



**ASEAN Open Skies and the Implications for Airport
Development Strategy in Malaysia**

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Abstract

“Open Skies,” in general, refers to the liberalization of aviation markets that can be pursued on a bilateral, regional, or multilateral basis. At the Association of Southeast Asian Nations (ASEAN) level, liberalization of airfreight and passenger services is targeted by December 2008. This paper seeks to examine the implication of open skies in ASEAN on the airport development strategy in Malaysia. The findings show that although Malaysia has invested substantially in overall infrastructure development, including airports, other member countries within ASEAN, notably Singapore and Thailand, have also followed a similar investment-intensive strategy to develop their international airports into airport hubs. The dream to turn Kuala Lumpur International Airport (KLIA) into a regional hub requires Malaysia to undertake several measures to overcome the competitive pressures from neighboring hubs. This includes joining a strategic global alliance group to improve the traffic feed of the national carrier. It will also require the government to accelerate the construction of the new Low Cost Carrier Terminal (LCCT) at KLIA. The strategy to build a cargo hub at Senai should be reviewed while the promotion of tourism, especially to non-ASEAN countries has to focus on a distinctive product appeal that will enable the country to differentiate its tourism products from those of regional competitors.

JEL Classification: F13, F14

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I. INTRODUCTION

“Open Skies,” in general, refers to the liberalization of aviation markets that can be pursued on a bilateral, regional, or multilateral basis. However, the depth of liberalization may differ from one Open Sky agreement to another as these agreements enhance the competition between airlines in different degrees. Capacity deregulation and the removal of price controls may also be treated differently in different agreements. Moreover, the geographic and functional dimensions covered may also differ from one agreement to another (Forsyth et al. 2004). In the case of the Association of Southeast Asian Countries (ASEAN), with the progressive implementation of the various ASEAN Open Sky agreements, it is envisaged that air traffic between capital cities will be liberalized by the end of 2008. Ultimately, ASEAN seeks to build a unified aviation sector by 2015, whereby designated airlines from a member country in ASEAN will be able to operate unrestricted flights to the designated airports of other member countries.

For ASEAN countries, increasing competition from the People’s Republic of China and India has created a new impetus to enhance their competitiveness, including a renewed effort to improve their transportation and logistics support services, for several reasons. First, the declining importance of tariffs has increased the importance of other types of trade transactions costs. In particular, the rise of global and regional production networks and the increasing use of just-in-time logistics, inter-modal transport and new security considerations since 9/11 have changed the face of the international economy and, with it, the type of trade transactions needed for exporting and importing goods. These transactions comprise a whole range of trade support services needed to send goods from a factory in an exporting country to the importing country. Transportation and logistics support services play a key role in these transactions and therefore can be harnessed to enhance the export competitiveness of a country. In this way, these transactions costs also affect the competitiveness of a country as a host economy since multinationals evaluate the viability of each new node in their global and regional production networks based in part on the cost and availability of transport and communications in a host economy for tying that node to others already in the network (Leinbach and Bowen 2004).

Second, ASEAN is an important export platform for electronics goods whose final markets are the US, Europe and Japan. Air cargo services and airports are particularly important because electronic products, and specifically semi-conductors, have a high value-to-weight ratio, rapid product cycles, and greater risk of damage associated with sea freight. Consequently, semiconductor firms have higher air cargo intensity, thereby rendering cargo services and airports as one of the key determinants of the competitiveness of each node in the production networks of multinational corporations (MNCs) in this sector. The significant variations in the quality and capacity of air cargo services, including ground-based logistics services, in the region further magnify the importance of these services as sources of competitive advantages to the firms that use these services and the national and regional economies where these firms are located (Leinbach and Bowen 2004).

Third, since tourism bears a particularly close relationship to the development of the aviation sector, the increasing demand for air travel has further heightened the importance of air services and airport development in each member country of ASEAN. Tourism statistics for the region show an upward trend in travel destinations in different parts of ASEAN as well as increasing domestic travel within each country due to increasing affluence.

However, air services and airports do not operate in a vacuum. Rather, their operations are contingent upon the aviation policies of each country and the region. While the objectives of aviation policy and the ability to implement these policies effectively differ significantly between the ASEAN member countries, they have in general relied on bilateral Air Service Agreements (BASAs), although some have joined regional and multilateral arrangements (Forsyth et al. 2006). Studies have shown that the liberalization of air services can lead to

new and better air services, thereby increasing trade in airlines services, gains in consumer welfare, and in the end, economic growth (InterVistas-ga undated; Forsyth et al. 2006).

Since airport development and the pace of liberalization of air services is determined by the government of each country, this paper seeks to examine the implication of open skies in ASEAN on the airport development strategy in Malaysia. In particular, it examines: (i) the initiatives that were undertaken for positioning the main international airport in Malaysia, namely the Kuala Lumpur International Airport (KLIA), as a regional hub, (ii) the achievements of KLIA to date, and (iii) the potential impact of the impending liberalization of air services on KLIA's aspirations to be a regional hub.

II. OPEN SKIES IN ASEAN

ASEAN was established in 1967 initially with five member countries, namely Indonesia, Malaysia, Philippines, Singapore and Thailand. Its membership increased over time with Brunei Darussalam joining in 1984, followed by Viet Nam in 1995, Lao People's Democratic Republic and Myanmar in 1997, and Cambodia in 1999. ASEAN was formed to promote regional peace, prosperity and stability. It has a total population of about 558 million as of 2006 with a combined gross domestic product of US\$1,047 billion and a total trade of US\$1,405 billion (Table 1). The importance of trade to the countries in the region can be seen from the same Table where seven out of the nine countries shown (excluding Brunei Darussalam) have a trade to Gross Domestic Product (GDP) ratio of more than 100%, with Singapore and Malaysia having the greatest dependency on trade in the region.

Given the importance of trade in ASEAN, member countries have recognized that transport is an important area for cooperation as it can contribute toward the reduction of trade transaction costs for member countries and the region as a whole. In this section, open skies in ASEAN is reviewed at three levels: (i) ASEAN-wide initiatives, (ii) sub-regional initiatives within ASEAN and, (iii) unilateral initiatives.

The initial focus as shown in the ASEAN Plan of Action in Transport and Communications 1994–1996 was on the development of multi-modal transport and trade facilitation, improving ASEAN inter-connectivity in telecommunications, harmonization of road transport laws, rules and regulations, the development of rules and regulations for the carriage of dangerous goods and industrial waste on land and sea, as well as human resources development in transport and communications (ASEAN Secretariat undated (a), <http://www.aseansec.org/7373.htm>. Accessed 14 April 2008). In the case of aviation, the improvement of air space management in ASEAN was emphasized with no initiatives then to liberalize air services in ASEAN.

Table 1: ASEAN Key Economic Indicators, 2006

Country	Population (thousand)	GDP (current US\$ million)	GDP per capita (US\$)	Trade per capita (US\$ 2004– 2006)	Trade to GDP ratio (2003– 2005)	Merchandise exports f.o.b. (US\$ mil.)	Merchandise Imports c.i.f. (US\$ mil.)
ASEAN 10							
Brunei Darussalam	381	6,400	16,798	22,368 (2003– 2005)	147.6 (2003– 2005)	7,700	1,730
Cambodia	14,351	7,193	501	516 (2003– 2005)	133.1 (2003– 2005)	3,800	4,900 (f.o.b.)
Indonesia	223,042	364,459	1,634	562 (2001– 2003)	60.4 (2001– 2003)	103,487	80,333
Lao PDR	5,765	3,404	590	314 (2003– 2005)	69.7 (2003– 2005)	874	1,060
Malaysia	25,767	148,940	5,780	11,603	221.5	160,676	131,152
Myanmar	50,962	n.a.	n.a.	108.0	n.a.	4,250	2,460
Philippines	84,590	116,931	1,382	1,210	99.9	47,037	51,522 (f.o.b.)
Singapore	4,393	132,159	30,084	124,769	454.4	221,772	238,652
Thailand	64,724	206,247	3,187	4,052	143.5	130,790	128,636
Viet Nam	84,108	60,884	724	922	144.4	39,605	44,410

Note: n. a.: Not Available.

Source: <http://stat.wto.org/Home/WSDBHome.aspx?Language=E>. (Accessed on 16 April 2008).

Subsequently, the development of a competitive air services policy was included as one item of the integrated implementation program for the ASEAN Plan of Action in Transport and Communications in 1997 (ASEAN Secretariat undated (b), <http://www.aseansec.org/7819.htm> Accessed 15 May 2008). This was targeted at the ASEAN Sub-regional Groupings/Growth Areas. The development of an ASEAN Open-Sky Policy was also considered as another area of possible cooperation. An internal ASEAN Secretariat study on “Preparing ASEAN for Open Sky” was commissioned.

Later in 2002, the ASEAN Memorandum of Understanding (MOU) on Air Freight Services was inked (Table 2). However, contracting parties are allowed to operate only all-cargo services up to 100 tons weekly based on a point-to-point route, with no limitations on frequency and aircraft type. Third and Fourth Freedom Rights are included in this agreement.¹ In 2007, the agreement was amended to increase the permitted capacity to 250 tons weekly.

¹ The Third Freedom of the Air or Third Freedom Right is the right or privilege, in respect to scheduled international air services, granted by one State to another State to put down, in the territory of the first State, traffic coming from the home State of the carrier. The Fourth Freedom Right is the right to take on, in the territory of the first State, traffic destined for the home State of the carrier.

Table 2: Proposed Commitments in ASEAN Open Sky (2008)

A.	Liberalization of Air Freight Services	Designated Cities, Airlines	Limitations	Others	Freedom Rights Accorded
1	ASEAN MOU on Air Freight Services 2002	Designated airport and airlines	100 tons, with no limitations on frequency and aircraft type	Allows for code-sharing with designated airlines of other countries and on agreed routes	3 rd and 4 th Freedom Rights
2	Protocol to amend the ASEAN MOU on Air Freight Services 2002, signed in 2007	Designated airport and airlines	250 tons, with no limitations on frequency, and aircraft type	Same	Same
3	Liberalization of ASEAN air freight services by December 2008: <ul style="list-style-type: none"> Implementing Protocol will be ratified based on the ASEAN-X principle; Implementing Protocol finalized but not ratified yet as of August 2008 	Capital cities and designated airlines in 2008; all international airports in 2010; All ASEAN members will be included by 2015	No limitations on capacity, frequency and aircraft type	No information on the details as yet	3 rd , 4 th , and 5 th Freedom Rights
B.	Liberalization of Scheduled Passenger Services	Designated Cities, Airlines	Limitations on Frequencies, Capacities and Aircraft Types	Others	Freedom Rights
1	Liberalization of scheduled passenger services, Dec. 2005–2008	ASEAN sub-regions such as CLMV countries, IMT-GT (only a roadmap), BIMP-EAEG, Singapore, Thailand, Brunei and Cambodia	Depends on individual agreements	Depends on individual agreements	3 rd and 4 th Freedom Rights
2	Liberalization of scheduled ASEAN passenger services, December 2008; still being worked out and will be ratified in November 2008 based on ASEAN-X principle	Capital cities in ASEAN, designated airlines	No limitations on frequency, capacity and aircraft type	No information on details as yet	3 rd , 4 th , and 5 th Freedom Rights
3	Liberalization of scheduled ASEAN passenger services, December 2010 based on ASEAN-X principle; still being worked out	All international airports; designated airlines	No limitations on frequency, capacity and aircraft type	No information on details as yet	3 rd , 4 th , and 5 th Freedom Rights
4	ASEAN Single Aviation Market, 2015 (with all ASEAN members)	All international airports in ASEAN, designated airlines	No limitations on frequency, capacity and aircraft type	No information on details as yet	3 rd , 4 th , and 5 th Freedom Rights

Sources: Roadmap for Integration of Air Travel Sector and Interview with MOT on 7 August 2008.

Limited open skies agreements were also ratified within a small sub-set of ASEAN member countries as in the case of the Cambodia, Lao People's Democratic Republic, Myanmar and Viet Nam (CLMV) regional air services agreements and the Brunei Darussalam, Indonesia, Malaysia and the Philippines BIMP-EAGA Agreement (Forsyth et al. 2004). A roadmap was also developed for the Indonesia, Malaysia and Thailand Growth Triangle (IMT-GT). Singapore, together with Brunei Darussalam, Cambodia and Thailand, concluded a Multilateral Agreement on the Full Liberalization of All Cargo Air Services in 2003 that allows carriers from the four countries to operate unlimited all-cargo services between and via each of the countries that is party to the agreement (<http://app.info.gov.sg> Accessed 4 February 2008). In 2004, Singapore, Brunei Darussalam and Thailand concluded a similar multilateral agreement for passenger services, providing for unlimited direct flights between any destination in the three countries.

In October 2003, the ASEAN leaders signed the Declaration of ASEAN Concord II (Bali Concord II) that aims at establishing an ASEAN Community by 2020. This Community is made up of three pillars, namely the "ASEAN Security Community," "ASEAN Economic Community," and "ASEAN Socio-cultural Community." Both liberalization and cooperation measures are used for the realization of a fully integrated economic community. A progressive approach is used for liberalization with the selection of 11 priority sectors, including air travel and tourism, for accelerated scheduled liberalization by 2010.

The Roadmap for Integration of Air Travel Sector, 2004 covers the liberalization of both passenger and cargo air services. Although full liberalization of ASEAN airfreight and passenger services is targeted by December 2008, it is expected that air traffic will be liberalized only between the capital cities for designated airlines of the member countries that will be ratifying the agreement, based on the ASEAN-X principle. Third, Fourth and Fifth Freedom Rights² are also expected to be granted to the member countries that ratify the agreement while no restrictions on capacity, frequency, and aircraft types are anticipated. Member countries that are most likely to ratify the agreement under the ASEAN-X principle are Malaysia, Singapore, and Thailand while other members, especially the CLMV countries, may delay liberalization until 2015.

By 2010, it is envisaged that air traffic will be liberalized for all the international airports of member countries that ratify the agreement, together with Third, Fourth, and Fifth Freedom Rights.³ All ASEAN members are expected to open up their international airports by 2015 under the ASEAN Single Aviation market.

Individual member countries have their own respective open sky arrangements with non-ASEAN countries. For example, Singapore has followed an open skies policy since the 1960s (Bowen 2000). The traffic rights secured for Singapore Airlines under Singapore's open skies strategy have been integral to the carrier's emergence as one of the world's largest airlines despite its very small domestic traffic base. Thailand, the Philippines, and Indonesia also have limited or partially open skies. Malaysia has open skies agreements with the US; Taipei, China; New Zealand; Austria; United Arab Emirates; Yemen; and the Scandinavian countries apart from 86 bilateral air service agreements (BASAs).

² Fifth Freedom Right refers to the right or privilege, in respect of scheduled international air services, granted by one State to another State to put down and to take on, in the territory of the first State, traffic coming from or destined to a third State.

³ India and the People's Republic of China, as ASEAN Dialogue partners, have been invited to join in the Open Sky Agreement of ASEAN by 2010.

III. POSITIONING MALAYSIA AS A REGIONAL HUB

Bowen (2000) highlighted the role of national governments in the development of airline hubs in Southeast Asia. In particular, two factors under the purview of national governments have frequently been used either to reinforce or to overcome prevailing patterns of centrality in regional airline networks and, in turn, to ease the access to hub airports. These two factors are the size and quality of airport infrastructure provided at the hub as well as airline competition policy, including the privatization of national carriers and deregulation on domestic routes, which will be discussed in the following section. As tourism policies also impact air travel, it will also be reviewed in the following section.

A. Investing in Infrastructure Development

Kuala Lumpur International Airport (KLIA) was conceptualized in the early 1990s to be a world-class hub airport for the Asia Pacific region. Its development is part of the country's national development strategy whereby sustained investment in infrastructure is made to ensure the timely and adequate supply of facilities that can meet the development requirements of the country (Malaysia 1991; Malaysia 2001). In turn, this sustained investment in infrastructure has enabled Malaysia to be ranked ahead of most of her ASEAN neighbors and the People's Republic of China, with the exception of Singapore, in terms of the overall quality of infrastructure in the country by the World Economic Forum (as cited in ADB, JBIC, and World Bank 2005).

From 1991 until 2005, Malaysia spent a total of RM63 billion for the development of transport infrastructure in the country (Table 3). A further RM30.3 billion has been allocated for the period of the Ninth Malaysia Plan (9MP: 2006–2010).⁴ The amount spent constituted an average of 21% of the total development expenditure of the country from 1991 until 2000. In the last five-year plan, the total expenditure on transport infrastructure amounted to 28% of total development expenditure, while in the current plan, the amount allocated is 15% of total development expenditure.

Out of this total expended on infrastructure development, there are various competing demands. Road development has consistently taken the largest share (60–65%) of the amount spent or allocated for developing the transport infrastructure in the country. Besides government expenditure, the private sector also expended RM15.2, RM7.9 and RM4 billion, respectively, during the Sixth, Seventh and Eighth Malaysia Plans under the privatization program of the country.

The second largest share in the amount expended for the development of transport infrastructure accrued to rail development, with the exception of the Sixth Malaysia Plan (6MP: 1991–95) when the amount spent on airport infrastructure took a slightly bigger share at 15.4% due to the development of KLIA. Port development took the second smallest share in the amount spent on transport infrastructure during the Sixth and Seventh Malaysia Plans (7MP: 1996–2000) while urban transport development had the smallest share. However, during the Eighth Malaysia Plan (8MP: 2001–2005), the amount spent on port development more than doubled from RM1.1 billion to RM2.4 billion due to expansion in capacity and upgrading of port and port-related facilities (Malaysia 2001b). The development of rural roads has been increasingly emphasized since the 8MP, with the amount allocated increasing to RM3.6 billion in the 9MP or a share of 12% of the total amount allocated for transport infrastructure development.

⁴ This refers to the latest of the five-year plans in the country that are used to guide the medium-term development of Malaysia.

Table 3: Government Expenditure on Infrastructure Development in Malaysia, 1991–2010 (in RM million)

	1991–1995	1996–2000	2001–2005	2001–2010
	6MP	7MP	8MP	9MP
Transport Type	Expenditure	Expenditure	Expenditure	Allocation
Total Transport (RM Million)	11594.7	20484.2	30936.5	30304.4
% of total development expenditure of the government	21.2	20.7	28.1	15.2
Roads	7,572.6 (65.3)	1,2269.5 (59.9)	1,8451.4 (59.6)	1,7303.1 (57.1)
Urban Transport	95.2 (0.8)	404 (2.0)	706.6 (2.3)	1,565.5 (5.2)
Rail	1,735.4 (15.0)	5,450.3 (26.6)	5,270.1 (17.0)	3,634.9 (12.0)
Ports	410.9 (3.5)	1,089.2 (5.3)	2,443 (7.9)	1,290 (4.3)
Airports	1,780.6 (15.4)	1,271.2 (6.2)	1,779.3 (5.8)	2,868.5 (9.5)
Rural Roads	n.a n.a	n.a n.a	2,286.1 (7.4)	3,642.4 (12.0)

Notes: 1. MP: Malaysia Plan.

2. Numbers in parentheses shows percentage of total transport expenditure.

3. n.a.: Not Available.

Sources: Seventh, Eighth, and Ninth Malaysian Plans.

B. Airport Development

The development of air transport is viewed as an important foreign exchange earner in the services sector, while the development of a comprehensive network of airports is deemed essential for facilitating trade, tourism, and to accelerate socio-economic development (Ministry of Transport, <http://www.mot.gov.my> Accessed 29 April 2008). By 2007,⁵ Malaysia had 45 airports, including six international airports, 19 domestic airports and 20 STOLports (Ministry of Transport undated). The six international airports are KLIA, Penang International Airport, Langkawi International Airport, Senai International Airport (in Johor state) in Peninsular Malaysia, Kota Kinabalu International Airport in Sabah, and Kuching International Airport in Sarawak in East Malaysia.

According to former Prime Minister Mahatir Mohamad (1995), the construction of KLIA was needed as Subang International Airport had experienced growth of 14–15% per annum from 1990 to 1995. This resulted in the airport reaching its designated capacity of 5,454 passenger movements per hour by the mid-1990s (Mahatir 1995). Capacity at the old Subang International Airport was expanded while KLIA was being built. With the provision of 10,500 hectares of land, KLIA at a cost of US\$2.8 billion is designed to be a world-class airport and a regional hub for the Asia Pacific region. Its development spanned several phases: Its first phase was completed on June 30, 1998, after seven years of conceptualization with a capacity of 25 million passengers per annum and 1.2 million metric tons of cargo (Table 4).

During the second phase (1998–2015), a temporary Low Cost Carrier Terminal (LCCT) was constructed on a fast-track basis at the beginning of June 2005 and was fully operational in March 2006, at a cost of RM108 million (www.lcct.com.my May 7, 2007). The LCCT is located about 20 kilometers from the KLIA Main Terminal Building and has the capacity of handling 10 million passengers a year. It is projected that this capacity will be exhausted by

⁵ STOLports are Short Take-Off Landing airports, which serve communities in less accessible areas.

2012. The current facilities will be upgraded to handle up to 15 million passengers per year by 2015, thereby increasing the total capacity at KLIA to 40 million passengers per year.

In 2008, the government announced the construction of a new permanent LCCT in three to four years' time with a capacity of handling 25 million passengers a year, thereby increasing the capacity of KLIA to 50 million passengers per annum (ppa). The new terminal will be located closer to the main terminal than the existing one and an Express Rail Link service will be built to link the new LCCT with the main terminal. It is expected that this new facility will be built together with the second satellite terminal during the forthcoming Tenth Malaysia Plan (2010–2015). The new satellite terminal and new LCCT will probably increase the capacity of KLIA to 75 million ppa. There is, however, sufficient land and capacity to develop facilities to handle up to 100 million passengers and five million metric tons of cargo per annum, including four runways, by 2020.

Malaysia Airports Holdings Berhad (MAHB), a privatized entity, manages and operates all the airports in the country, with the exception of the Senai Airport in Johor and the Kerteh Airport in Terengganu. MAHB was incorporated in 1991 when the Malaysian Parliament passed a bill to separate the Department of Civil Aviation into two entities with different responsibilities. DCA remains the regulatory body for the airports and aviation industry in Malaysia while MAHB focuses on the operation, management, and maintenance of airports. MAHB was subsequently listed on the Kuala Lumpur Stock Exchange in November 1999. The major shareholder is Khazanah National Bhd, a government investment holding company (73%), while the foreign share amounted to 2.6% in 2005 (MAHB Annual Report 2005).

Table 4: Summary of the Development of KLIA

Phase	Year	Description
1	1993–1998*	<ul style="list-style-type: none"> Initial capacity of 25 million passengers per annum (ppa); 1.2 million tons cargo; one main terminal, one satellite building.
2	1998–2015	<ul style="list-style-type: none"> Addition of LCT, adding 10 million ppa by 2012; Includes the expansion of current LCCT up to 15 million ppa by 2015. Total capacity of main terminal and upgraded LCCT will be 40 million ppa.
3	2010–2015 (forthcoming under the Tenth Malaysia Plan)	<ul style="list-style-type: none"> New LCCT (permanent) will be constructed to accommodate 25 million ppa, capacity of main terminal and new LCCT will be 50 million ppa; Construction of second satellite terminal and increase in passenger capacity to possibly 75 million ppa.
4	Dates not known	<ul style="list-style-type: none"> Construction of second terminal and increase in capacity to 100 million ppa.

Sources: * Mahatir 1995, and interview with Ministry of Transport, 22 May 2008.

An aggressive marketing strategy was launched for the period 2006–2010 to promote KLIA as part of its 5-Year Transformation Strategy (MAHB Annual Report 2006). This included, among others, the extension of the Airline Incentive Program to the end of 2007 to attract more foreign airlines to fly into KLIA as well as the other four international airports managed by MAHB. Incentives given under the Program include free landing and parking charges for new foreign airlines and existing airlines mounting new destinations and additional frequencies for a minimum period of three years (MOT 12 May 2008 interview). New foreign airlines were also offered free office rental space for six months as well as a marketing support fund for new airlines operating in KLIA. MAHB is currently working on a new set of incentives that will go into effect in 2008.

As part of its promotional strategy, MAHB also attends major aviation-related forums all over the world in its marketing and promotional efforts. In 2006, it participated in no less than 120 meetings with various airlines to present marketing proposals and route analysis (MAHB Annual Report 2006). It will host the 14th World Route Development Forum or Routes KL in

October 2008, making it the first Asian country to host this important airline-networking event, which is traditionally held annually in Europe. It is hoped that this event will attract some US airlines to operate from KLIA as there are so far no US airlines operating from it.

Commercial activities were stepped up with the establishment of a Commercial Management Department in September 2006 to oversee business development and to manage the related policies and procedures for MAHB's system of airports. This included, among others, the Retail Optimization Project to enhance the shopping-cum-dining experience of KLIA and other international airports managed by MAHB. MAHB has invested RM50 million in this project, which is slated for completion in July 2009 (New Straits Times, May 21 2008). This project aims to expand the airport's commercial revenue by increasing the average spent per passenger through the maximization of retail space and improvement in retail placement.

In 2004 the government designated Senai Airport in Johor (and next to Singapore), the only independently operated airport in the country, as the regional air cargo hub in an attempt to overcome the leakage of cargo from Malaysia that is being exported through Singapore. In view of this, RM100 million was approved under the Ninth Malaysia Plan to upgrade the facilities at this airport to facilitate the export of goods that are produced in the southern part of Malaysia that have found it more efficient to export through Singapore instead of KLIA (Interview MOT 12 May 2008).

1. Road Development

Apart from airports, road development is also important as it facilitates the movement of goods and people within the country. The total road network, comprising Federal and state roads, increased from a total of 53,984 in 1990 to 77,673 kilometers in 2005. The total amount spent for road development from 1991–2005 amounted to RM38.4 billion from the government and another RM27.1 billion from the private sector.

Road density has increased from 0.16 in 1990 to 0.24 kilometer of road per square kilometer in 2005, representing a 50% increase in road coverage and accessibility in any given area (Table 4). The road development index also showed improvement from 0.7 in 1990 to 0.85 in 2005 while the road service level improved from 2.96 kilometers per 1,000 population to 3.02 from 1995 to 2005.

Generally, the road infrastructure is better on the west coast of Peninsular Malaysia compared with the east coast and East Malaysia as the major cities and industries are located on the west coast of the peninsular side. A major development during the period under study is the construction of highways and expressways to connect all major cities and towns on the west coast of Peninsular Malaysia. The development of these highways and expressways was guided by the Highway Network Development Plan (1993–2004). Major road networks were privatized following the passage of the Federal Roads (Private Management) Act in 1984 in order to accelerate the construction of major expressways or highways and to reduce the fiscal burden. During the 8MP, (2001–2005), 16 privatized highway projects were undertaken to construct an additional 604.5 kilometers of the national road network, involving a capital expenditure of RM18.0 billion (Malaysia 2006a). Most of these projects were implemented through the Built-Operate-Transfer (BOT) System, which requires the private sector to construct, operate and maintain the facility using its own funds and, in return, collect the toll from the road users during the concession period. At the end of the concession period, the facilities will be transferred at no cost to the government. PLUS Expressways Bhd is the biggest of the highway concessionaires, operating approximately 85% of the country's highways. As of 2006, the total length of these toll highways is 1,238 kilometers. While some of the privatized highways are interstate in nature, quite a few are localized to Kuala Lumpur to ease the traffic congestion in the capital city.

The North–South Expressway, linking the northern tip of Peninsular Malaysia (Kayu Hitam in Kedah state⁶) to the southern tip (Johor Baru), was constructed progressively by sections from 1981 till 1994. It spans 847 kilometers and has reportedly lowered perceived vehicle operating and time saving cost by 25% per trip, after taking into account toll charges (Malaysia 1996). This expressway is also linked to KLIA via the North–South Central Link expressway. It is also part of the Asian Highway Network, which also connects into Thailand and Singapore.

Table 5: Road Development Indicators, 1990–2005

Indicator	Level of Development			
	1990	1995	2000	2005
Road Density ¹	0.16	0.19	0.20	0.24
Road Development Index ²	0.7	0.74	0.75	0.85
Road Service Level ³	n.a	2.96	2.98	3.02

Notes: 1. Road Density measures road length over the total area.

2. Road Development Index measures the level of road development taking into account both area and population size of the country.

3. Road Service Level measures total road length per 1,000 population.

Sources: Seventh (pp. 348), Eighth (pp. 270), and Ninth Malaysian Plans (pp. 377).

In the case of Penang, since the state is geographically and administratively divided between the island of Penang and Seberang Perai on the peninsular side, the Penang Bridge was constructed in 1982 and completed in 1985 to link the island with the hinterland. Due to the heavy volume of traffic, the bridge is currently being broadened from the current two lanes to three lanes. Penang is linked to the North–South Expressway on its Seberang Perai side. In 2006, the government announced that a second bridge would be built under the Ninth Malaysia Plan. Johor, the southernmost state in Malaysia, is linked to Singapore via the Johor Causeway and the Malaysia–Singapore Second Crossing. This second link cost RM1.6 billion and was ready in 1997 (Malaysia 1996).

The extensive and relatively good road network in Malaysia had two major impacts on air travel: first the completion of the North–South Expressway (NSE) in the 1990s rendered domestic air travel uneconomical as the expressway cut inter-state road travel time by almost half (NST December 5, 2007). While the arrival of Low-Cost Carriers has restored the use of air travel to some extent, the relatively good highways continue to pose a challenge for domestic air travel in Malaysia. Second, the NSE also facilitated the movement of goods from different towns to the six international airports in the country. For example, although most electronic goods from the electronics hub in Penang in the north are exported through the Penang International Airport, some are trucked down to KLIA and even further south to Singapore for export based on the flight availabilities at these airports (Tham et al. 2007). The road network has also been tapped for sea-air transshipment purposes as Malaysia is also well served with good ports such as Port Klang and Port of Tanjung Pelepas (PTP) where it was reported that electronic goods arriving from Shanghai were trucked up to the Advanced Cargo Centre at KLIA. These goods were later flown to Frankfurt (NST August 11, 2008).

C. Airlines Development

1. National Carrier: Malaysian Airlines

Malaysia Airlines (MAS), the national carrier, started as a company when it was incorporated under the Companies Act in 1971 (Khairiah 2008). Although totally owned by the government then, the company was termed as an off-budget agency (OBA) as the day-to-day running of the company was outside the control of the government. It has its own

⁶ Malaysia is a federation of 13 states and three federal territories.

employment policies and salary scheme and arranged its own funding and had no access to government loans. However, the government did provide support to the company in terms of government guarantees.

It was the first government agency that was privatized in 1985 as it was already a body incorporated under the Companies Act. Upon listing, 30% of its equity was offered to the public while the government retained a 70% share, with a long-term strategy to eventually reduce it to 30% in order to enable the government to appoint directors, including the chairman and the managing director.

Although the government's share did fall over time, the carrier's poor financial performance and costly fleet expansion subsequently slowed the pace of further privatization through public offerings (Bowen and Leinbach 1995). In 1994, 32% of the government's shares in MAS were sold to a single individual, Tajudin Ramli, resulting in the government's share falling to just 10%.

In 2000, six years after the government had privatized its controlling stake to Tajudin Ramli, MAS incurred RM9.5 billion in debt and four consecutive years of losses. Consequently, the government renationalized MAS in 2000 by buying back Tajudin's shares at RM8 each, although the prevailing market price was RM3.62. Some of the losses incurred were attributed to artificially low domestic fares that were imposed by the government. Hence, it continued to suffer losses after re-nationalization until 2002/2003 and 2003/2004. In the year 2005, MAS reported a loss of RM1.3 million due to increasing fuel costs and high operating costs.

A new Chief Operating Officer was appointed in 2005 and MAS launched its Business Turnaround Plan in 2006. The turnaround plan contained a series of specific cost and revenue actions to curtail further losses due to low yields, inefficient networks, and other factors such as poor pricing, rising cost structure, a mismatched fleet, weak operational performance, as well as significant social and political obligations (MAS 2006). Several new initiatives were implemented, including route rationalization, rescheduling all of its flight timing, diversifying its revenues, and changing its mode of operations from point to point services to hub and spoke services.

As part of its domestic route rationalization, MAS initially relinquished 96 of its non-trunk routes to Air Asia, leaving it to operate 22 routes. It has subsequently reinstated some of the routes and now competes with Air Asia on 25 trunk routes (MAS 2007). International routes were also rationalized from 114 to 90. Since it is not a member of any of the global alliances, MAS has embarked on a plan to form a network that resembles an alliance without joining an alliance. For example, Malaysia has code share arrangements with Northwest Alliance and KLM/Air France, which in turn are members of the Sky Team (Mahani et al. 2005). Based on multiple code share agreements, MAS has a global network that comprises 16 domestic and 82 international destinations at the end of 2007. Of the international destinations, 24 are serviced together with other airline partners.

The company subsequently registered profits in 2007, ending a series of losses since 2005. In 2008, the improved profit performance of 2007 is being severely challenged by the huge jump in fuel costs, as in the case of other airlines.

2. Emergence of Low-Cost Carriers: Air Asia and Firefly

In 2001, the government approved the establishment of the first low cost carrier based in Malaysia, namely Air Asia. The airline is not new as a government-owned conglomerate established it in 1993 but it was heavily in debt when it was sold to Tony Fernandes' company Tune Air Sdn. Bhd for the token sum of one ringgit. Fernandes then proceeded to reengineer the airline, turning in a profit in 2002.

Although it was initially established as a domestic carrier, it has since spread its wings to the international arena, with its first international inaugural flight to Bangkok (Table 6). With the rapid expansion of domestic and international routes, the number of passengers traveling by Air Asia has grown strongly from 5.1 million in 2006 to 7.7 million in 2007 (Ministry of Transport 2007 unpublished data). It has received several awards since its establishment, notably Asia's Best Budget Airline under the Best in Travel Poll 2007 by SmartTravel Asia.com and the Best Low Cost Airlines in Asia in 2007 by SkyTrax.⁷

Firefly, a wholly owned subsidiary of MAS, was established in 2007 as a community airline⁸ to compete with Air Asia and to develop additional business streams to increase profit. With hubs in Penang and Subang, this airline flies to a few destinations in Malaysia, Indonesia, and Thailand. The carrier is targeted to complement MAS by flying to destinations that are not financially viable for MAS so that both operations can match the needs of full service passenger and budget travelers.

Table 6: Summary of the Developments of Air Asia

2001	Air Asia sold to Tony Fernandes for the purpose of establishing a low-cost carrier based in Malaysia
2003	Established a second hub at Senai Airport in Johor Baru, near Singapore; Established Thai Air Asia as a joint venture with Shin Corporation; Launched its first international flight to Bangkok
2004	Acquired Awair, an Indonesian airline
2005	Rebranded Awair as Indonesia Air Asia
2006	As part of MAS route rationalization program, 96 non-trunk routes, in addition to 19 domestic trunk routes, were transferred to Air Asia
2007	Long-haul services from Kuala Lumpur to Australia and People's Republic of China using Airbus A330 offered by Air Asia X
2008	Vina Air Asia, to operate out of Hanoi, Viet Nam

Source: Compiled by author.

3. Increasing Competition between MAS and Air Asia

As in the case of other countries, the introduction of second tier airlines such as SilkAir, Eva Airways, Japan Asia Airways, All Nippon Airways, Asiana, Sempati and DragonAir has injected competition for established national carriers, some of which have long operated as a monopoly in their home countries (Chin 1997). Although Air Asia started out as an LCC in the domestic sector, it has since ventured beyond Malaysian shores and has started to include long-haul services from 2007 onwards. Since then, competition has heightened between the full service carrier (FSC) and the low cost carrier (LCC). First, in February 2008, the virtual monopoly of MAS and SIA on the Kuala Lumpur–Singapore route was ended with entry of three budget carriers on this route. This lucrative route was served by 180 flights a week by MAS and SIA and 14 flights by Japan Airlines under Fifth Freedom rights prior to 2008. Air Asia from Malaysia, and Tiger Airways⁹ and Jetstar Asia from Singapore have been allowed limited flights on this route. MAS and Singapore Airlines (SIA) will terminate the 30-year-old Shuttle Agreement¹⁰ (which lets MAS and SIA fix fares) as of June 2008 (NST Biz News Saturday 17 May 2008). This route may be underserved considering the

⁷ Skytrax is a United Kingdom-based consultancy that carries out international traveler surveys to determine the best airlines and other air travel related matters.

⁸ Community airlines differentiate themselves from LCCs as they operate routes that are not served by LCCs or full-service airlines and they utilize turboprops instead of jets. Although Firefly also flies to Penang, the airline uses Subang instead of KLIA while the LCCT is located at KLIA.

⁹ Tiger Airways, established in 2003, is jointly owned by SIA (49%), Indigo Partners LLC (24%), Irelandia Investments Ltd. (16%) and Temasek Holdings (11%), while Jetstar Asia, established in 2004, is a joint venture company by Australian airline company, Qantas which holds a 49% equity, Temasek Holdings (19%) and a group of Singaporean businessmen (32%) (Bernama 30 January 2008, Singapore).

¹⁰ Under the Shuttle Agreement, the carriers agree on a common fare to charge customers who turn up at the airport on standby for the next flight.

strong bilateral economic ties between Malaysia and Singapore and as compared to the 375 weekly Singapore–Jakarta flights as well as 307 bilateral weekly flights between Singapore–Bangkok. The opening is viewed as a significant development in the history of ASEAN airline industry and an important first step toward the liberalization of air services in the ASEAN region.

Second, in May the same year, MAS became the first FCC to offer “free seats” or seats that charge only surcharges such as fuel, insurance, airport tax, and administration fee for all domestic destinations. MAS subsequently extended this offer to all destinations within ASEAN countries, with the exception of Yangon. Its subsidiary is also offering zero fares for all its routes. Since the zero fare strategy is usually a model used only by LCCs, the new strategy of MAS to sell its unsold seats in the domestic and ASEAN routes has triggered a new fare scheme from Air Asia to better the offer of MAS.

D. Specific Policies

In the case of Malaysia, besides investing in infrastructure and controlling airline competition, the government also implemented some specific policies to promote KLIA as a regional hub. For example, the KLIA Hubbing Development Committee was set up in December 2000 (Malaysia 2001). This committee is made up of one representative from MAHB, two representatives from the Ministry of Transport, and one representative from the Ministry of Finance. The committee meets once a year to examine three areas for the development of KLIA: traffic facilities, connectivity through MAS service, and marketing (WTTC 2001). It also sets performance and services standards for KLIA based on world best practices. The KLIA Hubbing Unit was subsequently set up within the Aviation Department in the Ministry of Transport to liaise between the Committee and MAHB in the implementation of the plans proposed by the Committee. This unit oversees the utilization of the Trust Fund that was set up to attract airlines to KLIA. A budget of US\$131,579 over a three-year period was provided for promotional activities and incentives for new airlines introducing passenger or freighter services (Ahmad Husni 2004).

A Free Commercial Zone was also set up to facilitate the handling of cargo at KLIA. The FCZ uses the paperless environment concept with value added activities such as trading, break bulking, grading, sorting, re-packing and re-labeling. A one-stop center is also provided to expedite the process of cargo clearance with additional support services such as multi-banking services, clinics, food and beverage and also postal services.

Government-to-government promotional activities are also conducted through air talks with other countries. Joint-promotional activities with MAHB and the Ministry of Tourism are also used to market KLIA. Malaysia has not revised its airport tariffs since 1969 and KLIA has one of the lowest tariffs in the world.

E. Promoting Tourism

Since tourism bears a close relationship with the development of the aviation sector, various incentives are given to encourage the development of the tourism sector in Malaysia. For example, the Promotion of Investment Act of 1986 promotes the establishment and development of industrial, agricultural and other commercial enterprises in Malaysia through tax incentives. For the tourism sector, these incentives are available to hotel accommodation projects and other tourist projects. They include pioneer status, investment tax allowances, industrial building allowances, duty exemptions, income tax exemptions, and reductions in service tax. For example, companies building luxury ships are eligible to apply for pioneer status. In addition, sector specific incentives were also granted (See Appendix 1 for the list). It was reported that during the period, 1996–2005, 360 hotel projects were granted tax incentives, 30 tourist projects were also granted incentives and 180 budget hotels were also given tax incentives to encourage domestic tourism (Malaysia 2006b).

Numerous tourism products were introduced over the years, such as eco-tourism, agro-tourism home-stay programmes, cultural and heritage tourism, thematic events, meetings, incentives, conventions and exhibitions, sports and recreation tourism, education, and health tourism. Malaysia My Second Home was also introduced to encourage foreigners, their spouses and their dependents to select Malaysia as their second home.

Following the relative success of the Visit Thailand Year in 1987, Malaysia also launched its own Visit Malaysia Year (VMY) campaigns. In 2007, Malaysia launched its Third VMY campaign, after two previous campaigns in 1990 and 1994. The current VMY campaign has set as a target more than 20 million visitors and more than RM44 million in revenue. In January 2008, it was reported 20.9 million foreign visitors visited Malaysia in 2007 and the tourism industry generated RM46.1 billion in revenue in the same year (Ministry of Tourism undated).

The number of tourist arrivals more than doubled from 7.5 million in 1995 to 16.4 million in 2005 (Table 7). Total tourists receipts have grown from RM9.2 billion to RM31.0 billion over the same duration. By 2020, tourist arrivals are expected to reach 24 million while tourist receipts are expected to reach RM59.4 billion (Malaysia 2006b). Employment in this sector has grown from 67,214 in 1995 to 451,000 in 2005. ASEAN, the traditional source of tourist visitors for Malaysia, remained the largest region of origin with a share of 77% in 2005 while the share of Japanese tourists has declined from 4.4% in 1995 to 1.9% in 2005. On the other hand, tourists from the People's Republic of China and West Asia have increased in numbers. The importance of this sector as a source of foreign exchange earnings can be seen in the increase in the **net** contribution by tourism from RM11.2 billion in 2000 to RM18.1 billion in 2005 (Malaysia 2006a). Spillovers from this sector to other sectors such as hotels can be seen in the increase in the number of hotels and hotel rooms as well as the average occupancy rate over time.

Table 7: Selected Tourism Indicators, 1995, 2000, 2005 and 2010

Indicator	1995	2000	2005	2010
Number of Tourist Arrivals (million)	7.5	10.2	16.4	24
By Country of Origin (%)				
ASEAN	73.5	70.4	76.8	65.0
People's Republic of China	1.4	4.2	3.8	6.1
Japan	4.4	4.5	1.9	2.2
Australia	1.8	2.3	1.5	2.7
United Kingdom	2.2	2.3	1.5	2.8
Taipei, China	3.9	2.1	1.3	2.7
India	0.4	1.3	1.2	1.8
West Asia*	n.a	0.5	1.0	2.7
Hong Kong, China**	2.0	n.a	n.a	n.a
US**	1.3	n.a	n.a	n.a
Others	9.1	12.4	11.0	14.0
Total Tourist Receipts ¹ (RM billion)	9.2	17.3	31.0	59.4
Per Capita Expenditure* (RM)	n.a	1,696	1,890	2,417
Average Length of Stay (nights)	4.8	5.8	7.2	8.7
Number of Hotels	1,220	1,492	2,256	3,218
Number of Hotel Rooms	76,373	124,413	170,873	247,008
Average Hotel Occupancy Rate (%)	65.5	59.2	63.5	66.4
Employment	67,214	390,600	451,000	520,700

Notes:

* Not available in Eighth Malaysia Plan 2001–2005

** Not available in Ninth Malaysia Plan 2006–2010

2010 are projected numbers

1 Tourist receipts exclude excursionist receipts.

Sources: Eighth Malaysia Plan 2001–2005 and Ninth Malaysia Plan 2006–2010

Long-term strategies include the revival of long-haul markets (such as North Asia, Europe, North America and Oceania), maintaining the current focus on fast growing markets such as the People's Republic of China, India and West Asia, and capitalizing the Malaysia Truly Asia campaign (Tengku Adnan 2006). New growth areas such as emerging markets, niche products, and promotion of special events such as F1 Grand Prix will also be promoted. The Ministry is also keen to see that the economic and social benefits from international tourism are dispersed beyond the major cities and tourist regions in the country.

IV. IMPLICATIONS FOR AIRPORT DEVELOPMENT IN MALAYSIA

A. Current Performance of KLIA

According to the Ministry of Transport, as of 2008, there are 50 foreign airlines and three full-freighters (UPS, Fedex and Cargolux) operating at KLIA. Passenger traffic (excluding transit passengers) has grown almost four fold since its inception in 1998 (6.4 million ppa) to 23.7 million ppa in 2006 (Ministry of Transport statistics, www.mot.gov Accessed 2 May 2008). Cargo handled increased (excluding cargo in transit) slightly more than four fold from 159,741 tons in 1998 to 672,888 tons in 2006.

KLIA won the Airport Service Quality (ACI-ASQ) Award for the World's Best Airport in the 15–25 million ppa category for three consecutive years from 2005–2007. It was also voted the Best Airport Worldwide and Best Airport in the Asia Pacific region in the same award. Its Low-Cost Carrier Terminal-KLIA (LCCT-KLIA) was named by the Center for Asia Pacific Aviation (CAPA) as the Low Cost Airport of the Year in 2006).

Despite the improvement in the performance of KLIA as an international airport, it is by no means a regional hub. Table 8 below shows transit passengers constitute a mere 2–3% of the total passengers utilizing the airport while no transit cargo is handled at KLIA. The transit cargo in Malaysia utilizes mainly the international airports at Penang and Kuching.

Table 8: KLIA: Number of Passengers ('000)

	Total Passengers	Transit Passengers	Transit Passengers as Percentage of Total (%)
2000	14,733	380	2.6
2001	14,539	333	2.3
2002	16,398	461	2.8
2003	17,455	519	3.0
2004	21,059	535	2.5
2005	23,214	487	2.1
2006	19,459	441	2.3
2007	18,753	356	1.9

Source: Ministry of Transport.

Nonetheless, since KLIA is increasingly becoming more competitive, the attainment of a hub status will enable the country to capture gains from airport services as well as improve the returns to its investment in the airport. It is also possible that this is part of the risk management strategy of the country in order to reduce its reliance on others. However in this endeavor, the government faces severe challenges from its neighboring countries as shown in the section below.

B. ASEAN Competitors

The comparison here will be analyzed for Malaysia, Singapore and Thailand only as all three are the most likely member countries that will ratify the implementing protocol for Open Sky in ASEAN by the end of 2008. They also have relatively well-established international airports at their capitals while their national and low-cost carriers are among the most competitive in the region.

1. Airports

Government investment in infrastructure to boost the competitiveness of their airports is a strategy that is also used by the other major airports in ASEAN. Within ASEAN, dominant airports have for a long time been Bangkok and Singapore as these two airports are strategically located geographically to capture the European and Northeast Asian traffic and interregional connections. Both Singapore and Thailand have also invested heavily in the infrastructure of their respective international airports to enhance their respective competitiveness as hubs in Southeast Asia.

Singapore, for example, completed a S\$240 million upgrade of its Terminal 2 just before Thailand opened its new international airport in 2006. Subsequently, Singapore opened its S\$1.75 billion Terminal 3 in January 2008, increasing its capacity to 64 million. It is reported in March 2008 that the city-state is already planning for a Terminal 4 (CNA posted March 6, 2008.). This is in line with its strategy to use capacity expansion as a purposeful investment signaling strategy in order to capture new demand and to tilt the market share in the Southeast region toward Changi Airport (Phang 2003; KPMG 2007). Its Budget Terminal that was opened in March 2006 with a capacity of 2.7 million passengers will also be expanded at a cost of S\$10 million to be completed by early 2009. Changi also caters to the other end of the spectrum as “commercially important people” are provided five-star services in JetQuay, a facility adjacent to the main terminals with dedicated customs, immigration, personal concierge and limousine transport to the aircraft (KPMG 2007). It further has nine cargo terminals with a total capacity of three million tons per year. Two express freight centers cater to the express cargo sector, with DHL using Singapore as its regional hub.

Thailand has also recently opened its new international airport, the Suvarnabhumi International Airport in 2006, at a cost of US\$3.0 billion and with a capacity of 45 million passengers a year. A budget terminal is also planned for 2008 and it is expected that this will increase the capacity of Suvarnabhumi by another 17 million, with a final target of 100 million. Airfreight facilities at the Suvarnabhumi airport are designed to handle up to three million tons of cargo per year. Thailand's airport sector has benefited from the large tourism sector in the country with foreign tourists accounting for over 80% of visitors to Thailand (KPMG 2007).

Changi, Suvarnabhumi, and KLIA are all departing from the traditional model of airport development whereby the main revenue is derived from airlines through charges for landing and parking. Instead, all three airports have increasingly tapped into non-aeronautical businesses such as retail outlets, restaurants, entertainment, etc. that can also cater to non-traveling visitors. Non-aeronautical revenues accounted for 60%, 35%, and 19%, respectively, of the airport revenues of Changi, Suvarnabhumi, and KLIA (KPMG 2007).

Changi has often been acknowledged as one of the best airports in the world in surveys conducted by international aviation organizations as well as academic studies. For example, Park (2003) used a five core-factor groups,¹¹ multi-decision criteria model to analyze the competitive strengths of seven Asian airports (Park 2003). He found Changi, together with the new Hong Kong International Airport and Seoul Incheon International Airport to be more competitive while KLIA, Kansai and Narita to be less competitive.

¹¹ The five factors are spatial, facility, demand, service, and managerial factors.

Despite Changi's long-standing competitiveness, KLIA is catching up. In 2007, the Airports Council International (ACI) Airport Service Quality Awards nominated KLIA as the best for the 15–25 million passengers' category while Changi, which handled 35 million passengers in 2006, finished second, after Incheon Airport in Republic of Korea, in the category of 25–40 million passengers.

For the overall prize—Best Airport Worldwide—Incheon finished first, Hong Kong's Chek Lap Kok second, KLIA third, while Changi finished fourth. In another poll by Smart Travel Asia, an independent online travel magazine, Hong Kong International Airport, Singapore Changi, KLIA were the top three while Suvarnabhumi finished fourth.

2. Airlines

As in the case of airports, the three main state-owned full-service carriers in Malaysia, Singapore and Thailand are competitive and have been ranked among the top ten airlines in the world since 2005, based on Skytrax's survey of air travelers. Singapore Airlines (SIA) was named the World's Airline of the year in 2007 and 2008. SIA has in fact won this award on three occasions in the last 10 years. It was named the best airline for Asia and Southeast Asia. Malaysia Airlines (MAS) was ranked sixth worldwide in 2007 and 2008 while Thai Airways ranked second in 2007 fell to fourth position in 2008.

Low cost carriers (LCCs) have also proliferated in ASEAN since the financial crisis in 1997/1998. Air Asia's arrival in 2001 led the way and since then several regional rivals have emerged, including Tiger Airways and Jetstar Asia from Singapore, Nok Air, One Two Go, Nok Air from Thailand, and AirAsia and Lion Air from Indonesia. Competition is stiff as in the case of full-service carriers. Despite Air Asia's first mover advantage, its position as the leading LCC in Southeast Asia was taken over by Jetstar Asia in 2008, based on Skytrax's survey. Tiger Airways is ranked third in 2008, immediately behind Air Asia.

V. POSSIBLE OUTCOMES FOR KLIA WITH THE PROPOSED COMMITMENTS FOR ASEAN OPEN SKY

The likely impact on KLIA will be different at different milestones in the proposed commitments. Before 2010, it is expected that KLIA will benefit from the anticipated increase in air traffic with the implementation of the agreement since only capital cities are involved. But when all international airports in Malaysia are opened up in 2010, there is a possibility that air traffic may by-pass KLIA to pick up passengers and cargo at the other international airports in the country to feed hubs in both Singapore and Bangkok. However, since KLIA is the largest and has the most facilities compared with the other international airports in Malaysia, it is unlikely that traffic diversion will be substantial.

A more likely outcome is the use of KLIA to feed the hubs in both Singapore and Bangkok, with Singapore being the greater threat due to its proximity and status as a hub airport and the highly competitive logistics industry available there. This will have an adverse impact on KLIA's aspirations to be a hub airport for both passengers and cargo. Consequently, five crucial measures are recommended below to prevent this from happening and to facilitate KLIA to achieve its hub status.

A. Joining a Strategic Global Alliance for MAS

Ohashi et al. (2005) found that connection time is the most important factor in choosing air cargo transshipment location and routing while landing fee is the second most important factor. They also found some marginal evidence that freight forwarders may try to avoid large and congested airports. Their study therefore suggests that the choice of an air cargo transshipment hub is more sensitive to time cost than monetary cost. Given the importance of connection time, improving the networks of airlines based at KLIA play a crucial role in enabling KLIA to be a hub.

In 2006, MAS was reported to have an intention to join Sky Team as part of its plans to rationalize its international destinations under the hub concept (Centre for Asia Pacific Aviation March 6, 2006). Subsequently, MAS launched its own MAS Overall Strategic Alliance Integration Concept (Project MOSIAC) together with its Business Turnaround Plan for the period 2006–2012. This is essentially a code share alliance with other airlines so as to expand MAS's network. Nevertheless, the airline industry is dominated by global alliances that have been formed since the early part of the nineties. As they are global in scope, these alliances are the most significant in terms of network expansion. Although it is possible to establish various partnerships with individual airlines across different global alliance groups, the number and extent of "side alliance deals" will decrease over time as the global reach of each alliance network improves (Oum 2001).

In 2000, Oum reported that five alliance groups accounted for 57% of the world's total revenue passengers kilometers (RPK), a widely used measure of airline industry output (Table 9). Other indicators such as global passenger shares and operating revenue shares also show the substantial shares accruing to global alliance groups. This concentration of RPK, global passengers, and operating revenues in the hands of global alliance groups has grown over time when the 2000 data is compared with the 2007 data. By 2007, the share of RPK in the hands of the top three alliance groups (Star Alliance, Oneworld, and Skyteam) amounted to 59.1% while the share of global passengers and operating revenue controlled by them are 63.8% and 67.4%, respectively. This shows clearly that the market is getting more and more concentrated. Within ASEAN, both Thai Airlines and Singapore Airlines are members of the leading alliance group, the Star Alliance.

Table 9: Global Alliance Group Market Shares, 2000 and 2007 (%)

Alliance	Revenue Passenger Kilometers		Global Passenger Shares		Operating Revenue Shares	
	2000	2007	2000	2007	2000	2007
Star Alliance	21.3	26.1	18.8	25.1	20.9	27.2
Oneworld	16.4	20.7	12.8	17.9	15.0	20.0
Air France/Delta, Wings and Qualifyer	19.5	n.a.	17.6	n.a.	17.6	n.a.
Skyteam	Just formed	22.3	Just formed	20.8	Just formed	20.2
Others	42.8	30.9	50.8	36.2	46.5	32.6

Sources: Oum 2001 and Star Alliance 2007 (<http://www.staralliance.com> Accessed 23 May 2007).

Global alliances can also contribute to productivity enhancement, competitive pricing and profitability of its partners as alliance partners generally increase traffic routing via their intercontinental alliance gateway airports after the strategic alliances (Oum 2001). Bowen (2000) also showed that an airline that is more successful in forming alliances will draw more traffic feed from around the world to its primary hub.

Given the trend shown in Table 8 and the generally positive impact of alliances on the performance of the airlines, it is imperative for MAS to join a global alliance to improve its market feed.

B. Accelerating the Construction of the New LCCT Terminal at KLIA

Air Asia is well placed to gain from the liberalization, as it is the biggest LCC in Southeast Asia, measured by fleet size. It has already established a strong ASEAN presence with bases in Thailand and Indonesia as well as one planned for Viet Nam. Since Thai Air Asia and Indonesia Air Asia are slotted to be the designated airlines of Thailand and Indonesia, Air Asia is in a vantage position to gain from Open Sky in ASEAN. Moreover, it is pressing

ahead with an ambitious expansion program with the introduction of new destinations that include Hong Kong and southern India by the end of the year.

Despite this advantage, Air Asia is facing congestion in its current LCCT and the planned new LCCT needs to be accelerated to avoid retarding the airline from taking advantage of the Open Sky opportunities. Air Asia's CEO has in fact listed infrastructure support as the biggest challenge for managing the aviation industry in 2008 instead rather than the high oil price or the possibility of over capacity with the proliferation of LCCs.

C. Reviewing the Policy to Establish a Regional Cargo Hub at Senai

While it has been reported that that as much as 25–30% of airfreight throughput is channeled through Singapore (Malaysia 2006b), this does not imply that it is necessary to set up a separate air freight airport at Senai to stop the leakage. First, it is not necessarily the distance to KLIA that is the cause of the leakage. INTEL, which is producing in the north of Malaysia, reported that some of their chips are exported through Singapore due to the flexibility of flight connectivity (Tham et al. 2007).

Second, the electronics hubs in Malaysia are in Penang in the north and the Klang Valley in the central part of Malaysia and not in the southern state of Johor where Senai is located. Given the importance of time in the delivery cycle of these goods, E&E goods are exported mainly through the Penang airport and KLIA.

Third, there is unutilized capacity as well as room to expand the capacity at KLIA. In 2007, the number of passengers per annum at the main terminal was 19 million while the LCCT contributed another 7.7 million (Interview MOT 23 May 2008). Since the capacity of the main terminal is 25 million ppa, there is still excess capacity at the main terminal. Similarly, there is excess capacity in cargo as KLIA handled a total of 672,888 tons of cargo in 2006, which is well below its capacity of 1.2 million tons a year.

Fourth, although the air transport industry serves two heterogeneous markets, namely freighters and passengers, it uses the same technology for both. Moreover, most airlines carry both passengers and cargo. It is therefore better to focus on the development of KLIA as the regional hub for both passengers and cargo as airlines serve these two types of customers. Dedicated air freighter airlines can also utilize the facilities that have been developed to serve both passengers and cargo transactions.

Lastly, maintaining Senai as a good secondary airport due to its proximity to Singapore may be a better strategy than changing its status, as this would complement Changi's development.

D. Developing a Distinctive Product Appeal for Tourism

Within ASEAN, Thailand is the acknowledged leader for long-haul tourists from Europe and North America. Both Singapore and Thailand have been able to tap into the tourist market through different strategies. Thailand, for example, offers diverse tourist attractions while Singapore, despite lacking many natural tourism products, has managed to sell itself as the gateway to nearby tourist destinations of the region as well as through its theme parks (Bowen 2000).

Malaysia has not been able to tap extensively into the long-haul visitors market from outside ASEAN, despite sharing many similar tourism features with Thailand such as sun and surf tourism, eco-tourism, heritage tourism as well as medical and health and well-being tourism. The industry is still very much in its infancy since its contribution to GDP growth is only approximately 7.2%, implying that there is much scope for further growth. For example, although Malaysia was ranked below Singapore but above Thailand in the Travel and

Tourism Competitiveness index for 2008,¹² 74.5% of its tourist arrivals in 2007 are from ASEAN countries, with Singapore contributing as much as 67% of the ASEAN arrivals (Ministry of Tourism undated). As noted by the World Travel and Tourism Council (2001), the main problem with Malaysia's tourism lies in its image and the development of a distinctive product appeal that will enable it to distinguish itself from its competitors within Southeast Asia. Even its current tag line, "Malaysia—Truly Asia" differentiates itself too little from its competitors in the region, namely Singapore's "New Asia" and Indonesia's "Endless Beauty of Diversity."

E. Realizing the ASEAN Community

As noted by Chin (1997), unlike London–Paris–Amsterdam, which are gateways to a large hinterland and great concentration of population and activities, Southeast Asia is both fragmented and insular. At the same time, the rapid development of major international airports such as Suvarnabhumi, Changi and KLIA within relatively short distances, through heavy investment in infrastructure, has raised concerns as to whether supply will outstrip demand, leading to underutilization of some of these airports.

While the liberalization of the transport sector will undoubtedly help to facilitate the movement of goods and services within ASEAN, an increase in demand will be greatly assisted by the early realization of the ASEAN Community. This includes not just the initiatives taken to liberalize the transportation sector, including air transport but also the whole gamut of policies and initiatives that have been postulated for the realization of the ASEAN Community. Although ASEAN has made great efforts to liberalize trade under the ASEAN Free Trade Agreement (AFTA) as witnessed by the reduction in tariffs among member countries, progress on liberalization of the services sector is still slow. Despite five rounds of negotiations to liberalize the services sector since 1995, substantial barriers continue to limit the regional integration of this sector within ASEAN. Clearly, greater political will is needed for the realization of the ASEAN community. At the same time, the arrival of an ASEAN community will allow the region to tap into its extra-regional ties, leading to the possibility of the East Asian community, with ASEAN as the driver.

VI. CONCLUSION

ASEAN countries have adopted a policy of moving toward open skies in recognition of the important role played by transportation and in particular the aviation sector in linking these mostly export-oriented economies with the global economy. Given the region's history of planned development and cautious approach toward liberalization, it is not surprising that this liberalization is staged over several years with 2015 as the deadline for the attainment of open skies in ASEAN.

Is Malaysia poised to gain from open skies in ASEAN? The review of infrastructure development in this paper shows that Malaysia has invested substantially in overall infrastructure development, including airports, in its pursuit of economic development. This overall focus on total infrastructure development places Malaysia well ahead of most of its regional neighbors in the competitive ladder, with the exception of Singapore. While investment in infrastructure also aids in the development of KLIA as a regional hub, other member countries within ASEAN, notably Singapore and Thailand, have also followed a similar investment-intensive strategy to develop their international airports, namely Changi and Suvarnabhumi, as regional hubs.

¹² Singapore, Malaysia, and Thailand were ranked 16, 32 and 42, respectively, out of a total of 130 countries worldwide. See www.weforum.org Travel and Tourism Competitiveness Report 2008. Accessed 29 May 2008.

However, privatization of MAS has not yielded the textbook benefits of greater efficiency and competitiveness. Instead the huge losses sustained during its foray into privatized hands have caused the government to resort toward re-nationalization and a renewed effort to improve the competitiveness of the national carrier. The opening of a LCC in the country has forced MAS to be more competitive. Similarly, the liberalization of the lucrative Kuala Lumpur–Singapore route will also continue to increase the competitive pressures on MAS. Although the new management has managed to turn MAS operations back to profitability, it has still a long way to go in terms of competing against other national carriers such as Singapore Airlines and Thai Airways as these two airlines have formed an alliance with the leading global airlines alliance group in the world.

Nevertheless, the dream of turning KLIA into a regional hub is not infeasible despite the existence of two formidable hubs within ASEAN as KLIA is improving in its performance. There are also examples of multi-hubs in other regions such as the Tokyo, Seoul, and Hong Kong hubs in Northeast Asia. In order to realize this dream, several measures are recommended.

First, it is imperative for the national carrier, MAS, to join a strategic global alliance group to improve its traffic feed. Second, the construction of a new LCCT at KLIA needs to be accelerated as Air Asia is in a vantage position to gain from the increased opportunities provided by the ASEAN Open Sky agreement. It will also require the government to review its strategy to build a regional cargo hub at Senai. Instead, it should refocus on the development of KLIA as a regional hub for both passenger and cargo traffic. However, although infrastructure investment is important, it is not sufficient to guarantee the realization of KLIA as a regional hub. Concurrently, the promotion of tourism in the country, especially to non-ASEAN countries has to focus on a distinctive product appeal that will enable it to differentiate its tourism products from those of regional competitors.

Ultimately, it is not just the liberalization of the aviation sector alone that is needed for the development of KLIA as a regional hub. Instead the jockeying for regional hub status from KLIA against established hubs in Singapore and Bangkok and the increase in supply in each of these airports implies a greater need than ever for an integrated ASEAN market and this can only come about with the realization of the ASEAN community. Malaysia's dependence on the external economy and its relatively small domestic economy (26 million in 2006) as compared to some of its ASEAN neighbors such as Indonesia and Thailand makes it even more dependent on the region for scale economies than others. Consequently for Malaysia, it is the realization of the ASEAN Community that is of primary importance for its economic growth and for the attainment of its goal to be a regional hub for passenger and cargo traffic.

APPENDIX 1: SPECIFIC INCENTIVES AND FUNDS FOR THE TOURISM SECTOR IN MALAYSIA

1. Tour operators who bring in at least 500 foreign tourists in the assessed year through group inclusive tours certified by the Ministry of Tourism are also exempted from tax on income earned from the business of operating tours. The tour operators need to be licensed under the Tourism Industry Act 1992;
2. Double deduction for expenditure incurred by hotels and tour operators for overseas promotion is another incentive provided for this industry;
3. Double tax deduction is also allowed for expenses incurred in training of hotel staff and tour operators to upgrade their skills levels, as approved by the Tourism Ministry;
4. Organizers of international trade exhibitions/conferences in Malaysia are also eligible for tax exemption on income earned from organizing international exhibitions that are approved by MATRADE and the organizers of the international exhibition have to bring in at least 500 foreign trade visitors per event;
5. Apart from preferred tourist goods that are exempted from import duties, import duty exemptions are also granted to branded ready-made clothes and leather goods with an import value of not less than RM200 per unit;
6. Service tax exemption is granted to two-star hotels and those of a lower category that have at least 20 rooms except for hotels in Penang, Johor Baru and Kuala Lumpur that should have at least 50 rooms;
7. Two special funds, namely the Special Fund for Tourism and Infrastructure, were launched in 2002 in order to stimulate private investment, and the upgrading of tourism products.

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