



STRATEGIC & COMMERCIAL INTELLIGENCE

A guide to airports in Asia Pacific

INFRASTRUCTURE

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Executive summary

Interest in Asia Pacific airports is growing, as more travel means more money flowing throughout the aviation industry. There are many attractive investment prospects around the region, but each is guided by its own set of economic and demographic conditions. Unlike the recent spate of investments in mature airports in the Western hemisphere, investment in emerging market airports is driven by the need for capital to help improve facilities, operations and security.

The countries and territories that feature in this publication are home to over 3 billion people¹, but air travel in Asia Pacific still has considerable room to grow. The advent of low-cost carriers in tandem with rising wealth means that air travel is becoming accessible to a mass market as never before.

As a result, much of the current growth is being driven by domestic or intra-regional activity.

The degree of airport development varies significantly across Asia Pacific. Airports may be broadly classified into three tiers:

- Leading the way are those airports that are generally considered to offer world class facilities and services. These include Hong Kong, Singapore, Tokyo Narita, Seoul Incheon and Sydney international airports. Revenue streams tend to be highly diversified, reducing reliance on aircraft landing and parking fees, and in general exceed USD 500 million per year.
- Shanghai Pudong, Bangkok and Kuala Lumpur are examples of airports which have recently upgraded or are planning to upgrade their facilities, focusing especially on their retail and entertainment propositions. Alliances with foreign or private operators have been sought for their commercial and operational expertise.
- Also offering possible investment opportunities going forward are the relatively less-developed airports of India, Indonesia, Vietnam and the Philippines. Many of these are suffering from either under- or overcapacity. The multitude of small under-utilised regional airports, in India and Indonesia in particular, show potential for consolidation. Significant investment potential exists to improve facilities and diversify revenues.

¹ UNESCAP Population Data Sheets, 2006

The challenges: Deregulation, modernisation and diversification

The recent airport-related transactions elsewhere in the world may be an indicator of what lies ahead for Asia Pacific. Several Asian airport operators have entered alliances with foreign operators, while still raising funds on capital markets as well as from private investors.

The advent of infrastructure funds, private equity and alternative investment vehicles have all helped to make infrastructure a more attractive destination for capital.

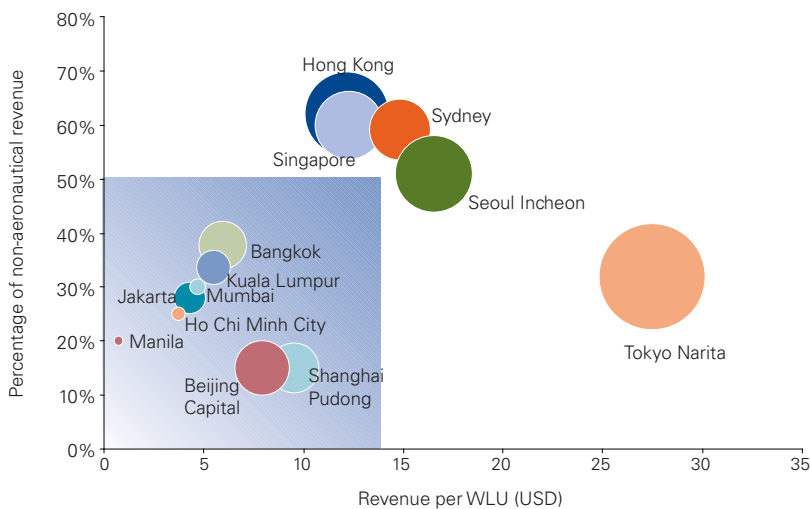
Airports in Asia can evolve to become much more than mere transport utilities, providing space and opportunity for retail, entertainment, logistics and conference facilities. In fact, for some of the more advanced airports in the region such as Hong Kong and Singapore, air terminal services have already dropped to less than 40 percent of their revenue.²

China, for instance, is encouraging private investment in its larger airports to boost the quality of buildings and operations. The imminent signing by the Association of Southeast Asian Nations (ASEAN) of a region-wide "Open Sky" agreement, scheduled for implementation in 2008, will further encourage airport development in anticipation of increased flights between ASEAN nations.

Low-cost carriers are a relatively late entrant to Asia, but the likes of AirAsia, Jetstar and Tiger Airways are rapidly altering the travel patterns of budget-conscious travellers, and airports are now adjusting to this trend. Both Singapore and Kuala Lumpur airports have recently opened purpose-built budget terminals to serve the burgeoning low-cost air travel segment. At the other end of the spectrum, some airports have announced plans to expand facilities targeted at luxury or business travellers, in the footsteps of Singapore's five-star JetQuay service.

The other side of the growth story concerns air freight. Volumes are escalating across the region, with some airports struggling to cope with demand. The attractive low-cost manufacturing options available in many Asian countries, as well as unprecedented demand for imported foreign goods, are causing bottlenecks in air cargo transport operations. Some countries are also disadvantaged by poor domestic distribution networks and infrastructure. Global logistics giants UPS, DHL, TNT and FedEx have established distribution hubs at major regional airports, but are still developing their network in many countries, most notably China.

Selected Asia Pacific airports, relative positioning, 2005



Note: (a) Bubble size indicates relative airport revenue

(b) Work Load Unit (WLU) is a measure of combined airport throughput; 1 passenger equals 1 WLU, and 100kg of cargo equals 1 WLU

Source: KPMG Analysis based on airport Web sites, annual reports, and national aviation statistics

² Hong Kong Airport Authority, Civil Aviation Authority of Singapore, KPMG Analysis

The world's largest airports by passenger and cargo volumes, 2005				
Passenger volumes		Cargo traffic (tonnes)		
1	Atlanta (ATL)	85 907 423	1 Memphis (MEM)	3 598 500
2	Chicago O'Hare (ORD)	76 510 003	2 Hong Kong (HKG)	3 433 349
3	London Heathrow (LHR)	67 915 403	3 Anchorage (ANC)	2 553 937
4	Tokyo Haneda (HND)	63 282 219	4 Tokyo Narita (NRT)	2 291 073
5	Los Angeles (LAX)	61 489 398	5 Seoul (ICN)	2 150 140
6	Dallas /Fort Worth (DFW)	59 176 265	6 Paris, Charles De Gaulle (CDG)	2 010 361
7	Paris, Charles De Gaulle (CDG)	53 798 308	7 Frankfurt-Main (FRA)	1 962 927
8	Frankfurt-Main (FRA)	52 219 412	8 Los Angeles (LAX)	1 938 430
9	Amsterdam, Schiphol (AMS)	44 163 098	9 Shanghai (PVG)	1 856 655
10	Las Vegas (LAS)	43 989 982	10 Singapore (SIN)	1 854 610
11	Denver (DEN)	43 387 513	11 Louisville (SDF)	1 815 155
12	Madrid (MAD)	41 940 059	12 Miami (MIA)	1 754 633
13	New York (JFK)	41 885 104	13 Taipei (TPE)	1 705 318
14	Phoenix (PHX)	41 213 754	14 New York (JFK)	1 660 717
15	Beijing (PEK)	41 004 008	15 Chicago O'Hare (ORD)	1 546 153
16	Hong Kong (HKG)	40 269 847	16 Amsterdam, Schiphol (AMS)	1 495 919
17	Houston (IAH)	39 684 640	17 London Heathrow (LHR)	1 389 589
18	Bangkok (BKK)	38 985 043	18 Dubai (DXB)	1 314 906
19	Minneapolis/St Paul (MSP)	37 604 373	19 Bangkok (BKK)	1 140 836
20	Detroit (DTW)	36 389 294	20 Indianapolis (IND)	985 457
21	Orlando (MCO)	34 128 048	21 Newark (EWR)	949 933
22	Newark (EWR)	33 999 990	22 Osaka (KIX)	869 474
23	San Francisco (SFO)	32 802 363	23 Tokyo Haneda (HND)	799 073
24	London Gatwick (LGW)	32 784 330	24 Beijing (PEK)	782 066
25	Singapore (SIN)	32 430 856	25 Atlanta (ATL)	767 897
26	Philadelphia (PHL)	31 495 385	26 Guangzhou (CAN)	750 555
27	Tokyo Narita (NRT)	31 451 274	27 Luxembourg (LUX)	742 766
28	Miami (MIA)	31 008 453	28 Dallas /Fort Worth (DFW)	741 805
29	Toronto (YYZ)	29 914 750	29 Oakland (OAK)	672 844
30	Seattle (SEA)	29 289 026	30 Brussels (BRU)	660 854

Source: Airports Council International (ACI), based on Airports participating in ACI annual traffic statistics collection.



Australia

After a decade-long privatisation process, public attention is turning to the substantial increases in revenue commanded by several Australian airports. In March 2006 the federal government launched an enquiry into airport pricing. The outcome of this enquiry will influence the extent of opportunities for investment in the coming decade.

Between 1994 and 2003, 22 of Australia's largest airports were privatised. The federal government assigned these assets to private ownership using long-term leases, but retained some involvement in their operations under the conditions of the 1996 Airports Act. The government raised some USD 6.5 billion from the process.³

Since July 2002, the pricing and profits of the seven state capital airports (Sydney, Melbourne, Adelaide, Perth, Darwin, Brisbane and Canberra) has been monitored

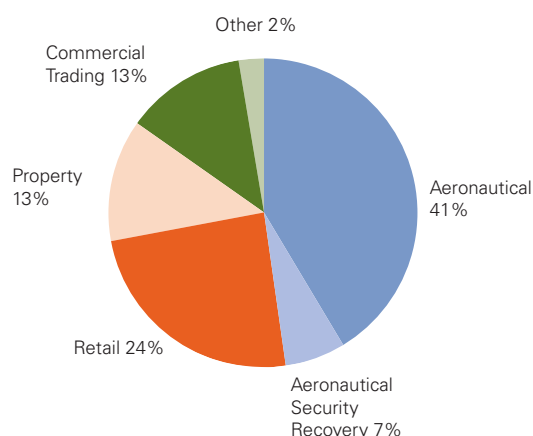
by the Australian Competition and Consumer Commission (ACCC). It has described its regulatory framework as "light-handed," claiming it serves only to discourage airport operators from providing unsatisfactory standards or charging unreasonable fees for services. The ACCC does not, for example, examine non-aeronautical revenues. Property from retail, property management, advertising and parking provide significant additional revenue streams for all Australia's large airports.

³ The Auditor-General, Audit Report No.50 2003 - 04, "Management of Federal Airport Leases"

A decade after the privatisation, the extent to which this sale has facilitated competition in the airports sector is being keenly debated. Critics believe the regulation may need to become more heavy-handed, in order to prevent airport management companies reaping excessive profits. Others point out that the relative geographical isolation of Australia's cities makes it impractical for them to compete directly.

The ownership and operation of airports is therefore a sensitive subject in a country where such a high proportion of the population rely on air travel. A report in the Sydney Morning Herald in February 2006 suggested that aeronautical revenue generated by price-monitored airports had increased 68 percent to over USD 500 million between FY2001-02 to 2004-05.⁴ It calculated that net profits on a per-head basis had also risen substantially. The greatest increase was at Sydney airport, where the average profit rose by 35 percent to approximately USD 13.50 per passenger.

Indicative revenue for Australian airports by category, 2005



Source: Southern Cross Airport Holdings, "Annual Report", 2005-2006

Sydney airport had already come under scrutiny in December 2005, after an Australian Competition Tribunal hearing upheld a complaint by airline Virgin Blue claiming it had abused its monopoly position when negotiating airside charges.

Growth and differentiation

The aviation industry has suffered from a number of setbacks, both domestic and international, over the past decade, but this has not prevented overall growth in traffic. Passenger activity across all Australian airports grew at a compound annual growth rate of 4.8 percent between 1995 and 2005. Air freight volumes grew less quickly, at a compound rate of 2.6 percent over the same period.

Australia's largest four airports, namely Sydney, Melbourne, Brisbane and Perth, facilitate 70 percent of the country's airport traffic.⁵ All have different key strengths to differentiate their position in the market:

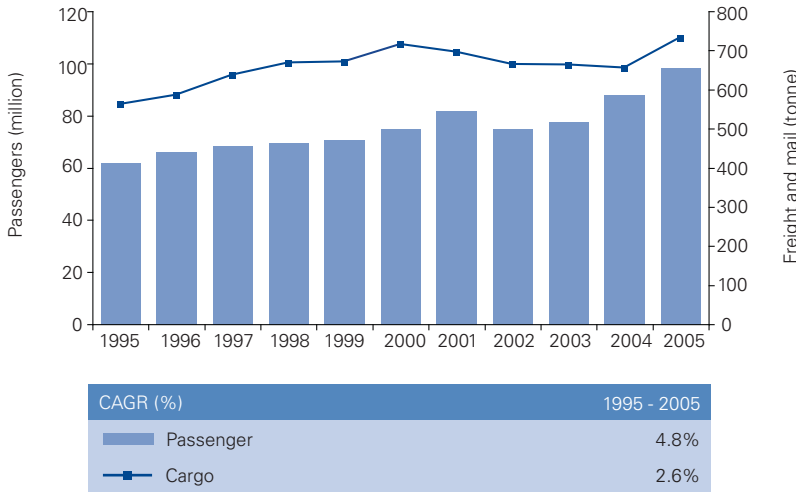
- While Sydney's service and infrastructure are considered among the best in Asia Pacific, this comes at a price, with its fees being the highest.
- Melbourne Airport ranks less highly on its service levels but is a frontrunner in environmental management and enjoys a strong affiliation with Singapore Airlines.
- Brisbane is benefiting from growing tourism volumes and also has the capability to grow its freight services.
- Perth is taking advantage of its lower charges and its relative proximity to Asia and Europe.

Among these top four airports, Melbourne faces some domestic competition from Avalon airport, while Brisbane faces competition from the Gold Coast and Sunshine airports.

⁴ "The Cash Cow," Sydney Morning Herald, 6 February 2006

⁵ Bureau of Transport Regional Economics Statistics; Airport Traffic Data, 1994-95 to 2004-05

Volume of passengers and air cargo for Australian airports, 1995 - 2005



Source: Australian Government, Aviation Statistics - Airport Traffic Data 1994-95 to 2004-05; KPMG analysis

Outlook from the Outback

Tourism is predicted to be the biggest factor driving growth of Australia’s airports. The country is anticipating steady growth in inbound tourism from Asia, while the emergence of low cost carriers has helped to stimulate growth in domestic travel and has the potential to encourage expansion and commercialisation of smaller airports. These low cost carriers include Virgin Blue (owned by Virgin of the UK), and Jetstar (an offshoot of the leading Australian carrier, Qantas).

Freight traffic is expected to remain confined to the main four airports, and may continue to grow more slowly than the level globally.

The government is under pressure from neighbouring countries to improve its restrictive airspace regulations. These include restrictions on night flying and policies preventing foreign involvement in traffic control and airspace management.





China has two of the largest airports in the world in terms of passenger volumes, and the country is aiming to develop a clear network of hubs for cargo transport. The government permits foreign investment in airports with stakes of up to 49 percent, while the Civil Aviation Authority of China (CAAC) continues to administer aviation fees and handle air traffic control issues.

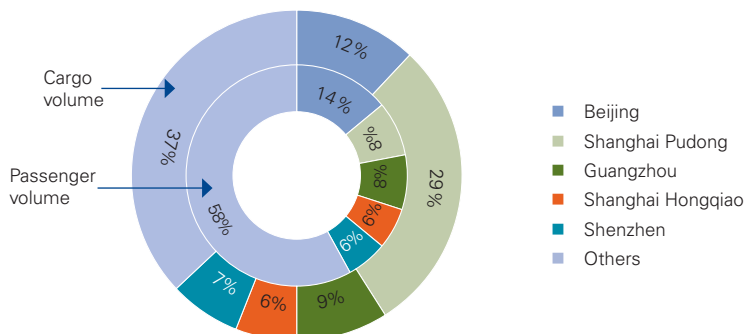
As China's middle class has grown, the country has witnessed a steady increase in air travel, both for business and leisure. The number of international tourism departures from mainland Chinese airports is on track to exceed 40 million in 2006. This represents a four-fold increase in outbound travel since 2000.⁶ Disposable income and an increased desire to travel are resulting in ever greater volumes of air traffic in the skies above China.

As a projection of current growth rates, international departures will overtake tourist arrival numbers in 2008. As the growth continues, the recent signs of overcapacity at certain airports could prove to be short-lived. Indeed, the recent expansions and redevelopments of some of China's largest airports may only be a foretaste of what is to come. Volumes, on a per capita basis, are still relatively low. A citizen in the United States makes an average of 2.2 trips by plane every year, but the figure is just 0.3 for China.⁷

⁶ "China, travel and tourism background and forecast - International arrivals and departures," EIU Business Asia, October 2005

⁷ Airbus Press Centre; Global Market Forecast 2004-2023

Market share of major airports in China, 2005



Source: China Airport Statistical Report 2005



China currently has 142 civilian airports. The market is skewed towards the largest 10 airports, which together possess a 60 percent share of passenger volumes. Seven of these are located along the eastern seaboard. The pattern is similar for cargo, with the five leading airports accounting for 64 percent of total volumes.⁸

Beijing Capital International Airport is the largest airport in China in terms of passenger volume. It is majority-owned by Capital Airports Holding Company, which is under the direct management of CAAC. In turn it controls or holds stakes in over 20 other Chinese airports. Shanghai is the only city in China with two airports: Pudong International Airport and Hongqiao International Airport. Shanghai Pudong ranked number one in China for cargo volume in 2005. The airports of Guangzhou, Shenzhen, Hainan Meilan and Xiamen are also listed with minority stakes in public hands.

China's middle class make their mark

Until recently, the majority of Chinese travellers did so for business purpose. However this has changed dramatically in recent years, as travel for private purposes has soared to 70 percent of all traffic. Tourism has now emerged as an important category of personal expenditure in China.

While international departures originating within China are growing faster than inbound travel, China's own tourism potential is also impressive. In 2004 China overtook Italy to become the world's fourth-largest international tourist destination, according to the World Tourism Association.⁹ International travel is a key revenue driver for major airports. International tourists to China totalled 120 million in 2005 and are expected to reach 177 million by the end of the decade, spurred by major events such as the 2008 Olympic Games and the 2010 Shanghai Expo.

⁸ CAAC official statistics, 2005

⁹ World Tourism Association Statistics; www.world-tourism.org



China's manufacturing sector, and the growth of domestic consumer markets, have helped to bring about similar growth in air cargo volumes and capacity. Freight tonnes surged 15 percent in 2005, to over 6.3 million tonnes. CAAC believes cargo throughput could exceed 10 million tonnes by 2010, representing growth at rates faster than that of passenger traffic.¹⁰

Opportunities for investment

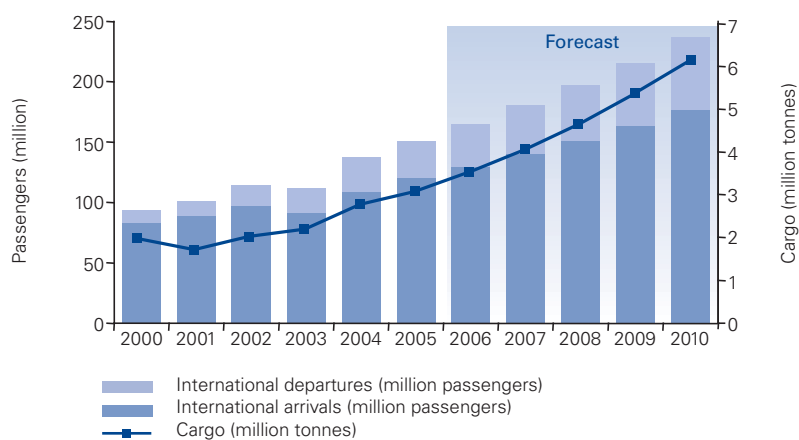
Aeronautical fees represent the dominant revenue component for most Chinese airports. Foreign and private investors have an opportunity to help these airports develop new revenue

streams from ancillary and commercial activities. In many cases the need for such assistance has become more pressing as the government has phased out subsidies for regional airports and decentralised their administration into the hands of local CAAC offices.

Foreign investment restrictions apply to a number of areas associated with the aviation sector. As a result, a company may have to extract certain units or commercial activities from a target entity before its investment can be cleared by the government. Aside from air traffic control, restricted areas include duty free outlets (these outlets are supervised and regulated by the China Duty Free Corporation, a state owned enterprise) and ownership of related real estate.

Although further deregulation of the aviation industry may occur slowly, there have been several other positive developments. In 2004 the government granted "Fifth Freedom Rights" to Hainan Island in 2004, allowing foreign airlines to stop over and pick up passengers and cargo. This could allow the island to take advantage of the budget airline sector now emerging in Hong Kong and Southeast Asia. The government has also announced it will provide unlimited access to foreign carriers in other southern and western provinces such as Sichuan, Yunnan, Guizhou, Guangxi and Tibet.

Passenger and cargo volume for airports in China, 2000 - 2010



CAGR (%)	2000 - 2005	2005 - 2010
Passenger	15%	15%
Cargo	9%	15%

Sources: (1) China Statistical Yearbook 2001-2005
 (2) China Airport Statistical Report 2005
 (3) Eleventh five-year-plan of China Tourism Industry (2006-2010)

¹⁰ Eleventh Five Year Plan of China Civil Aviation Authority, 2006 - 2010



Demand for outbound air travel is sustained by Hong Kong's relatively affluent population, and business travel to the mainland and around the region. The number of outbound air passengers should remain steady as Hong Kong residents continue to travel abroad for business and leisure. Hong Kong International Airport handles over three million tonnes of cargo each year, the second highest cargo throughput in the world.¹¹

Ranked the second busiest cargo airport in the world, Hong Kong International Airport (HKIA) at Chek Lap Kok handles over 40 million passengers and 3 million tonnes of cargo each year.¹² It is owned and operated by the Airport Authority, a statutory corporation established by the Hong Kong government.

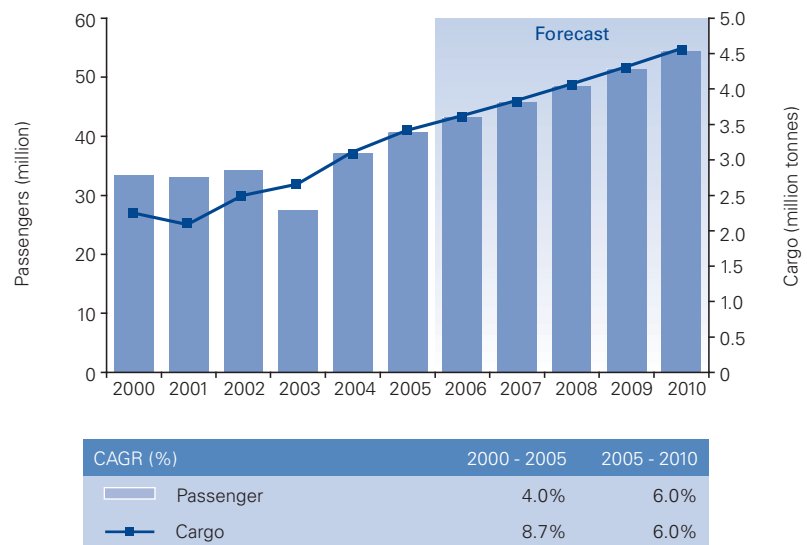
Since its official opening in 1998, passenger numbers going through HKIA have grown at a compound annual growth rate of 4 percent, to reach 40 million in 2005. Passenger volume was hit hard by the Severe



¹¹ Airports Council International website; www.airports.org

¹² Airport Authority Hong Kong website; www.hongkongairport.com

Hong Kong International Airport passenger and cargo volumes, 2000 - 2010



Source: Airport Authority website, 2006
Hong Kong International Airport Master Plan 2020

Acute Respiratory Syndrome (SARS) epidemic in 2003, dropping by 20 percent in that year, but recovered strongly in 2004. Air cargo volumes were not significantly affected by SARS, but registered a 7 percent dip during the 2001 recession. As with passenger numbers, cargo volumes recovered to previous levels quickly the following year.

HKIA has extended its revenues beyond airport terminal services. Only 38 percent¹³ of its revenues are generated from aircraft landing and parking fees; the bulk of the balance is made up of fees from retail licences and airside support service franchises. The airport made a USD 546 million operating profit, at a margin of over 60 percent, in its 2006 financial year.

Passenger and cargo volumes are expected to grow steadily at between 4 and 6 percent annually for the next five years. In its 2001 Master Plan, the Airport Authority set out its projected 2010 passenger and cargo volumes at 54.5 million and 4.5 million tonnes¹⁴, respectively.

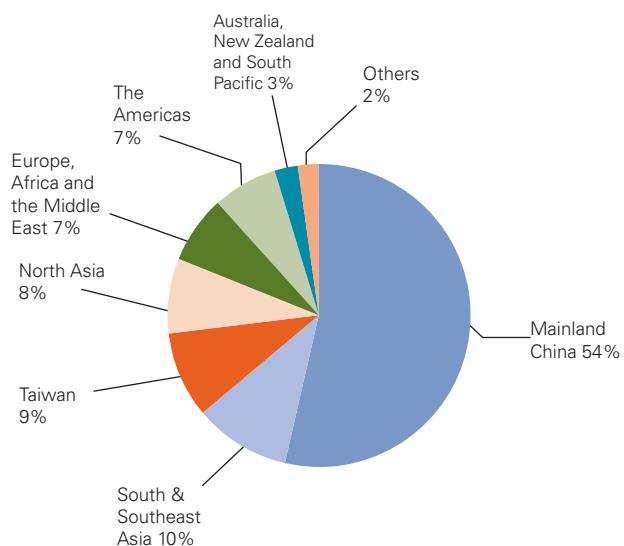
Hong Kong as a destination will continue to provide steady but modest growth, and inbound business travel will be driven by its status as a financial and commercial centre. Hong Kong competes with Singapore as a regional hub, but has the advantage of its proximity to mainland China.



¹³ Airport Authority Hong Kong Annual Report 2005-06

¹⁴ Hong Kong International Airport Master Plan 2020, October 2001

Profile of visitor arrivals to Hong Kong by region, 2005



Source: Census and Statistic Department, Hong Kong SAR Government

One of HKIA's objectives is to tap into the significant potential in the mainland Chinese air travel market. It is targeting Chinese passengers, cooperating with land and sea transport providers to make HKIA more accessible, especially to the Pearl River Delta region. Government-supported tourism initiatives have helped, for example by relaxing visa requirements.

Hong Kong's free port status holds a strong advantage in providing cargo services. The continuing relocation of manufacturing industries from Hong Kong to mainland China and other low-cost production centres in Asia has fostered the rapid growth in cargo volumes into and out of Hong Kong. However its position as a hub will rest on the continued high standards of its services and infrastructure, compared to lower cost airports on the Chinese mainland.

One example of this is express air cargo. Leading logistics and cargo service providers, including FedEx, DHL, TNT and UPS, have been actively expanding their express services in Hong Kong. Cathay Pacific is also planning to build and operate its own air cargo terminal at HKIA. The express cargo share of Hong Kong's total air cargo volume is forecast to increase to 13 percent over the next three to five years.¹⁵

HKIA is also investing heavily in becoming a destination in its own right, rather than just a travel facility. Plans are underway to open SkyPlaza, a massive retail, exhibition and entertainment complex which will form part of Terminal 2, scheduled to open in 2007-08. The addition of such facilities may open doors to further opportunities for private sector investment.

¹⁵ Hong Kong Trade Development Council; "Profiles of Hong Kong major service industries," August 2006



India

Privatisation or part-privatisation is already underway at Mumbai and Delhi international airports. It is on the agenda at many others including Chennai and Kolkata. An estimated USD 50 billion will be spent on aviation development over the next 10 or 15 years.

The government is keen to step up the privatisation of airports, which has had a slow start. To date, private investment consortia members include foreign airport operators from countries such as Malaysia and Singapore.

India is one of the fastest growing economies in Asia, recording annual growth of up to 8 percent per annum in recent years. Its international tourism industry also appears to be thriving. The country's airports, along with much of its other infrastructure, are now struggling to keep pace with this growth.

The state-managed structure

The Indian airport sector has historically suffered from underinvestment and undercapacity. Airports are almost exclusively state-managed, under the auspices of the Airports Authority of India (AAI). Many have facilities that struggle to cope during peak periods, and few are estimated to be turning a profit.

Around 15 percent of AAI's USD 612 million airport revenues is currently earned from non-aeronautical activities,¹⁶ and the AAI is keen to increase this ratio. A concerted effort will be made to woo concessionaires and brand-names to set up outlets in international airports.

¹⁶ Financial Express, "Duty free shops fail to woo flyers"; 7 October 2006

Of the airports managed by the AAI, 11 are international and 89 are domestic.¹⁷ The top four international airports – Mumbai, Delhi, Chennai and Kolkata – handled an aggregate 14 million passengers in 2005, over 70 percent of India's international passenger traffic. Mumbai's Chhatrapati Shivaji International Airport alone registered a passenger throughput of over 6 million.

Passenger volumes rising from a low base

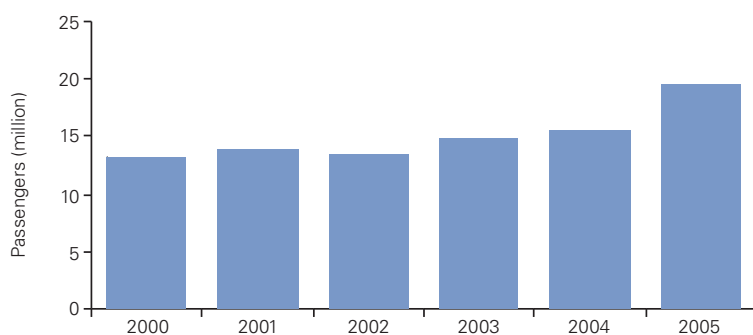
Passenger volume is growing fast, in both business and leisure travel segments. Foreign tourist arrivals in 2005 increased by 13 percent¹⁸, spurred by active support from the Ministry of Tourism in the form of the "Incredible India" campaign. This has helped to raise India's profile as a tourist destination, although it still lags behind other Asian countries. Fewer than four million foreign tourists visited India last year, compared to over 13 million in Malaysia and 10 million in Thailand.¹⁹

The number of Indians travelling to domestic and foreign destinations is also rising on the back of higher disposable incomes, and international tourism departures grew nearly 14 percent in 2005. Low cost airlines have helped to boost domestic air travel, encouraging people to switch from rail travel.

Economies with large Indian populations, such as the United Kingdom and United States, can also influence passenger volumes through Indian airports. Visiting family and friends is one of the key reasons for Indians to travel, whether at home or abroad.

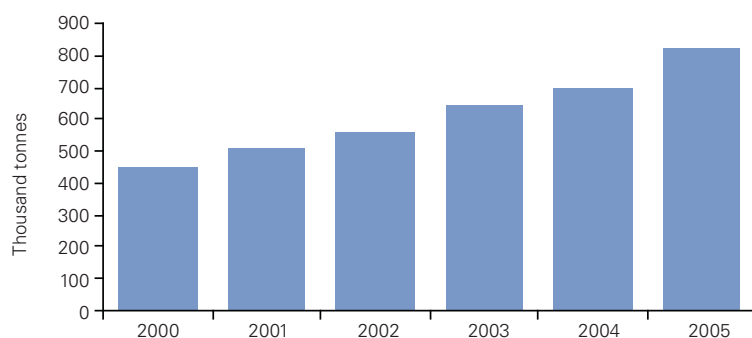
A stronger economy and foreign investment have also stepped up demand for air cargo services. Cargo volumes handled by India's airports have risen by a compound annual rate of 13 percent since 2000, reaching 0.8 million tonnes in 2005.²⁰ The AAI has taken steps to improve air freight capacity facilities in the major international airports. Additional steps have been taken to establish international cargo facilities at key domestic airports such as Nagpur and Guwahati.

International passenger volumes at Indian airports, 2000 - 2005



Source: Airports Authority of India, 2006

International cargo volumes at Indian airports, 2000 - 2005



Source: Airports Authority of India, 2006

¹⁷ Airports Authority of India

¹⁸ World Travel and Tourism Council

¹⁹ "India: Travel and Tourism Profile," EIU Industry Briefing, May 2006

²⁰ Airport Authority of India, 2006



Indonesia

Two state-owned airport operators dominate in the airport sector in Indonesia and account for over 90 percent of the total market revenue. Aeronautical revenue is the primary source of revenue at the largest airports, but the importance of non-aeronautical revenue is likely to increase.

Two state-owned airport operators, PT Angkasa Pura I (AP I) and PT Angkasa Pura II (AP II) manage the commercial activities of Indonesia's largest airports. The two companies accumulated revenues of USD 140 million and USD 181 million respectively in FY2003-2004, achieving compounded growth rates of 10 percent and 11 percent between 2002 and 2004. Some smaller airports are owned or operated separately, either directly by provincial governments, or through Technical Executive Units under the Ministry of Transportation.

By far Indonesia's largest airport is Soekarno-Hatta Airport, in the capital Jakarta. This airport accounted for 72

percent of AP II's passenger traffic in 2004.²¹ The next three largest airports are Ngurah Rai Airport in Bali, Polonia Airport in Medan and Juanda Airport in Surabaya. These four, along with Hasanuddin Airport in Makassar, have been identified by the state operators as having the best growth prospects.

Of the 25 airports in Indonesia which are classified as international airports, 21 are managed by either AP I or AP II. These two operators also manage several of the largest domestic airports including Adi Sutjipto Airport in Yogyakarta and Syamsuddin Noor Airport in Banjarmasin.

²¹ PT Angkasa Pura II Annual Report 2004

The business traveller remains important

One misconception is that tourism is the main growth driver for Indonesia's airport sector. While tourism is important to some of the larger airports, more than 50 percent of the visitors to Indonesia come for business purposes, most from neighbouring countries such as Singapore and Malaysia. Only 55 percent of the visitors travelled by air, with the remainder travelling by ferry to ports such as Bintan near Singapore and Medan in Sumatra.²²

Prospects for growth

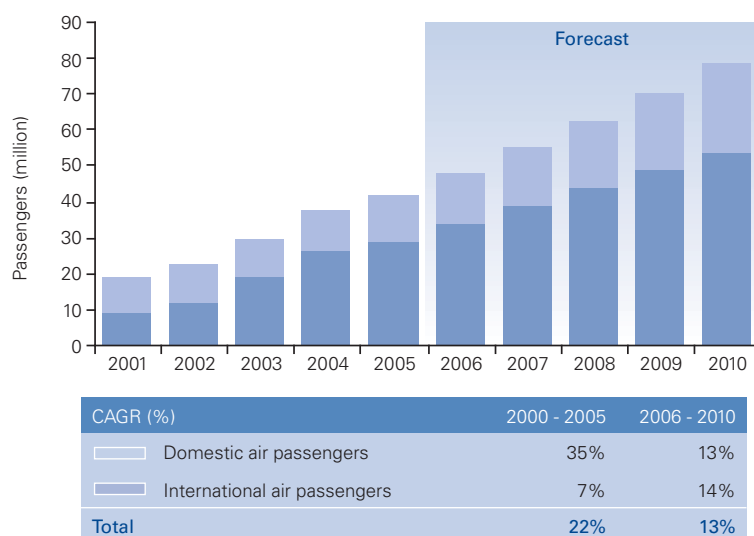
While airport operators gained more than 70 percent of their revenue from aeronautical fees between 2002 and 2004, they appear to recognise the need to diversify and improve alternative revenue streams. This is reflected in their plans for future airport development, which include more sophisticated retail facilities and improvements to supporting infrastructure.

As Indonesia has recovered from the financial crisis, domestic air passenger volumes have increased at a faster rate than international air passengers, rising from less than 50 percent to about 70 percent of total air passenger numbers between 2001 and 2005. Nevertheless a weak exchange rate and heavy airport departure tax has discouraged Indonesians from traveling internationally, especially given the relatively lower cost of traveling by air within the country.

Airlines have been opening new routes to Indonesia, a trend that may continue as new low-cost carriers emerge in the region. Leading this development is AirAsia, which plans to open two new routes from Johor in Malaysia to Surabaya and Medan. This process is being facilitated by the ASEAN "Open Sky" policy. This comes into effect in 2007 and calls for greater competition and access to airports among the region's airlines.

²² "Indonesia: Travel and Tourism Profile," EIU Industry Briefing, April 2006

Air passenger volumes for Indonesian airports, 2001 - 2010



Sources: Directorate General of Air Transportation official website at www.dephub.go.id, 2006



The size of Japan's outbound tourism industry far exceeds that of inbound tourism. Around 17 million Japanese travelled out of Japan in 2005, compared to under 6 million tourist arrivals.²³

Despite Japan's low population growth rate, there is significant scope for growth in the air travel industry as only 13 percent of the 127 million population travelled outside the country during 2005. Healthy demand for domestic travel is expected, as the population's wealth continues to increase despite a number of economic setbacks over the past decade. Passenger and cargo volumes are expected to grow at a compound annual rate of 4 percent for the next five years. Tour operators expect demand to grow between 2 and 3 percent annually. Inbound tourism has been given a boost by government support with an active "Visit Japan" campaign.

The Japanese technology industry contributes significantly to demand for air freight, aided by lower air transport costs. Around 30 percent of cargo is transported by air.²⁴ Imports and exports of scientific instruments and audio-visual equipment posted strong growth in 2005.

Japan's 96 airports accommodate 52 million international and 94 million domestic passengers annually.²⁵

The five major airports – Narita, Haneda, Kansai, Chubu and Osaka – are positioned as strategic hubs for international and domestic transport.

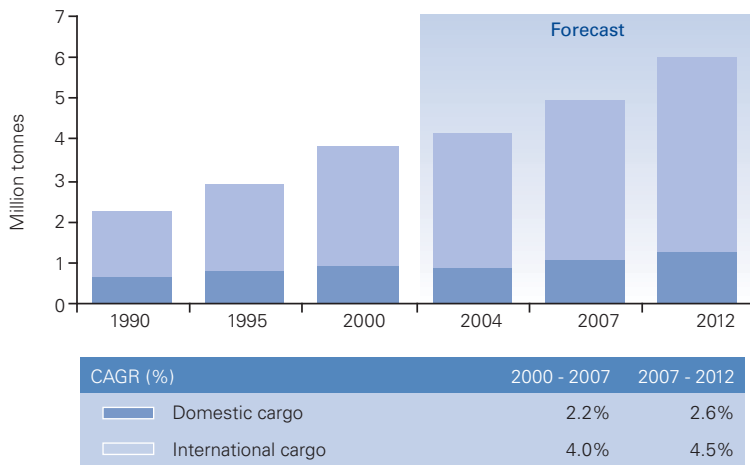
²³ Japan National Tourist Organisation

²⁴ Toyo Keizai magazine article, September 2005

²⁵ Japan Civil Aviation Bureau



Air cargo volumes for Japanese airports, 1990 - 2012



Source: (1) Civil Aviation Bureau, Forecast of Air Traffic, 2006
 (2) Ministry of Land, Infrastructure and Transport, 2005

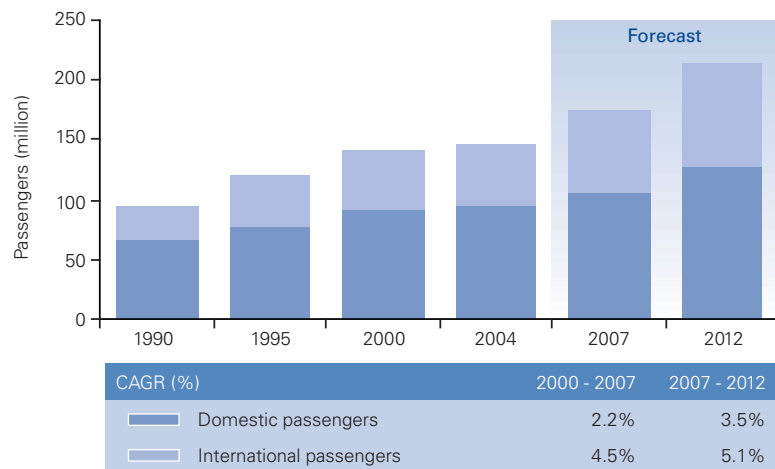
The vast majority of international travel by Japanese citizens is by air, but domestic travel is still dominated by rail and road transport.²⁶ Second- and third tier airports comprise major domestic airports and provincial airports, respectively. Japanese airports are predominantly state-owned and managed, with limited domestic private investment currently in place. However, there are longer term plans for privatisation, yielding possible investment opportunities in both the first and second tiers.

Tokyo's two airports – Narita and Haneda – dominate the air transport industry. Narita is used exclusively for international traffic, handling 32 million passengers in 2005. Some 2.2 million tonnes of cargo passed through Narita, making it the world's third busiest. Although Haneda is considered secondary to Narita because it is used mainly for domestic flights, its passenger throughput exceeded 63 million in 2005, the fourth highest globally.²⁷

²⁶ Japan Statistics Bureau
²⁷ Airports Council International; www.airports.org



Air passenger volumes for Japanese airports, 1990 - 2012



Source: (1) Civil Aviation Bureau, Forecast of Air Traffic, 2006
 (2) Ministry of Land, Infrastructure and Transport, 2005

Racing to modernise

Competition between major airports is heating up. Kansai International Airport, built on a man-made island off Osaka, is struggling to keep up with competition from Narita and Chubu. Newcomer Chubu International has eaten into Kansai's share of passengers in the south-west of Japan. Kansai is hopeful that more flights to China and a second runway scheduled for 2007 will shore up its passenger volumes from the 16 million it handled in 2005.²⁸

Narita has implemented a programme of upgrades and expansion to boost its appeal to international carriers and travellers. These measures include the construction of an additional runway, proposed reductions in landing fees and improved terminal buildings. A new rapid mass transit system to downtown Tokyo will improve access and reduce transfer times.

Haneda was Tokyo's first international airport, until Narita took over in the late

1970s. It now serves as a domestic hub, providing air links to 48 other domestic airports, and a limited number of international flights. Haneda also fulfils a ceremonial role in its use as a base for the arrival and departure of government officials and VIPs.

Chubu has been making waves since its opening in early 2005, capturing 12 million passengers in that year.²⁹ Situated near Nagoya, it benefited from the hosting of World Expo 2005 in Aichi prefecture. Chubu offers the cheapest landing fees among Class 1 airports: up to 30 percent less than Narita, and around 20 percent less than Kansai.³⁰ Chubu is also developing its non-aeronautical revenue streams, actively promoting its retail, dining and entertainment facilities.

Not to be outdone, second- and third tier domestic airports are also redeveloping their facilities, and several new domestic airports, including New North Kyushu, Kobe and Mount Fuji-Shizuoka have opened or are in the pipeline.

²⁸ Kansai International Airport traffic statistics

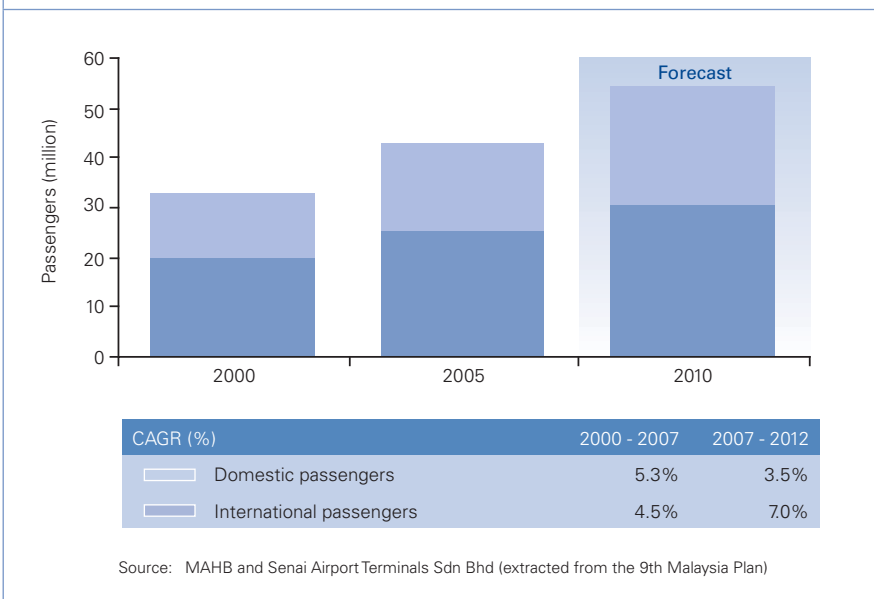
²⁹ Chubu International Airport traffic statistics

³⁰ EIU Viewswire, Japan Travel and Tourism; KPMG Analysis



The prospects for Malaysia’s airport sector will be shaped by the direction of the government’s liberalisation and rationalisation plans, as well as by growth in tourism and foreign investment. Kuala Lumpur International Airport (KLIA) faces much competition within the region to establish itself as a regional hub.

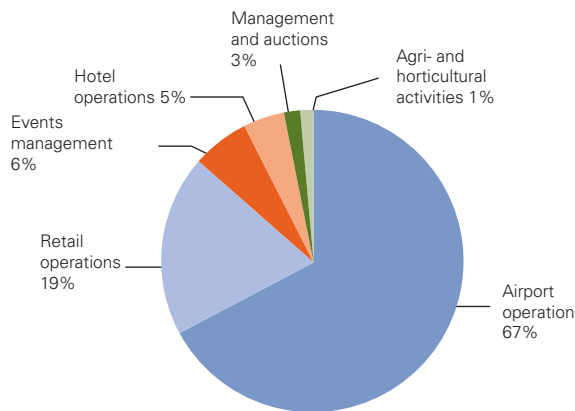
Air passenger volumes for Malaysian airports, 2000 - 2010



The Malaysian government forecasts that combined domestic and international passenger traffic at the country’s airports will grow by an average rate of 5.8 percent per annum over the coming four years, reaching 54.5 million passengers in 2010. Similarly, actual traffic volumes are projected to grow at an average rate of 5.8 percent per annum to 611,495 commercial aircrafts in 2010.

Cargo volumes through Malaysian airports will also grow strongly, driven in particular by rising intra-regional trade. Total volume is expected to

Profile of visitor arrivals to Malaysia by region, 2005



Source: MAHB Annual Report 2005

reach 1.5 million tonnes by 2010, based on a projected growth rate of over 9 percent per annum.³¹

Ownership structure

Malaysia Airport Holdings Berhad (MAHB), formerly known as Malaysia Airport Sdn Bhd (MASB), operates and manages Malaysia's main 19 airports and a further 17 short take off and landing (STOL) airports. MAHB listed on the Main Board of the Kuala Lumpur Stock Exchange in 2000. The Malaysian government, through its investment arm Khazanah, owns a 72.74 percent interest in MAHB, as of 30 June 2005.

KLIA was developed to replace Subang Airport as the main gateway to Malaysia. The licence to manage and operate KLIA was issued to Malaysia Airports (Sepang), a wholly owned subsidiary of MAHB in 1998. The licence was for a period of 50 years.

The government's Ninth Malaysia Plan indicates its support for reform within the domestic aviation industry. This could have implications for the national

carrier Malaysia Airlines, (MAS), the airports network and related services such as air traffic control.

The government has also made efforts to promote Malaysia as an aviation hub for the growing regional budget airlines sector. A new terminal at the KLIA opened in 2005, to service as a dedicated terminal for low-cost carriers (LCCs). Currently, this new terminal is used principally by AirAsia for its domestic and regional trunk routes.

AirAsia commenced operations in 2001 as the first domestic LCC operator in Malaysia. Since 2003, with the franchising of the AirAsia brand through Thai AirAsia, it has begun to build a more comprehensive pan-Asian network. Competition in Southeast Asia is intensifying as rivals are establishing new low-cost ventures. These changes could contribute positively to the revenue growth for Malaysian airports, and help MAHB to diversify those revenues away from its current mainstay, KLIA.

Steady revenue patterns

The majority of MAHB's revenues come from aeronautical operations, comprising landing, parking and handling fees, and related costs. In 2005 retail sales (including duty free retailing) accounted for 19 percent of revenue.³² The commendable financial performance of MAHB's airport operations in 2004 and 2005 were attributed to a recovery in aviation traffic following the SARS attack of 2003.

The relative breakdown between aeronautical operations and retail revenues has remained constant over the past decade, although fees from aeronautical operations have risen relatively faster since 2003.

³¹ MAHB and Senai Airport Terminals Services Sdn Bhd (extracted from Ninth Malaysia Plan; www.epu.jpm.my)

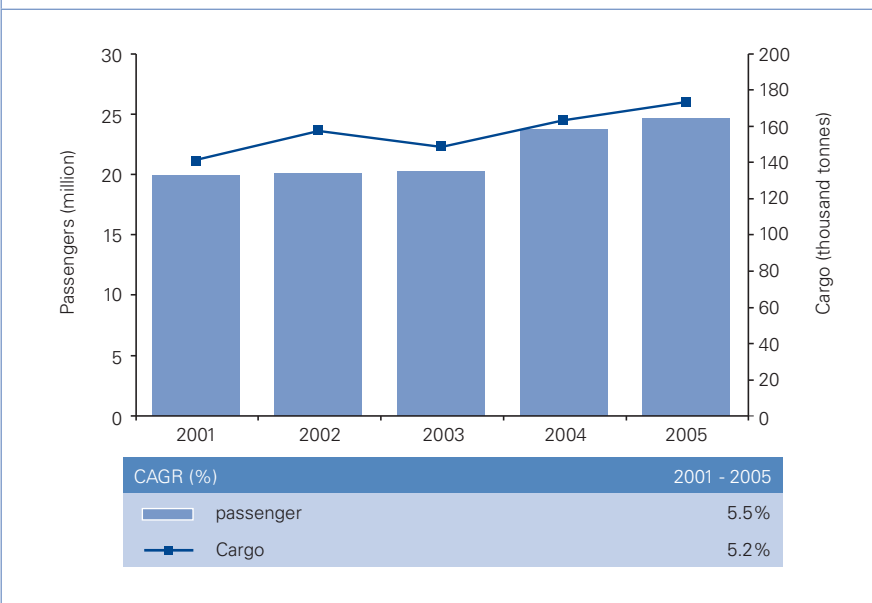
³² MAHB Annual Report 2005



Philippines

The Philippines' aviation sector has relatively small passenger volumes compared to other countries in the region, but the country has seen steady growth in recent years, particularly as a result of the introduction of low cost carriers.

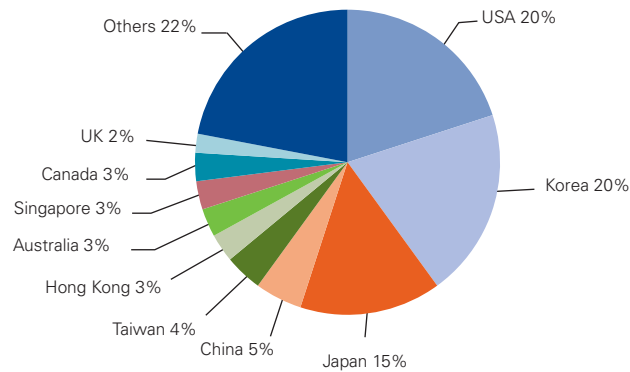
Passenger and cargo volumes for airports in the Philippines, 2001 - 2005



The Philippines has 85 airports, of which eight are international. The largest international airports are Ninoy Aquino, Clark International, Subic Bay and Mactan-Cebu, which together account for more than 60 percent of all air passenger traffic.³³ The sector is state-dominated, with the Air Transportation Office (ATO), under the Department of Transportation and Communication (DOTC), managing the country's airports.

³³ Airport Transportation Office statistics

Profile of visitor arrivals to Philippines by region, Jan - Oct 2006



Source: Department of Tourism, 2006

According to the ATO, air passenger traffic reached 24 million in 2005, having achieved solid growth of 5-6 percent CAGR between 2001 and 2005. Growth is expected to remain stable or increase, driven by regional and domestic economic growth.

Recently, there has been some private sector investment in airports in the Philippines, most notably in Ninoy Aquino International Airport's (NAIA) terminal III and Caticlan Airport in Boracay.

Government initiatives

The DOTC is addressing concerns about the country's infrastructure by supporting a number of airport initiatives. Examples include the expansion of the Clark International Airport at a cost of P 250 million (USD 5 million),³⁴ and construction of a VIP facility at Mactan-Cebu International Airport.

The Department of Tourism has also been proactive in its tourism-related investments, launching inbound tourism campaigns from China, Korea and Japan. Furthermore, it was granted "approved destination status" from China in April 2006.³⁵ The result of these policies would likely be higher inbound Asian tourists, which already account for 70 percent of inbound tourist arrivals.

Low cost carriers would become an important growth driver

Low cost carriers (LCCs) are permeating into the Philippines market, with Air Asia (Malaysia), Tiger Airways (Singapore), Cebu Pacific (Philippines) and Viva Macau (Macau) among the first movers. Infrastructure supporting LCCs are also on the rise, with the construction of LCC terminals in Clark International nearing completion, and further plans to build similar terminals in Mactan-Cebu and smaller airports.

³⁴ BusinessWorld article, August 2006

³⁵ Economist Intelligence Unit, 2006



Over 32 million passengers passed through Singapore's Changi Airport in 2005. Its two main terminals are equipped to cope with a combined 44 million passengers. At the forecast annual growth rate of around 7 percent, that limit will be reached by 2009.³⁶

The award-winning Changi Airport is operated by the Civil Aviation Authority of Singapore (CAAS), a statutory board under the Ministry of Transport. It has been named best airport by 10 different publications and organisations during 2006, including OAG Worldwide, Skytrax and CNN Business Traveller. Some 80 airlines serving over 180 cities utilise Changi Airport, registering over 4,000 scheduled flights weekly.³⁷ CAAS also operates the much smaller Seletar airport, which mainly serves aviation schools and charter flights.

Given the advanced development of Changi Airport, domestic growth

opportunities are limited, and CAAS is looking at investment opportunities overseas. Its portfolio of overseas airport investments includes assets in India, China and Russia.

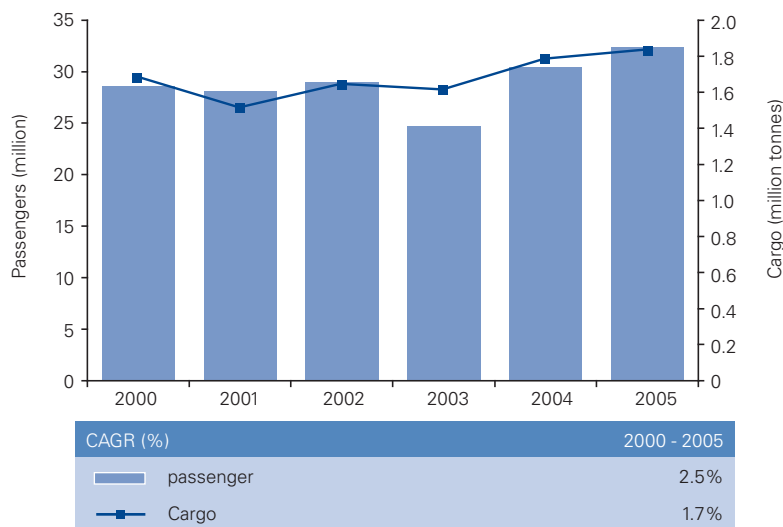
CAAS has tended to build ahead of the demand curve, as evidenced by its development of new facilities at Changi. A third terminal, with a capacity of 20 million passengers per annum, is due to open in 2008, bringing total handling capacity to 64 million per year.³⁸ The terminal incorporates commercial space for over 100 retail and dining outlets, and is linked to a 350-room airport hotel.

³⁶ Singapore Economic Development Board

³⁷ Civil Aviation Authority of Singapore website, www.caas.gov.sg

³⁸ Changi International Airport website, www.changiairport.com

Passenger and cargo volumes for Singapore, 2000 - 2005



Source: Changi Airport website, 2006

Diverse revenues and strong earnings

Other special purpose developments have also come online. To cater to low-cost carriers and the growing number of budget travellers, a separate Budget Terminal was opened in early 2006 with a capacity of some 2.7 million passengers. The compact building and its minimal facilities have been designed to keep costs low while providing an efficient service in line with the objectives of cost-conscious passengers and airlines such as AirAsia, Tiger Air and Valueair. At the other end of the spectrum, "commercially important people" are pampered in JetQuay, a five-star facility adjacent to the main terminals, complete with dedicated customs and immigration, personal concierge, and limousine transport to the aircraft.

Changi has evolved to offer a wide range of facilities and services in addition to shopping and dining outlets. Passengers in transit may watch a variety of television programmes in themed lounges, or while away a few hours on a free city tour.

Only 40 percent of Changi's revenues are sourced from aviation and terminal services such as landing and parking fees. The bulk is generated from non-aeronautical charges including fees from office rentals, concessions and franchises. CAAS posted a net operating surplus of 45 percent in 2005.³⁹

Singapore is also a regional hub for air cargo. Changi handled 1.8 million tonnes of air cargo in 2005, up 3 percent compared to 2004.⁴⁰ Singapore has nine cargo terminals at Changi with a total capacity of 3 million tonnes per year. Two express freight centres cater to the growing express cargo sector, one of which is operated by DHL as its Singapore regional hub.

Passenger demand will be supported by government measures to attract foreign visitors. The Singapore Tourism Board has launched campaigns targeted at both leisure and business travellers. Singapore is a popular venue for business events and conferences due to its convenient location and well-developed facilities. It is hoped that regional visitors will be attracted by two new casino resorts in Singapore, while Singaporeans continue to travel abroad to cheaper Asian destinations for short shopping trips and resort holidays.

³⁹ Civil Aviation Authority of Singapore website, www.caas.gov.sg

⁴⁰ Changi International Airport website, www.changiairport.com



South Korea

Over the past five years South Korea has witnessed impressive growth as a regional tourism destination, but is still more established as a logistics and cargo centre.

South Korea has eight major international airports. The biggest is Incheon International Airport, located to the west of the capital Seoul.

The Ministry of Construction and Transportation of South Korea is responsible for the formulation of air transport policies. However, the day-to-day operations of the airports are handled by two major corporations.

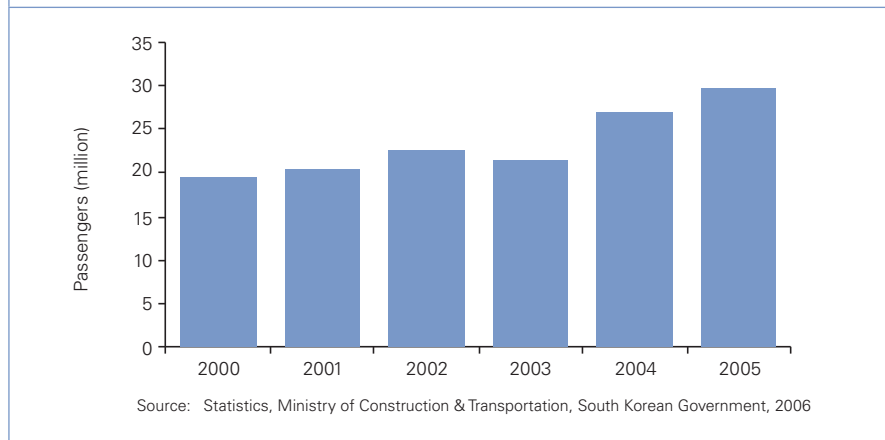
- Incheon International Airport Corporation (IIAC) was established in 1999 under the Incheon International Airport Corporation Law. IIAC is an independent public authority which develops, promotes and manages airports, seaports and both business and leisure infrastructure to enable Korea to compete successfully in the global marketplace.

- Korea Airports Corporation (KAC) manages all the domestic and international airports in Korea except the Incheon International Airport.

South Korea has enjoyed significant growth over the past five years. In 2005, South Korea's international passenger volumes rose to 29.7 million. The country has seen a growing influx of tourists, primarily from China and Japan.

Cargo volume was also growing as the South Korean economy develops. Its international freight traffic reached 2.6 million tonnes in year 2005, a 34 percent increase over year 2000. North America and China are the major cargo shipment destinations.

Passenger volumes for South Korean airports, 2000 - 2005



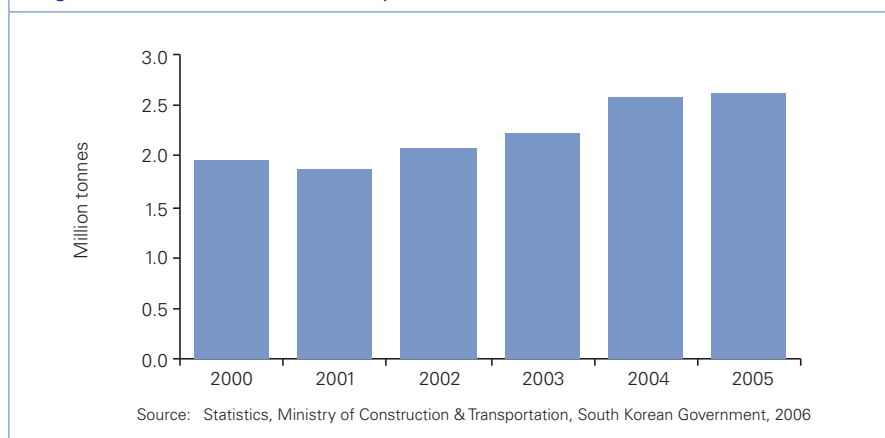
Incheon International Airport started operating in 2001. It is equipped with two runways, one passenger terminal and one cargo terminal. There are plans to build another runway during 2008.

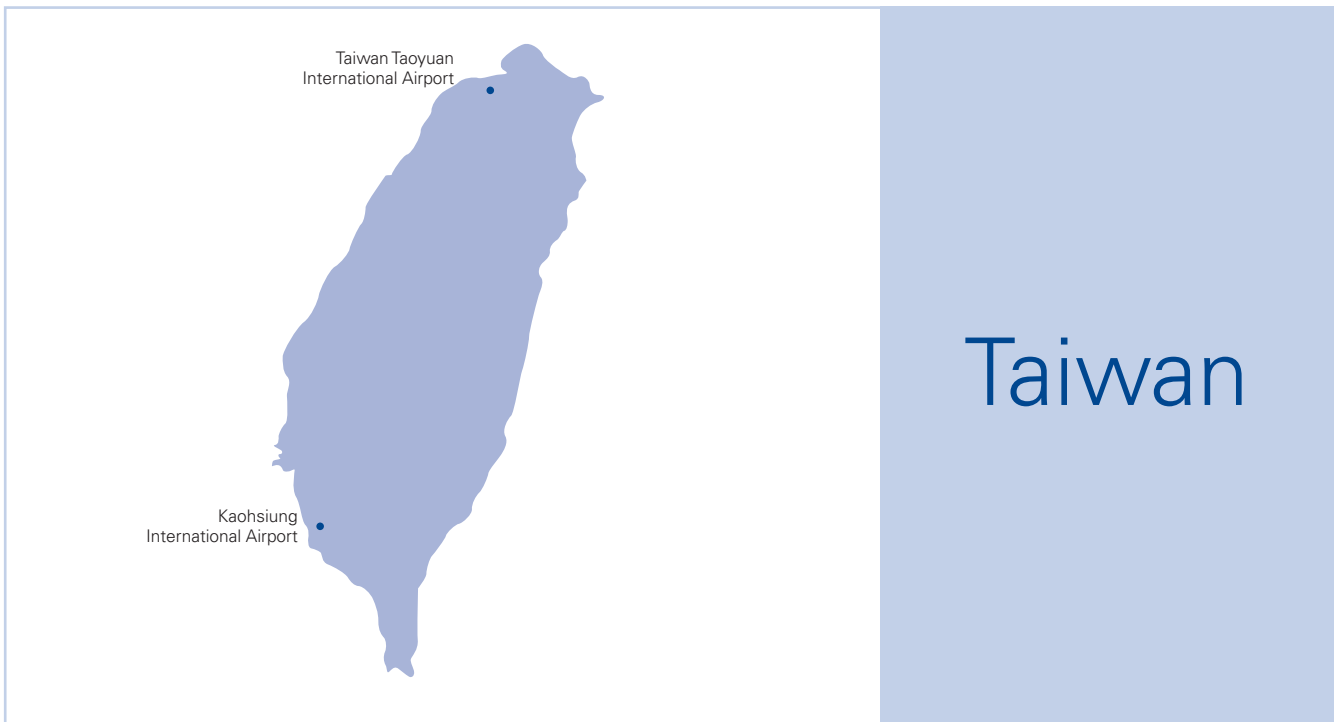
The airport is operated by Incheon International Airport Corporation. A key focus is to increase revenue from its cargo and logistics business. A Free Trade Zone (FTZ) has been developed around the airport, with a 109-hectare cargo terminal area and a 99-hectare airport logistics park. Key logistics companies like Schenker

and KWE have been the key tenants of the airport logistics park. All these initiatives are expected to strengthen Incheon airport's role as a logistics hub for Northeast Asia and to bring in additional revenue for the airport.

In recent years Jeju has grown to become one of the largest airports in the country, while Gimhae International Airport in Pusan is also due to open a new international terminal during 2007.

Cargo volumes for South Korean airports, 2000 - 2005





The air routes between Taiwan and Hong Kong are some of the busiest in the world. Taiwan Taoyuan International Airport near Taipei is the sixth busiest cargo airport in Asia Pacific.

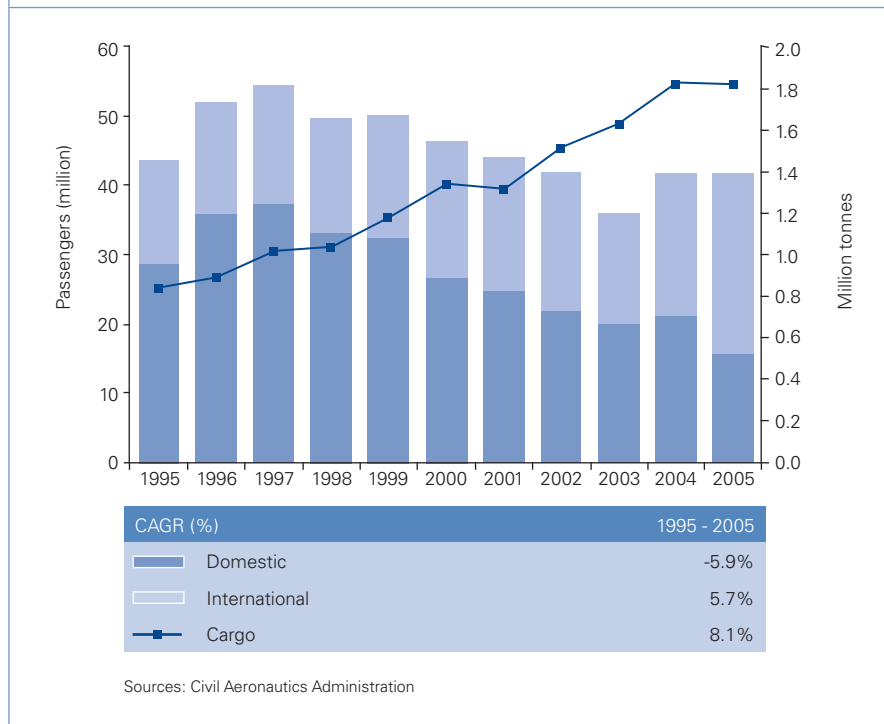
All 18 of Taiwan's airports are currently government owned and operated by the Civil Aeronautics Administration (CAA). International routes are handled by Taiwan Taoyuan International Airport and Kaohsiung International Airport while the smaller airports cater for only domestic travel or international chartered flights.

Growth at Taiwanese airports has slowed since the mid-1990s. This is especially true for domestic travel, as improvements in infrastructure have made it easier for people to travel by road or rail. In the last four years alone, 12 east-west highways were opened and a second north-south expressway inaugurated. The opening of the high-speed railway between Taipei and

The image shows a close-up of an airport departure board. The board is blue with white text. It lists flight information for various airlines, including flight numbers, times, and destinations. The visible text includes:

Airline	Flight Number	Time	Destination
KE	081	11:50	
DL	2809	11:50	
AM	580	11:45	
OZ	0739	11:45	
KE	082	12:00	
DL	7863	12:00	
CZ	688	12:00	
JL	962	12:20	
OZ	339	12:20	
CZ	688	12:20	
UA	800	12:25	
NH	7046	12:25	
JL	994	12:25	
KE	5741	12:25	
KE	763	12:25	
DL	7901	12:25	
JL	5164	12:25	
Z	122	12:40	
	6964	12:40	
	359	12:45	

Passenger and cargo volumes for airports in Taiwan, 1995 - 2005



Kaohsiung in early 2007 could further undermine the domestic market for air travel.⁴¹

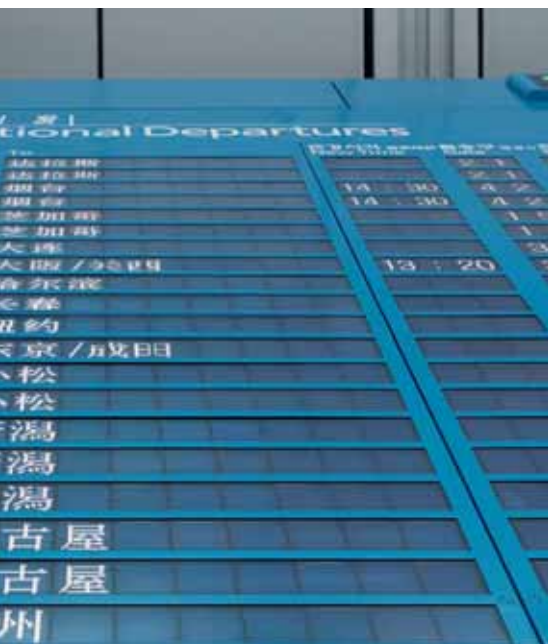
In 2005, 15 of the 18 airports in Taiwan, all domestic, were loss-making. In response, CAA has been considering privatising airports and outsourcing certain management functions. However, with the current state of the airports and dogged by the major problem of simply not having enough passengers, private investors are turning their heads away.⁴²

Taoyuan – the brightest light

Taiwan Taoyuan International Airport is one of the few profitable airports in Taiwan, accounting for nearly 50 percent of all passenger volume, 90 percent of international travellers and 94 percent of cargo volume on the island. In 2005, terminal 2 of the North Concourse was completed and

terminal 1 underwent renovation. There are plans for a third terminal within the next 10 years. China and Taiwan are engaged in an ongoing dialogue regarding a direct transport link between the two sides of the Taiwan Strait. Successful establishment of such a link will put the new capacity to good use with CAA officials predicting that passenger numbers could reach 50 million by 2035.⁴³

Taiwan's convenient location as an access point to the Americas and Asia has driven its growth in cargo at more than 8 percent per year between 1995 and 2005. Cargo traffic is predicted to reach nearly 2 million tonnes by 2010.⁴⁴ To increase future competitiveness, a new air cargo park near Taoyuan, also acting as a free trade zone, is in the works to cater for future demand.



⁴¹ Asia Pulse "High-speed railway may impact Taiwan's domestic airport," 21 August 2006

⁴² Taipei Times "Airports fail to attract investors," 2 August 2006

⁴³ Central News Agency "Shanghai, Beijing airports pose bigger threat to Taoyuan Airport," 28 September 2006

⁴⁴ NKFUJST "The Forecast of Taiwan International Air Cargo Quantity," July 2005



Thailand

Bangkok ranks fourth in Asia in terms of air passenger traffic behind Tokyo, Beijing and Hong Kong, clocking up 48 million passengers in 2005. Passenger numbers have been growing at an annual compound rate of around six percent.

There are 36 airports in Thailand, of which the five major international airports – Bangkok, Phuket, Chiang Mai, Hat Yai and Chiang Rai – are owned and operated by publicly-listed Airports of Thailand (AOT).⁴⁵ These five handle some 90 percent of Thailand's air passenger traffic. The remainder are under the administration of the Ministry of Transport's Department of Civil Aviation.

After much anticipation, Bangkok's new Suvarnabhumi International Airport began commercial operations in September 2006. It currently has a 45 million passenger capacity, and will be able to accommodate up to 100 million in the future.⁴⁶ However, with

passenger traffic already reaching near capacity, AOT is speeding up plans to build a new passenger terminal exclusively for low-cost carriers as well as a third runway to accommodate growth in air traffic. The future of the old Don Muang airport, which had a capacity of around 35 million passengers per year, is uncertain, but may include use for aircraft maintenance, limited domestic charter flights and welcoming dignitaries.

Tourist hot-spot

With a large tourism industry, Thailand is frequently featured among the top global holiday destinations. The most common destinations are Bangkok, Phuket, Pattaya, Koh Samui and Chiang

⁴⁵ Department of Civil Aviation statistics

⁴⁶ Airports of Thailand

Mai, while emerging destinations include Koh Chang and Koh Lanta. Tourist specialty segments, such as boutique hotels, spas, golf resorts and medical tourism are all being developed as a way to attract higher-spending visitors to the country.

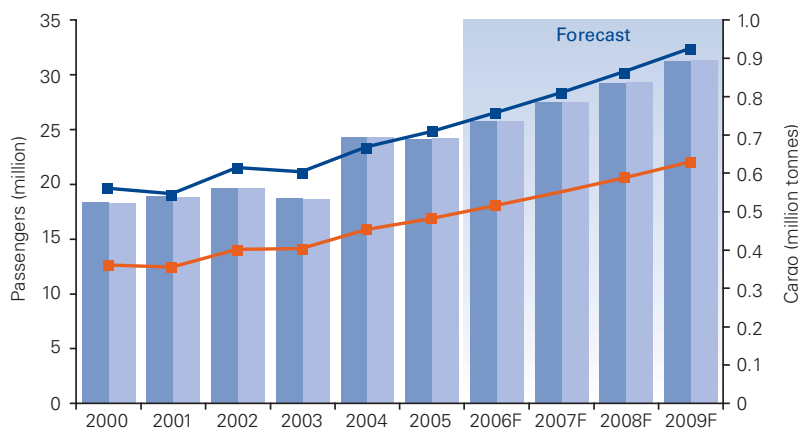
Despite a series of setbacks, including the recent coup and the Asian tsunami in December 2004, the tourism industry of Thailand has been resilient. Foreign tourist arrivals rose 36 percent in the first six months of 2006, reflecting the low figures a year earlier in the aftermath of the tsunami.⁴⁷ Foreign tourists are the power behind the airport sector, accounting for over 80 percent of visitors to Thailand.⁴⁸ For 2007, the Tourism Authority of Thailand is forecasting a record 15 million international visitors.

Steps are being taken to tap further into China's huge potential outbound tourism market. Thailand is the third most popular destination for Chinese tourists, after Hong Kong and Macau. Tourism authorities in Thailand and China have agreed to cooperate on measures to boost travel between both countries. China is already the fourth largest source of visitors to Thailand, with around half a million visitor arrivals in 2005; under the new tourism agreement, this number is expected to rise to 3 million by 2010.⁴⁹

Thai airports still retain a traditional revenue model, but are gradually seeking to diversify. Around 35 percent of airport revenue is currently generated from non-aeronautical sources, chiefly retail concessions. This ratio is set to grow in coming years. Suvarnabhumi airport, it is anticipated, will eventually expand to include substantial exhibition and conference facilities, adding to the massive retail complex already operating in the international departure level.

Air cargo volumes have suffered during periods of economic downturn, but have recovered strongly in subsequent years. Thailand's cargo sector is sensitive not only to the domestic and Asian economy, but also the performance of its three largest trading partners namely the US, Japan and the European Union. Around 1.2 million tonnes of cargo was handled by Thai airports in 2005, mainly through Bangkok. Cargo shipped by air has grown at an average compound rate of five percent annually since 2000, and is expected to continue at a slightly higher rate of 6 or 7 percent for the next five years. Air freight facilities at Suvarnabhumi airport are designed to handle up to 3 million tonnes of cargo per year.

Passenger and cargo volumes for airports in Thailand, 2000 - 2009



CAGR (%)		2000 - 2005	2005 - 2009
Passenger departures (LHS)		5.7%	6.7%
Passenger arrivals (LHS)		5.6%	6.7%
Cargo load (RHS)		4.8%	6.9%
Cargo unload (RHS)		6.0%	6.9%

Source: (1) Department of Civil Aviation, 2006
(2) IATA passenger and freight forecasts 2005-2009

⁴⁷ "Exports, Tourism help to stave off an economic downturn," The Nation, 22 August 2006

⁴⁸ "Thailand: Travel and Tourism profile," Economist Intelligence Unit, May 2006

⁴⁹ "Thailand: Travel and Tourism profile," Economist Intelligence Unit, May 2006



Vietnam

Economic growth and fast-developing tourism are contributing to simultaneous growth of cargo and passenger volumes in Vietnam. The three largest airports are all undergoing expansion programmes.

While Vietnam's GDP growth has averaged 8 percent in recent years, passenger volumes at the country's airports have risen even faster. Between 2000 and 2005 passenger throughput increased by a compound annual growth rate of over 20 percent, reaching approximately 13 million per annum. The rate of growth may slow in the next five years, but could still reach 20 million by 2010.⁵⁰

Alongside the growth of passenger volumes, air cargo throughput

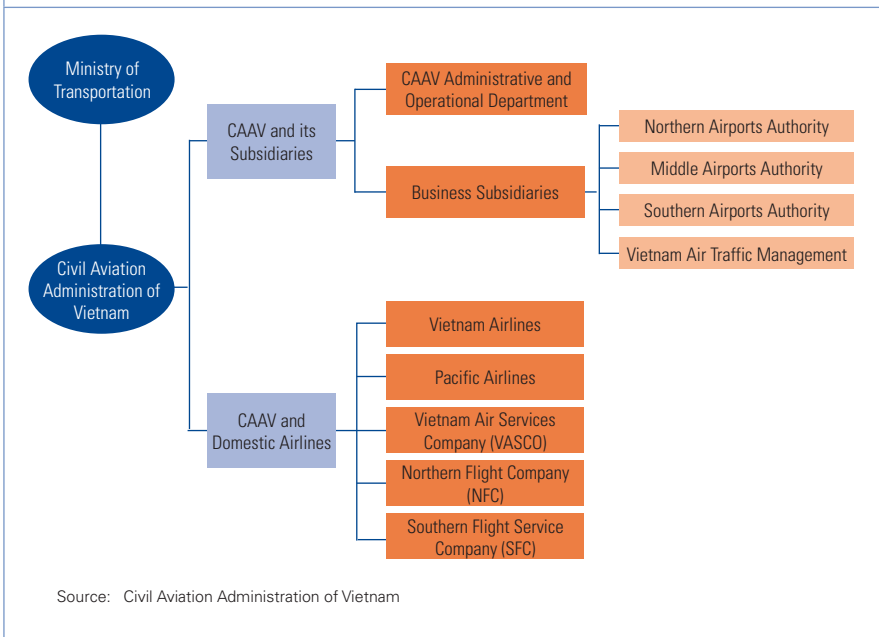
volume had also surged, largely due to an increase in international trade and foreign direct investment. The government appears to view the cargo business positively and expects growth to remain strong with a growth rate of up to 27 per annum between 2006 and 2010.⁵¹ At this rate of growth, cargo volumes could surpass 575,000 tonnes in 2010.

There are presently 28 airline companies operating 23 domestic and 72 international air routes within the

⁵⁰ Civil aviation Administration of Vietnam (CAAV)

⁵¹ CAAV estimates, KPMG analysis

Vietnam airports: Industry structure



Vietnam's Flight Information Regions (FIR). The major air transport carrier is Vietnam Airlines, which currently holds about 42 percent of the international passenger traffic and 85 percent of the domestic passenger traffic at Vietnamese airports.⁵² Vietnam Airlines conducts some route sharing with other carriers in the region such as Cathay Pacific.

Current structure of airport administration

The Civil Aviation Administration of Vietnam (CAAV), a government agency that reports to the Ministry of Transport, is responsible for the jurisdiction and management of all airports in Vietnam. Vietnam Air Traffic Management, a subsidiary of the CAAV, is fully responsible for air traffic control.

Currently there are 21 airports in Vietnam, with a clear distinction between the three principal international airports and 18 smaller domestic airports. The three principal airports, namely, Tan Son Nhat Airport, Noi Bai Airport and Da Nang Airport, together handle about 12.5 million domestic and international passengers in 2005, accounting for over 95 percent of total passenger throughput in the country.

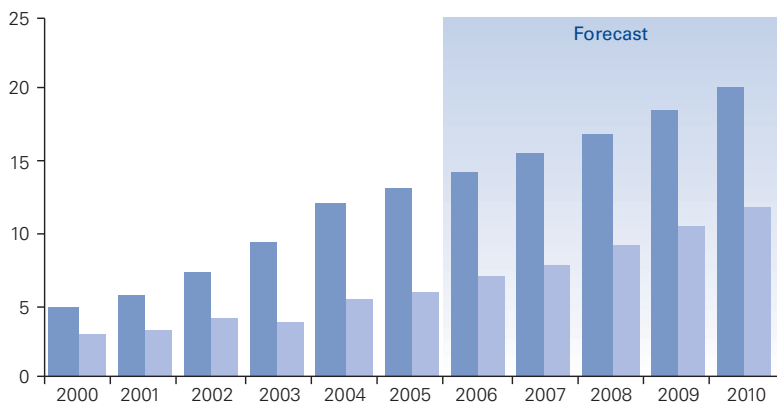
The government has pledged to invest about USD 1 billion to improve airport infrastructure in Vietnam, as well as to build two new international airports at Long Thanh in the south and Chu Lai in the central regions.⁵³

⁵² Civil aviation Administration of Vietnam

⁵³ Civil aviation Administration of Vietnam



Passenger throughput volume in Vietnam, 2000 - 2010



CAGR (%)	2000 - 2005	2006 - 2010
Passenger throughput volume	21.7%	9.0%

Source: Civil Aviation Administration of Vietnam, KPMG analysis

The government’s initiatives to upgrade and expand airports encompass improvements to passenger terminals, runways, air traffic control and radar systems, and all related airfield services. The plans include substantial upgrades and expansion of the aircraft maintenance centres at Tan Son Nhat and Noi Bai airports.

Vietnam has welcomed involvement from foreign consortia in the upgrading process for several airports, most notably Danang on the central coast.⁵⁴ However no direct investment by foreign airport management companies has yet to occur and capital for airport development continues to be sourced domestically.

⁵⁴ “Design & Building Bidding Package Signed for Danang Terminal,” Vietnam News Brief Service, 24 May 2006

KPMG's Global Aviation Group



KPMG member firms serve many of the leading companies in the aviation industry around the world. They provide external audit services to 26 percent of passenger airlines among the top 50 airline companies ranked by revenue. They also provide audit tax or advisory services to a number of airport owners and operators across the world.

KPMG's Global Aviation group is represented in many major international markets. Industry knowledge and training are shared among member firms, enabling them to assist you in recognising opportunities and implementing changes necessitated by industry developments.

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