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FROM HUB TO TOURIST DESTINATION – AN EXPLORATIVE STUDY OF SINGAPORE AND DUBAI'S AVIATION-BASED TRANSFORMATION

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FROM HUB TO TOURIST DESTINATION – AN EXPLORATIVE STUDY OF SINGAPORE AND DUBAI'S AVIATION-BASED TRANSFORMATION

ABSTRACT

The growth of air transport networks and continuing deregulation have allowed small low-populated places like Singapore and Dubai to become major international tourism destinations. Both have tightly combined airline, airport and tourism strategies to achieve this status, yet scholars have still to comprehensively analyse the complex multi-level strategies leading to such successful developments. Taking an exploratory approach, we address this gap. We comparatively analyse Singapore and Dubai through qualitatively examining the interactions between their respective airlines, airports, governments and tourism authorities, and how integrated management strategies transformed these nodes from aviation traffic hubs to tourism destinations.

Keywords: Singapore, Dubai, Tourism Strategy, Aviation, Management, Destination

1. INTRODUCTION

Tourism has long been heralded as a major foreign exchange earner for local economies, and is now claimed to be one of the largest global industries (Dwyer and Forsyth, 1997; Hassan, 2000; Pearce, 1989). Many countries, therefore, look towards tourism as a key source of income generation, particularly international visitors who bring additional foreign exchange to the region. However, an adequate transport infrastructure is an essential prerequisite for receiving, accommodating and processing these visitors, and a well designed infrastructure can be the basis for the development of a tourism destination.

In the case of airlines, their ongoing contribution to tourism expansion goes far beyond providing the essential transportation links. During the 1970s and 1980s, vertical integration strategies with accommodation and tour operating sectors as well as other tourism-related activities such as restaurants and rental cars were frequent within the aviation industry (Lafferty & Fossen, 2001). While this more orchestrated and integrated approach to aviation strategy is no longer commonly practised, there are two significant examples that contradict this trend. Both Singapore and Dubai have skilfully coordinated the activities of their airlines, airports, tourism enterprises and authorities to provide incentives for passengers to visit through designing vertically integrated strategies to transform their aviation hubs. They are now established as successful and globally recognised destinations, with their successful economic development over the last decade depicted in Figure 1. The extraordinary importance of air transport for both economies can be grasped by the number of trips per capita in comparison to other states. For Singapore and Dubai it is significantly higher compared to states with a similar GDP and much higher population bases (see

Figure 2).

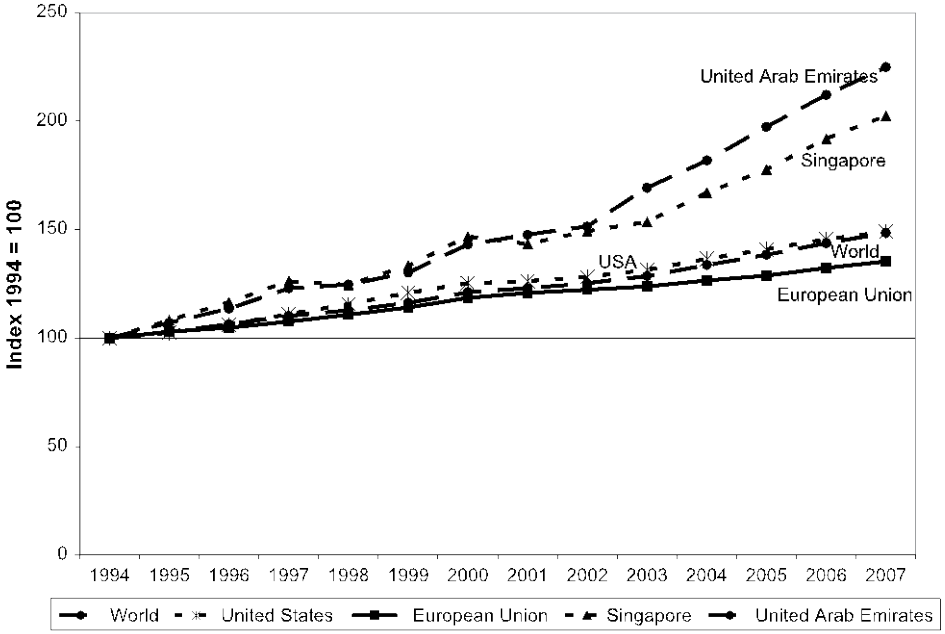

Fig. 1. GDP development in comparison (index 1994 = 100).

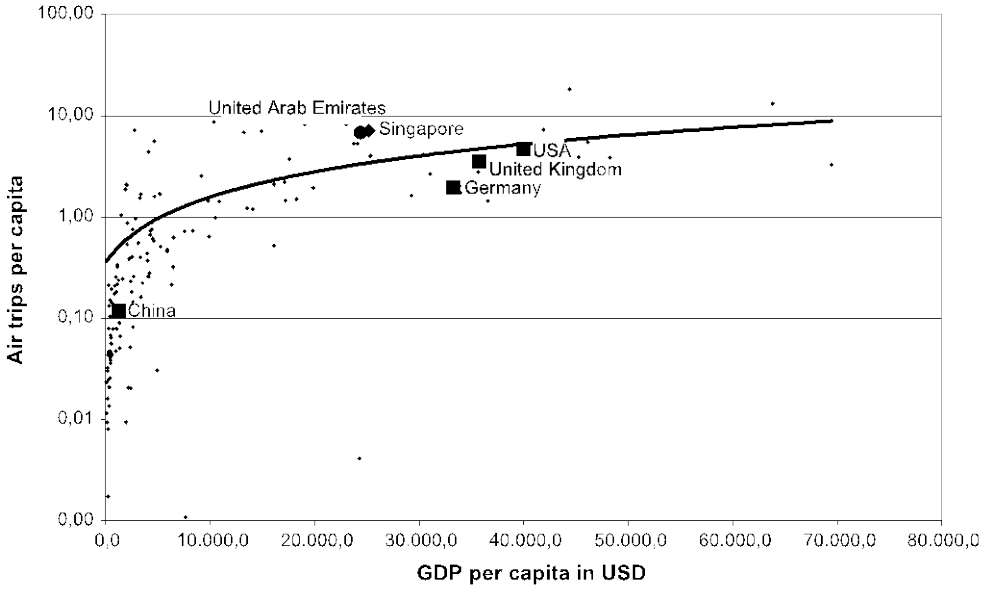

Fig. 2. GDP-air travel intensity.

However, academic efforts to extend the understanding of these concerted strategies have been limited (an exception is Bowen, 2000). We therefore focus on these two cases in this paper: Singapore and Dubai. Both represent an orchestrated

approach to tourism strategy by leveraging their geographic location and skilfully growing their air transport infrastructure. Based on the case analyses we seek to further understand the nature and dynamics of these tourism hubs in order to generate a new comprehension of such aviation strategies. The following section examines the nodal function framework as it applies to aviation flows (Pearce, 2001). We then independently analyse the Singapore and Dubai cases before finally deriving conclusions.

2. THE NODAL FUNCTION FRAMEWORK

Well connected transport networks make tourism destinations more accessible and inter-connected. Networks, therefore, can assist in regional development and play an important role in leveraging activities (Lew and McKercher, 2002). Aviation networks in particular consist of a set of links (e.g. air routes) and nodes – terminals or interchanges – that are connected. The more links a certain node has, the more accessible and interconnected it becomes. The nodes can have four associated functions: origin, destination, hub and gateway (Pearce, 2001). All nodes are potential origins and destinations, while hubs and gateways have special characteristics due to their position and connectedness in the network. The destination, hub and gateway functions are especially relevant in a tourism context. Establishing a destination – i.e. a place which attracts tourists – is at the core of leveraging the tourism industry as a major contributor to economic wealth and growth. Several elements can influence tourists to choose one or various destinations: accessibility, attractions, amenities, image and price are seen as essential in this regard (Cho, 2000).

International airline hubs enjoy a special advantage in competing for tourist traffic. In general, a *hub* is a centrally located point that a flow of passengers passes through in order to integrate a set of origin-destination points (O'Kelly and Miller, 1994). For airlines operating in a hub, Dennis (1994) identifies three critical operational factors: geographical location in relation to the markets served to minimise flying time and costs; good airport facilities to process passengers rapidly and handle a large number of flights simultaneously; and coordination of schedules to minimise the time spent on the ground. The concentration of transiting traffic represents a tourist market to be tapped. Both Singapore and Dubai have managed to divert a significant number of passengers who stop in either of those cities on long-haul routes between Europe, Asia, and the Southwest Pacific.

The extent to which places can establish themselves as something greater than a hub or a gateway – that is, as destinations in their own right – will depend on their ability to provide facilities and attractions that will appeal to the connecting traffic to stop for a few hours or even to spend nights there, i.e. changing the connectivity to interconnectivity. This has been successfully performed by the two nodes analysed in this paper. Table 1 summarises the key features which define the Singapore and Dubai nodal functions as they relate to the infrastructure design that includes government, airline, airport and other institutional and enterprise activities. The question, however, that remains to be answered is to how to develop the individual features indicated above and how to successfully combine them into an integrated and complex strategic plan.

Table 1
Nodal function types and their representation in Singapore and Dubai.

Nodal function	Dubai	Singapore
Origin	Population of 1.4 million in 2006 (Statistics Center of Dubai, 2006), the majority of them being expatriates. GDP per capita $19,009 in 2000. The UAE had an HDI value of 0.824 which ranked it 49th out of 177 countries.	Population of 4.5 million residents (2006) living within a land area (island) of only 645 sq km. Human Development Index – HDI 0.916 and a GDP per capita of $32,866, the 17th in the world.
Destination	*Attractions* Burj Al Arab Hotel, artificial Palm and World islands. Water-based activities including diving, fishing, sailing, water skiing, windsurfing (Laws, 1995). Further key attractions: zoo, Dragon Mart, Ski Dubai, Dubai National Museum. *Events* Dubai Summer Surprises since 1998; Dubai Shopping Festival since 1996, sports events (e.g. Dubai Tennis Open since 1993, Dubai World Cup, Dubai Desert Classic), development of exhibitions and trade fairs via the Dubai World Trade Centre. *Amenities* Significant hotel and real estate initiatives related to tourism, leisure and entertainment activities. *Shopping* Extensive shopping opportunities, with retailing a prominent component of new mixed developments. *Image* Exotic, but safe, beach tourism location with diversions of shopping and assorted cultural and natural heritage attractions (Henderson, 2006). *Price* Standard package holiday in Dubai is priced slightly below average, but many established competitors (e.g. Canary Islands, Egypt, Thailand) are more price-competitive (DTCM, 2004)	*Attractions* Singapore as a garden city (Ioh et al., 2001), comprising Botanical Gardens, Jurong Bird and Reptile Parks, Singapore Night Zoo, Bukit Timah Reserves, Mount Faber, Orchid Gardens and Sentosa, the Island of Tranquillity. *Events* Top location for international meetings and conferences: no. 1 in Asia, no. 6 worldwide (Low and Heng, 1997). *Shopping* Low-cost 'shoppers' paradise' since 1970 (Bowen, 2000). More recently, established the Tourism Shopping Division with the aim to establish Singapore as the retail hub of Asia, especially for consumer tech products, fashion, jewellery and watches.
Gateway	Minor gateway function	According to Low and Heng (1997) the success of Singapore as a tourism gateway is contingent on its functions as a facilitator and organizer. Some of Singapore's tourism attractions have acted as a gateway to other ecotourism destinations, such as Taman Negara, in Malaysia, Bali, in Indonesia, and Pattaya, in Thailand.

3. METHOD

We use an exploratory approach to carve out the trajectories Singapore and Dubai used to develop their destinations with a special emphasis on the air transport related institutions and actions. Our case study approach aligns with Stake's (1995) identification of phenomena as objects to be studied, and is also consistent with Yin's (2002, p. 15) use of case studies when seeking "to illustrate certain topics… and to explore the situation in which the relationships being evaluated has no clear single set of outcomes". The relationships being evaluated in moving from hubs to destinations place four critical institutions involved in any air transport-centred development as pertinent for analysis: the respective airline/s, their airport/s, private enterprise and their national governments. The geographic, economic and socio-cultural environments too played a role in effecting this strategy. The analytical framework is

depicted in Figure 3.

The data came from secondary sources, and was analysed according to the relationships in Figure 3 as related to the orchestrated strategy-making process. In the remainder of this paper we will analyse Singapore and Dubai with an emphasis on these critical elements and their interaction. We will argue that Dubai and Singapore have leveraged their natural assets (i.e. the geographical position) effectively, have skilfully developed the additional critical elements and orchestrated their interplay to become highly successful business and tourism centres.

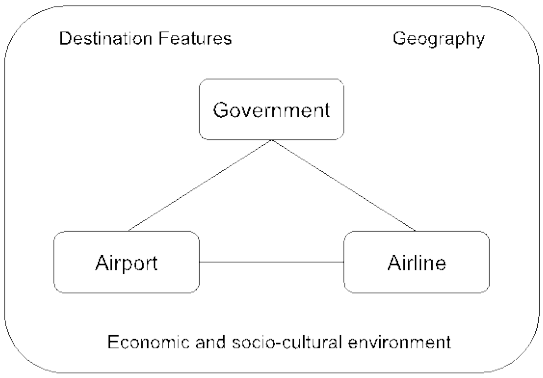

Fig. 3. Analytical framework.

4. AN ANALYSIS OF SINGAPORE AND DUBAI

4.1 Singapore

4.1.1 Government and Society

Despite its official status as a Republic, Singapore is occasionally referred to as a democratic dictatorship. As Huff (1995, p. 753) formulates, it "used 'dictatorial' means to make the 'free market' work", referring to the stability of the ruling party that has resulted in continued government and key administrative positions and policy. For example, Harry Lee Kuan Yew served as prime minister of the People's Action Party (PAP) from 1959 until 1990.

This instrumental role of public enterprise was a lead factor in the development of Singapore Airlines by the PAP government (Huff, 1995). In the 1980s, the Singapore government had majority or minority shareholdings in around 500 companies, many of them operating in a (natural or legislated) monopolistic situation (Zutshi and Gibbons, 1998). This highly centralised control structure was reinforced by a web of interlocking directorships (Huff, 1995). Even though the government began privatising parts of its holdings, the economic success of its state-owned companies, their instrumental character and their strategic importance have resulted in a slow, cautious privatisation process.

Singapore has quickly developed from a traditional trading hub into one of the world's leading financial centres, a focal point in the global shipping and trading networks, and a leading tourism on-route destination stop. Singapore's integration into the global economic and political networks has been supported by its aviation flag carrier.

4.1.2 Singapore Airlines (SIA)

Singapore Airlines, founded in 1972, now operates 99 aircraft on a route network that comprises 99 destinations to more than 40 countries around the globe. With regard to passenger kilometres flown, SIA is ranked 4th, while for passengers transported it is ranked 6th among IATA airlines (IATA, 2007). Singapore also consists of nationals from neighbouring countries (China, Malaysia, and India) which generate high travel demand. A growing number of guest workers and foreign experts have moved to Singapore, creating additional and stable travel demand on many routes. Further, the shift in its economic structure towards services and finance has furthermore emphasised business travel demand.

Production. SIA is consistently ranked among the premier carriers in the world and has been profitable since its inception (Sikorski, 1990), with several aspects of its production structure and philosophy supporting this strong performance.

Operating from Changi Airport, SIA is the main home carrier of Singapore and has been able to defend a strong market share of approximately 35 – 40%. Together with its Star Alliance partners, the carrier consistently accounts for a total of more than 40% of all flights offered at Changi Airport (see Figure 4).

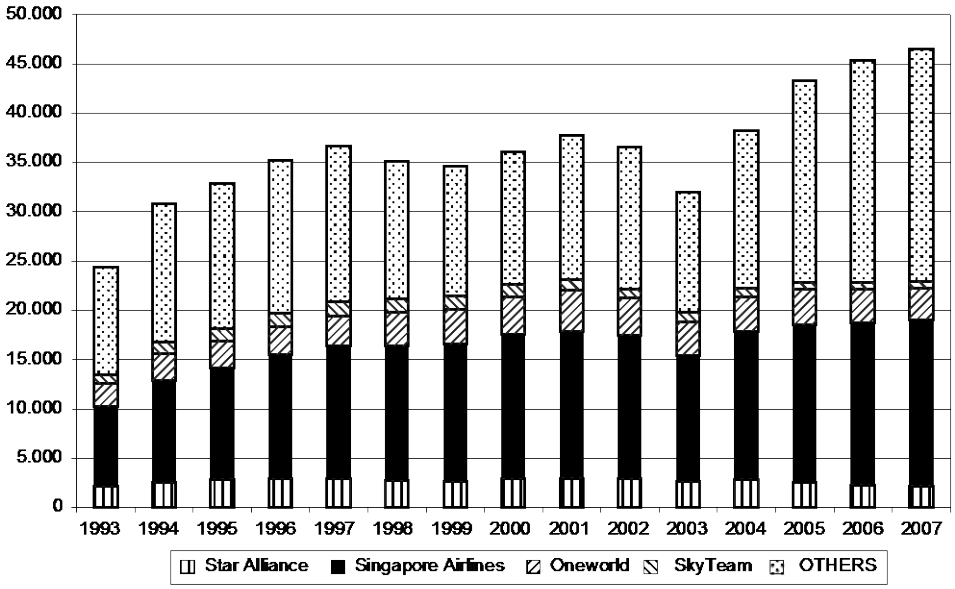

Fig. 4. Frequency share development at Singapore Changi Airport 1993–2007 (Source: Published flight schedule data).

Today, SIA operates 36.2% of all flights at Changi – up from 33.1% in 1993[1]. This strong position within the airport's airline portfolio is supported by the carrier's monopoly position in several important markets to and from its home base. Currently a total of 161 destinations are connected to Singapore Changi on a scheduled basis, 57 of which are served by SIA (35.4%), and 23 of these operated from a monopoly

[1] All supply related data is based on published flight schedules on Official Airline Guide (OAG, 2007).

position (Changi Airport, 2007). Over all, 40% of SIA routes operated from Changi are monopoly routes, allowing the carrier to generate high profits from a large share of uncontested markets.

Besides its high share of monopoly routes, a fundamental benefit for the airline is its strict focus on long-haul routes which allows the carrier to exclusively employ long-haul, widebody aircraft. SIA therefore has a homogenous fleet (currently consisting only of B747, B777, A340 and A380[2]) resulting in significant cost advantages (Doganis, 2002). The relatively low labour costs in combination with its high quality and service standards offered also contribute to SIA's success.

Marketing and Strategy. The basis for SIA's marketing efforts is its use of latest technology and excellent service. From its inception, SIA has followed a comprehensive product differentiation strategy in all classes. The airline was one of the first to introduce hot meals, free alcoholic and non-alcoholic beverages and video-on-demand. Even in times of global economic decline in the aftermath of the 9/11 terrorist attacks, SIA was one of the few airlines that expanded its route network, upgraded its in-flight service levels and adopted new technologies such as the A380 (aircraft size) and A340-500 (long-haul record) (Donnelly, 2003). Singapore Airlines is among the distinguished group of five that are ranked as five star airlines by Skytrax (2007). As is the case for the Singaporian state, SIA's management too has remained stable over decades.

4.1.3 Changi Airport

Singapore Changi Airport, inaugurated in 1981, is the centre of the country's only

[2] Even with the introduction of the A380 this homogeneity has only marginally been reduced, given the high degree of commonality between this aircraft and the A340.

civil airport and its related activities. The previous airport, Paya Lebar, suffered growing congestion, aging facilities and limited growth opportunities due to its proximity to the city. The new Changi airport was designed to include facilities necessary to allow proper and efficient operations for SIA (e.g. maintenance hangars) and had a design capacity of 8.1 million passengers per year – by then already the threefold of the national population (Globalinsight World Overview Data, 2003). SIA contributed about one third of the airport's investment costs of S$ 1.5 billion (phase 1). With the completion of terminal 3 in 2008, Changi has the capacity to serve approximately 64 million passengers per year – including the 4 million passenger budget terminal inaugurated in 2006. This total design capacity is not only more than twice than the current annual traffic volume, it will also be the 14-fold of Singapore's total population.

When Changi opened, 60% of all revenues came from aeronautical charges – today 60% are generated by non-aeronautical businesses indicating the shift to more consumer-based tourism sectors. Changi began to be defined as a complete "destination in itself" from 1997 (Changi Airport, 2007). Since then, the airport has intensified its efforts to set up attractions and commercial offers, ranging from stores and duty free shops, the development of special recreation zones (e.g. differently themed gardens, transit hotels, game shows, swimming pools) to linking the airport to the city's mass transit train network in 2002. In cooperation with Singapore Visitor Centres, transit passengers having at least 5 hours to spare before their connecting flight can register for a 2-hour free sightseeing tour of Singapore.

These developments have supported the airport's highly efficient and reliable operations and leveraged Singapore as an attractive transfer point. The success of this strategy is not only seen in the airport's and SIA's traffic numbers, but also in the

respectable number of awards the airport has earned over the years, including “Best Airport Worldwide”, “Best Airport in Asia”, granted by Business Traveller Magazine, OAG and just recently Skytrax (Changi Airport, 2007).

4.1.4 Interrelationships

The evolution and success of Singapore as a destination is clearly evident through a long term, orchestrated strategy integrating tourism and aviation (Sikorski, 1986). Governmental and political support was driven by the long-time Prime Minister, Lee Kuan Yew (Raguraman, 1997) and assisted by the integration of other tourism related authorities. One example to illustrate this is the Singapore Stopover Holiday (SSH) programme. On arrival at Changi airport, passengers flying SIA or SilkAir are issued with a SSH identification card. This entitles them to free transfers and rides between the airport, hotels and attractions, free admission to certain tourist attractions and discounts on selected restaurants, shopping centres, attractions and car rentals. In addition, SIA maintains a well documented relationship with the Singapore Tourist Promotion Board (STPB) with enhanced SIA priority status for package deals for visitors (Sikorski, 1986).

Network relationships also exist with Singapore Airlines, the Civil Aviation Authority of Singapore (CAAS) and the civil service, each having interlocking directorates (Sikorski, 1990). Many of SIA’s suppliers at Changi are also subsidiaries. For example, Singapore Airport Terminal Services (SATS), the main local handling agent, is part of the Singapore Airlines group, as are the carrier’s maintenance and overhaul subsidiaries, SIA Engineering Company and Singapore Technology Aviation Services. Each of these examples illustrates the strong nodal connectivity that exists among the airline, airport, government and broader industry groups,

supporting the development of Singapore into a global destination hub. The implications of this connectivity are discussed following the Dubai case study.

4.2 Dubai

4.2.1 Government and Society

Dubai is a sheikhdom ruled by the Maktoum family, and is the second largest emirate within the United Arab Emirates (UAE). To compensate for its fading oil reserves, the travel and tourism industries are being actively developed as major revenue generators. Dubai's natural strength is its historic position at the crossroads of intercontinental trade routes and its centuries-long tradition as a trading point.

Key to understanding the economy in the Gulf region is its Islamic history and culture as well as the status and role of the Maktoum family. Accordingly, state property and personal property are difficult to distinguish. Such a constellation allows a comprehensive master plan for the country and its economic development with all interests supporting the same goal – to increase the wealth of the emirate, its population and its rulers. Furthermore, the absence of a fully democratic system results in a strong continuity of governance, making it possible to design and realize long-term projects.

4.2.2 Emirates Airline (EK)

Emirates Airline was founded in 1985 by the Maktoum family as Dubai's counterpart to the multinational home carrier Gulf Air, a joint venture of Bahrain, Oman, Qatar and the UAE. Over the subsequent years, Emirates has played a key role in connecting the old Dubai trading point with important cities in the Middle East and

Gulf regions, as well as Europe and Asia. Nevertheless, Emirates stresses that the only government funding ever received was a start-up capital injection of US$ 10 million in 1985. This was the basis for adding two aircraft per year (on average) for the next 15 years. With an increasing speed of its fleet expansion program, Emirates has assembled a fleet of around 100 aircraft with many more being on order, including 58 A380s.

Emirates' Dubai hub is well positioned for Europe – Asia travel, as it is equidistant between Northern Europe and Southern Asia. Thus, EK's route pattern concentrates on West-East traffic patterns, linking Europe with Asia. This link has been extended over later years towards the South-East as destinations in Australia and New Zealand have been added, with Emirates now becoming a major player in Trans-Tasman traffic, hitherto a quasi-duopoly of Qantas and Air New Zealand. Furthermore, EK has developed a leading position in many African markets, connecting this continent also to its global network. At the same time, the extension of its route network towards the west is also under way. Emirates serves New York twice daily from Dubai and has recently added non-stop services to Houston, Toronto and São Paulo. In conjunction with this expansion strategy and unlimited airport capacity prospects, Emirates (as well as its regional siblings Etihad and Qatar Airways) are seen as major threats for European and Asian airlines (Delfmann et al., 2005; O'Connell, 2006).

Production. Emirates enjoys significantly lower operating costs than its competitors, with labour costs estimated at 18% of its total expenditure compared to roughly 30% of European and North American carriers. Reasons are varied, but an important factor is the availability of cheap guest workers: ground handling, maintenance and catering are tasks for which workers from low wage countries,

especially Pakistan and India are employed. On the other hand, accounting and IT tasks are outsourced to India and Lebanon (O'Connell, 2006). With regard to the second most important cost, fuel, Emirates can also leverage specific advantages. Due to its proximity to oil production and refining facilities, fuel is slightly cheaper in the Gulf region. With its young fleet and hence, latest engine technology as well as the availability of (so far) uncongested airport infrastructure, the airline faces advantages resulting from these lower fuel costs (O'Connell, 2006).

Bulk orders and skilled manoeuvring between Airbus and Boeing allow the company to achieve volume discounts (O'Connell, 2006). For example, in response to the 18 month delay in the Airbus A380 programme, EK cancelled an order for 10 A340-600 and replaced it with B777-300ER, a move supporting Boeing and punishing Airbus. At the same time, Emirates announced orders of up to 100 long-haul aircraft for the B787 and the A350XWB, highlighting its strong negotiating position.

About 3.5 billion people live within an eight hour flying radius from Dubai (O'Connell, 2006). EK's strategy offers convenient transfer flights through its hub at Dubai International Airport rather than direct flights between origin and final destination points. About 60% of all EK passengers use the airline directly to connect onto another flight (Flagstaff, 2007). The carrier's revenue split along regions shows the success of this strategy: about 36% of the revenues are earned in Europe and the Americas, 30% in East and Australasia and only 15% in the Middle East (Emirates Group Annual Report, 2006/07). Due to its geographic location, Emirates offers nearly exclusively long haul to long haul connections which is reflected in its greater average trip length of nearly 4000km, compared to its European rivals which range from 2000 to 3000km. As is the case for SIA, this long-haul focus also brings the

advantages of a low-complexity fleet structure for Emirates.

Emirates serves a total of 75 destinations, representing 35% of the total 214 routes offered to and from Dubai International Airport (DXB); 25 of these routes are served exclusively by Emirates. While the share of routes offered by the home carrier and the number of monopoly routes are almost identical for EK and SIA, the total number of destinations served from the comparably young hub of Dubai is significantly higher, reflecting its beneficial location as well as its speed of development.

An important aspect of Emirates' network strategy is the typical build-up pattern of a destination. EK always enters a market with one daily flight, and through increased demand builds up the route with larger aircraft (A330 to B777) and then higher frequencies. This high frequency is necessary to attract the higher yield business travellers.

Dubai's geographical location, along with the technological possibilities, allows EK to follow this orchestrated approach. EK is now able to reach every point in the world non-stop, benefiting and actively leveraging the very open bilateral regime in their home country. Any airline is allowed to fly into Dubai, usually giving EK reciprocal entry to their countries. Furthermore, even though Emirates claims to have not received subsidies from the government, they are clearly regarded as a financially well-equipped company.

Emirates also benefits from another somewhat rare feature: its owners also own the airport and govern the regional aviation policy. The landing charges in Dubai are extremely low and provide cost advantages for its largest customer: airport and traffic control charges for Emirates are reported to be more than 50% lower than for their major European rivals such as British Airways or Air France/KLM at their

respective home bases (O'Connell, 2006). Currently, the airline holds a share of 43.4% of all flights at Dubai International Airport – a strong growth from 26.4% in 1993. Further, Emirates is not a member of any global airline alliance. Accordingly, alliance-aligned market presence is significantly lower than for example at Star Alliance carrier SIA's hub in Changi. Only 8.5% of all flight movements at DXB are accounted for by one of the three alliances (see Figure 5).

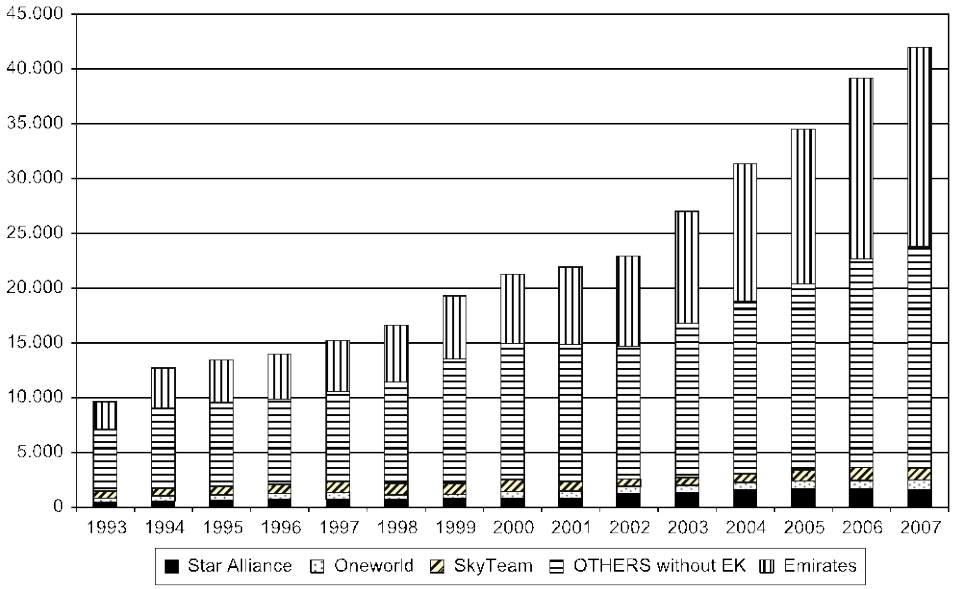

Fig. 5. Frequency share development at Dubai International Airport 1993–2007 (Source: Published flight schedule data).

Marketing and Strategy. One of the ubiquitous traits in middle-eastern business and development projects is that nothing less than the best and the largest, biggest and highest is aimed for. This is true for buildings (Burj al Dubai) and hotels (Burj al Arab) as well as airlines and airports. Accordingly, Emirates Airline is – like SIA – following a product differentiation strategy aiming at the top end of the market. The young airline markets its young fleet, superior in-flight entertainment system, meals and amenities, and seeks to expand its route network at a breathtaking speed. It

collects traveller awards for excellent customer service and is aiming to build a global brand. Emirates invests some $300 million per year into brand building through advertising in their foreign destinations and also in significant sports sponsorships. For example, it spent $150 million in naming rights for Arsenal London's stadium in the UK (Donnelly, 2003).

Emirates actively communicates an aggressive expansion policy. EK's reportedly agile organisation benefits from the close communication and coordination of its CEO with its sole owner and therefore maintains short decision processes and simple structures (Sull, Ghoshal and Monteiro, 2005). Emirates refuses to join the international trend to join an alliance network because it claims to be more successful without having the complexity of governing an alliance - and without having to share profits. Selected bilateral ties are in order, but the involvement into a flexibility-absorbing larger network is clearly rejected.

4.2.3 Dubai International Airport (DXB)

Dubai International Airport operates in a highly competitive market not only regarding its transfer hub function, but also for local traffic with all 7 UAE emirates have their own airports. Nevertheless, it has succeeded in developing a position as one of the world's leading airports.

The airport's current capacity is set at 22 million passengers per year – five times UAE's total population. Since current forecasts project a total traffic volume of 60 million passengers in 2010, the current US$4.1 billion expansion program targets expanding the total capacity to 70 million passengers per year by adding a third terminal. This capacity will be equivalent to the 15-times the population – a value similar to Singapore's.

Like Changi Airport, DXB has followed a strategy of supporting its home carrier through establishing a strong market position by providing comprehensive and reliable service quality. Further, its non-aeronautical businesses too have been the focus of its development. Continuous raffles of luxury cars and the development of the duty free business dominate the airport's reputation. DXB won a series of awards and is often in a head-to-head race for the top post with Changi for "Best Airport Worldwide" and "Best Airport in Size" awards (Dubai Airport, 2007).

Nevertheless, even though passenger numbers have increased dramatically over the last decades, the number of transit passengers has remained constant at about 1 – 1.2 million since the early 1990s. The difference has become increasingly stark in the following years, reflecting the growing importance of Dubai as a destination, rather than a transit point or hub (see Table 2).

Table 2
Dubai International Airport development (no. of passengers in thousand).

Year	Departing	Arriving	Transit	Total
1970	84.1	83.7	74.5	242.3
1975	295.4	352.2	340.1	987.7
1980	717.3	767.8	1302.7	2787.8
1985	1104.0	1125.3	1618.2	3847.5
1990	1610.4	1656.5	1749.8	5016.7
1995	2923.1	2967.0	1212.9	7103.0
2000	5516.1	5604.6	1200.0	12,320.7
2005	13,963.0	13,963.0	860.0	24,782.3

Source: Van de Bunt, 2003; 2005 values are own calculations based on ACI data.

4.2.4 Interrelationships

Civil aviation in Dubai is controlled and run by governmental bodies and, finally, by the Maktoum family. For example, Dubai established its Department of Tourism and Commerce Marketing (DTCM) as a successor to its Dubai Commerce and Tourism Promotion Board in 1997. This newly established agency is headed by Dubai's ruler Sheikh Mohammed bin Rashid Al Maktoum and is responsible for

tourism planning, development and marketing (Henderson, 2006). While the airport is run directly by the Civil Aviation Authority, most other organizations within Dubai's civil aviation belong to the Emirates group, making it the umbrella for all aviation related activities in Dubai. It is important to note that this separation between airport and airline is a requirement by international civil aviation authorities (e.g. the US American FAA) in order to guarantee security, safety and market fairness.

Emirates Airline is the core entity within the Emirates group, being the global ambassador carrying the name of Dubai, and the largest company within the Emirates group. Nevertheless, many other aviation related companies are also part of the Emirates group, covering all elements of the aviation and tourism value chains, such as destination and leisure management (Emirates Holidays, Arabian Adventures, Emirates Hotels & Resorts, Emirates SkyCargo, Skywards), IT services (Mercator), distribution (Galileo Emirates), cargo and handling (Dnata). Furthermore, the group holds stakes in a catering company as well as in international subsidiaries. In terms of creating direct incentives for air travellers to stay in Dubai, Emirates coordinates the "Dubai Stopover" program so that its passengers are offered the opportunity to book hotels, rental car, tours and safaris for discounted prices.

5. DISCUSSION AND CONCLUSIONS

We have focused on two facets to further our understanding of the development processes by which Singapore and Dubai have established themselves as tourism destinations: the geographical analysis of both places as hubs, and the integration and governance of the airlines, airports and tourism organisations. We have identified three central themes that are comparable in the two cases. First, both Singapore and

Dubai are *centrally* located geographically, giving both destinations a comparative advantage. Both places were able to strengthen their positions as long-haul airline hubs to most major economies in the world. Yet we would argue that 'place' itself is not enough to succeed, and the second comparable factor is the significant *government investment and governance* that each destination has put into this orchestrated strategy. Both Singapore and Dubai governments developed a coherent strategy in which the importance and roles of the air transport system were clearly articulated. World-class airlines and airports were set up to create a high reputation of service to attract particularly the high yield type of passengers, with both cost and quality leadership strategies being implemented simultaneously. The continuity of both governments would suggest that a consistent and long-term oriented investment and development strategy was allowed to develop for this success. In both cases, synergistic relationships and interlocking directorates between the airline and other institutions are common, with the airlines having considerable control of the production activities at the airport. Many companies operating at Changi or Dubai airports are subsidiaries of their respective airlines. In addition they also have strong links with tourism organisations to develop enticements for stopovers; e.g. airfares that also include two or three night accommodation for minor additional expenditure. Emirates has even more consolidation through owning hotels, adventure travel agencies and tourism attractions.

This leads to the third point, whereby both case studies have developed an *integrated and complex network system*. Hubs were created into destinations through the complementary interaction of attractions, transport and accommodation sectors that then formed more comprehensive visitor stays. Both have used shopping paradises and their associated complementarities as key features to 'pull' visitors to

stay. This integrated complexity also occurs at a governance level, as noted above. This is significant in that the orchestration can be more readily managed than in a conventional multi-nodal network with its multi-competing interests.

Yet Dubai and Emirates/DXB are not mere clones of Singapore and Singapore Airlines/Changi. Dubai is more aggressive and consequential as seen in Emirates' decisive stand-alone strategy. Emirates refuses to join any global alliance network yet truly has a global presence. With the inauguration of flights to São Paulo in October 2007, Emirates is now the only carrier in the world that serves all continents with its own aircraft. Furthermore, with the announcement to establish a low cost subsidiary EK is following the step SIA has made with setting up Tiger Airways in 2003. There is also increasing competition between the two airlines. One example is in the sponsorship of sporting events where both compete for high profile events (e.g. Formula 1 races) to add to their portfolios. Due to their targeting of the same customer segment with the same differentiation criteria on East-West routes, with similar fleet structures and fleet and route development strategies, the rivalry between SIA and EK is rising continuously. Reportedly, European traffic to Australia and New Zealand via Singapore has dropped by 4.3% whereas this traffic via Dubai has increased by 8.5% from 1999 to 2004 (O'Connell, 2006). Also, there is a continuous competition between EK and SIA for awards in the field of quality, and both are trying to offer an international, but local touch product (SIA: "Singapore girl", EK: international crew in Arabic fashion).

So the question arises as to the inimitability of this strategy and whether Singapore and Dubai can sustain their first mover advantages. Indeed, Huff (1995) questions the replicability of the Singapore experience. Regional rivals Kuala Lumpur (Malaysia) and Bangkok (Thailand) enjoy similar location advantages and

are now taking on the Singapore challenge to be the premier hub of the region (Bowen, 2000).

Etihad and Qatar Airways are growing rapidly and provide strong competition to Emirates and Dubai, and also smaller competitor Oman Air has just recently signalled that it will enter into the competition for transfer passengers by ordering long-haul Boeing 787 aircraft. While these airlines hope to win shares of the current EK intercontinental markets, significant differences in their development and strategies indicate different future perspectives for them. Neither carrier operates (or will operate) a pure wide-body fleet, but split their operations into regional and intercontinental aircraft. Etihad and Qatar Airways, both early A380 adopters, seek to compete with EK with an equivalent product, but the smaller number of aircraft ordered reflects different strategies. Both target a higher product quality, with less emphasis on large passenger masses. Furthermore, their owners – Abu Dhabi and Qatar, respectively – have a much stronger focus on governmental and business travel than Dubai has shown over the years. Oman Air again seems to target transfer operations at a smaller scale and can accordingly not be directly compared to EK and SIA. Thus, any attempt to copy EK's success by the two direct rivals would not experience the backing needed by their home markets. A similar success is therefore unexpected, even though all players will impact EK's development to some degree.

As noted above, places need more than just location, they need well designed and well implemented air transport policies and strategies to develop tourism. Our study suggests that one possibility is through strong government investment and complex network infrastructure to change their hub status into a central destination position. Geographical locations at the crossroads of major trade flows, stability and continuity in political and governmental conditions, coherent and long-term oriented

planning, and first mover advantages may rarely occur in these favourable combinations.

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