographical location of Dubai as a connection point between the east and west is an important factor that has led to the growth of Dubai Airport... The geographical and strategic location of the airport is one of our competitive advantages (GA).

It is, therefore, believed that the strategic geographical location of the airport does not only offer a substantial and unique physical asset, but also an inimitable and organised resource. As mentioned earlier, the involvement of local governments in operating airports in the region is likely to make it difficult to substitute the location of DXB. Although DXB has some rivals in the region, there are only a limited number of airports

that can easily handle transit traffic, as was found when analysing the competitive environment in chapter 5. The financial and physical resources available to DXB allow it to benefit from its strategic location to handle this type of international traffic.

6.3.4 DESTINATIONS AND CONNECTIVITY

Common issues in airport operation and scheduling that can lead to earning competitive position are the wide range of destinations that the airport serves, connection times between international flights and the speed at which passengers can be processed. As highlighted earlier, there are a large number of air carriers connecting DXB with many points (as referred to earlier in table 6.1 and 6.2 in this chapter), with EK alone serving 179 destination worldwide (as demonstrated in the previous chapter). This operational advantage was highlighted by interviewee GA:

There are around 130 airlines using Dubai Airport and fly to over 200 destinations worldwide. There are 15 flights to Sydney daily. This means that if you miss a flight you can catch the next one. I think this is what mainly distinguishes Dubai Airport from any other competitors.

Studies (e.g., Knorr and Eisenkop, 2008) regard DXB as a major frequent connection point and time-saver for passengers and cargo flying from Europe to Australia and even Africa. The airport's infrastructure has been created in order to make the airport capable of handling a high transit load at a minimum connection time between flights. The rapid processing of passengers allows airlines to run more carefully, align their schedules and route passengers through the airport on stricter schedules, thus connection between two flights can be as minimal as possible. Respondent GA also emphasises the importance of short connectivity between flights:

...the other advantage is the short connection times between flights with a maximum of 4 hours... We have a low connection time of around 2 to 4 hours between flights.

This interviewee believes that the open skies agreements and the 24-hour operation of the airport are factors behind the achievement of low connections between flights:

We have an open sky policy so airlines can come and use the airport as much as they want...One of the competitive advantages of Dubai Airport is that it operates 24 hours a day 7 days a week.

As studied in the literature review, the number of flight destinations, frequency of service and the availability and timings of flights are all crucial factors for passengers when choosing to fly from an airport. Therefore, the capability of the airport to offer such service factors can be considered as a valuable, rare, inimitable, and organised resource.

6.4 DXB'S HUMAN RESOURCES

The review of the academic literature stresses the significance of experience and knowledge of employees to the success of firms. In this section the human resources available at DXB are addressed to explore how they contribute to the growth level of the company, and how they help form a source of competitive advantage.

6.4.1 DXB'S LEADERSHIP AND TOP MANAGEMENT

DXB has a major human capital resource available to it from its leadership, in particular, the Chairman and CEO who bring unique skills and experiences to the operation of the airport. The Chairman of Dubai Airports - Sheikh Ahmed Al-Maktoum, has decades of experience in the aviation industry, serving as president and chairman of a number of operational and functional areas (Dubai Airports, 2009). He is currently the president of DCAA, the chairman of DXB, and the chairman of Emirates Group (Emirates Group owns EK, SkyCargo, DNATA, a large share of Emirates Catering and 43,6% of Sirilankan Airlines) (Dubai Airports, 2009). This explains the significant strategic ties and integration between these different organisations. These entities have

experienced year on year growth and constant modernisation under Sheikh Al-Maktoum's leadership, and the connections provided by his influence throughout the aviation industry may prove to be a source of sustainable competitive advantage in the case of DXB

While Sheikh Al-Maktoum is a strong inside influence on DXB's operations, the current CEO - Paul Griffiths, brings outside and international experience to the position. Prior to taking the CEO position in 2007, Mr Griffiths worked as managing director of London Gatwick Airport, which is the second largest airport in the UK and the sixth largest international airport in the world (Dubai Airports, 2009). Prior to this he was board director of the Virgin Group, developing international operations for Virgin Atlantic Airways, and he also had experience in marketing and commercial planning and technology for Hong Kong operator Dragonair (Dubai Airports, 2009). This provides a substantial technological boost in the knowledge base of DXB's top management, as well as providing an international perspective due to his strong influence in outside technology. The important role that the CEO plays in the overall performance of DXB is clear in this statement by interviewee JR:

Because I have been a consultant at many airports and worked for many airports, I think the leadership starts from the top and we have a wonderful leader: our CEO - Paul Griffiths, and he has been a good driving force.

This indicates that the top management of DXB offers a unique set of human resource that can be leveraged to the firm's strong advantage. Both the chairman and the CEO provide a valuable and rare set of skills, connections, and resources that provide a substantial advantage to the airport. These two individuals are also highly involved in the development of the airport management and structure, indicating that the human capital represented by these two individuals is well utilised in the firm.

Managerial issues were raised by asking interviewees questions including: who is responsible for making decisions at the airport? Responses included:

Everything in the airport is led by the committee that is involved in these decisions and they will involve people like Sheikh Al-Maktoum... the goal is always set by the leadership this comes from Sheikh Al-Maktoum (LN).

The CEO, Mr. Paul Griffiths, after getting back to Sheikh Al-Maktoum the chairman of Dubai Airport... The CEO is responsible for making day-to-day business decisions with other department managers, while strategic and future planning issues are discussed with Sheikh Al-Maktoum, the decision maker at Dubai Airport (GA).

We have a sort of governor structure that incorporates our senior management which reports directly to the chairman, and that senior management comprising Mr Paul Griffiths - the CEO of the airport, Tim Clark - the president of Emirates, the head of DNATA and the head of engineering projects (JR).

These statements explain the important and valuable role that both the chairman and the CEO play. The latter statement shows the involvement of other aviation players in the airport business and development, which also highlights the importance of the corporate culture of DXB.

6.4.2 SKILLS AND EXPERIENCE OF EMPLOYEES

In addition to the specific resources noted above, DXB has a full complement of effective and skilled managerial and human resources at all levels of the organisation that can be relied upon to engage in the overall operations required by the firm. What can also be seen as a strong demonstration of human capital is the presence of a number of Vice Presidents. The role of these VPs is to support the Chairman and the CEO in taking decisions and overseeing the different departments. Table 6.3 shows a list of DXB's VPs and top management.

Table 6.3: DXB's VPs and top management

Chairman
Chief Executive Officer
Senior Vice President, Strategy Group
Senior Vice President, Airport Solution Group
Senior Vice President, Human Resources and Development
Vice President, Commercial
Vice President, Airside Operations
Vice President, Internal Audit
Vice President, Engineering Services
Vice President, Information Technology
Vice President, Strategy
Vice President, Finance
Vice President, Marketing and corporate communication
Vice President, Dubai Cargo Village
Vice President, Procurement
Vice President, Terminal Operations
Vice President, Dubai World Central Development
Vice President, Projects – Solutions Unites
Vice President, Electronics Support – Dubai Air navigation Services
Vice President, Dubai World Central Development – Airside Operation

Source: Dubai Airports (2009)

Amongst the interviewees, there was a positive attitude in relation to the fact that the experience and knowledge of employees has contributed to the growth level of DXB:

From an airport company perspective, we need knowledgeable and experienced people to cope with growth. The growth is coming because of what is happening outside our control from the growth of Dubai and the acquisition of aircraft by Emirates and Flydubai. So, the challenge is how to be able to manage that growth, which means that having knowledgeable and experienced people is very important (JR).

I think everybody has got something to offer; it does not matter where you are in the chain. It is very important to realise that sometimes great ideas come from the least expected places, so I think what you see now at the airport is the contribution of everybody; there is no one single person that says this is the product of my planning... Do not forget that the airport has about 3000 people

working, so to have that many people means that you have many people thinking of wanting to move in the right direction to the goal that management sets (LN).

Interviewee GA believes that allowing and attracting highly experienced people from different nationalities to work within the UAE adds to the experience of DXB:

We learn from the best experiences of other airports... Any qualified person is allowed to work in the UAE, and here at the airport, we have staff members and managers from different nationalities. A good example is our CEO who comes from the UK. So, I think the presence of people from different backgrounds with different qualifications and experiences is one of the reasons behind our success.

DXB places a high value on human resources as a major competitive advantage, focusing on a high degree of training and skills within its full operation. Keeping employees up to date and providing them with the necessary knowledge is seen as an important human factor at the airport. According to interviews, approved training courses are available to employees from different departments on a regular basis at different levels. Interviewee GA states:

We have a training centre approved by IATA and ACI, and training sessions are held on a daily basis to staff from different departments. Depending on their position and experiences, staff members attain around three courses a year.

Interviewee JR reveals that staff training is directly related to the airport's objectives:

Training programmes are built in to our objectives, so each department has KPIs, which is down to individuals within the unit. Every staff member gets internal training and, when budget permits, external training in technical

aspects with ICAO or IATA is also provided, so we have an understanding of what is going on in the industry around us.

Respondent LN indicates that employees have the right to choose the training course they feel they need to participate in:

HR is very involved in setting these training courses, at least the basic ones, where they look at different levels and what type of courses are required. At least once a month there is training on something. The way it works, it is not set to everybody and you can set your own training, and say, I want to be trained in this particular skill because of your own work.

The availability of highly skilled local and foreign employees, as well as providing them with the necessary knowledge to keep them up to date with new technology is assumed to be one of the valuable and rare resources that DXB possesses.

6.5 DXB'S ORGANISATION RESOURCES

The human resources noted above are supported strongly by an organisational culture that emphasises the importance of cooperation within departments, between departments, as well as with other firms in the environment. These are important aspects of high standard, efficient, safe, secure and sustainable airport operations. In this section, the organisation capital of DXB is categorised as internal and external relations.

6.5.1 INTERNAL RELATIONS

The cooperation and coordination between the different departments within DXB is considered as a valuable organisational resource. This is largely achieved through conducting regular meetings between department managers, between the CEO and department managers, as well as between department managers and staff members. Although it was difficult for the researcher to obtain a detailed organisational chart for the airport company in order to be able to better understand the structure of the

organisation and how cooperation and coordination is achieved, the importance of this area was highlighted during the interviews. Respondents stated that at the leadership level, the CEO meets weekly with VPs to discuss issues concerning the airport business and operation performance:

There is a weekly session for vice presidents they call it a leadership group meeting (JR).

The CEO meets up with vice presidents once a week to discuss different issues concerning the airport operations and improvements (GA).

This is an ongoing process, I mean they can meet as often as required, but generally, VPs meet at least once a week where they discuss ongoing business development and expansion. They are quite switched on when it comes to these things (LN).

It was also mentioned that the CEO meets monthly with departments to discuss different issues:

As a department we see him once a month so we get the opportunity to show him what we are doing and he gets the opportunity to give us direction (LN).

There is a monthly meeting held between all the departments including management staff to discuss general issues (GA).

There are also other meetings that take place regularly in less formal relationships. Respondents draw attention to this issue by commenting:

Within the working group level, we incorporate to make sure there is an understanding. For example, the business plan is under the strategy unit. We

have a weekly session to discuss things like plans, budgeting and establishing KPIs within the unit (JR).

We have an open door policy so meetings can happen at any time, but there are regular structured weekly meetings (LN).

There is a group of people that meet on regular bases to read complaints and suggestions collected from the airport's employees in different departments to discuss them and try to resolve any problem (GA).

Interviewee GA also points out the importance of information technology in spreading information within the firm:

We believe in team work and we exchange information between us using the internet, so we collect information and news from all the different departments, for example engineering, operation, etc, and repost them so everybody keeps informed with the latest changes and activities.

This also indicates that the planning and organisational system of the airport is one of its strengths. However, it is difficult to assume that this can be a source of sustainable competitive advantage since this process is often followed by other organisations in the industry.

6.5.2 EXTERNAL RELATIONS

In addition to the internal relationship, the organisational culture of DXB is highly honed and focused strongly on operational safety, security, and sustainability as part of its external relations. As demonstrated earlier, creating a responsible airport environment is among the airport's strategic pillars. Specific organisational measures that can be identified within the firm's internal documentation that reflect the organisational culture of commitment to these areas, include reports of emergency drills

within the airport as well as the operational testing of the newly opened Terminal 3, which tested every aspect of the new terminal before its opening (Dubai Airports, 2009). The importance of providing a safe operational environment was highlighted by interviewee JR as one of the airport's visions.

Providing safety and world-class facilities are our vision and we have to keep doing that.

Another example related to commitments in these areas includes the participation of DXB in the March 2009 Earth Hour campaign, in which lighting in some areas of the airport was switched off (although not in safety or operational critical areas) to bring attention to the need to conserve energy and demonstrate commitment to climate change (Dubai Airports, 2009). This was communicated by Dubai Airport's CEO, demonstrating that the message of environmental sustainability does come from the top levels of management. This type of vocal commitment is crucial in ensuring that a given aspect of corporate culture can be assumed to be embedded, and thus the commitment to the environment voiced by the CEO can be assumed to be part of the corporate culture as a whole.

The cooperative relationship between DXB and other organisations in its value chain is also a substantial organisational resource. This includes the cooperation with EK, Flydubai, DCAA, DNATA, Emirates Carting, FTZs, the Tourism Board of Dubai, regional transportation development networks and other government agencies. Although these are seen as different organisations that are managed and operated separately, there is a sort of integration between them, as they are all owned and run by the government of Dubai. In addition, as was mentioned earlier, the chairman of DXB is also the chairman of EK, DNATA and Emirates Carting, as well as the president of DCAA. It is argued (Lohmann et Al., 2009) that the integration between the main aviation actors in Dubai encourages air travellers to visit the city.

One of the interviews highlights the significance and uniqueness of this ownership and management integrations for DXB by stating:

What I think is unique about this airport is the alignment between those companies (JR).

This integration means that there are greater opportunities for establishing strategic relations between the airport and those aviation players. Keeping good relationships with other organisations in the environment provide DXB with flexibility and additional resources that can be utilised in order to promote the development of the airport. These organisational resources provide a strong basis for building competitive advantages for DXB through leveraging all other aspects of its resources, including financial, human and physical resources, in order to be the most efficient practice possible.

6.6 SUMMARY

The discussion above highlighted a large number of resources that DXB possesses. Using the RBV of the firm, this chapter focuses on four main areas of resources: Financial Capital, Physical Capital, Human Capital and Organisational Capital. Table 6.4 below summarises the attributes that represent main sources of internal strengths for DXB. However, it is important to remember that the realisation of these strengths within the firm depends not only on the existence of these resources, but also the use of these resources to create and maintain competitive advantages. Therefore, which of these resources can truly be considered as sustainable competitive advantages? That is to say, which of these resources can be considered as valuable, rare, inimitable, and organised? The table also identifies the resources that can fall into each of these categories.

Table 6.4: Summary of competitive advantages from internal resources

Resources	Can be considered
Financial support of government	valuable, rare, costly to imitate, exploited by the firm
High internal revenues	valuable, rare,

Infrastructure and facilities	valuable, rare,
Ability to expand physically	valuable, rare, costly to imitate, exploited by the firm
Geographic location	valuable, rare, costly to imitate, exploited by the firm
Number of destinations and connectivity	valuable, rare, costly to imitate, exploited by the firm
Top leadership including strong local and international experience	valuable, rare, costly to imitate, exploited by the firm
Experience and knowledge of employees	valuable, rare
Cooperation and coordination between departments	valuable,
Cooperate relations and integration with other organisations	valuable, rare, costly to imitate, exploited by the firm

The table presents a number of resources that can be considered as sustainable competitive advantages. However, there are a number of potential challenges to the current situation that could reduce the overall effectiveness of some of these resources. One particular challenge to the strategic value of these resources is the potential that Dubai government may not be able to continue to offer the same level of financial support to the operations and expansion of DXB in the future. However, this does challenge some of the assumptions of the degree of financial resources and support available to DXB. In addition, although DXB may not be immediately affected by the economic downturn and the drop in aircraft movements that may result, there is a significant potential that it could be vulnerable to traffic decline in the future. As DXB's revenues are directly dependent on passenger and cargo traffic volumes, a drop in these volumes could affect its internally generated revenues and further expansion plans.

Although this chapter highlights the majority of the internal resources of DXB, some are not explored in detail here as they are referred to later in the research. For example, the airport's brand name and reputation, as well as its corporate culture with other airports are major sources of organisational resources which are studied in detail in the next chapter when analysing the strategic practices of DXB. In addition, the capability of DXB to handle specific types of traffic and to provide better quality of service to its users is also further addressed later in the research. This means that the competitive advantages of DXB is not only limited to the resources identified in table 6.4.

CHAPTER 7 DXB'S STRATEGIC PRACTICES

7.1 INTRODUCTION

One of the major points of discussion within the interviews that were conducted was the strategic direction of DXB. The research questions that are related to the strategic direction of DXB included: What were the strategies adopted by DXB? What were the reasons for choosing these strategies? Why were other business strategies not adopted by DXB? As the choice of strategies is related to the external and internal environment at DXB, this chapter also attempts to relate the choice of strategies for DXB to its environments. In other words, the goal of the chapter is to identify the strategic direction and discuss how these strategies are adopted in terms of the environment in which DXB is operating. Therefore, the different business strategies that are discussed in the literature review part of this research are related to the case of DXB, including the three generic strategies, the growth strategies and strategic alliances.

7.2 CONTROLLING DXB'S COSTS

As described in the literature review, the cost leadership strategy can help the company protect itself from rivalry, new entrants, powerful buyers, powerful suppliers and substitutes. Due to the fact that these forces are relatively low in the case of DXB, as found when analysing the competitive environment in chapter 5, this strategy is not broadly adopted by DXB. Nevertheless, there is some evidence of cost control strategies in use by DXB. Interviewee GA indicates that the building and construction projects in the airport are performed by lowest-bid selection in order to reduce investment costs. However, priority is usually given to quality.

Building and construction projects are subject to tenders. We decide which company is going to take part of the project based first on quality and then on price (GA).

There are also some measures which are undertaken by the airport in order to reduce costs related to lighting, air-conditioning, and water usage (Dubai Airports, 2009). Interviewee JR indicates that, in order to remain competitive, the airport has controlled hiring and reduced electricity usage:

We have to remain competitive in terms of costs and we have to manage our operating costs. For example, we have limitations on our staff requirements and hiring. Another example is electricity which is, interestingly, one of the largest operating costs of the airport. Temperature in offices has been reduced to save electricity bill. We are also trying to lower electricity costs in terminal facilities.

In fact, the consumption of utilities at DXB accounts for 25% of the total operational cost, which is considerably higher than average energy costs at other airports, which account for around 5 to 7% (Dubai Airports, 2009). This shows that the cost control strategy is not widely in use by DXB in some operational areas. It also indicates that while the literature has shown that staff requirements are often the highest operation cost at airports, it is not the case at DXB. The relatively low labour cost is mainly due to the availability of a large number of low paid foreign workers, particularly from Asia, working in the UAE, as found when analysing the social factors in chapter 4.

While the main aim of the cost leadership strategy is to control and reduce the costs to ensure that the company can offer its customers the lowest price on the market, interviews have shown that adopting the cost leadership strategy by DXB in order to offer airlines the lowest price possible would not have an impact on the airline's decision to fly from DXB. Interviewee LN states:

I think that in the case of Dubai Airport, charges will not have an impact on attracting airlines to use the airport. Even if no prices are levied to use an airport, airlines will not use it unless they have passengers there.

Respondent GA is consistent with this point of view:

I do not think that lowering airport charges will attract more airlines to come to Dubai Airport... Airlines use Dubai Airport because there is a demand for passenger and cargo travel and without this demand, airlines won't come to this airport.

These statements indicate that air travel demand is the airlines' first choice to fly from DXB, not airport fees, and that the airport does not place cost control in its primary position. Given the fact that the airport has a little direct competition in the main region and is still in the growth stage, this can be considered as a suitable approach, as there is no need to reduce costs to the lowest level in order to provide a significant level of competitive advantage.

While cost leadership strategy does not appear to be widely in use, DXB charges are considered to be relatively low comparing to other airports. A study undertaken by Cranfield University in 2002 (cited in O'Connell, 2006) to investigate landing charges for B737-800 aircraft at 24 different airports, demonstrated that DXB charged its customers the lowest landing fees. Another more recent study by Cranfield University (Graham 2008, cited in Karamanlis 2008) for a regional cross-border A319 turnaround in 2007 shows that DXB is the second lowest airport in terms of aeronautical charges and taxes.

It is argued (O'Connell, 2006) that the ability of DXB to offer its airlines lower charges is mainly due to the cross-subsidy of landing charges through earnings from the extensive duty-free facility. It is also believed (Knorr and Eisenkop, 2008, p. 3) that low airport charges at DXB may be the result of factors including:

cost savings due to higher factor productivity, the non-existence of a double mark-up (as a result of the central management of Dubai's aviation interests by Sheik Ahmed bin Saeed Al-Maktoum), monopoly rents enjoyed by other hub

airports at the disadvantage of their airline clientele, and lower marginal damage costs of noise pollution in Dubai (because of different ecological preferences).

In addition, the relatively large amount of traffic which is being served at the airport means that it is likely to be achieving economies of scale. As studied in the literature, the achievement of lower unit cost comparing to competitors can lead an airport to gain a competitive advantage.

The discussion here demonstrates that while the airport management neglects the importance of their airport charges in attracting airlines, the airport offers its airline customers relatively low prices in comparison with other competitor airports, which can be a success factor that the airport management does not truly realise.

7.3 DXB'S DIFFERENT PRODUCTS AND SERVICES

The main generic competitive strategy in use at DXB is differentiation. The review of the strategic management literature highlights that differentiation allows a company to reduce buyer and supplier power and increase the cost of their product, as well as providing a competitive advantage in a sector that has highly similar offerings. In the case of DXB, differentiation could be chosen mainly because of the availability of the financial resources, as well as the support from the government of Dubai and the airport's position in Dubai's tourism and trade strategies. The differentiation process of DXB is based on its physical attributes and resources, as well as service quality, as found when analysing the airport's internal environment in chapter 6.

The facilities and services available at DXB are what mainly differentiate the airport from its other competitors. Its ability to offer extensive services to businesses and proximity to FTZs and business centres in the region is a significant differentiation strategy for the airport, and one that can be regarded as non-substitutable or reproducible by other rivals. The airport's integration into the surrounding FTZs offers a

unique opportunity for differentiation and allows the airport to set itself apart from its competitors on these terms. This integration brings substantial cargo shipments and business travel to the airport, as it is the only substantial business-oriented airport in the region. As the only airport in Dubai, it serves as a major point of entry for traders and tourists within the region, garnering a high level of government support due to this importance. Therefore, the differentiation strategy is based on the airport's importance to the economic growth of the region and the tourism industry in Dubai.

One of the major points of differentiation, and the main strategy that it uses in many cases, is the design of the facilities and services offered in order to meet the needs of specific customers. In the case of DXB, the differentiation strategy is also based on the requirements of airlines and their passengers. According to the respondents, some of the facilities and services that have been built to meet the needs of EK and its growth level have included constructing a special terminal building. This development, which is one of the first in the world, has been designed in order to enable the airport's home based carrier to implement its A380 large fleet.

We were the first in the world to build a terminal specially designed to handle the A380 (GA).

The airport has built a special terminal for the A380 aircraft and that is going to be specifically for Emirates because we need to make sure that we are able to cater for this kind of aircraft and this passenger number (LN).

Building such a terminal that is dedicated to EK's A380s is intended to provide services for the large number of passengers using this large aircraft. Such a development can be regarded as one of the physical resources that provides a strong differentiation advantage in that it is very rare (being one of the few terminals in the world), valuable (as it allows the airport to process the large number of passengers), inimitable (it was developed with financial resources outside the reach of most airports), and imperfectly substitutable (as it was developed in anticipation of EK's A380 fleet, which is not going

to be developed by many competing airlines). Therefore, by adopting differentiation as its strategy, DXB is likely to reduce the airlines' power and may deter new entrants to the market as entry is likely to be at higher cost.

Special facilities for passengers in transit including showering facilities, hotels, and extensive duty-free selection are also forms for differentiating DXB's products. The respondents believe that the airport hotels are a particular point of interest for passengers, with respondent LN stating:

We have quite a few facilities we add into the terminal because of requirements of passengers; showering facilities and hotels; all of these services came into line because there is a demand for these special services. Not every airport has a hotel inside it, we have two hotels and soon we are going to have a third one inside the terminal. So, airlines are choosing Dubai airport over other airports because of the services available to their passengers. So, if you look at transit passengers, they will prefer to fly through Dubai airport because of the facilities available to them.

Respondent GA says:

Around 60% of our passengers are transit so we built facilities specially designed to handle transit passengers including large duty free area, airside hotels and showering facilities.

These special facilities are seen as a major differentiation point, as the transit through DXB is likely to be more comfortable and attractive for passengers than at other airports.

7.4 DXB CHOOSES NOT TO FOCUS

As studied in chapter 2, the focus, or niche strategy focuses the product on a narrowly targeted and possibly geographically distributed demographic in order to achieve strategic advantages. While this strategy has been pursued by some airports, DXB is not focusing on specific geographical locations or customer segments. Rather, it serves a wide range of varied customers including long-haul, short-haul and cargo. Therefore, the airport does not use a focus strategy, as this would not be appropriate for a general purpose airport in the size of DXB.

7.5 PENETRATING THE AIRPORT MARKET

One of the major strategies in use at DXB is the market penetration strategy. The market penetration strategy is one of the four growth strategies defined in the literature review, in which an existing market is targeted for growth. The market penetration strategy is intended to allow the competitor to attract more customers through improvement of quality and level of service, reducing cost, and using advertising to convince new customers to try the product or service. Some of these market penetration strategies are adopted by DXB as discussed below.

7.5.1 PROVIDING BETTER SERVICE QUALITY AT DXB

Improving service quality is a central focus of DXB. The design of the airport and its facilities was structured in order to improve the customer experience. This includes minimising queuing time, reducing the amount that individuals have to walk, directing passengers through the terminals and making other changes that improve service quality at the airport. DXB has been classified by the ACI in 2009 as the second best airport in the region of the Middle East in terms of service quality (ACI, 2009). SkyTrax, which is the world's largest airline and airport review site categorises DXB as an official 3-Star Airport (SkyTrax).

Interviewees were asked to what extent they think that their airport is focusing on providing a better quality of service to its passengers. One of the interviewees comments on this by saying:

We always look at the passenger experience very closely. We are making sure that people do not stand in line forever, that people are processed in the right way and that people do not walk a long way. That is why you know designing the airport is very important to take this passenger consideration and making people's experience through the airport one that is memorable, one that is quick, one that also involves what the passengers are looking for so we offer them that experience (LN).

The airport offers facilities and services based on passenger segmentation. Due to the social factors and the mixture of people visiting and living in the UAE, ranging from people with very high incomes to foreign contract labourers, the airport offers services and facilities intended for experienced and regular passengers, as well as special services for those who are not experienced passengers and often require guidance through the airport system. One interviewee states:

Well, when we plan and design our facilities we do surveys to understand our multiple passenger characteristics ranging from passengers with very high incomes who expect a certain level and class of facilities to labourers who may not be as experienced travellers and we provide them with way finding facilities (JR).

The airport provides facilities that enhance the level of customer service. For example, Al Majlis facility and the Executive Flights Centre that aims to serve the needs of rich leisure and business passengers. Other examples are the open-air gardens, children's playing and gaming areas, and the other extensive passenger specialty services.

The airport also provides support for individuals with special needs through its Dubai Care Team: a group of employees that provides support for passengers at the airport.

We have established a group called Dubai Care Team and I'm the leader of this team. This team provides support and care for people with special needs while they are at Dubai Airport (GA).

This allows the airport to serve a wide range of passengers and passenger needs. The differentiation of the airport product and services which have been highlighted previously in this chapter is another sign of adopting this growth strategy by DXB. The range and extent of services, as well as the depth of service coverage (for example, offering services specially designed for transit passengers such as hotels and showering facilities) are clear indications that the airport has been carefully designed to provide better service quality for its airlines and their passengers. Nevertheless, service quality is still seen as an issue for the airport management. This is apparent in the SkyTrax passenger reviews which reveal that the problem of queuing and congestion is growing with the increase in the number of passengers passing through DXB's terminals. Some remarks on this regard include the large queues for customs, security, toilets and showers; lack of seating areas; overcrowded terminals leading to blocking passenger flow; long walks to the gates and long bus trips around the airport which make it not easy to transit; and overpriced shops (Data from SkyTrax as of 2010). It is the reason why DXB has been classified only as 3-Star airport, and why its rank has declined to number 26 in terms of passenger satisfaction (as highlighted earlier by one of the interviewees). Therefore, while the airport management claims that their airport provides high quality of service to its passengers, there are some improvements needed in this regard.

7.5.2 REDUCING DXB'S CHARGES

Respondents were asked whether the airports discounted charges for airlines or whether there were promotional rates for new and existing airlines. In this case, there was no

evidence that prices were lowered, either on an individual basis for new airlines or as a promotional approach. The respondents indicated that it would be considered unfair to charge airlines different rates depending on different characteristics. Respondent LN's response was typical of this question:

I don't think there is a specific way of doing discount charges and these sorts of things... What we try to do for new airlines, we try to help them through the very complex procedure if they want to change their route to Dubai Airport. We look at airlines and see what kind of requirements they have and we try to present them a solution that works for them and for us. But I do not think that discounts apply there... We cannot charge an airline something and charge another airline something else.

While it was mentioned by one of the interviewees that DXB had lowered its landing charges for airlines for a limited period of time, this was not intended to be one of the airport's market penetration strategies:

Prices are the same for all users whether they are new or existing airlines. The only case where Dubai Airport lowered its price was at the beginning of the economic downturn where charges were reduced by 35% for all airlines (GA).

Respondent JR indicated that the development of the subsidiary Al-Maktoum Airport may offer some potential for incentives for airlines that are willing to move, as this would provide benefits for both DXB and the airlines (offering the airline more space and potentially lower costs while offering DXB the chance to reduce congestion at peak times). He states:

At this point, no. However, we are in the process as we are transiting to the first phase of opening Al-Maktoum to provide some incentives to airlines to relocate there early on. So if we can incentivise them to move to Al-Maktoum,

it has a dual benefit. This could be attractive to some carriers to avoid peak congestion period at this airport (JR).

As pointed out by interviewees, and as discussed earlier in the cost leadership strategy in this chapter, the reason for not adopting this growth strategy is due to the fact that airlines using DXB are regarded by the airport management as less sensitive to change in prices, which are considerably lower than other competitor airports. Further reduction in airport charges in order to attract more airline customers and to penetrate the existing market is seen as not necessary and it is not a major part of DXB's strategic direction.

7.5.3 MARKETING AND PROMOTING DXB

While lowering charges is not a major element of DXB strategy, marketing and promoting the airport to customers are seen as an area of focus. Marketing and promotion is another way to penetrate the market through developing a brand name. According to respondent JR, the advertising and marketing strategies used in the airport are two-fold. He declares that the first marketing challenge is marketing Dubai itself as a destination, which is the less difficult part, as the region is already heavily marketed and well known. However, JR believes that the main challenge is marketing the airport in comparison to other neighbouring airports in terms of services and facilities, and the advantages of Dubai over other airports like Abu Dhabi:

One is the marketing aspect of getting airlines to fly to Dubai and that has happened sort of naturally because Dubai city does such a good job in marketing itself, and the world knows where Dubai is. In terms of marketing the airport, we have competition down the road in Abu Dhabi so we always try to provide facilities and market the airport and demonstrated the advantages of Dubai versus Abu Dhabi (JR).

The DXB strategic department is also heavily involved in air service and route development for Fly Dubai and EK, as well as sharing market information with the other airlines using DXB. According to respondents:

The marketing aspect is working with airlines to encourage them to establish additional routes and destinations, and we conduct conferences and various mechanisms to do that (JR).

We have our strategic department which has access to a lot of research and analysis and they develop their routes and services based on these research documents. So we expose to airlines the routes and what benefit they can get from changing or modifying their routes to go through Dubai Airport (LN).

This information is also used to promote the airport to other airlines as well, in order to draw attention to DXB and the benefits of routing their airliners through the airport. This is not only used to establish further routing, but is also intended to promote the airport and provide a substantial benefit to airlines for flying through Dubai. According to an interviewee:

We as a marketing department help airlines understand the market and what benefit they can get from using Dubai Airport... With support from other departments, we organise and attend national and international exhibition, meetings and conferences to market the services and facilities we provide to airlines. We do not only present what the airport can provide them but also what the city of Dubai can offer their passengers (GA).

Another interviewee states:

It is important to explain to airlines why it is interesting for them from their business point of view to come to Dubai and for their passengers to use this

airport rather than whatever airport they use. So, yes we use a lot of research and a lot of analysis to support it (LN).

From the statements above, it is obvious that the main area of advertising for the airport is targeting the airlines as the prime customers, rather than targeting passengers directly. According to respondent GA, the benefits that are related to passengers including “*tourism, infrastructure, hotels, shopping centres, and visa requirements*” are seen as a major focus of the airline marketing strategy. Respondent LN explains the airport’s marketing focus, stating:

Our clients are the airlines; they are the ones who bring all the passengers.

While passengers are not seen by the airport as the main focus of marketing, there are considerable advertisements that are targeted to them through the duty-free shops using games and promotions like a luxury car draw and a millennium millionaire draw for example. Such marketing schemes are believed by respondent GA to help attract passengers to the airport:

Some of the things that have been done to attract passengers to the airport are the luxurious car draw and the millennium millionaire prize. Passengers are given tickets to enter these draws after spending a specific amount of money in the duty-free shops. I think draws on those two big prizes have attracted passengers to fly through Dubai rather than flying through other airports in the region like Doha, Abu Dhabi or Bahrain.

Another respondent also assumes that the airport benefits from marketing campaigns that take place within the airport boundaries:

People are very aware of what Dubai Airport is. They do not distinguish between duty free and all these different bodies. From their perspective they

see this as one thing - the airport, whereas from the management prospective each stakeholder has a role to play (LN).

However, this is not the main marketing initiative at DXB, because passengers are not considered to be the main customers of the airport.

Marketing schemes, such as Loyalty Cards for example, are not seen as a significant aspect of passenger marketing at DXB, although the airport benefits from the loyalty schemes used by airlines to attract passengers. When asked about whether DXB has adopted such marketing schemes to attract passengers, respondent LN asserts:

Loyalty cards!!! I do not think an airport is the right body to market these sorts of things, there are very much related to retail, so if you look at Emirate Express very much related to duty free, spend this much get that much so you create loyalty. I think that loyalty comes to the airport from these different bodies that are creating this retail experience. If you look at Emirates Airlines they have loyalty cards and as long as they fly through their hub Dubai Airport the airport gets the benefit. As an airport you benefit from loyalty schemes in place, so yes, these are things we have visibility on them but we do not physically run them.

This interviewee also noted that the airport is not the direct choice of passengers; instead, he believes that the choice to fly to a destination is a combination of how and where the passenger is flying rather than a selection of the airport specifically:

Automatically, when a passenger chooses to fly, let us say with Emirates instead of Saudi Airline, this is because they want to come to this airport and not to the one in Saudi and they want to fly on Emirates airlines and not on the Saudi airlines, so it is a combination of experiences that decides how passengers should go and where they go (LN).

Although the airport does not target passengers directly, discussion with interviewees revealed that the reputation of DXB has attracted more passengers. Respondents believe that:

Dubai Airport is a brand and is driven by the UAE and Dubai strategy of drawing people as a business centre and as a tourist destination. Dubai has marketed itself and Dubai Airport has benefited from that (LN).

The brand of Dubai and Dubai airport are so closely linked. I think that Dubai airport is well known as a good product. If passengers have a choice to connect, they will make a decision about our airport because of offerings and our facilities (JR).

7.6 DEVELOPING MARKET FOR DXB'S PRODUCT

The market development strategy is another form of growth and depends on developing a new market for existing products. DXB has not focused significantly in this area of strategic growth development. According to respondents, the involvement of the government in financing other transport infrastructure developments (including the airport itself) means that the market development strategy is not necessary for DXB. Comments on this issue include the following:

Well, that is beyond our responsibilities. These are areas where we need external bodies like the road and transport authority to work with to deliver something like that. A good example is if you look at Al-Maktoum International Airport we need a road way between us and Al-Maktoum Airport to smooth the cargo facilities, so we would work with the metro facility so that we can link these two airports. So these are strategies which is government led and the decision is theirs. We propose what we want because they do not have the visibility toward our future project, but it is up to the government to make the investment (LN).

Ground transportation and airport access has never been a big issue for Dubai Airport and we are not involved in such development projects. The government of Dubai has taken a lot of measures to connect Dubai Airport with the other cities in the UAE to make the airport more accessible. One of the good examples is the 70 km long tunnel that the government is planning to construct to connect Dubai Airport with Al-Maktoum Airport to reduce the total transit time, mainly for cargo traffic (GA).

Discussion with interviewees in this regard has also shown that the geographical location of the airport and the small size of the UAE are reasons for not adopting such a strategy.

The UAE is a small country if you compare it with countries like the UK. Sharja, for example, is 10 minutes drive from Dubai, and Abu Dhabi is around 30 minutes (GA).

While market development is not seen as a major strategic need for DXB, the airport is involved in regional transportation development and planning. Respondent JR notes:

We are part of the integrated sort of Dubai vision plan, and in terms of service transportation we are working closely with the RTA (Rail Transport Authority). As we develop our master plans for this airport and future plans for Al-Maktoum Airport, we are having strategic sessions on how we are going to integrate the public transportation rail, metro rail and buses into both of these airports.

7.7 DEVELOPING NEW PRODUCTS FOR DXB

As discussed earlier in this chapter, DXB does show significant signs of product development. The airport has positioned itself, not only as a destination airport

serving Dubai and the surrounding regions, but also as a long-haul transfer point, connecting Europe and the Middle East to regions in the Far East. Involvements in product development include the specific development of the third terminal to service the Airbus A380 aircraft, and Dubai Cargo City and Cargo Mega Terminal which provide cargo processing services to freight air carriers.

It has also engaged in substantial product development in terms of passenger services that have allowed the airport to distinguish itself from other airports that also serve the same region. Examples include the extensive duty-free shops, Al Majlis facility, the Executive Flights Centre, the flower centre, export centre, the Dubai Care Team, special services for international arrivals and transit passenger, and other various levels of services at different costs. This indicates substantial involvement in product development strategy. However, this strategic move is related directly to other strategies that have already been discussed in more detail in this part of the research; namely the section on differentiation and market penetration.

7.8 DXB BUSINESS DIVERSIFICATION

Another strategy that is in use by firms in industries is diversification. As noted in chapter 2, diversification can include related diversification, which includes horizontal integration and vertical integration, and unrelated diversification.

7.8.1 INTEGRATING VERTICALLY

The airport is showing clear signs of related diversification in the form of hotel facilities. As highlighted earlier, there are hotels inside the terminal buildings, which are run by DXB. The need for hotels is specified by respondent LN, who indicates that with substantial numbers of passengers visiting DXB who are transiting, and many of them have to stay inside the airport terminal for a few hours or longer, so there is a strong demand within the airport for longer-term relaxation facilities for these passengers.

We have hotels within the airport, 60% of our passengers are transit and they are sitting there for up to 6 or 7 hours to be connected to another flight so they need somewhere to relax.

According to respondent GA:

We have three hotels one in each terminal with a combined capacity of approximately 1,000 beds.

While this can be considered as a development of forward vertical integration, it is more of a strategic movement intended to meet customer needs, and improve the quality of service rather than a significant attempt to gain more control of output. These hotels do not only serve as convenient accommodation for travellers and as an expansion of the services provided by DXB, they also provide a substantial amount of revenue along with other sources of revenues for DXB.

Although there is no forward vertical integration in place between DXB and local travel agencies, there is a formal integration between DXB and the Tourist Board of Dubai. As mentioned earlier when studying DXB's corporate culture, the airport integrates with a variety of other government bodies and agencies, which are also owned and operated by the government of Dubai. Respondents declare that DXB works closely with the Tourist Board of Dubai.

We work quite closely with the Tourist Board of Dubai. Their role is to market Dubai as destination through travel agencies and so on (LN).

The Tourist Board of Dubai is primarily responsible for the marketing of the country as a tourism destination, and, according to respondent LN, the majority of tourism arrivals to Dubai come through DXB. Thus, the airport benefits from the Tourism Board's involvement, even though it is not adopting forward vertical integration as one of its business strategies.

Dubai airport is the window to the city and around 97% of arrivals come through the airport. So, from the marketing perspective, if you market the country as a destination you would likely to market the airport. That is how it works (LN).

According to another interviewee, GA:

We have a very strong relation with Tourist Board of Dubai which is responsible for Dubai tourism marketing and we held regular meetings with them to discuss different issues.

Additionally, there are other elements of vertical integration under discussion.

According to respondent JR:

We have our marketing department looking at the market and route structures. Emirates has its own sort of travel and hotel products and because we are aligned to Emirates we do work together to come up with integrated marketing plans.

As discussed earlier in the previous chapter, there is clear evidence that DXB is adopting backward vertical integration with companies that provide services such as aircraft ground handling and catering services, as well as with aviation authorities and regulatory bodies. However, this is not considered as a strategy since backward vertical integration usually exists by nature at airports (Graham, 2004). Therefore, this is not a strategic method that needs to be explored in order to determine the strategic direction of DXB.

7.8.2 INTEGRATING HORIZONTALLY

DXB, which is under state ownership, has not made a substantial movement towards acquisition of other airports. Although DXB is closely involved in the development of the new Al-Maktoum Airport, this airport is not considered to be a move toward increasing market share or product development, but rather as a means of reducing pressure on DXB and expanding the current capacity. This is also not a significant part of the strategic development of the airport, and it is not seen by respondents as a major or potential strategic movement.

One of the respondents indicates that, rather than attempting to expand the airport's influence through horizontal integration, the focus is on delivering Al-Maktoum Airport.

We are not in that business at the moment... Dubai World Central is what we are focusing on delivering and that in itself is an accomplishment (LN).

Another respondent, JR, does not rule out the possibility of expansion into airport infrastructure outside their current market, but clearly indicates that DXB's strategic direction is not focusing on this area at the present.

Again this is not part of our airport strategy at this time. We are focused on the growth of Dubai. That is not to say that in the future Dubai will not be looking at partnering and investing in airport infrastructure and aviation outside the city of Dubai.

Respondent GA concurs with JR, indicating that managing and operating other airports is a potential future strategy but it is not in use in the strategic development at this time.

Well, we aim to become a large airport company that manages other airports worldwide. However, purchasing and acquiring other airports is not one of our business strategies.

Therefore, the airport is not showing any sign of adopting horizontal integration strategy in order to improve market access and expand market coverage.

7.8.3 DIVERSIFICATION IN UNRELATED AREAS

Horizontal integration is almost entirely unexplored in the DXB strategic management direction. However, there is a limited amount of forward vertical diversification, primarily focused on providing goods and services to the passenger base of the airport. The airport hotels are the major source of related diversification in ownership by DXB. These hotels are seen more as a convenience for travellers and as a means of differentiation and providing better quality of service to passengers, rather than a significant way of developing unrelated diversification strategy. As respondent JR indicates, the only three hotels owned by DXB are the three hotels within the airport concession area, and the airport does not own any other businesses:

With exception to the airside transit hotels which are the airport concession, on the land side we do not own or operate hotels. The airport company is focused within its property line.

Other than this involvement, there is no indication of unrelated diversification being used in the structure of DXB.

7.9 DXB'S STRATEGIC ALLIANCES

An alternative to the use of full diversification for gaining competitive advantages is the use of strategic alliances and cooperation with other firms, which can occur either horizontally or vertically.

7.9.1 HORIZONTAL STRATEGIC ALLIANCES

Although airlines use horizontal strategic alliances generously, as a means of gaining synergies and reducing buyer power, this is not a common strategy in the airport industry. As such, it is not expected that DXB's strategic views would focus intensively on the use of alliances and strategic ventures with other airport companies.

The respondents indicated that there was no current strategic alliance in use between DXB and other airports, and that there was no indication of a strategic need for this use. However, airspace management was considered to be a matter of operational concern and has had some attention from the respondents. One of the interviewees indicates:

We work very closely with all of the airport community. Obviously, because we are in an area that shares a lot of the airspace, airspaces are becoming tighter and tighter so from that end we do work together to make sure that our futures expansion does not clash. Strategic alliances, I wouldn't think so. The only alliances we have are Dubai airports which are managing two airports (LN).

Respondent JR felt similarly, stating:

Formally no, we have to work within the country of the UAE and with the other emirates to coordinate in particular airspace infrastructure and to make sure that all our goal plans are sort of aligned together. That has a knock on effect where we have to coordinate airspace infrastructure within the whole GCC region including Bahrain, Kuwait, Iran, Qatar and Saudi Arabia. But, in terms of strategic alliances we are not aligned with any other specific airport.

Respondent GA indicated that safety and security were common concerns of the airport community and so DXB routinely cooperated on the safety and security operations front, as it was required in order to successfully engage with the airport community.

We cooperate with other local airports to discuss certain concerns, for example, safety and security, but we are not strategically aligned to them. I think this type of alliance usually takes place between airline companies where they can share the benefits but not between airports.

While these statements further highlight the importance of the corporate culture of the airport as a major source of sustainable organisational capital, there is no indication that strategic alliances and more formal strategic cooperation between DXB and other airports is one of the strategies adopted in order to drive the strategic direction of the airport.

7.9.2 VERTICAL STRATEGIC ALLIANCES

A potential form of alliance for the airport would be a contractual or airport use agreement with airline companies. Unlike the horizontal alliance, there is significant use of vertical alliance at DXB, especially considering its position as the EK's home base. The strategic and tactical goals of DXB and EK are closely aligned, and the two companies are tightly integrated in terms of their operational management.

The most obvious one is we are strategically allied to our home based airline Emirates. Our goal is tight to their goal and it is very important for us to make sure that they are served as required. It is the flag carrier of Dubai and we have to retain this strategic alliance. We have very good relationships with other airlines as well but none of them is specifically strategically allied to us (LN).

EK and budget carrier Fly Dubai are the only airlines with which DXB is vertically aligned, although it maintains positive working relationships with other airlines that pass through the airport as well. Respondent JR indicates:

Well, we have conditions of use agreements for facilities for all the signatory airlines here. I would say the special relationship is with our home carriers Emirates and Fly Dubai. However, with that said, we have to balance with other carriers and their needs, and we try to manage fairly with all the airlines here.

This shows that the airport intends to deal fairly with all carriers that come into the airport, rather than cultivating special relationships with given carriers. The following statements also emphasise the importance of keeping good relations with all airline customers:

Our priority is to keep our airline customers satisfied and to do this our doors are always open to them and we held a monthly meeting to listen to them and try to solve any problems they may have (GA).

Our strategy and airline marketing department work quite closely with other airlines to make sure we are offering them what they want. You know, it is always good to keep your customers happy. So it is an ongoing relationship we have with all our airline customers (LN).

The special relationship between DXB and EK is a matter of special concern for the respondents, and is considered to be a key element in the strategic operation of the airport. Respondent LN indicated that EK was “*embedded*” in the operation of DXB.

The airport has Emirates embedded in it. It is a big part of Dubai Airport that cannot be ignored.

Whereas JR indicates:

I do not think that Dubai Airport would exist without Emirates. I think without Emirates you and I would not be here talking. I mean if you think about it,

98% of people who come to Dubai have to fly here so it is an interrelationship between the carrier and the airport. They are hand in hand.

The overall feeling regarding this particular vertical alliance is that it is a vital factor to the operational performance of the airport. Furthermore, the EK expansion is seen as one of the key elements in the expansion of DXB. The third terminal expansion, which is the terminal designed for the EK's Airbus A380 fleet, is seen as evidence that the two companies are highly allied.

As Emirates expand we expand. Emirates expansion is partly linked to our expansion. Now we are building the third terminal which will be catering for the A380 and it is purely for Emirates and we have to make sure it is delivered to their requirements (LN).

Respondent JR provides more details regarding the nature and scope of the alliances between DXB and EK and Fly Dubai. He indicates that a large amount of traffic results from EK and Fly Dubai traffic, and as such fleet acquisition plans are carefully coordinated with these airlines:

We work very closely with Emirates and Fly Dubai under fleet acquisition plans. Since around 70 percent of our traffic comes from those two carriers, we have non-disclosure agreements in place so their business plans and confidential information are transmitted to us. So we coordinate our forecasts and projections with their business plans (JR).

GA indicates that traffic and future development projects are based on a combination of forecasts from these airlines as well as IATA forecasts.

Yes, our traffic forecasts and future development projects are based on our airlines' forecasts as well as IATA's. We take into consideration our

customers' needs to make sure that the right investment is taking place in the right time.

This is intended to ensure that the strategic operation of the airport is aligned with the needs and patterns of the airline customers. JR indicates, furthermore, that EK's fleets had different projections in terms of changes resulting from the economic downturn:

Emirates' fleet acquisition plans slightly differed to respond to the economic downturn. So, we had to adjust our forecasts accordingly. Similarly, as best as we can, we coordinate with the other airlines and we have expertise looking at the market to understand what the forecast of growth may be on high side and low side.

These projections are used to develop the airport's operations in order to adjust offers for the needs of travellers, as well as to adjust to different patterns of travel and different traveller volumes. Thus, there is substantial involvement and information sharing between these two firms, as well as joint management ventures. However, this does not only involve the development of the airport services.

7.10 SUMMARY

This chapter has explored three different areas of strategic development with regard to DXB. First, the competitive strategies described the general strategy used to set the company aside from its competitors. The main generic strategy that is used by DXB is differentiation, although there is some involvement of cost management in the firm's strategy. The second area of strategy that was considered was growth strategies. The main growth strategy in use was the market penetration strategy, in which DXB attempted to maximise revenues from existing products and existing markets. Lowering airport charges, which is one of the means of gaining advantages using the market penetration strategy, was not used by DXB. Instead, DXB's strategy focused on the use of improvement of service quality (both to airlines and their passengers) and

improvement of infrastructure, as well as airport marketing. However, this is focused primarily on the airlines, rather than on the passengers themselves. As indicated by respondents, the airlines are the main determinant and the main drivers of business. The market development strategy is not widely used in terms of local development. DXB also has used product development extensively. This has mostly focused on the development of business services, expansion at Al-Maktoum Airport, and development of services explicitly for the use of its in-transit passenger loads, as well as the development of services for passengers at all levels. Diversification was not widely used in DXB's strategic structure. The only limited evidence of diversification was the integration with the local tourism authority and the diversification of the airport business in the form of in-terminal hotels. However, the latter is more intended as a means of providing services to transit passengers, rather than as a means of expanding DXB's customer base or expanding into an unrelated area. The third part of strategy development was the strategic alliance with other firms. The only significant strategic alliances that DXB has are with its two home airlines: EK and Fly Dubai. These vertical alliances include information sharing, as well as significant cooperative infrastructure development.

CHAPTER 8 DXB'S COMPETITIVE STRENGTHS AND SUCCESS FACTORS

8.1 INTRODUCTION

In the previous chapters, the external and internal environmental analysis and the interviews that examined the strategic direction of the airport have together provided considerable background information regarding DXB's level of competitiveness. However, what has not yet been made explicit is which of these external and internal factors and resources can be truly considered as key success factors. Therefore, this chapter addresses the competitive strengths that are found in DXB's business environment and its resources, and attempts to relate these findings to the literature review. It also highlights which of DXB's competitive strengths can be considered as long-lasting and sustainable. This assists the researcher to develop a best practice conceptual model that can help airport management analyse and realise their key competitive strengths.

8.2 THE FOUR CORE AREAS OF COMPETITIVENESS

From the analysis of the case of DXB, it seems that the competitive strengths of the airport are driven from factors related to four core areas: the General Condition (the external macro-environment), the Competitive Situation (the external micro-environment), the Resource Acquisition (the internal environment) and the Strategic Direction. These four core areas are discussed below in order to demonstrate how they have led DXB to possess competitive strengths over other rivals.

8.2.1 THE GENERAL CONDITION

As mentioned earlier, the general condition of the airport is related to factors in the general environment. The macro-environment of the UAE was studied in chapter 4 of

this research. The success factors of DXB that are found in this area can be summarised in the following points:

- **Very politically stable country:** While instability in the Middle East is seen as an issue, the close diplomatic ties between the UAE and western countries, as well as with other Islamic and Middle Eastern governments, have placed the country in an ideal position to benefit from a highly politically stable environment. DXB is in a firm position to benefit from this settled political condition in the UAE, and hence this is considered as a strength that DXB holds over other airports in the region. This is consistent with the review of the literature that shows the significance of government stability for the aviation industry (Freathy, 2004, Tretheway & Kincaid 2005, Flouris and Oswald 2006).
- **Large support from the government:** The government of the UAE, as the owner of the airport, has an important role in influencing the growth of DXB. It is a large promoter of the airport through its encouragement and financing its infrastructure development and through enhancing the level of service provided, as well as making sure it is competitive. This strong support is expected to have had a great impact on the development and continued growth of DXB. This concurs with the view of the literature which shows that governments in general seek to develop airports in order to improve their infrastructure and to support regional development (Jarach, 2005), as well as to become more significant in the region (Kraus and Koch, 2006).
- **Free trade policies and business incentives:** The number of established FTZs, the regulations of foreign ownership of businesses and properties, the complete freedom of capital movement and the tax-free policies, which have been set to make the UAE and Dubai more attractive to companies and investors, have been highly effective in encouraging international businesses to the country. This concurs with previous studies (e.g. Tretheway & Kincaid, 2005) which indicate that the development of FTZs has a great influence on generating commercial and business activities within the region.

These political and economical factors are seen as a strength that has a great influence on the growth level of DXB.

- **High level of economic and regional growth:** The analysis in chapter 4 has shown that the UAE has grown rapidly in the past several years indicating an overall strong economic growth. The UAE's economic growth level has attracted foreign businesses which drives the development of the aviation industry. Due to its strong involvement in tourism and freight air services, DXB's growth is related directly to the economic growth in the region. Therefore, this economic factor is regarded as an influential factor of growth for DXB, thus a strength that the airport holds. This echoes the findings of other researchers (Park 2003, Williams 2006, Lin and Hong 2006) who stress the strong relation between regional business developments and the growth level of an airport company.

- **High air travel demand:** The overall economic wealth of people living in the UAE, and the hiring of foreign workers and expertise for highly skilled jobs with high salaries demonstrates that individuals have high income available to spend on holidays and luxurious lifestyles. Since the UAE is a multi-cultural society, there are some benefits related to the aviation industry generated from this social factor. The existence of this mixture of people means that more people are travelling in and out of the country more often to visit families and friends. The analysis of the UAE's economic factor has shown that there is a high air traffic demand driven from leisure and business travel. In addition, there is a high demand generated from the strategic location of Dubai as a transfer hub. Therefore, this socio-economic factor can be considered as a key driver for growth in the case of DXB. This concurs with Park (2003) who argues that air travel demand is an important source of competitive strength for an airport.

- **Less environmental constraints:** While the operation of an airport is usually affected by environmental and health concerns (Upham, 2003) that may limit its ability to operate effectively and to expand physically to accommodate traffic growth, this is not the case for DXB. There are different measures that have been undertaken by DXB

to minimise environmental concerns and to improve the quality of life for residents around the airport. Therefore, DXB is not subject to any restraints that could impact on its growth and expansion. This is demonstrated by the massive infrastructure development that the airport has witnessed over the past few years and by the current development of Al-Maktoum Airport. In this sense, DXB is in a strong position to benefit from less environmental pressure in comparison to other competitor airports that are unable to grow physically in order to cope with increase in traffic demand.

- **Absence of legal restrictions and pricing rules:** While airports are usually subjected to anti-trust laws and restrictions that might limit their operation and profitability, DXB is not subject to any regulations and restrictions. The state-ownership of the airport and the joint management of DXB and DCAA (both are led by Sheikh Ahmed Al Maktoum) mean that it is unlikely that DXB would practice any monopolistic actions that need to be continuously monitored and controlled. The absence of these pricing rules allows the airport to adjust prices and revenue structure more freely as it suits its business. In addition, the airport is allowed to operate 24 hours a day, which permits better flight schedules and connectivity. Therefore, this is regarded as a competitive strength that DXB possesses over other rivals who might have less control over their operation and revenue structure.

8.2.2 THE COMPETITIVE SITUATION

The analysis of the external micro-environment in chapter 5 has related the competitive position of DXB to five core forces that determine the intensity of competition. While the combined intensity of these five forces is regarded as relatively low, each of these areas holds a competitive strength for DXB, as pointed out below.

- **Small number of strong competitors:** Although DXB is seen as a competitor to some major international airports mainly in East Asia and Europe, it overlaps with only two airports in its catchment area, namely Doha and Abu Dhabi. This is not usually the case at the other competitor airports, which are operating in highly competitive regions.

For example, an airport like Singapore overlaps in its catchment area with many competitor airports in the region of Northeast and Southeast Asia (Park 2003, ACI 2006). This means that Singapore Airport is likely to be under more competitive pressure within its region than DXB. It is also the case for major hubs in Europe where there is a huge overlap in their catchment areas (Barrett 2000). The presence of a large number of airports within a region means that they are likely to compete on prices, which can impact on their business profitability (Doganis, 1992). Operating in a less competitive region is an advantage in itself as DXB's ability to grow and profit is likely to be higher than other competitor airports.

- **High level of entry barriers:** Since the state-ownership of airports can be seen as a major entry barrier (Williams 2006), this is likely to limit the number of airports and the level of competition within a region. The involvement of the UAE's government in the airport business makes it difficult for new airports to enter the market and compete with DXB. While this is the case at DXB and the other government owned airports in the region, it is not usually the case at other regions where countries encourage private airport development. For example, in some European countries there is more freedom of airport market competition (Delfmann et al., 2005), which may indicate a higher potential risk from new entrants. If DXB is competing with one of those European airports that have a higher risk of potential rivals, DXB has an advantage over that airport. Therefore, the higher the entry barriers the more the existing airports benefit from less competitive pressure.

- **Inter-modality of transport facilities:** While studies (e.g. Dennis 2001, Pitt and Brown 2001, Williams 2006, Cream 2009) have shown that airports, mainly regional, can be substituted with other means of transportation, the analysis in this research indicates that DXB is hardly affected by roads, rails and seaports. In addition, this area presents the potential for a competitive strength for DXB. The integration of an airport with other transport modes can enhance the operational performance of the airport through expanding the airport's catchment area and providing better surface access (Graham 2004, Freathy 2004, Cream 2009). DXB works with government organisations

to plan for transport construction projects in order to make the airport more integrated into the regional transport network. This inter-modality of transport facilities does not only enhance the accessibility of the airports to passengers and goods, but is also regarded as providing better service quality for passengers. Therefore, this can be regarded as a competitive strength that DXB holds.

- **Alignments with powerful buyers:** The discussion in the previous chapter has shown that the strategic alliances between DXB and its home based airlines are likely to reduce the market power of these powerful buyers. This is also influenced by the government ownership and joint management of DXB and EK. These very tight relationships between DXB and its customers do not only reduce the bargaining power of strong buyers but also provide a competitive strength for the airport over other competitors who may be under the influence of powerful customers. Powerful airlines may force an airport to lower its prices and limit its profitability (Brueckner 2002, Oum et al. 2008).

- **Integration with supplier companies:** While the bargaining power of suppliers in the case of DXB is found to be relatively low, the integration between the airport and its supplier companies can be considered as a success factor. Major providers including DNATA and Emirates Catering are owned and operated by the Emirates Group which is also managed by the chairman of DXB. Other suppliers including immigration services, customs services, and the airport police are also run by the government of Dubai which also owns the airports. The integration and cooperative relations between these bodies means that DXB has a competitive strength over other rivals who may have less control over their supplier companies.

8.2.3 THE RESOURCE ACQUISITION

The competitive strengths that are driven from DXB's resources have been explored in chapter 6 of this research. The analysis of the internal environment has shown that there are some factors that led DXB to gain its competitive strengths including:

- **Financial support from the government:** Although it was difficult to quantify the level of financial resources available, the state-owned nature of DXB means that the airport has access to substantial support from development funds in the UAE and benefits indirectly from other development funds in the transport sector. The involvement of government has also reduced its marketing costs, as the Tourism Board of Dubai and other development agencies take on the burden of financial development for the airport itself. Therefore, government subsidy is considered as a substantial financial advantage for DXB. This is consistent with previous research (e.g. Doganis 1992, De Neufville and Odoni, 2003) which indicates that state-owned airports have access to substantial state financial resources. It is also in agreement with Park (2003) who asserts that the form of ownership can be a source of competitive strength for airports.

- **High level of internally generated profits:** Despite the fact that financial figures were not obtained, which makes it difficult to determine the precise level of profitability, primary and secondary data have shown that revenues from non-aeronautical activities form a substantial source of income for DXB. These financial gains are generated mainly from duty-free shops, hotels and other concession activities at DXB. Revenues from these sources can be regarded as a source of financial advantage for DXB. This is consistent with the literature that indicates the importance of non-aeronautical revenue for the airport business (Doganis 1992, Graham 2003, Neufville and Odoni 2003, Oum et al. 2004, Cream 2009) and as a source of competitive strength for airports (Park, 2003).

- **The strategic geographical location of the airport:** As discussed earlier, the location of DXB can be considered as valuable, rare, non-substitutable, and inimitable. The significance of DXB's geographical location as a long-haul transfer hub can be regarded as a crucial source of competitive advantage. This is in agreement with previous research (e.g. Park 2003, Gardiner 2005, Lin and Hong 2006, Kraus and Koch 2006) that illustrates the significance of an airport location for its growth.

- **The property, plant and equipment available at the airport:** Physical resources at DXB that can be considered as sources of competitive advantages may include the advanced flight management system, the cargo mega terminal, and the terminal hotels, and the other facilities that help process aircraft and passengers and relate directly to the operational capability of the airport. This is in agreement with other researchers (e.g. Park 2003, Tretheway & Kincaid 2005) who argue that the facilities provided by an airport represent elements of competitive strengths. There are also other facilities and equipment that provide safe and secure operation at DXB. However, it is difficult to consider all of these physical resources as being main sources of competitive strengths.

- **The airport's ability to expand physically:** While the limited availability of land could limit an airport's potential to expand in order to accommodate more traffic (Cream, 2009), this is not the case for DXB which has witnessed a dramatic expansion in its infrastructure over the years. Therefore, the ability of DXB to expand physically can be identified as an essential source of strength. This competitive strength allows DXB to act more flexibly to growth in demand level and to adopt new types of aviation related activities. This concurs with Park (2003) who suggests that an airport's ability to expand in order to handle more traffic is an important element of competitive strength.

- **The number of destinations and flight connectivity:** The wide range of destinations that the airport serves, the frequency of service available, the low connection times between international flights and the speed at which passengers can be processed at the terminal building are all central issues in DXB's operation and scheduling. These operational areas are related to the airport products which have been designed to handle a large number of aircraft and to allow for a higher process of passengers and aircraft at a minimum connection time between flights. These are also related to other operational advantages including the 24 hour operation policy at the airport. These operational capabilities are considered as significant sources of competitive strengths in the case of DXB. This is consistent with earlier studies (e.g.

Barrett 2000, Park 2003, Graham 2003, Hess and Polak 2005, Papatheodorou 2006) that highlight the significance of these elements for the success of airports.

- **Influential leadership and decision makers:** The chairman of DXB, who is very experienced in the aviation sector and has a fundamental role in the country's air transport industry, as well as his position as a member of the royal family, provides a substantial competitive strength to the airport. This human resource advantage is also apparent in the role of the CEO, who brings international experience to the airport. The chairman and the CEO present a valuable and rare set of experiences and skills that play an important part in the overall performance of DXB indicating that the human capital represented by these two influential leaders is a strong competitive advantage available to the airport. Studies (e.g. Barney, 1997) assume that general managers and organisational leaders can have a great and direct impact on firms' internal performance. Other studies (e.g. Park 2003) in the area of aviation also indicate that managerial factors can be a source of competitive strength for airports.

- **Highly skilled and experienced employees:** The experience and knowledge of employees at DXB can also be considered as a major human resource advantage. This is because the airport is targeting highly qualified people from different nationalities (as part of the UAE's scheme of targeting international skills) and provides them with the training required to keep them up-to-date with new developments, which is likely to reflect positively on the overall performance of the airport. The effectiveness of employees can be considered as another essential source of competitive strength in the human capital category. This is consistent with the literature that demonstrates the importance of human resources for the success of a firm (Barney 1997, Grant 2008).

- **High degree of cooperation between departments:** The cooperation and coordination between different departments within the airport is an organisational resource that led DXB to gain a strength. This has been achieved through adopting an open door policy and conducting regular meetings that enhance teamwork and allow for more discussion and understanding between staff members in the department as well as

with other departments. Other ways of exchanging information within the organisation such as the use of internet and printed publications are also employed. This is in accordance with the views of researchers (e.g. Park 2003, De Neufville and Odoni 2003, Wells and Young 2004) who believe that the form of organisational structure is crucial for the airport.

- **High degree of collaboration with other organisations:** The collaboration between DXB and the other organisations in the environment (such as that with DCAA, Emirates Group, the FTZ, local transport authority, etc) is believed to be a key factor that led the airport to preserve its competitive position in the region for many years. The integration between DXB and the main aviation players is regarded as unique and very difficult to imitate, even by large airports. Therefore, the corporate culture of DXB is seen as a sustainable competitive advantage that the airport possesses. This concurs with the view of Jarach (2005) who argues that the integration between an airport and other actors involved in the value chain leads the airport to obtain a competitive advantage. This is also consistent with the strategic management literature that emphasises the importance of establishing good relations with other firms in the environment (Barney 1997).

8.2.4 THE STRATEGIC DIRECTION

As noted earlier, there are different strategies that firms can use to compete in the market. Chapter 7 explored the strategies that have been adopted by DXB in order to gain a stronger market position. This part of the research goes over the key points in order to illustrate how those schemes have led DXB to gain its competitive strengths.

- **Lower airport charges:** Although the use of cost leadership strategy is limited by airports, aeronautical charges at DXB are found to be relatively low. There are some signs that DXB is limiting its running costs including reducing electricity and staff hiring costs. Lower airport charges levied on airlines can influence their decision to use an airport (Graham 2003, Gardiner 2005, Tretheway & Kincaid 2005). The achievement

of lower overall costs compared to other competitors leads DXB to possess a competitive strength. This is consistent with other studies (e.g. Cream, 2009) which indicate that providing the lowest prices possible to airline customers leads airports to gain a competitive advantage.

- **Differentiated services and facilities:** DXB is showing clear signs of adopting differentiation as a business strategy. An example is the development of terminal buildings to serve the A380. Providing such different and unique airport facilities is giving DXB a first-mover advantage, and hence the airport has a competitive strength over other competitor airports. This echoes the view of Jarach (2001) and Graham (2004) who believe that product differentiation leads airports to achieve a competitive position in the market.

- **High quality of services provided:** Improving quality of service and passenger experience is a key focus of attention for DXB's management. The airport offers facilities and services based on passengers' requirements, as well as their experience and familiarity of the airport terminal. Better service quality is also driven from the differentiated and unique airport products that are aimed to target and serve the needs of special travellers. This valuable resource holds a strong competitive strength for DXB. This is consistent with Park (2003) who believes that the level of services provided to passengers can be a source of competitive strength.

- **Good reputation and brand name:** Although the main area of advertising for DXB is focusing on airlines rather than passengers, the airport benefits from other marketing activities which target passengers, including those from duty-free shops and airlines loyalty programmes. The good reputation of DXB is also likely to be driven from its safe and secure operations, as well as the wide range of high quality products and services offered to travellers while in the airport. This concurs with Jarach (2005) who regards an airport brand name and worldwide reputation as a crucial source of competitive advantage.

- **Developed new and innovative products:** DXB does show considerable signs of product development in terms of long-haul, cargo and passenger services which have allowed the airport to gain competitive strengths over other airports in the region. Examples are the introduction of in-terminal showering facilities, the Cargo Mega Terminal and the Flower Centre. This is in agreement with Graham (2004) and Auerbach & Koch (2007) who emphasise the importance of product development as a key in maintaining a competitive position.

- **Integrated vertically with tourism authority:** DXB is pursuing a forward vertical integration with the Tourist Board of Dubai as both organisations are owned by the governments. This sort of forward integration allows the airport to benefit from the marketing schemes undertaken by the Tourist Board of Dubai to promote Dubai as a leisure destination. Working closely with such an authority will help the airport to attract more air travellers. This concurs with the view of Cream (2009) who argues that airports need to establish partnerships with local travel agencies in order to market themselves to leisure passengers.

- **Diversified in related businesses:** The strategy of diversification has the potential for a competitive strength in the case of DXB. Although specific financial data was not obtained for the research in this regard, as more than 60% of travellers handled by the airport are transit and with the capability of accommodating up to 1,000 passengers, the terminal hotels are likely to be a substantial source of internal revenues for the airport. In addition, this diversification can be regarded as a way of improving the service quality for airport users. Therefore, this limited development of related business diversification can be considered as a source of competitive strength for DXB. This agrees with the view of Barney (1997) who argues that business diversifications in related areas can be valuable for firms.

- **Allied vertically with airlines:** The strategic alliances and cooperation between DXB and its airline customers do not only guarantee lower bargaining power of buyers, but also mean that investments are put in place according to airlines' traffic forecasts

and projections. This indicates that the vertical alliances and cooperation between DXB and its airline users are fundamental factors in the operational performance of the airport. In fact, it is the establishment of such alliances that are regarded as one of the main factors that have led DXB to gain a sustainable competitive advantage. This is consistent with the literature that stresses the effectiveness of vertical strategic alliances for airports (Freathy 2004, Albers et al. 2005, Jarach 2005, Delfmann et al. 2005, Auerbach and Koch, 2007, Cream 2009).

8.3 CHALLENGES TO DXB'S SUCCESS FACTORS

Competitive strengths must be considered in terms of their sustainability as well as the current strengths offered. Therefore, this part of the research attempts to develop some scenarios in order to identify which of DXB' competitive strengths can be challenged and which can be regarded as sustainable.

While the government ownership of the airport and the amount of funds available for airport development projects are seen as a substantial financial strength at this time, this may change in the future if the government decides to reduce its financial support or to privatise the airport company. Any radical change in the financial situation of the airport may limit the ability of the airport to spend on new and innovative facilities and to expand its infrastructure, which may in turn reduce the level of services provided to airlines and their passengers. Therefore, although current strengths such as the financial resources available, the condition of facilities provided, the ability to expand physically and the level of services offered, are seen as valuable (and some are rare physical resources), they are not very sustainable in the long-term. This is dependent of course on how long the government is willing to support the airport and, if privatised, how new owners would react to financial matters. Privatising DXB will also mean that regulatory bodies have to put down some sort of environmental and legal controls to ensure that the new operators comply with international and national standards, and do not practice any monopolistic power. This means that while the current absence of constraints and restrictions is seen as a success factor, this may change in the future.

While the strategic geographical location of the airport is seen as a sustainable competitive strength in the short-term, the development of long-haul aircraft that are able to overcome long distances is likely to endanger this strength in the long-term. As longer distances between connection points are enabled by developing technologies in aircraft design, the role that hub-and-spoke airports plays now is likely to be narrowed in the future. Although recent aircraft technology has given some airports a major source of competitive advantage (Williams, 2006), future technological improvements may imperil the strengths of some major hubs in favour of other point-to-point airports. This means that the important role that DXB plays now as a connection point between the east and west is likely to be limited with advanced aircraft development. This also means that other operational strengths at DXB, including the wide range of destinations available and the short connectivity between flights, are likely to be affected by such improvements. Therefore, while the location of DXB can be considered as a sustainable strength in the short-term, it will be less sustainable in the long-term if new long-haul aircraft are introduced and utilised by a large number of airlines.

The differentiation in DXB's products is likely to be relatively sustained in the short term. DXB has a first-mover advantage in developing different products such as the A380 terminal building. However, this does not mean that differentiated products can be sustained for a very long time. Those different and unique products will not be regarded as an advantage over the long-term when other airports follow the footsteps of DXB and introduce more advanced facilities. This also applies to other valuable and rare products and services that are currently possessed by the airport such as the advanced Air Traffic Navigation System. In order for DXB to be ahead of competition, it has to continuously develop and introduce new products to satisfy the change in airlines and passengers' requirements. The ability of DXB to introduce unique and different products is limited to the availability of financial resources, as well as the degree of legal and environmental concerns. This also depends on how follower airports act strategically in relation to DXB's competitive moves in the future. Therefore, the differentiation advantage is time-limited, although the time horizon may be somewhat long.

The human capital resources enjoyed by DXB may also be unsustainable in the very long term. The CEO may leave the organisation (although there is no indication that this will occur in the near future), as his career has involved steady movement from one position to another. Although it is less likely that the chairman would leave DXB as such, it is possible that he may choose to retire or change his position in the future, and he will eventually die. Both the chairman and CEO have been a driving force for DXB and have a great influence on the collaboration of the organisation. Any drastic change in DXB's management and organisational structure may alter the efficiency of employees and the firm's culture of cooperation, which in turn will impact on the airport's capabilities.

There is another limited, although currently very strong, source of sustainable competitive advantage, which is driven from the airport's ownership, management and its organisational capital. The tight integration and cooperation with other government organisations and regional services in the environment such those with DCAA, Emirates Group, the Tourism Board of Dubai, Free-trade zones, local transport authorities, and other government agencies, offers DXB a major source of sustainable competitive advantage. The scope and extensive nature of these cooperative relationships is relatively rare, even for major hubs. This integration does not only reduce the bargaining power of supplier companies (e.g. Emirates Group), but it also enhances the inter-modality of transport services (integration with transport authorities), the airport's ability to expand (the integration with Dubai city and DCAA), its quality of services (e.g. the wide range of shopping facilities and better ground access) and its brand name (the integration with the Tourism Board of Dubai). However, while this integration advantage can be considered as sustainable at this time, any change in the form of ownership or management is likely to impact on these organisational and cultural resources of DXB. This means that this competitive strength can be eroded in the long-term, and hence it is somewhat less sustainable.

The strategic vertical alliance between DXB and EK is a crucial source of sustainable competitive advantage. In fact, this factor can be considered as the most sustainable strength in the case of DXB. The strategic alliances between DXB and its home based airline means that the airport development projects are taking place according to future business plans and other confidential data shared between the allied companies. Using the market information shared with its main customer, the airport is also involved in air service and route developments which can be of benefit for both partners. The positive and beneficial working relationships are likely to be sustainable in the long-term, mainly due to the reliance of both partners on each other regarding their operation. This means that EK will not be able to find another place to serve its needs better than DXB does. This is also evidenced by the view of EK's management. The sustainability of such alliances is likely to sustain DXB's brand and reputation, both of which are mainly driven from EK's marketing and loyalty schemes. While it is argued that the development of new aircraft may alter the role of hub-and-spoke airports in favour of point-to-point operation, the strategic alliances between DXB and its home based airlines (giving the large fleet of EK) will always ensure that there is traffic passing through the airport. In addition, strategic alliances can create financial resources for DXB. In the case that the airport is unable to finance future expansion, the airline partners can contribute financially to airport development projects. For example, EK may choose to buy its terminal building at DXB. This demonstrates that the strategic alliances between the airport and its airlines are the strongest source of sustainable competitive advantage in the case of DXB. However, while this strategic strength is regarded as sustainable for DXB, the level of sustainability is largely dependent on EK's business growth and future success, as well as its future form of management and ownership if the government decides to privatise it as well. So far, the airline has shown great performance in terms of growth which means that it is less likely to fall easily.

The majority of the success factors related to DXB's general condition including political stability, strong government support, regional business encouragements, economic growth, and regional travel demand, are likely to be relatively sustainable currently, unless the UAE undergoes considerable political, economic or social changes.

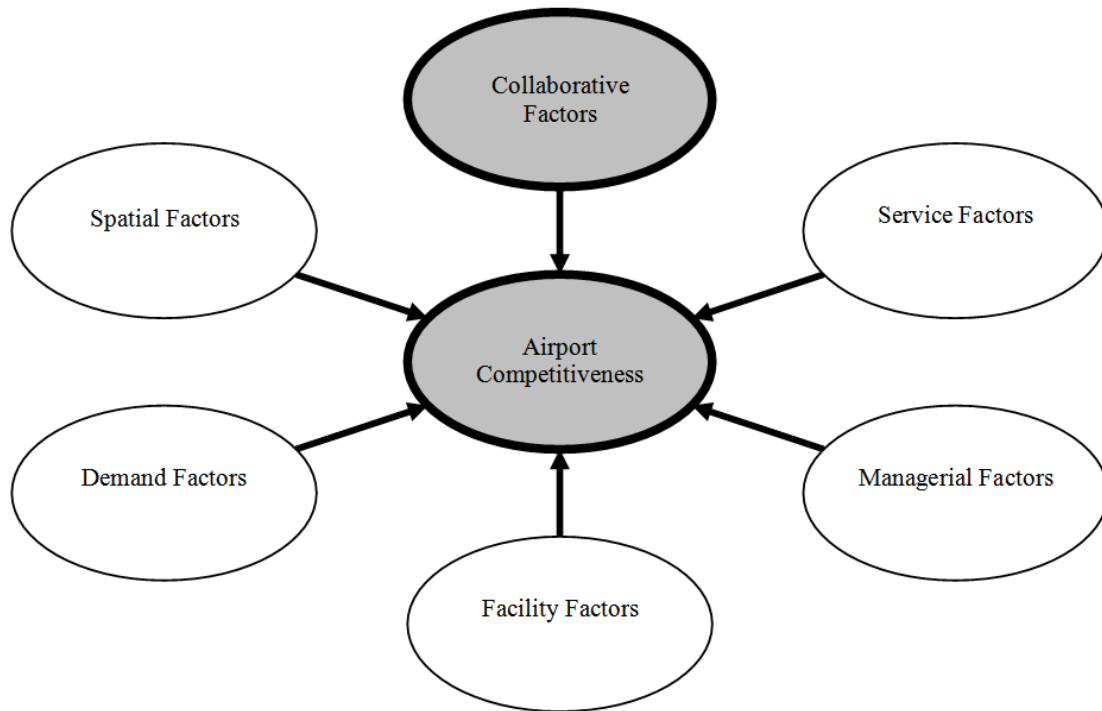
While political instability in the Middle East can be regarded as the most significant threat to the growth of DXB, political crises and conflicts in the past decade have had no impact on the aviation system in the region. There is another threat driven from the potential downturn in air traffic demand, which is a result of the global financial crisis. This may affect the growth of the airport market in the Middle East, thus decreasing demand and revenues at DXB. Given that the country is currently economically and politically stable, and given that there is a high level of demand for business and tourism travel, this is not considered to be a high risk. As noted earlier, the sustainability of the other strengths in the general environment including the current low degree of environmental constraints and legal restrictions is largely dependent on the form of ownership and the level of measures to be taken in the future to reduce health and social concerns.

8.4 THE AIRPORT COMPETITIVENESS MODEL

The analysis of competitive strengths in the case of DXB in this chapter provides substantial evidence for how airports in general can realise and appreciate their level of competitiveness. However, some findings are inconsistent with the academic literature. While Park (2003) emphasises the need of airport management to identify and understand their source of competitive strengths, his model ignores the importance of factors that may affect the level of competitiveness including vertical strategic alliances, cooperation and integration between the airport and main actors in the value chain. This research asserts the importance of such factors which have been major sources of competitive strengths for DXB. These sorts of cooperation and integration have proven to be beneficial in providing sustainable competitive advantages for airport companies including DXB. Therefore, this research includes collaborative factors as a further complication to the other five core factors of competitive strengths identified by Park, as demonstrated in figure 8.1. Adding such factors could make the model more functional as it allows airport managers to recognise the benefits and advantages they can derive from collaborating with other firms in the environment. Collaborative factors may include the level of cooperation and integration between the airport and its buyers,

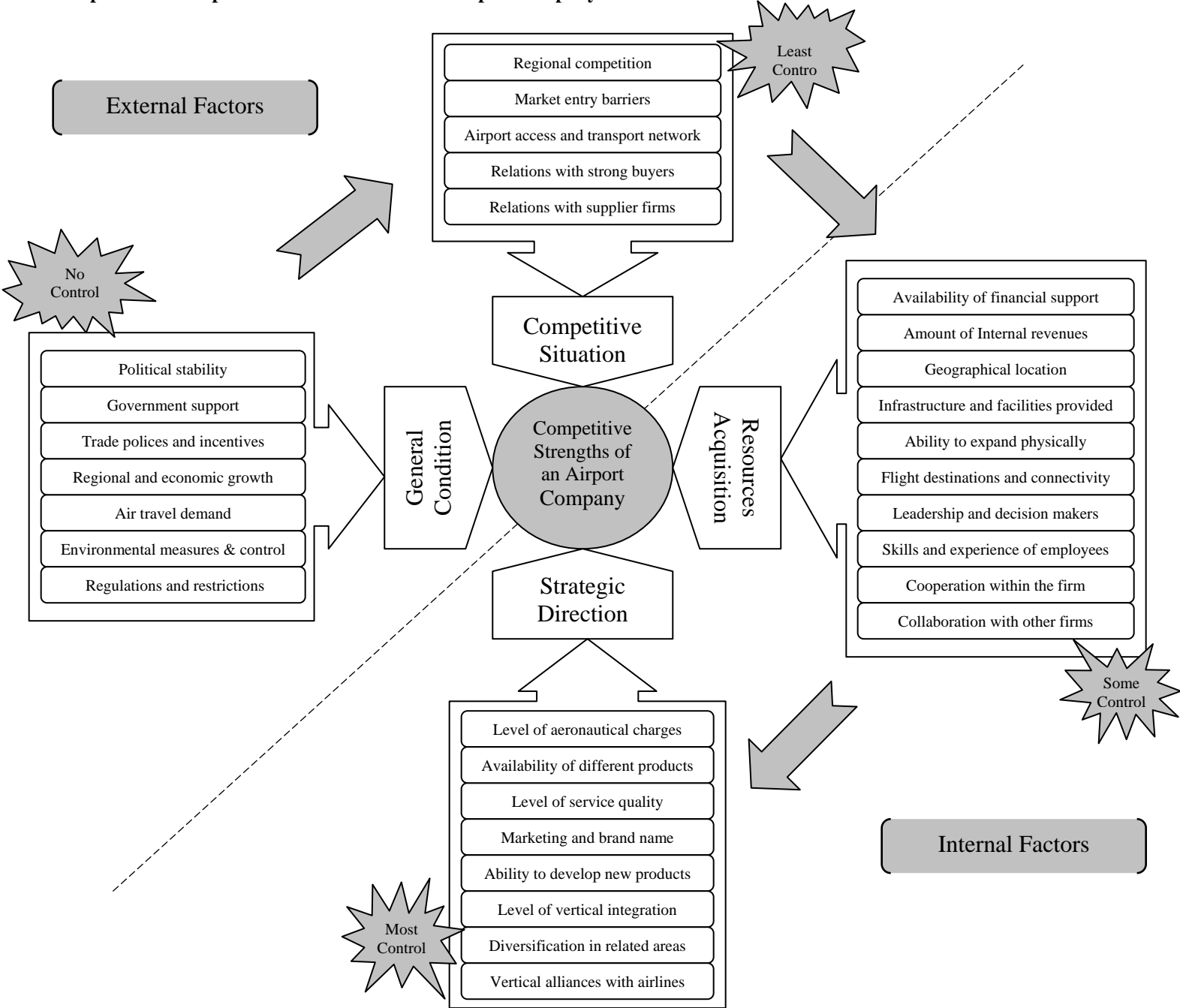
suppliers, regulatory authorities, other actors in the aviation industry (e.g. airport handling and catering companies) and other organisations in the environment (e.g. travel and tour operators and transport network).

Figure 8.1: An addition to Park's airport competitiveness model



The analysis of the competitive strengths of DXB in this chapter permits the author to design a more detailed model that can help airport managers analyse and gain more understanding of their key sources of strengths. Figure 8.2 illustrates a best practice conceptual model for a competitive airport company. As noted earlier, this research argues that the competitive strengths of an airport company are derived from a combination of factors in four core areas: the general condition, the competitive situation, the resource acquisition and the strategic direction. The companied intensity of these success factors determines the level of competitiveness and the competitive strengths of an airport company.

Figure 8.2: A best practice conceptual model for a successful airport company



The model shows that in order to recognise their sources of competitive strengths, managers should look at factors related to their airports' external and internal environment. The dotted line in the figure separates the external and internal factors. The external strengths include two areas, the general condition and the competitive situation, whereas the internal strengths include the resource acquisition and the strategic direction. Managers should first look at the area that is out of their power and then move clockwise to analyse the factors that they have 'least', 'some' and 'most' control over. This process will allow airport managers to fully realise their key sources of strengths. The model will also help managers consider ways to improve their competitive level.

The general condition is the area where airport management in general have no power. These include: the level of their countries' political stability; government support; local business encouragements; regional economic growth; travel demand; environmental constraints; and legal restrictions. Competitive strengths driven from this area is important for the success of an airport company, as factors in this area determine the degree of their business sustainability. However, since factors in this area are out of their control, airports are unable to improve their competitive strengths in this regard. What they can do is to carefully monitor and predict any changes in the general condition that could have an impact on their business performance.

Airports benefiting from less environmental constraints and lower degrees of legal restrictions should always try to sustain these strengths by taking the necessary environmental measures to reduce impacts and increase the social benefits. In addition, they should avoid misusing their market power and treating customers unlawfully. This way the airport management can make sure that no further constraints and restrictions are imposed on them in the future, and hence they can sustain these competitive strengths.

Managers should also look at another external area that drives success: that is, their current competitive situation. Factors in this area include their level of regional

competition, entry barriers, inter-modality of the transport network and relations with buyers and suppliers. Airports have the least control over these factors. Airports have limited control in this area as they can only work with their buyers and suppliers closely in order to minimise the bargaining power of these companies. However, the levels of their buyers and suppliers' power are usually difficult to determine and control, unless they have some sort of integration or alliances with these organisations. In this area, airports cannot control the number of competitors in the market and the degree of competition, which is often determined by their local governments. In addition, airports do not have control over other means of transport unless they are involved in market development which is, as the case study and the literature showed, not often the case at most airports.

In order for airports to enhance their competitive strengths in this area, it is important that they establish and keep good relations with their airline users and service providers. More benefits can be gained if airports succeed in creating alliances with strong buyers and integrating with key supplier companies. Airports should also plan and work closely with local transport authorities in order to increase their surface access and enlarge their catchment area. They should also maintain good relations with their government and local authorities by complying with laws and fulfilling local travel demand so that no further actions are taken by government to encourage entry into the airport market.

Following the analysis of these two areas of external strengths, managers should move to look at competitive factors that are related directly to their business. The resource acquisition and strategic direction are areas in the internal environment that airports have some and most control over. The area of resources acquisition includes factors like financial support, generated revenue, geographical location, infrastructure and facilities, the ability to expand physically, flight destination and connectivity, the influence of leadership, experience of employees, cooperation within departments and collaboration with other firms. While airports have control over some of these factors, it is usually difficult to determine the level of financial support available, the amount of generated revenues and the ability to expand facilities, as these are, in most cases, decided and

regulated by governments and local authorities. The airport fixed location and inability to move the business somewhere else is another limitation of control in this area.

In order to maintain the availability of financial resources, again, airports should maintain good relations with their government to ensure the accessibility to public funds and gain more freedom over their profits. This will also increase the ability of the airport to expand its infrastructure, to accommodate any increase in traffic demand, and thus will enhance the number of destinations served and flight connectivity. Airports should also work hard to sustain their human resources by providing their employees with the right training and skills required to undertake any tasks. This will not only ensure safe and secure airport operation, but will also enhance the company's organisational culture. The case study has shown that collaboration with other firms in the environment can be very effective in attracting more airlines to use the airport and marketing the airport to passengers, hence it is very important for airports to maintain close relations with those companies and government agencies.

The last area of consideration in this model is the strategic direction which is also related to the company's internal environment. Airports in general have the most control over factors in this area as it is their choice to move in any strategic direction. Competitive strengths in this internal area are derived from some factors including the level of airport charges, availability of unique products, quality of service provided, brand name and reputation, ability to develop new products, level of vertical integration, ability to diversify business, and the presence of alliances with airline companies. Airports have most but not full control over this area as it is also the airlines' decision to get involved in any strategic alliances with airports. An airline may decide to ally strategically with one airport but not with another.

In order to obtain competitive strengths, airport managers should carefully choose the strategic moves that suit their business needs and their airline requirements. Airports should always look at ways to reduce their costs and to provide lower charges to their customers. This will help airports to attract more airlines and to benefit from the higher

throughput. Differentiation is a major source of competitive advantage and in order to sustain it, airports should always try to introduce and develop new products and, if necessary, adopt diversification as a way to differentiate. This will not only ensure better quality of services but will also generate more profits. Airports should work hard to develop a brand name and good reputation; not necessarily through marketing the airport to passengers directly, but by integrating vertically with local travel agencies to market on their behalf. This will ensure that both the airport and the airline keep their good reputation. Competitive strengths in this area have the potential for sustainability mainly through establishing strategic alliances with airline companies in order to share traffic data and market studies.

8.5 SUMMARY

The analysis of the case of DXB shows that there are four areas which shape competitive strengths for airports, including the General Condition, Competitive Situation, Resource Acquisition, and Strategic Direction. Each of these areas holds competitive strengths for airports. In the case of DXB, the majority of these competitive strengths are considered to be less sustainable in the long-term. Strengths such as the location of the airport as an international long-haul carrier hub, the current financial resources available (direct and indirect), the human and managerial resources, the integration with other state-owned firms and agencies, and the firm's cooperative culture, are seen as a substantial competitive strengths at this time. However, they may be less sustainable in the future if any major changes in the form of ownership and in aircraft technology occur. The strongest and the most sustainable competitive power in this case study is found to be the strategic alliance with EK. However, the sustainability of this source of strength depends on how EK faces future economic challenges. Barring any substantial political, economic, or social changes in the UAE, competitive strengths in the general condition can be regarded as sustainable. These findings contribute to the development of a best practice conceptual model for a competitive airport company, which can be used to help airport management realise and improve the sources of competitive strengths. The four core areas of competitiveness are separated into external

and internal environments, and are classified as No, Least, Some and Most, according to the airports' ability to control these areas. This chapter also highlights a further complication to an existing airport competitiveness model that fails to realise the importance of factors such as establishing strategic alliances with airline companies, as well as collaborating and integrating with other organisations in the environment.

CHAPTER 9 CONCLUSION AND RECOMMENDATIONS

9.1 INTRODUCTION

Having studied the case of DXB in detail in the previous chapters, this part of the research aims to point out and conclude what has been found from this research. Specific questions that have been addressed in chapter 1 as the main research questions are considered here include: How are airports different from other industries? Is DXB different from other airports? and what can other airports learn from the case of DXB? The discussion here shows that there are some unique aspects to the ownership and management of DXB, which shape competitive strengths for the airport. Overall, the DXB strategic experience has proved to be highly successful. In addition, this chapter also evaluates the strengths and limitations of this research, and highlights how further research should be conducted.

9.2 IS THE AIRPORT INDUSTRY DIFFERENT?

Current issues have had a major impact on the demand and growth level for many aviation players including airports, which mean that airports, such as other industries, have to compete against each other more than ever in order to survive. It has become more important for airports to adopt business strategies that can contribute to their business performance. While airports are now more active in following strategic trends, there is some deficiency and inconsistency in the literature on how airports can better understand the source of their competitive strengths.

The literature review and the case study provided considerable information on airports' competitive strategies. For example, airports are found to be most suited to product differentiation rather than cost leadership. Cost leadership strategy is more suitable when industries are in their shakeout or maturity stages of the market life cycle (Johnson 1999), and where there are greater needs for firms to protect themselves from rivalry, new entrants, powerful buyers, suppliers and substitutes (Porter, 1985). Airports

can become cost leaders if functional activities are carried out by specialised firms not by the airport itself (Barrett, 2000), which will lead to a lower overall staff cost (Doganis 1992). Operational activities such as aircraft handling and catering at DXB are undertaken by specialised companies. There are also some initiatives towards cost leadership by DXB through subjecting construction projects to competitive bidding, as well as cutting the cost of staff and electricity. The latter is currently the highest operational cost for the airport. However, since airports in general are in the growth stage of their market lifecycle (Graham, 2004) and, as in the case of DXB, there are a small number of rivals, less threat from new entrants and substitutes, and low bargaining power of buyers and suppliers, the use of such competitive strategy can be considered as somewhat limited. On the other hand, while adopting differentiation is regarded as less necessary when industries are in their growth stage (Johnson 1999), it is seen as a major source for satisfying airline demands and providing better service quality for airport users. Differentiation is considered to be a widely applicable strategy to airports in order to gain a strong market position (Graham, 2004; Jarach, 2005). This is the main competitive strategy chosen by DXB and has proven to be a suitable approach that led the airport to gain a first-mover advantage.

Adopting focus or niche strategy leads firms to become an expert in a particular market (Flouris and Oswald 2006) and enables them to meet their customers' specific requirements (Porter, 1985). This strategy is suitable for firms in saturated markets where serving only a single type of customer is plausible. Airports may choose to focus on a particular group of airlines or a specific geographical area (Graham, 2004). However, the literature has also highlighted the risk of becoming dependent on specific types or groups of air carriers (Barrett, 2000, Delfmann et al., 2005, Kraus and Koch 2006). This strategy may not be favoured by general airports, including DXB, that choose to serve a wide range of different air carriers. Given the fact that the airport industry is still in the growth stage (Graham, 2004), this is a suitable strategic direction. Therefore, airports can be seen as not very different from other industries in terms of adopting competitive strategies.

In terms of growth strategies, market penetration is considered to be widely used by airports, as it is in other industries. It is achieved mainly through providing better service quality, reducing airport charges and marketing the airport to users. Quality of service is seen as an increasingly important issue for the airport business (Park 2003, Graham 2003, Tretheway & Kincaid 2005). Discounted airport charges can shape incentives for airlines to start to use the airport facilities (Clayton, 1997, Zhang and Zhang 2001, Graham 2004). Airport marketing is regarded as a crucial source of competitive advantage for airports (Jarach, 2005). DXB is largely involved in providing higher quality of service and marketing itself to airline customers. Therefore, airports are considered as similar to other industries in this regard.

The other growth strategy found to be beneficial for airports is market development. Developing new markets for existing products is a strategy that is used by many industries (Flouris and Oswald 2006, Henry 2008). The main effort for market development by airports is geographic expansion of the catchment area (Freathy 2004, Graham 2004). While DXB is not directly involved in developing other transport facilities in order to improve its service access and enlarge its catchment area, it works with the local government, which has the responsibility for financing transport infrastructure development, to plan for such regional transportation projects.

Product development concerns the development of new products for existing customers (Flouris and Oswald, 2006, Henry, 2008), and is often pursued by airports through the development of services for specific types of air traffic (Graham 2004, Auerbach and Koch 2007). Since DXB is undertaking differentiation as its main competitive strategy, it is regarded as following a product development strategy. This means that airports are involved in this growth strategy like other industries.

The market expansion strategies, especially horizontal integration and unrelated diversification, are not widely pursued by the airport industry (Graham, 2004), and not by DXB. This is a suitable approach since a strategy such as unrelated diversification is usually not valuable to firms (Barney, 1997) and carries a high degree of risk (Freathy,

2004). However, vertical integration is often pursued, especially on a small scale, by airports (Graham 2004, Freathy 2004). Such strategy can be regarded as more valuable to firms (Barney, 1997). This is consistent with DXB's use of strategy and as such, DXB can be considered to be typical in this regard.

While horizontal alliance and cooperation is vital for the survival of many industries including airlines, airports are exceptional in this regard. In the airport industry, there is little evidence for the beneficial use of such a strategic approach (Graham 2004, Albers et al. 2005, Delfmann et al. 2005). This strategy is not followed by DXB either.

The main differences in the airport industry include geographically fixed locations and the inability to realise significant economies of scale past a certain point in operations (Graham, 2004). The size limitation on airports means that airports cannot expand indefinitely in order to realise economies of scale. This can be seen in the growing congestion at DXB, which has provoked the construction of a second airport (Al-Maktoum) rather than an attempt to increase future capacity at DXB.

Government support, which is commonly very strong for airports, is another difference in the airport industry as compared to other industries. This is very important for market entrants, as without government support and regulatory allowance it can be very difficult, or even impossible for new airports to enter the market, providing significant competitive advantages for firms already in the market (Williams, 2006). However, for airports that have gained support of the government, it can provide substantial regulatory and financial benefits, such as subsidies, direct funding, and reduced capital costs (Doganis, 1992). The direct financial effects of government support were not analysed in this case, but the regulatory, financial, and anti-competitive benefits to DXB were certainly reflected within the analysis.

9.3 IS DXB DIFFERENT FROM OTHER AIRPORTS?

The competitive environments of airports can vary widely in terms of the external and internal context. As such, the question must be asked: is DXB different from other airports? Many of DXB's differences come from its unique integration and management structure. DXB benefits as its owner (the government) is the owner of the home-based airline and also governs the region's aviation policy. In addition, all of these aviation-related activities are overseen by one person who is a member of the royal family. The overall responsibility and long-term involvement of Sheikh Al-Maktoum, who is the Chairman of the DXB and Emirates Group, as well as the minister of Dubai Civil Aviation Authority, is one of the main reasons behind DXB's success. This management role of all of these organisations permits for more synergies in the interest of all aviation players. This also results in less anti-trust laws and regulations that may limit the airport's ability to expand and grow. In addition, the embedded nature of the airport into EK allows for more collaborative approaches and decision making towards future development. This insures that large development projects are taking place according to joint efforts between the airport and the airline, and that EK is unlikely to move its operation to another competitor airport.

This, however, does not mean that DXB's strategic strengths are unique. In terms of strategic goals and moves, DXB is substantially similar to the airports profiled within the literature review. As noted earlier, there are some strategies that are not very practicable by airports, and have not been adopted by DXB. Strategic directions followed by DXB are also adopted by many other airports that are studied in the literature, meaning that DXB is not a special case in this regard.

There are major similarities between DXB and other competitor airports such as Doha, Abu-Dhabi and Singapore. The latter has quite similar strategic practices which are focusing mainly on providing higher facilities standards, attracting high-class passengers and focusing on becoming a large re-export centre in the world. Both Doha and Abu-Dhabi gain the same locational advantage which allows them to play a similar role as DXB. They are also influenced by the dramatic growth of their home-based

airlines Qatar and Etihad respectively, in which, like EK's business strategy, they are also concentrating on acquiring large numbers of aircraft and increasing the number of destinations and frequencies. In addition, since Abu-Dhabi is also owned and operated by the UAE's government, it is likely to have similar management structure and corporate culture, as well as other financial resources that are available to DXB. It is, therefore, reasonable to conclude that DXB's business model is a success story in the aviation history that can be learned from.

9.4 LESSONS LEARNED FROM DXB'S PRACTICES

Unlike many other airports, DXB has overcome many challenges and achieved continued growth over the past few years. While DXB is not considered very different than other competitors, there are some characteristics in its ownership and management that led it to outperform its rivals. Therefore, there are a number of lessons that can be learned from the case of DXB. Although DXB's strategic management is primarily positive and effective, some of these lessons are negative.

The first lesson that can be learned from the analysis of the case of DXB is that the competitive strengths of an airport company are driven from different key success factors relating to four core areas in the external and internal environment: The airport's general condition; competitive situation; resource acquisition; and strategic direction are all areas of consideration when analysing the airport's competitiveness. This finding has led the researcher to develop a conceptual model that can help managers realise their sources of competitive strengths as shown in figure 8.2 in the previous chapter. Table 9.1 highlights the key competitive factors derived from these four areas.

Table 9.1: Key competitive factors

General Condition
Political stability
Support from Government
Regional businesses and trade incentives

Regional economic growth
High travel demand
Absence of environmental constraints
Absence of legal restrictions

Competitive Situation

Low number of strong competitors
High level of entry barriers
Inter-modality of regional transport facilities
Alignments with powerful buyers
Integration with supplier companies

Resource Acquisition

Availability of financial support
High internal profits
Strategic geographical location
Infrastructure and facilities provided
Ability to expand physically
Large number of destinations served and low flight connectivity time
Influential leadership and decision makers
Highly skilled and experienced employees
High level of cooperation between departments
High level of collaboration with other organisations

Strategic Directions

Low aeronautical charges
Availability of different products and services
High quality of services provided
Good reputation and brand name
Availability of new and innovative products
Degree of integration with other companies
Diversification of business
Alliances and cooperation with airline companies

The case study teaches us that airports could benefit from substantial financial and operational support available from their local government. It is clear that the growth of DXB is related directly to the growth of the UAE and, in particular, to Dubai. Dubai has done a great job in becoming an attractive businesses and tourist destination. DXB is seen by the government of Dubai as an important gateway to the world and as a crucial piece of infrastructure that is set to encourage business and trade activities into the region. This is largely evidenced by the development of FTZs within the airport which can be considered as crucial for the growth of DXB. The long-term development strategy of Dubai ensures that DXB benefits from very favourable political, economical and social environments.

Another lesson that can be learned from the case of DXB is the importance of establishing integration with other companies. The vertical integration between DXB and key players in the aviation industry (such as that between DXB and DCAA and Emirates Group), as well as other state-owned actors in the airport value chain (such as that with the Tourism Board of Dubai and local transport development authorities) provides considerable sustainable competitive advantage for the airport company. This cooperative culture guarantees that there are less anti-trust polices and restrictions imposed on the airport, as well as assuring the airport of lower bargaining power of buyers, suppliers and substitute products. However, this does not mean that DXB is allowed to work in a way that is not acceptable socially and environmentally. DXB understands its obligations and always tries to find alternative ways and measures to reduce health and environmental impacts.

It is evidenced in the study that airports need to establish strategic vertical alliances with airline companies in order to gain sustainable competitive advantages. Strategic alliances guarantee that airport investment projects are set in place at the right time according to projected growth figures and forecasts obtained from its airline partners. This is critical as many examples worldwide have shown the unpredictability of airline customers. Long-term agreements ensure that airlines will be using the facilities

provided by airports specifically for them, and there is less chance that airlines will decide to move operations to another competitor airport or try to push down prices. In the case of DXB, the decision by EK to acquire large numbers of A380s has rushed the airport to develop Terminal 3 building and to plan for the new airport. Without the close working relationship between these allied partners, it could have been more difficult to plan for such huge investment projects.

The study also shows that cooperation between an airport and its airline customers is necessary in order for the airport to uphold its market position. The ability of the airport to work cooperatively with its airline partners allows for a better understanding of their functional needs in order to achieve growth. Sharing specific market information with airlines will not only help the airport get involved in air service development and marketing new routes to airlines, but will also support the airport in realising passengers' segmentation and their requirements, so it is more able to design and develop facilities and services that suit their needs.

Alignment of airport strategic goals and capabilities is important in ensuring success. DXB managers showed a strong awareness of strengths, abilities, and limitations of the airport organisation in the strategic management. For example, the choice was made to invest in the secondary Al-Maktoum Airport rather than expanding capacity directly at the existing DXB, which acknowledges the problem of reduction of congestion and the ultimate limitation on the scale of the airport.

An important lesson that should be learned from this study is the need to focus on non-aeronautical activities as a fundamental source of income. Airports should focus more on investing heavily in facilities and activities that could lead to an increase in retail opportunities. DXB has developed different retail activities in order to benefit from the optimised dwelling time of transit passengers. It is important for airports to recognise travellers' needs and their purchasing abilities in order to provide facilities and services that increase their desire to spend on the airport. This will not only ensure that the airport is able to subsidise its aeronautical activities from non-aeronautical revenues and

reduce charges levied on airlines to meet their requirements, but will also allow it to gain a reputation and brand name derived from more satisfied and loyal customers.

The case of DXB supports other views in the literature (e.g. Starkie, 2001) which argues that unregulated airports have a strong incentive to lower their aeronautical charges. While DXB is not under any price regulations that may limit its initiatives to impose higher charges on airlines, the airport decides to offer its airline customers relatively lower aeronautical charges, which is likely to be subsidised by the large revenues generated from other retail activities. This teaches us that airports including DXB are now more aware of their airline customers' requirements and are less likely to abuse their market power.

There is now greater emphasis on airports to adopt differentiation as their competitive strategy. The case of DXB indicates that airports require substantial physical structure including a wide range of aircraft, passenger and cargo handling and processing facilities and services. DXB has developed a different and unique set of facilities that have been designed to allow for more efficient operation. For example, the development of the terminal building dedicated to handling EK A380 has given the airport a first-mover advantage. The availability of innovative and efficient infrastructure components will create value driven from the airport's ability to focus on distinctive resources and taking advantage of its core competencies. This does not only provide higher service quality for airlines which make the airport a more attractive and enjoyable experience for their customers, but will also help airlines generate more traffic, reduce connectivity time of flights, and thus reduce their operation costs.

It is clear that airports need to operate 24 hours a day 7 days a week. As mentioned earlier, the low connectivity time, the wide range of destinations being served at DXB and flight frequencies are major sources of strengths for DXB. The ability of DXB to offer efficient operation is directly related to its ability to operate freely with no time restrictions. It is, therefore, the airport's responsibility to address environmental

concerns and educate its local community of the economical and social benefits that the airport could bring to the region.

Although the literature has shown the importance of airport charges on airlines' decisions to operate from an airport (Gardiner 2005, Tretheway and Kincaid 2005, Warnock-Smith and Potter 2005) and to encourage more traffic and new routes (Clayton 1997, Zhang and Zhang 2001, Graham 2004), DXB management does not realise the significance of this strategic factor. Reducing airport charges as a strategy of market penetration has not been followed by the airport. Interviewees consider aeronautical charges as irrelevant to the performance of DXB and are not seen as a source of strength. Despite this view, DXB charges are regarded as relatively low, which is likely to be due to factors such as the achievement of economies of scale which is usually difficult to achieve by an airport due to their fixed location and limited ability to expand their infrastructure. Nevertheless, the airport management should focus more on understanding the relation between their fees and the airlines' choice to operate from DXB. This is particularly critical in relation to the development of Al-Maktoum Airport which is likely to necessitate some price reduction to allow for better utilisation of the vast airport capacity. Not realising the impact of airport charges on airlines can be considered as one of the negative practices of DXB.

Airports should focus on passengers directly as their own customers, rather than customers of airlines that use the airport. DXB does focus on the needs of passengers in its operational strategies. However, the airport management believe that the passenger choice of DXB is a combination of airline and destination, rather than a deliberate choice to visit the airport itself. Given that a passenger can choose a different airport for transit in many cases, particularly in situations where there are other accessible airports in close proximity that have the ability to play a similar role, an increased emphasis on the passenger may be appropriate. Marketing schemes such as Loyalty Cards, which have been highlighted in the literature as one way of marketing the airport directly to passengers (Jarach 2005) must be taken into consideration seriously by the airport management. As noted earlier, providing services that directly promote the positive

nature of the airport can create further value to travellers and can maximise aeronautical revenues.

Another negative lesson in the case of DXB is the lack of realisation of competitive boundaries. While some of the interviewees believe that airports within their catchment area are their only competitors, others consider other international hubs in other regions as their sole competitors. This conflict in views demonstrates that there is some inconsistency in determining the airport's main rivals and competitive pressure. It is important to realise that managers should not look at airports within close proximity as their only competitors. Other airports, in particular transfer hubs located further afield, can also be regarded as substitutes for airport services and must be taken into consideration when analysing the airport's competitive situation and setting strategic plans.

9.5 EVALUATION OF THE RESEARCH

There are a number of relevant and interesting findings that have been produced in this research study, which can be regarded as strengths. However, as with many other research studies, a number of limitations exist. This section of the thesis provides an evaluation into the research in terms of strengths and weaknesses.

It is obvious that the area of strategic management in the airport industry has attracted only marginal attention and is in need of further research. This research elaborates on the literature which shows that the implication of some of these strategic methods for the case of the airport is limited and complex. It gives a comprehensive overview of DXB which is an addition to the existing literature that has neglected the importance of studying the case of such a leader in the airport business industry. One of the major strengths of this study is that it not only highlights the positive lessons that are learned from the case of DXB in regard to strategic management of airports, but it also underlines the caveats that must be derived from this experience. This ensures that the

airport management should take into account all the features of the internal and external environment when building capacity and competitive strengths.

There are a number of analytical techniques that have been selected to analyse DXB's external and internal environments including the PESTEL Analysis, the Five Forces Model and the RBV of the firm. While there are some limitations when using these methods independently, the combined use of these analytical tools can be considered as one of the strengths of this research. The use of these tools has proven to be influential and useful in anticipating DXB's competitiveness. This combined use can also be regarded as an innovative and successful approach in investigating airports' key competitive strengths. Nevertheless, it is clear that the use of tools such as the PESTEL Analysis requires the considerations of a wide range of factors that can change at any time. Any dramatic change in one or more of these factors may alter the findings of this research, which can be one of its limitations.

The other major limitation to the study is the unavailability of specific internal secondary information due to data confidentiality. Possessing some financial figures would have given the researcher some determination of DXB's business performance and profitability. DXB's organisational chart was also difficult to access, which makes it somewhat difficult to determine the level of organisational capital. The inaccessibility of some internal documentation made it difficult for the researcher to apply some other tools such as the Value Chain Analysis, which could have provided a much further understanding of the internal environment of DXB.

Another limitation is concerned with the use of data collection technique. Although conducting interviews as primary data for this study has proven to be beneficial in answering the research questions and filling the gap in the literature, the use of this method has raised further questions. In particular, when interviewees responded to three of the questions related to the impact of airport charges on airlines, the airport's current and future competitors and the use of passenger marketing schemes by DXB.

What is described here in this thesis represents an investigation for a single case study which suggests that DXB is not significantly different from other airports indicated by the literature review. This can also be regarded as one of the limitations of this study. Of course, as these airports were also primarily case studies, it is possible that DXB, and these airports, are actually exceptional cases. This is not possible to determine without large-scale investigation of a number of airports in order to obtain better aggregated findings.

9.6 RECOMMENDATION FOR FURTHER RESEARCH

Having pointed out the limitations that exist in this research, it is important to make recommendations so that other studies can build up on this one. This section, therefore, highlights how further research should be carried out.

Further research may include an investigation into the strategic practices of other airports that are competing directly with DXB including Singapore and Doha. This may also include Abu Dhabi Airport, which, although it is also owned and operated by the UAE's government, is nevertheless a strong competitor to DXB given its close proximity. Such a comparative study would better clarify the strategic differences and competitiveness between these airports, and whether they see DXB as a threat for their businesses. Investigating the competitive strengths of a number of successful airports worldwide will provide a better generalised evaluation that can be considered as a further addition to the literature.

While this study shows some uncertainty concerning the use of some business strategies by airports, including lowering charges to airlines and marketing the airport to passengers, this raises further questions that should be addressed in future research. These areas should be better investigated through questioning and surveying airlines and passengers that use DXB directly for their perspectives. This may further illustrate the effectiveness of adopting such strategic methods on attracting airlines and passengers to fly through an airport.

Although this study gives justifying evidence regarding the importance of internal resources and capabilities as sources of competitive strengths for airports, a further study may include a detailed analysis into the internal environment of an airport company through using other business tools such as the Value Chain Analysis. Using the Value Chain Analysis will further show the limitation of applying this analytical tool on service industries such as airports. The implication of the Value Chain by airports is limited in the strategy literature and further research in this regard will provide a significant addition to the existing literature.

In the future, studies should also include an investigation into the case of Al-Maktoum Airport and the impact that it may have, following its full opening, on the existing infrastructure and facilities available at DXB. Moving the majority of operations to the new airport would be likely to leave the current facilities at DXB underutilised, which in turn would lead to higher unit cost. This would pose more strategic challenges for DXB's management which will be forced to further implement strategic initiatives that are currently not in use by the airport company. The opening of Al-Maktoum Airport would be likely to impact on the operational performance of other airports in the region as well.

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APPENDIX 1: INTERVIEW QUESTIONS

Interview Guide

Interviewee Background

1. Would you mind telling me your name and your current position?

The Airport Aim and Objectives

2. What are your goals and where do you see Dubai Airport in 10 years from now?
3. What are the main objectives to achieve your goals?

The Airport Resources

4. Who is responsible for making decisions concerning investing, expanding, and improving services at your airport?
5. How often does the general manager meet with department managers to discuss issues concerning the airport business?
6. How do different departments in your organisation cooperate and coordinate with each other?
7. To what extent do you think that the experience and knowledge of your employees has contributed to the growth level of Dubai Airport?
8. How often do staff members attend training and development programmes?
9. What are Dubai Airport's main financial resources and how stable are they?
10. To what extent do you think that the geographical location of your airport has contributed to its growth level?
11. Do you think that the airport's physical resources have enhanced its operation performance?
12. To what extent do you think that Dubai Airport is focusing on providing better quality of service to its customers?
13. What is your opinion on the overall effectiveness of the airport marketing scheme? For example, advertising, promoting and passenger loyalty schemes.

14. Do you think that your airport's brand name and reputation have attracted more passengers?

The Airport Strategies

15. Has Dubai Airport adopted any cost control strategies in order to offer its airline customers the lowest price possible?
16. Has Dubai Airport adopted differentiation strategy through designing different and unique facilities to handle a specific type of airline or passengers?
17. Does your airport focus on a particular group of customers or specific geographical area?
18. Has Dubai Airport invested in services such as roads, buses or trains in order to expand geographically by enlarging the airport catchments area?
19. Has your airport diversified its business by investing in unrelated areas such as hotels and properties?
20. Has your airport invested in local travel agencies and tour operators as a marketing scheme to attract more passengers to use Dubai Airport?
21. Has your airport established any strategic alliances and cooperation with any other airport companies?
22. What is your opinion on the effectiveness of purchasing and acquiring other existing airports in order to gain greater market share?
23. Has Dubai Airport established any strategic alliances with airline companies in the form of contracts and airport use agreements?
24. Does the relation between Dubai Airport and its airline customers involve any collaborative approach on issues such as traffic projections, capacity requirements and future investment projects?
25. Is your airport involved in activities such as market research and analysis to develop air services and routes?
26. Does you airport offer any special promotion or discount programmes such as lower charges to potential new airlines or existing airlines starting a new route?
27. If your airport faces an increase in completion from another airport, what would your strategic response be?

The Competitive Environment

28. Which existing airports on the national and international level do you think are your competitors?
29. What distinguishes Dubai Airport from such competitor airports?
30. Do you see a risk from potential new airports that may enter the market and act as competitors to Dubai Airport?
31. How would you describe the significance of good relations between Dubai Airport and its airline customers?
32. Do you think that Dubai Airport is able to operate efficiently without its home-based airline (Emirates) being in service?
33. Do you think that substitute services such as rail, roads and seaports are affecting the operational performance of Dubai Airport?
34. What is the relation between Dubai Airport and its supplier companies those that provide services such as aircraft ground handling, catering, and immigration control?

The General Environment

35. To what extent do you think that the economic condition of the United Arab Emirates has contributed to establishing Dubai Airport's market position?
36. Do you think that social and cultural factors have contributed to air travel demand in the United Arab Emirates?
37. Are concerns over issues such as global warming, pollution and noise affecting the growth level of your airport?
38. Is Dubai Airport subject to any legislation and restrictions that may interfere with its planning, operation and business?
39. Do you think that technological factors have had a major influence on Dubai Airport's operational performance?
40. Do you think that political forces have had an influence on the growth level of Dubai Airport?

End of Interview

41. To finish, what would you describe as the main factors behind a successful airport company?
42. Would you like to add any other information?

Thank you very much for your cooperation

APPENDIX 2: LANDMARKS OF DUBAI

Images showing landmarks of Dubai, adopted from DTCM.

Dubai Business Bay



Dubai Marina and Palm Island



City of Arabia



The World Islands

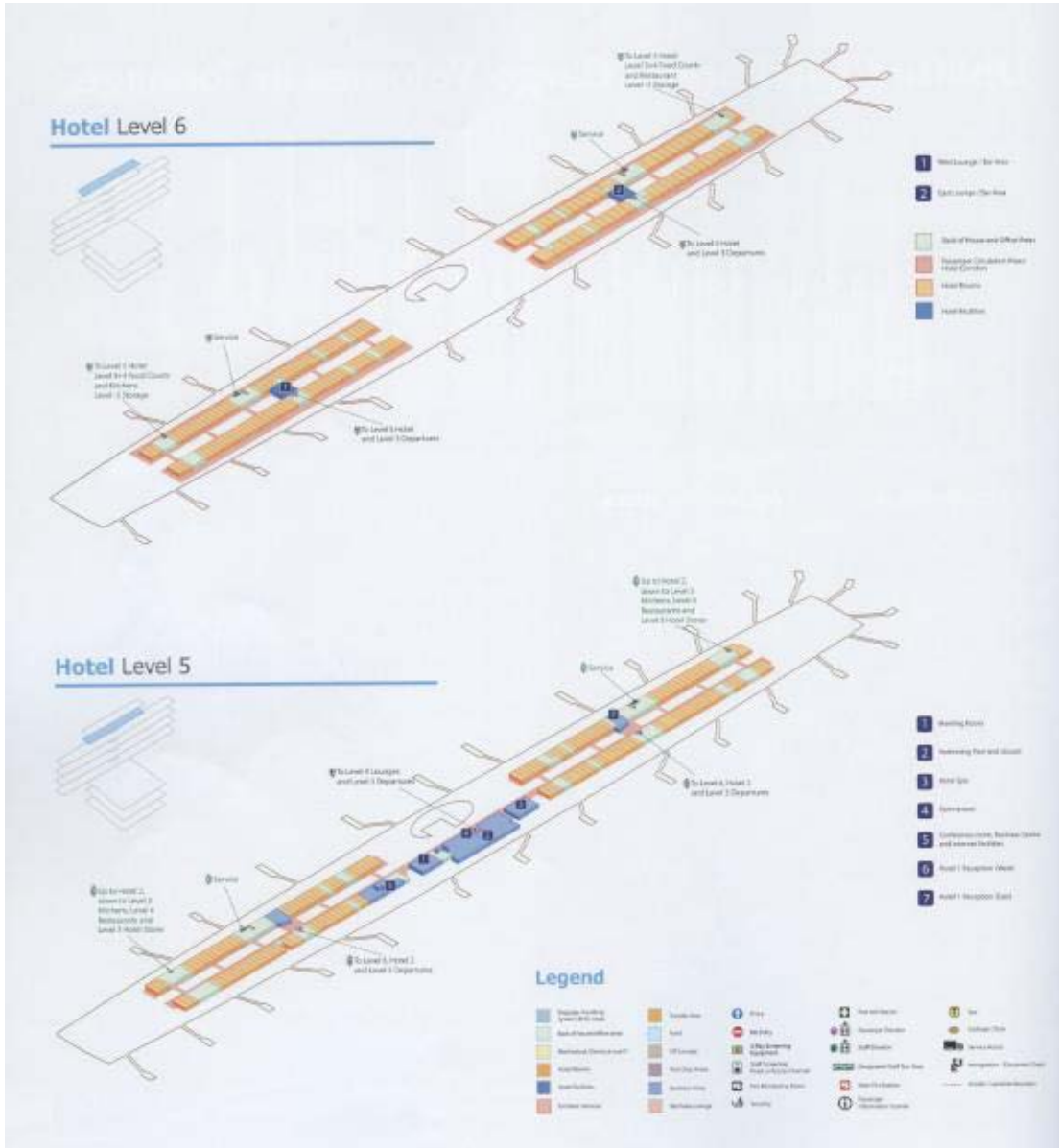


Burj Al Arab

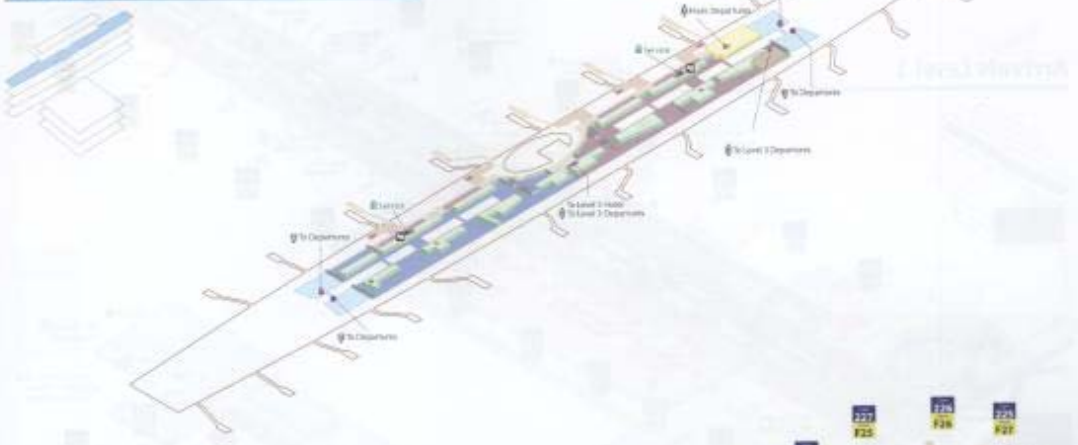


APPENDIX 3: TERMINAL 3 LAYOUT

Layout maps for Terminal 3 building at DXB, adopted from Dubai Airports (2009)



Lounges Level 4



Departures Level 3



Arrivals Level 1



Apron Level Level 0



Departures Hall Level -3



Legend

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- 1 Economy Check-in Desk (DL, 621-627)
- 2 Economy Check-in Desk (G2, 628)
- 3 Economy Check-in Desk (VA, 629)
- 4 Economy Check-in Desk (B1, 630)
- 5 Economy Check-in Desk (G2, 631)
- 6 Economy Check-in Desk (BA, 632)
- 7 First Class Check-in Desk (1-11)
- 8 Business Class Check-in Desk (1-11)
- 9 Economy Staff Check-in Area
- 10 Economy Staff Check-in
- 11 Economy Premium Service Lounge
- 12 Unaccompanied Minor Lounge

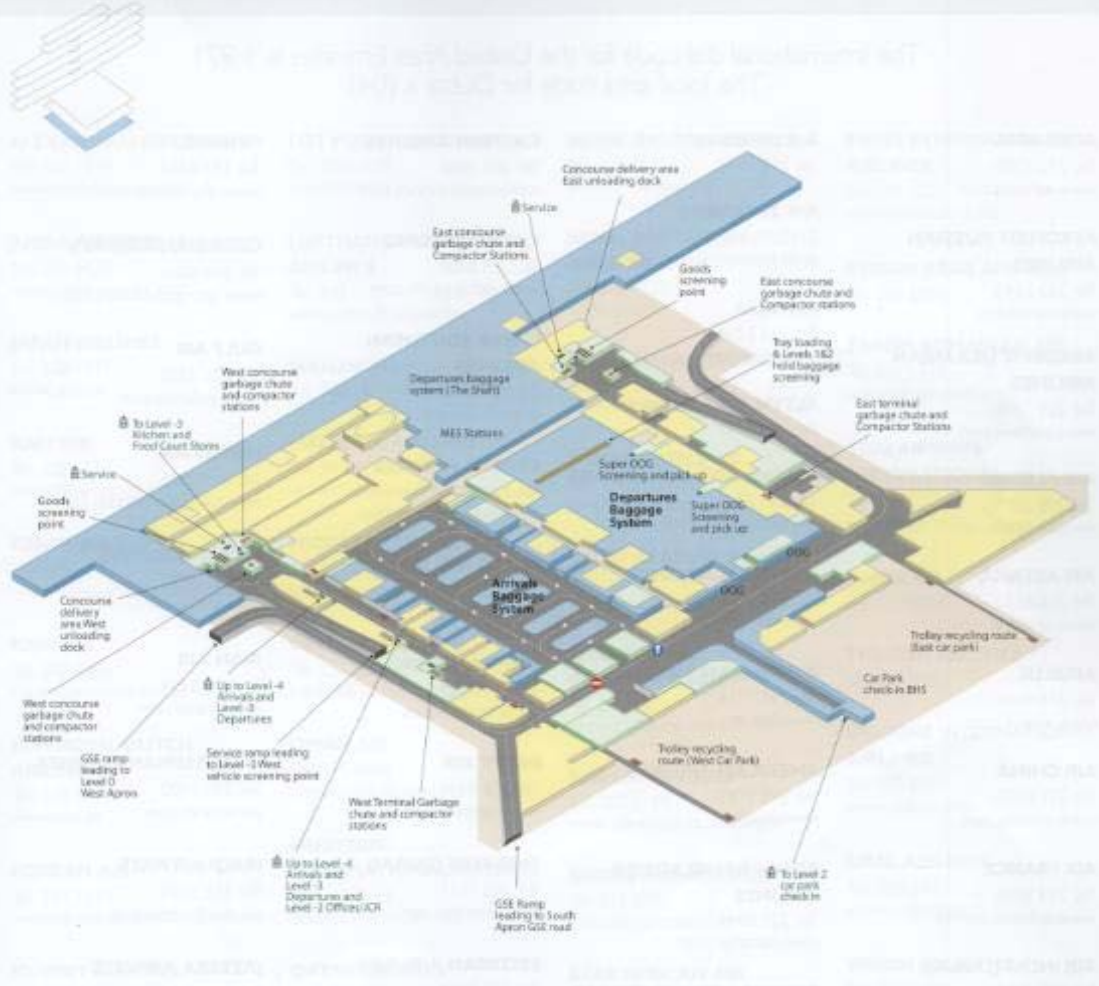


Arrivals Hall Level -4

Architectural Studio



Baggage Services Level -5



APPENDIX 4: DXB'S TERMINAL FACILITIES

Images for facilities provided at DXB, adopted from Dubai Airports (2009)

Terminal Facilities at DXB



Terminal Facilities at DXB



Cargo Facilities at DXB



Dubai International Hotel at DXB



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