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# **Hong Kong as Air Cargo and Logistics Hub: From Strength to Strength ... Or set to decline?**

## **A Competitiveness Review**

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## Summary

- Hong Kong retains a significant competitive edge over competitor locations, whether in the PRD or further afield. This is due not simply to Hong Kong's superbly efficient new airport, but also its global reputation for clear and simple taxes, a highly business-sympathetic environment, a strong and clear legal system and an absence of corruption. This in part explains growth in air cargo business that has outpaced every other hub in Asia over the past five years.
- However, anxieties concerning the potential erosion of this competitive edge are well founded. Distinctively, freight forwarders today have flexibility to shift operations speedily and seamlessly from Hong Kong to other hubs in the PRD if competitive edge is eroded.
- In addition, Hong Kong's single greatest competitive advantage – the connectivity and the frequency of flights to connected destinations – is being eroded rapidly as a more liberal approach to air services agreements in China has enabled Guangzhou in particular to build its international connectivity at a striking pace. Combining this with Guangzhou's already-superior domestic connectivity, it is clear that Hong Kong can no longer rest on connectivity as the primary source of future competitive advantage.
- Hong Kong's reputation for reliability and efficiency, the simplicity of operations facilitated by its "free port" status, and a massive clustering of logistics expertise, remain significant – and perhaps more sustainable – competitive advantages, though the idiosyncratic Trade Declaration Charge creates disproportionate documentary friction. A proposed Goods and Services Tax (GST) is also thought likely to threaten Hong Kong's distinctive "free port" advantage.
- Complacency would be mistaken, since all relevant competitors are improving their service offerings at a striking pace.
- Among potential sources of present and future weakness, the past failure to develop trans-shipment capabilities alongside the predominant origin-destination business is perhaps the most significant. Several Asian competitor hubs lead Hong Kong in this area.
- High costs, customs-related frictions, trucking costs and inefficiencies linked with moving consignments across the HK-Mainland boundary, and the steady migration of manufacturers deeper into the Chinese Mainland, also create competitiveness challenges.

- Also, surprisingly, supply-side constraints are beginning to emerge – in part resulting from faster-than-expected growth over the past eight years – which suggest that CLK may very soon become growth-constrained. Particularly acute is the problem of air traffic management, and an extremely conservative air-space management regime, which mean that Hong Kong is already at maximum capacity for many hours of the day.
- It is perhaps too early in the life of challenger hubs like Shenzhen, Baiyun and Dubai to predict with any clarity how vulnerable Hong Kong is as Asia’s leading air cargo hub. It is unlikely that leadership will be eroded as speedily as has been witnessed between Hong Kong port and Yantian port but this comparison remains a sobering one for the logistics sector. The challenge is real and direct enough for a number of initiatives to be considered as a matter of urgency (see Chapter 10 for details):
  - **Customs arrangements:** including green lanes, harmonised customs procedures, electronic standardisation of manifests and liberalisation of trucking arrangements, and abolition of the Trade Declaration Charge.
  - **Transshipment regulation:** drafting of a new Trans-shipment ordinance as part of an overhaul of the outdated Import-Export Ordinance.
  - **New infrastructure:** Tuen Mun link; a logistics park (maybe not on Lantau); HK-Zhuhai bridge; new computer systems for air traffic management; a third air cargo handling terminal;
  - **Aggressive freeing-up of air space and traffic management:** which will require challenging diplomacy between Hong Kong and Beijing; long term, the more controversial issue of the third runway needs to be tackled;
  - **Cost reduction,** in particular lower air cargo handling costs
  - **“HK Inc” coordination** to tackle industry-wide challenges
- **Conclusion:** Hong Kong is a formidable and highly successful air cargo hub, with advantages over competing hubs that are unlikely to erode quickly. Hong Kong nevertheless faces serious challenges that require extensive and complex policy responses from Government. Because many responses require close collaboration between officials in Hong Kong, Guangzhou and Beijing, it is open to question whether initiatives can be implemented with the speed necessary to protect Hong Kong’s leadership position. Given the difficulties the Hong Kong Government may face, a concerted and coordinated effort by operators across the trade and logistics sector to press for appropriate and timely responses may be a critical factor in protecting the future success of the hub.

## SWOT Analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Connectivity and frequency of flights</li> <li>• Free port status</li> <li>• Clustering of logistics expertise</li> <li>• 24-hour cargo friendly customs environment</li> <li>• Simple and transparent tax system</li> <li>• Business friendly operating environment</li> <li>• Law and order</li> <li>• Reliable and efficient on-airport facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Ease of shifting cargo operations from Hong Kong to other hubs</li> <li>• High cargo terminal cost</li> <li>• High trucking cost</li> <li>• Customs inefficiencies at the Chinese border</li> <li>• Trade Declaration Charge (TDC)</li> <li>• Outdated import-export ordinance and complex licensing regimes</li> <li>• Inadequate connectivity with mainland cities</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Merger of Cathay Pacific and Dragonair creates strong home carrier</li> <li>• Further streamline customs arrangements               <ul style="list-style-type: none"> <li>○ Green Lanes, harmonised customs procedures, electronic standardisation of manifest, full liberalisation of “four-up-four-down” and “one truck one driver” rules.</li> </ul> </li> <li>• Pass new transshipment ordinance</li> <li>• Aggressive freeing up of air space management</li> <li>• Develop new infrastructure               <ul style="list-style-type: none"> <li>○ Tuen Mun link, new computer systems for air traffic management</li> <li>○ Development of cost-effective logistics park</li> </ul> </li> <li>• Third cargo terminal</li> <li>• Third runway</li> <li>• Hong Kong-Macau-Zhuhai bridge</li> <li>• e-freight</li> <li>• Promotion of FOB Hong Kong</li> </ul>	<ul style="list-style-type: none"> <li>• Slot congestion and conservative air traffic control</li> <li>• Lack of sufficient cargo terminal capacity</li> <li>• Direct links between the mainland and Taiwan</li> <li>• Pearl River Delta manufacturing base moving inland</li> <li>• High land cost               <ul style="list-style-type: none"> <li>○ Land for airport expansion extremely scarce</li> </ul> </li> <li>• GST</li> <li>• Complacency</li> </ul>

## 1. Hong Kong's current competitive position

Hong Kong has over the past three decades grown to be by far Asia's largest and most efficient air cargo handling hub. This is a result of many factors, but three above all stand out: the long-standing role that Hong Kong has played as a trading hub within Asia, and between Asia and distant continents – a role that was augmented after 1949 as the China under Mao Zedong closed itself to the rest of the world, leaving Hong Kong as a solitary conduit between the Mainland and the outside world; the staggering emergence of south China and the Pearl River Delta over the past 25 years as a manufacturer to the world; and the completion in 1998 of an airport that not only enabled an explosion of capacity, but is regarded throughout the air cargo industry as one of the most reliable and efficient in the world.

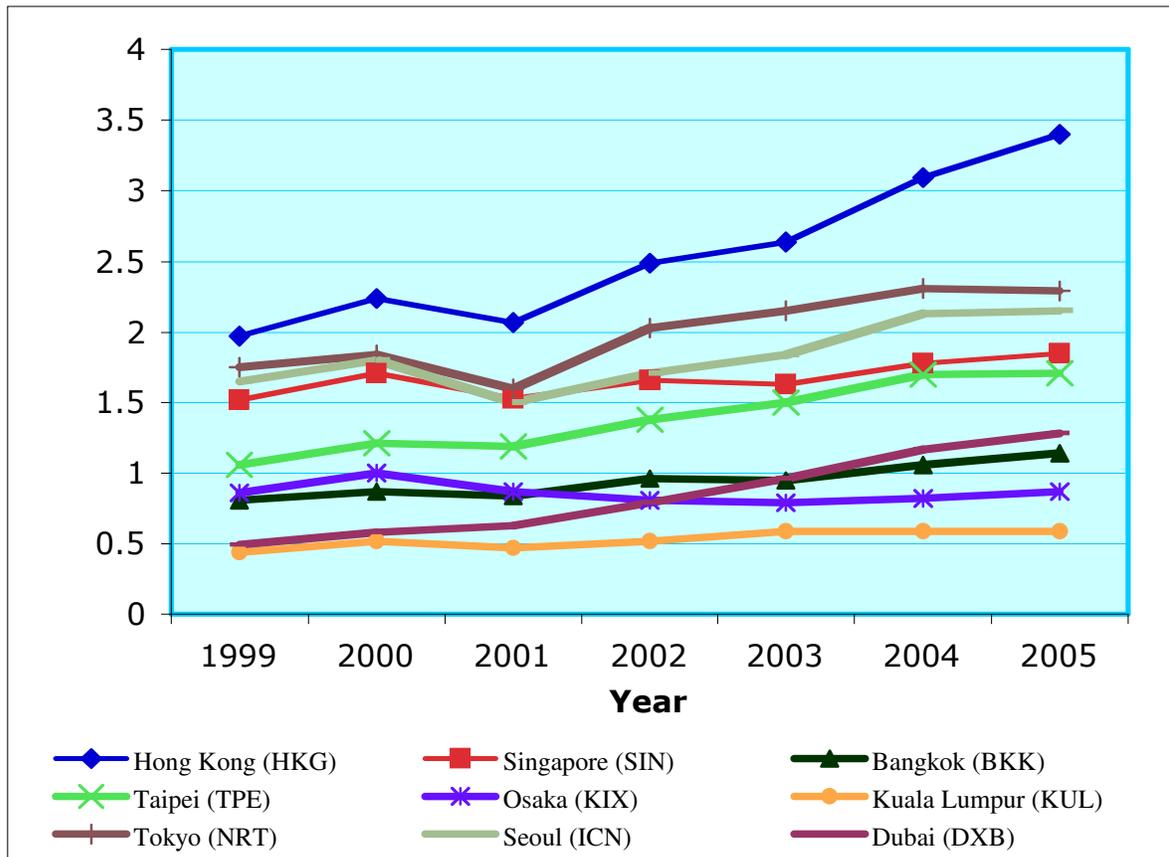
Underpinned by these factors, a number of other very critical strengths have emerged which go beyond the essentially lucky and locational advantages conferred by the closure and reopening of China. These include the emergence of a colossal and highly-skilled trade and logistics cluster, accounting for \$347 billion value-added to the economy and directly employing 804,600 people<sup>1</sup>. They also include the Hong Kong Government's steadfast commitment to Hong Kong as a "free port", to low and simple taxes, a legal system that is uncorrupt and built on international legal tenets, and a business operating environment that is widely regarded as one of the most business-friendly in the world.

While competitor locations in Asia have built sophisticated new airports, adopted policies carefully targeted to attract airlines and air cargo and logistics businesses, focused hard on improving their reputations for reliability and efficiency, and offer air cargo handling costs that are often significantly lower than those charged in Hong Kong, our analysis of regional data shows that Hong Kong retains a significant competitive edge over competitor locations. This is as true of the Pearl River Delta hubs – Baiyun in Guangzhou and Baoan in Shenzhen in particular – as it is further afield in transshipment hubs like Singapore, Seoul, Taipei and Dubai. Despite all recent challenges, Hong Kong has recorded growth in air cargo business that has outpaced every other hub in Asia over the past five years. (See Figure 1)

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<sup>1</sup>2004 data. National Income Section, Census and Statistics Department, HKSAR.

**Figure 1: Cargo throughput at selected Asian airports (in million tonnes)**



Source: Airports Council International. Tonnage data includes express and excludes mail. The Seoul data refers to the Seoul airport in 1999 and 2000, and Incheon only in 2001 onwards.

While Hong Kong's competitive leadership is considerable, and may take some time to erode, there are clear signs being noted across the air cargo industry that have triggered concern, and raised questions about the severity of the competitive challenge and about steps that should be considered to optimise the competitiveness of the Hong Kong hub in order to deflect or delay diversion to other hubs. These signs of our competitive challenge include:

- aggressive investment in new and efficient airports;
- improved connectivity in competing hubs through liberal developments in air services regimes;
- lower air cargo handling charges at other hubs;
- well-articulated airline ambitions to build their air cargo businesses around other hubs;
- the migration of exporting manufacturers deeper into the Chinese Mainland, taking them further from the Hong Kong hub;
- the emergence of domestic air cargo activity within China, fuelled by strong growth of China's domestic economy, with much of this focused on other regions of China.

In addition to these concerns, questions hover over the extent to which the establishment of direct air services between Taiwan and the Chinese Mainland will divert air cargo business from Hong Kong. This is a question that has tantalised for the better part of a decade, but which is still unresolved, since direct flights remain banned except at Chinese New Year and other tightly circumscribed events in the year. To some extent, anxieties over passenger diversion have already been addressed, since most Taiwanese package tourists visiting the Mainland now transit Macau en route to Mainland destinations. But the future cargo traffic pattern has yet to be anticipated, and could have a more noticeable impact if new services are established that specifically facilitate cargo movement. Since this would be less politically sensitive than the movement of people, such cargo-specific services are quite likely, facilitated by a number of Mainland-Taiwan joint ventures that have already been established in embryo.

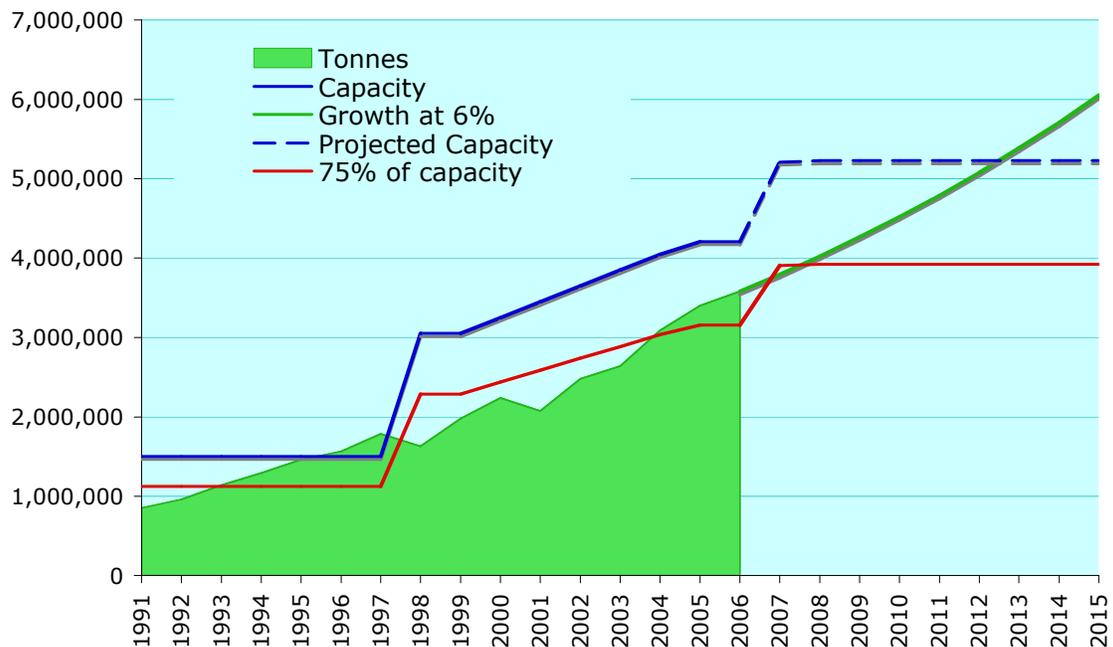
It has also been noteworthy how in the sea cargo sector, Shenzhen's Yantian container port has grown much more rapidly than Hong Kong-based observers anticipated. In barely a decade Yantian is diverting business from Hong Kong, and has emerged to be a serious competitor in terms of scale, reliability and efficiency. Those with a stake in Hong Kong's air cargo sector have not been slow to question whether air cargo hubs based in the PRD could move with similar speed to erode Hong Kong's competitive lead.

With these many questions circulating, this study aims to examine the nature and scale of competition from competitor hubs, to examine Hong Kong's weaknesses and vulnerabilities, and finally to suggest actions that might be taken to preempt or slow competitive diversion.

## 2. Growth projections for Hong Kong

In light of the uncertainties percolating about Hong Kong's future competitiveness as an air cargo hub, and a lack of clarity on the potential for cargo diversion in particular to Guangzhou's Baiyun airport, there is a greater than usual challenge in estimating future air cargo growth prospects. If one draws only on the past track record (see Figure 3) and projects forward assuming a straight-line continuation, then Hong Kong could expect growth of between 8% and 10% per annum for the coming decade. If we take a conservative projection of 6% annual growth (as shown in Figure 2 below), Hong Kong's air cargo throughput would exceed capacity early next decade. Moreover, throughput has already exceeded 75% of capacity since 2004, triggering an urgent need to plan ahead for new capacity.

**Figure 2: Hong Kong air cargo growth since 1991, in tonnes**



Source: Tonnage data from HKIA, includes express, excludes mail. Capacity has taken into account of initial designed capacity upon opening of Chek Lap Kok airport and later productivity gains that allowed increases in handling capacity at Hactl and AAT. Projected capacity takes into account expansion plans of DHL.

**Figure 3: Annual growth in Hong Kong's cargo throughput**

<i>Year</i>	<i>Tonnes</i>	<i>Year-on-year growth</i>
1991	850,000	--
1992	957,000	12.59%
1993	1139,000	19.02%
1994	1293,000	13.52%
1995	1458,000	12.76%
1996	1563,000	7.2%
1997	1786,000	14.27%
1998	1629,000	-8.8%
1999	1978,000	21.42%
2000	2241,000	13.30%
2001	2074,000	-7.45%
2002	2479,000	19.53%
2003	2642,000	6.58%
2004	3088,000	16.88%
2005	3402,000	10.17%
2006	3,580,000	5.23%
16-year average	--	9.76%

*Source: HKIA. Includes express, excludes mail.  
Tonnage rounded off to nearest thousand tonnes.*

Indeed, if one takes note of forecasts in China's recently published 11<sup>th</sup> Five Year Framework that air cargo will grow at almost 15% per year over the coming five years, and assumes that growth in the PRD will at least match the national average, it seems hard to believe that Hong Kong growth will not be strong, even if there is a degree of diversion of air cargo traffic to Baiyun and Baoan. CAAC has also forecast Mainland cargo traffic to grow at 13.3% for the next five years, and 10.9% for the next 15 years (see Figure 4).

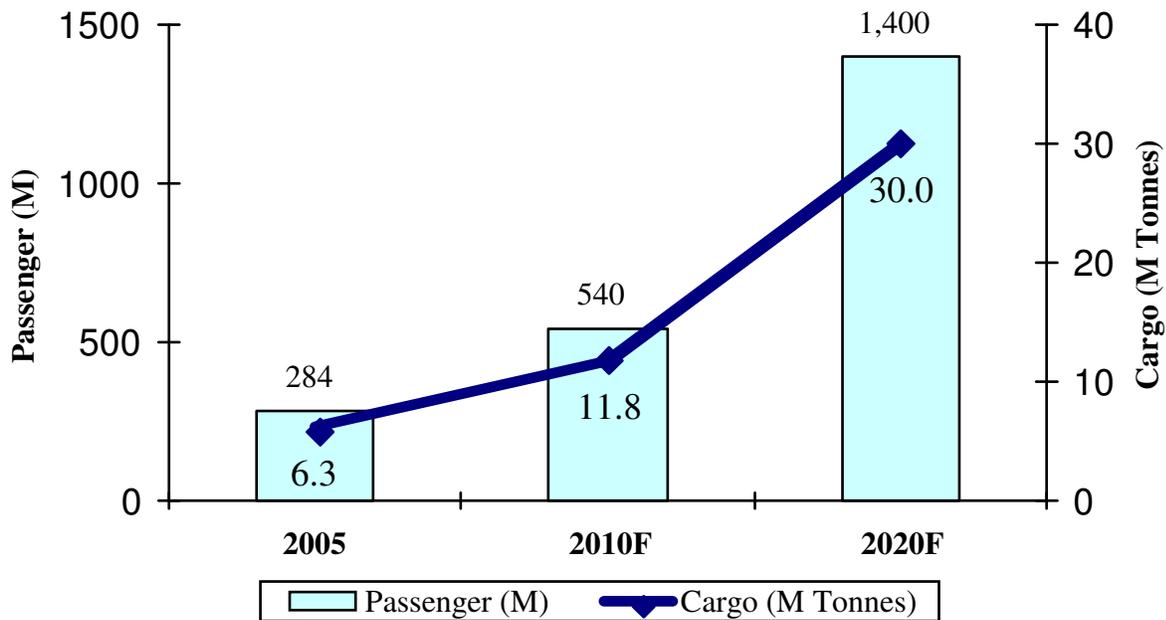
In spite of these pointers to continued double-digit growth, most operators involved in the air cargo business in Hong Kong adopt more cautious growth forecasts, in part because sustained growth at 9% per annum is extraordinary by global comparison, and in part because supply-side constraints (like flight path slot constraints) must at some point kick in with such strong growth trends.

The most optimistic forecast comes from Cathay Pacific, which draws on its own plans to channel more transshipment traffic through the Hong Kong hub to feed growth at a planned new air cargo handling terminal. Its 15-year forecast is for 7% annual growth, though Cathay expects short term growth to be much stronger. Most cautious is Hactl, which is anxious about the scale of potential diversion to Baiyun and is currently waging a battle to delay early approval of a new third air cargo handling terminal. Its projections include three scenarios, with the middle-ground base scenario predicting a 5% annual growth between 2005 and 2008, 5.3% between 2008 and 2015, and 5.6% between 2015 and 2020.

This scenario would bring Hong Kong's cargo throughput to 7.5 million in 2020. Hactl's higher growth scenario forecasts an average of 7.65% annual growth from 2005 to 2020, bringing cargo throughput to 9.7 million in 2020, while the most conservative scenario projects an average of 3.57% annual growth in the 15 years until 2020.

Meanwhile, the Airport Authority's Master Plan 2025, published in January 2007, laid out the projection that by 2025, HKIA would handle 8 million tonnes of cargo. The Airport Authority is therefore forecasting a 20-year compound growth rate from 2005 to 2025 at 4.6%.

Figure 4: CAAC projections on passenger and cargo demand in China



Compound annual growth rate forecast, CAAC

	CAGR 2005-10	CAGR 2010-20	CAGR 2005-20
Passenger	13.7%	10%	11.2%
Cargo	13.3%	9.8%	10.9%

Source: CAAC

Since all forecasting models rely on data put into them, and since available data provides such confusing signals, we make no attempt to wring modeled forecasts of our own. However, it appears intuitively implausible that air cargo growth through the Hong Kong hub should not continue to be strong, even while competing hubs in the PRD and Shanghai grow strongly.

The various forecasts for Hong Kong are also in line with global forecasts of the Asian market. The *Boeing World Air Cargo Forecast 2006* projects solid growth for the Intra-Asia, Asia-North America and Europe-Asia markets in the next 20 years, from 2006 to 2025, at an annual rate of 8.6%, 7.1% and 6.9% respectively. These regional projections are a sign of sustained economic growth and healthy trade volumes.

Any massive dislocation of international trade would clearly undermine such bullish forecasts – and threats based on a sharp recession in the United States, or on dislocation in the event of a global outbreak of Avian Flu cannot be dismissed out of hand. But if such large-scale dislocations do not occur, then available data

suggests good growth in the coming five years through the Hong Kong hub even in the event of diversion of air cargo business to Baiyun or elsewhere. In short, the rising tide of trade is likely to lift all boats. Thus, Hong Kong's competitive "moment of truth" is likely to lie in the more distant future as its challengers mature and China's domestic economy becomes a more powerful influence on regional economic growth patterns. In the shorter term, the greater danger may be complacency, which could lead to delays in investments and reforms that will be essential if Hong Kong's long-term competitive leadership is to be protected.

### 3. Developments at competitor hubs

Inherent to Hong Kong's superior services as an air cargo hub, it is also one of the most expensive in the world. No wonder more price competitive hubs of Guangzhou and Shenzhen are eyeing to divert at least some of Hong Kong's origin-destination cargo traffic.

Another often overlooked advantage competitor hubs possess is that they have land resources to build new capacity. While Hong Kong has practically no available land for airport expansion without reclamation, emerging hubs in China and burgeoning hubs around Asia are aggressively building new cargo handling capacity. (See Figure 9 on page 22 and Figure 13 on page 31 for a summary of their plans.)

New capacity is crucial to the competitiveness of any growing hub, because air cargo, unlike passengers who choose their flight routes, could be flexibly diverted from one city to another when new capacity is available. Hong Kong's experience is one example. When the Chek Lap Kok airport was built to replace Kai Tak, almost doubling Hong Kong's cargo handling capacity, even stakeholders in the aviation sector had expected excess supply. To the industry's surprise, new capacity drew new cargo traffic, and contributed to Hong Kong's success as an air cargo hub in the past eight years since Chek Lap Kok opened.

Meanwhile, simply by virtue of longer geographical distance between Hong Kong and the US and Europe, we are at a disadvantage competing against a second and separate group of competitors for intercontinental air cargo services – primarily Shanghai, Seoul and Dubai. (See Figure 6 for inter-continental flight times.) Hong Kong has been so preoccupied by the burgeoning origin-destination business between the PRD and the outside world that these Asian hubs have been one step ahead of Hong Kong in recognising the value of developing air-to-air transshipment capabilities – in the face of the volatile seasonality and the troubling trade imbalance on long haul air cargo routes. About one-half of the cargo traffic through Singapore, Seoul and Dubai is classified as air-to-air transhipped cargo, compared with 35% in Hong Kong. (The transshipment issue is in fact more complex, and is addressed later in this study, see chapter 7.)

Of mitigating comfort for the Hong Kong hub is the fact that Hong Kong occupies an ideal location for intra-Asian air cargo movement, sitting at the heart of a five hour flying circle that embraces approximately half of the world's population. (See Figure 5 for intra-Asian flight times.) In so far as competitive strength is derived from being well-placed to consolidate air cargo in one location in Asia, and then transfer this cargo to destination markets in Europe and North America, then Shanghai, Guangzhou, Taipei and Hong Kong share

clear advantages over other hubs. For Europe services, Dubai has strong competitive advantages, while for US-only destinations, Seoul, Tokyo and Shanghai have clear advantages.

**Figure 5: Flight hours between regional hubs**

	Hong Kong	Shanghai	Guang-zhou	Singapore	Seoul	Taipei	Bangkok	Tokyo	Osaka	Dubai
<b>Hong Kong</b>	X	2h20m	45m	3h45m	3h20m	1h40m	2h40m	4h05m	3h45m	7h50m
<b>Shanghai</b>	2h20m	X	2h	5h15m	1h45m	X	5h30m	2h50m	3h20m	X
<b>Guangzhou</b>	45m	2h	X	3h55m	3h10m	X	3h	4h20m	3h20m	7h55m
<b>Singapore</b>	3h45m	5h15m	3h55m	X	7h20m	6h30m	2h25m	8h10m	7h30m	9h15m
<b>Seoul</b>	3h20m	1h45m	3h10m	7h20m	X	2h30m	6h20m	7h55m	1h40m	12h15m
<b>Taipei</b>	1h40m	X	X	6h30m	2h30m	X	4h10m	3h15m	7h03m	9h50m
<b>Bangkok</b>	2h40m	4h20m	3h	2h25m	6h20m	4h10m	X	6h10m	6h30m	6h50m
<b>Tokyo</b>	4h05m	2h50m	4h20m	8h10m	7h55m	3h15m	6h10m	X	1h05m	12h45m
<b>Osaka</b>	3h45m	2h05m	3h20m	7h30m	1h40m	2h35m	6h30m	1h05m	X	12h
<b>Dubai</b>	7h50m	X	7h55m	9h15m	12h15m	9h50m	6h50m	12h45m	12h	X
<b>Total:</b>	<b>28h10m</b>	<b>30h5m</b>	<b>30h5m</b>	<b>54h05m</b>	<b>46h15m</b>	<b>33h35m</b>	<b>43h35m</b>	<b>50h35m</b>	<b>46h13m</b>	<b>90h</b>

Source: Published flight schedules of respective cities, summer 2006

(Note: In cases where no direct flights are available between hubs, the Hong Kong time is used to avoid distortion of comparison.)

**Figure 6: Flight hours between Asian hubs and intercontinental hubs**

	Hong Kong	Shanghai	Guang-zhou	Singapore	Seoul	Taipei	Bangkok	Tokyo	Osaka	Dubai
<b>Paris</b>	13h40m	11h55m	12h50m	13h10m	11h45m	X	12h	12h30m	12h25m	7h5m
<b>Frankfurt</b>	12h50m	11h10m	12h15m	12h40m	11h20m	13h40m	11h15m	11h40m	12h10m	6h45m
<b>Los Angeles</b>	13h15m	14h45m	12h50m	18h05m	11h	11h35m	15h30m	9h55m	10h25m	X
<b>New York</b>	15h45m	17h30m	X	23h	13h40m	17h50m	17h10m	12h30m	X	10h10m
<b>Chicago</b>	14h32m	13h25m	X	20h30m	12h50m	X	X	12h20m	12h2m	X
<b>Amsterdam</b>	12h40m	10h45m	14h35m	13h25m	X	X	11h45m	12h	9h55m	7h10m
<b>London</b>	12h45m	12h00m	X	13h35m	11h35m	11h40m	12h5m	12h35m	12h30m	7h35m
<b>Total</b>	<b>95h27m</b>	<b>91h30m</b>	<b>95h32m</b>	<b>114h25m</b>	<b>84h50m</b>	<b>95h32m</b>	<b>94h17m</b>	<b>83h30m</b>	<b>85h12m</b>	<b>66h32m</b>

Source: Published passenger and freighter schedules, September-October 2006.

Only direct flights with no technical or commercial stops are included. For comparison purposes, those routes without direct flights are neutralised with Hong Kong data. Out of the top 10 European and US cargo destinations in the world by 2005 throughput, Memphis, Indianapolis and Miami are not included because direct flights to these destinations are not widely available from the Asian hubs within our scope of comparison.

Such are the two categories of airports actively challenging Hong Kong's position as an air cargo hub: hubs like Guangzhou and Shenzhen (and at the margin Shanghai Pudong and Macau) that compete with Hong Kong for the high-value goods made in the Pearl River Delta and have advantages in terms of domestic China connectivity; and more distant challengers like Singapore, Seoul

and Dubai focused on linking strong regional hub-and-spoke arrangements with strong intercontinental connectivity.

This chapter will examine the extent to which these hubs constitute a threat to Hong Kong.

### **Competition for direct cargo: Guangzhou, Shenzhen and Shanghai**

In the past, the airports of Guangzhou and Shenzhen have been dismissed by Hong Kong shippers and freight forwarders as undesirable operation bases. Such partiality is not without reason. Cumbersome customs restrictions, coupled with short working hours and a bureaucratic mindset, limit the attractiveness of Baiyun and Baoan airports as air cargo hubs, despite lower air cargo handling charges and closer distances from factories in the Pearl River Delta. So far, the relatively small volume of cargo exported from Baiyun and Baoan means that freight forwarders can gain little from consolidation.

However, as the two airports have expanded their international network and frequencies, some of these problems have seen some incremental improvements. Mainland airport officials interviewed for this study are clearly conscious of their shortcomings and appear clear-headed about how to remedy them in the coming years. In Shenzhen, for instance, the launch of Jade Cargo and the Lufthansa Group's investment in an international cargo handling terminal means that airport customs are modifying their working hours to accommodate Jade's freighters. The decision by Federal Express to relocate their Asia hub to Guangzhou from Subic Bay has also allowed the integrator to convince the Baiyun airport authorities to eliminate customs requirements for transhipped cargo.

The Mainland airports have been cultivating their strengths and eliminating their weaknesses faster than many outsiders realise.

### **Baiyun and Baoan -- Hong Kong's next Yantian?**

*Guangzhou - International connectivity* Proclaimed in the CAAC's 11<sup>th</sup> Five Year Plan as the designated international passenger and cargo hub in southern China, the Guangzhou Baiyun International Airport is rapidly building its international flight network, adding 17 new international destinations in 2006 to the 20 it had in 2005. Its ambition is to add another 50 in the next five years, fast approaching Hong Kong's level of international connectivity.

*Domestic connectivity* But an important element of competitiveness comes from its domestic network, and this is where Baiyun has an edge over Hong Kong. As Pearl River Delta factories move inland in search of lower costs and as

Western regions of China further develop, Hong Kong would find it increasingly important to be able to offer seamless transfer of shipments onto aircraft to go to second tier cities and inland airports. Guangzhou is in principle already able to do that. In reality, these challenges to Hong Kong will only materialise when wide-bodied aircraft are being used on these domestic routes, since the current prevailing use of narrow-bodied aircraft greatly limits capacity for cargo carriage.

***Towards Open Skies*** Indeed China has in recent years liberalised access for foreign carriers, in particular with the signing of the US-China air service agreement in August 2004. Before August 2004, only four airlines from the US and from China were allowed to operate between the two countries, with only 20 weekly freighter services per airline. With the new agreement, five more airlines are added, freighter frequencies are permitted to reach 131 per week by 2010, and 5th freedom rights are granted. Provided that the carrier operates at least 72 movements per week, the carriers have unlimited capacity, unlimited codeshare and 7th freedoms. (See Figure 7 for details.) Meanwhile, access to European carriers is still relatively restrictive.

**Figure 7: US-China Air Services Agreement, 2004**

<i>Before</i>	<i>After</i>
4 airlines from each country	Add 5 airlines from each country by 2010
20 per week freighter service	111 per week freighter services to be added by 2010, total 131 frequencies.
US carriers restricted to five Chinese cities; Chinese carriers restricted to 12 US cities	<ul style="list-style-type: none"> <li>• Carriers with 72 flight movements a week enjoy unlimited capacity</li> <li>• 5<sup>th</sup> and 7<sup>th</sup> freedoms</li> <li>• Unlimited codeshare</li> </ul>

*Source: Newspaper reports and Strategic Access interviews.*

***Expanding catchment areas*** Moreover, although Hong Kong currently depends on the efficient highway system in southern China to deliver these shipments from the Pearl River Delta to Hong Kong, any improvement in road infrastructure in the PRD also benefits either Guangzhou or Shenzhen, if not disproportionately. A highway that makes possible a 20-hour trip from Chongqing to Hong Kong has also improved Guangzhou’s accessibility to Chongqing.

***Cumbersome customs*** International freight forwarders who have tried Baiyun or Baoan often tell stories about the bureaucratic nightmare of clearing

customs, for both import and export. However, on-the-ground interviews revealed that the problems are lessening, albeit incrementally. In the past, every piece of shipment in Baiyun and Baoan was scanned for security checks, in comparison to the “known shipper” programme in Hong Kong which requires declaration and only spot checks. However, operators in Shenzhen have told us that as customs declaration has become electronic in recent years, for many scheduled flights, cargo scanning is now selective and instances of customs officers asking the forwarders to open and unpack shipments for searches has been reduced.

Another customs-related complaint has been regarding working hours and long lunch breaks. On this, one must note that the Yantian and Shekou port customs used to be criticised for the same reasons. They improved faster than the Hong Kong sea cargo sector anticipated. Given time, we can only expect the same to happen with the airport customs of Baiyun and Baoan, though whether they will succeed in wholly eliminating Hong Kong’s competitive edge is open to question. For this, it would be helpful to understand the underlying reasons for China’s complex and illiberal customs regime. The fundamental role of customs in China is to collect revenue, rather than to facilitate trade, and this is the main reason behind the highly regulated environment. Complexity is compounded by the fact that different municipal regions have their own customs regimes. Guangdong Province, for instance, has 7 different customs districts, namely Shenzhen, Huangpu, Guangzhou, Gongbei, Jiangmen, Shantou, and Zhanjiang. Not only does each have different clearing practices, they also compete with each other for generating the highest customs revenue. It also means that goods moving across districts also require declaration.

In recent years, the Yangtze River Delta region has launched trials of customs reform, making declaration procedures uniform across Shanghai, Nanjing, Hangzhou and Ningbo. However, these changes are likely to be incremental. Currently, about 13% of national government tax income comes from customs levies, justifying important political clout of the Customs Authority in Beijing. The airport customs at Baiyun and Baoan do not answer to their local or provincial governments, but directly to Beijing.

Cumbersome customs regulations are therefore likely to remain a weakness for all Mainland airports in the foreseeable future. But the pragmatic steps recently taken to facilitate speedier cargo movement suggest that Hong Kong’s advantage will narrow over time.

*The influence of large scale foreign investments* We have already seen Lufthansa and FedEx making an impact on liberalising cargo-related policies in Shenzhen and Guangzhou airports respectively. More foreign investments

are on the way, gradually pushing the government to liberalise. (See Figure 8 for the major foreign investments in cargo airlines in China.) These joint ventures also help Chinese airports and airlines to raise funds for infrastructure expansion, as well as help bring managerial talent and staff training to an international level.

*Lack of consolidation possibilities* Another typical complaint from forwarders regarding PRD airports is the lack of critical mass, which limits potential for consolidation activity. It is questionable whether this would remain a weakness in the long term, as critical mass builds. Since consolidation requires a dismantling and mixing of consignments from a wide variety of originating cities, only a hub with considerable cargo throughput would be able to offer the opportunity for freight forwarders to optimise the space in their pallets. If and when Baiyun and Baoan airports attract a critical mass of cargo, freight forwarders located in these airports would enjoy greater flexibility for consolidation.

*Supply side advantage* All major Chinese airports – whether with an international or domestic focus – are building at breath-taking rates. To this end, Hong Kong’s infrastructure growth and the cargo handling capacity offered could be lagging behind in a few years’ time. <sup>2</sup>

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<sup>2</sup> But demand could be growing so fast that such aggressive expansion would struggle to keep up. In Guangzhou, for instance, demand is expected to reach 2 million tonnes in 2010. Under current expansion plans, the handling capacity would reach 2.5 million tonnes, including 0.6 million tonnes in a dedicated FedEx facility, according to a presentation and speech, “*The Plan and Carrying-out Programs of Guangzhou Baiyun International Airport as a Cargo Hub*,” Liu Zijing, president, Guangdong Airport Management Corporation, in Beijing, May 22, 2006. That means that five years from now, utilisation rate would be at 80% (currently it is 70%) and more capacity would have to be built otherwise saturation would be reached by 2015 assuming a compound growth rate of 7% -- which is half the growth rate forecast in China’s 11<sup>th</sup> Five Year Plan.

**Figure 8: Foreign air cargo investments in China**

	<i>Hub</i>	<i>Foreign investor</i>	<i>Domestic partner</i>	<i>Developments</i>
<b>Korean Air-Sinotrans joint venture</b>	Tianjin	Korean Air (25%); Hana Capital (13%); Shinhan Capital (11%)	Sinotrans Air, a subsidiary of Sinotrans Ltd. (51%)	Signed in September 2006, the joint venture aims to launch by late 2007. It will operate domestic and international cargo flights.
<b>Great Wall Airlines</b>	Shanghai	Singapore Airlines Cargo (25%); Temasek Holdings (24%)	China Great Wall Industry Corporation (51%)	Launched in June 2006 Shanghai-Seoul-Amsterdam and Shanghai-Mumbai routes. (Grounded in August 2006 for China Great Wall Industry's alleged involvement in missile sales to Iran.)
<b>Yangtze River Express</b>	Shanghai	China Airlines (25%); three other Taiwanese logistics companies (24%)	Hainan Airlines (51%)	Operating six freighters, waiting in line for CAAC clearance for more aircraft.
<b>Jade Cargo International</b>	Shenzhen	Lufthansa Cargo (25%) and German finance institution DEG (24%)	Shenzhen Airlines (51%)	Launched Shanghai-Amsterdam in August 2006.
<b>Shanghai Airlines Cargo International</b>	Shanghai	EVA Airways (45%) through two subsidiaries of Evergreen Group	Shanghai Airlines (55%)	Started Shanghai-Los Angeles flight in June 2006, plans to fly to Frankfurt and more US cities.

*Source: Newspaper articles, information updated as of October 2006*

**Figure 9: Top Ten Mainland Airport's Recent Expansion Plans**

<i>Rank</i>	<i>Airport</i>	<i>Expansion and upgrade projects</i>
1	Shanghai Pudong	Second terminal and third runway construction to be completed by 2008 at a cost of RMB19.7 billion, which could double the possible aircraft movements per year.
2	Beijing Capital	RMB19 billion Olympic expansion project commenced in Mar 2004, for completion by late 2007, to double the cargo capacity to 1.8 million tonnes per year.
3	Guangzhou Baiyun	The 800,000-tonne third cargo terminal construction started in 2005 and will finish in 2007. A warehouse and a cargo runway are being built for FedEx's use, increasing capacity further to 2.5 million tonnes per year. The project kicked off in Sep 2005, to be completed in 2010.
4	Shenzhen Baoan	The airport will upgrade existing freight terminal to handle over 300,111 tonnes a year by 2008. Also plan to construct second runway and third terminal by late 2008-early 2009.
5	Shanghai Hongqiao	Expansion was completed in June 2005, boosting overall capacity by 30% to 300,000 tonnes.
6	Chengdu	New runway to be completed by 2008. Aiming at 3.4 million passengers and 600,000 tonnes cargo by 2015.
7	Kunming	A new airport is being built, with the first phase completed in 2009, designed for 20.7 million passengers and 600,000 tonnes of cargo. Third phase to be completed 2035, reaching 4 runways.
8	Xiamen	Latest expansion plans aim to expand to accommodate 17 million passengers and 1.2 to 1.5 million tonnes of cargo by 2015, with a new runway, cargo apron and parking bays in the pipeline.
9	Hangzhou	With capital from Hong Kong Airport Authority, now a 35% shareholder in the airport management company, it plans a second runway and new terminal.
10	Nanjing	Second phase construction is underway, Apron will be expanded from 180,000sqm to 360,000sqm.

*Source: News articles; information updated as of October 2006*

## **Macau - Attracting Charters but not Threatening Hong Kong**

Many interviewees have mentioned Macau as a potential threat to Hong Kong's attractiveness to unscheduled charters. Due to the slot constraints and higher landing fees in Hong Kong, Macau has been able to lure some charters away during peak season, some shippers and forwarders have told us in interviews. After all, Macau is not only cheaper, it also offers a no-hassle free-port status for customs clearance.

However, a closer examination of the issue has led us to believe that such a threat is not significant. In the past decade, several carriers that started as charters flying from Hong Kong have one by one become scheduled carriers, including Luxembourg-based Cargolux, Amsterdam-based Martinair, Polar Air from the US and Ocean Airlines from Italy. This suggests that charter activities have grown strongly in Hong Kong, and this growth is not reflected in statistical data summarising only throughput flown on charters.

Moreover, many of those charters being diverted to Macau, or even Shenzhen, are aircraft types that Hong Kong wouldn't welcome. Noise pollution regulations in Hong Kong only permit aircraft that meet Type III standards. But unscheduled charter operators - since they usually cater for unexpected, unbudgeted needs of shipment - often use the oldest available aircraft types that do not meet Type III standards<sup>3</sup>. Since Macau and Mainland Chinese airports do not have these restrictions, such charter aircraft are in fact forced to use these airports instead of Hong Kong.

With Macau's projected growth in tourism, the airport is bound to expand its regional and international networks in passenger flights. In the long run, Macau has the potential for attracting freight to fill bellyholds of passenger aircraft. We should note, however, that Macau is currently highly dependent on Taiwan-China cargo for its scheduled freight traffic. Once direct air links are allowed, Macau would have to seek out new markets.

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<sup>3</sup> These aircraft include DC 8, DC 10, B727 and B747-100.

## **Shanghai – aspiring to become Asia’s leading hub**

In terms of geographical location, Shanghai is closer to the US and to Europe than Hong Kong is. Gearing up to welcome a surge in passenger traffic during the 2010 World Expo, the Shanghai Pudong Airport is fast expanding in infrastructure and bellyhold capacity.

*Rosy growth prospects* As far as its air space capacity permits, Shanghai’s air cargo business is set to grow at spectacular rates in the next 10 years.

Also, Shanghai stands to benefit substantially from any warming of cross-straits relations. Should direct links be allowed, Shanghai would divert transshipment traffic currently benefiting Hong Kong, Incheon and Macau. No wonder both of the largest Taiwanese airlines, China Airlines and EVA Airways, have formed joint ventures with mainland firms to run cargo airlines – Great Wall Airlines and Yangtze River Express – both of which are based in Shanghai.

*International connectivity* In 2006, Shanghai had 69 international destinations, closely behind Hong Kong’s 86. With UPS developing its hub and with China Eastern and Shanghai Airlines as its ambitious home carriers, the Pudong airport is set to grow robustly in connectivity.

It is noteworthy, however, that Pudong is being developed as an international hub, with domestic flights still focused on Hongqiao to the west of Shanghai. The extent to which this separation of domestic and international operations hampers seamless connectivity through Shanghai has yet to be fully gauged.

*Expanding catchment, but running into local competitors.* The improving road and rail network into Zhejiang and Jiangsu provinces would expand Pudong’s catchment area. At the same time, however, the up-and-coming second tier airports of Hangzhou and Nanjing could increasingly become rivals of Shanghai. Although the location of airports in the Yangtze River Delta is less dense than our PRD hinterland, the situation of rivalry and lack of cooperation may develop in a similar manner.

*Slot congestion* Every time cross-strait relations become tense, military exercises in China’s coastal areas are stepped up, meaning that civil aviation becomes paralysed for Shanghai. Even absent such tension, military exercises are commonplace, and cannot be anticipated, regularly disrupting civilian flights into and out of Shanghai. Scheduling of military exercises is confidential and therefore unpredictable.

The density of domestic flights to Hongqiao and international flights to Pudong means that air space congestion is particularly acute as passenger and cargo demand in Shanghai's airports continue to grow.

### **Note on Price and Growth Trends in China**

In projecting the future development of international air cargo in China, two trends are often neglected and misunderstood. First, the status quo of low costs of operation in China is unlikely to continue in the long run. Second, a boom in domestic air cargo could divert terminal handling capacities at airports and further drive up prices.

#### *Lower cost is not a sustainable advantage*

Lower cost in Guangzhou, Shenzhen and Shanghai, in particular terminal handling charges and labour cost, has often been cited as a competitive advantage over Hong Kong. Indeed, lower cost has motivated some airlines, shippers and forwarders to experiment with these emerging hubs. However, costs in the Mainland often lack transparency and are more complex than many non-Mainland cargo agents imagine. For instance, Hong Kong freight forwarders are not able to obtain their own licenses (known as Class A license) to allow them to issue master airway bills on the Mainland. Instead, they need to lease the license from a Mainland-owned, Mainland-registered forwarder.

We concur with the recent report by GHK<sup>4</sup> that routing cargo through Mainland airports involves considerable intangible costs, such as dealing with a more bureaucratic customs, less intercontinental frequencies and a less efficient cargo handling terminal.<sup>5</sup> Mainland airports have a long way to go before they can offer the value for money proposition that Hong Kong can.

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<sup>4</sup> Executive summary, "Study on Competitiveness of HKIA as an International and Regional Air Cargo Hub – Volume I", GHK, April 2006.

<sup>5</sup> According to GHK's 2004 estimates, if Hong Kong's intangible costs stand at 100, Guangzhou's would stand at 2,500, Shenzhen at 4,100 and Macau at 5,200. Meanwhile, the tangible costs for the four airports are estimated to range from Hong Kong's 100 to Shenzhen's 114.

## *Airport charges*

The case of airport charges is an illustration of hidden costs and a complex, opaque cost structure in China. Airport charges in China for foreign carriers are among the highest in Asia. Although the basic take-off/landing fees are lower in China than in Hong Kong, extra charges are imposed to park, taxi, use lighting, or to take-off or land at certain times of the day. Also, foreign carriers pay about three times the landing fees that Chinese carriers pay to fly the same route, since the calculation of fees is based on the carrier's nationality and not the type of route flown. It is also not insignificant that aviation fuel costs are significantly higher on the Mainland than in the global fuels market.

This muddled situation on cost comparison is changing, with CAAC ready to implement a reform plan by early 2007 (see Figure 10 below). Foreign and domestic airlines would be charged by the routes they fly, without regard of their nationalities. Airport charges for foreign airlines, therefore, would be expected to drop while domestic airlines may start paying more. But the fee calculation methods remain complex, and the extent of these price adjustments for foreign airlines remains to be seen.

**Figure 10: CAAC airport fee reform**

<i>Proposed initiatives</i>	<i>Details</i>
<b>Foreign carriers to receive national treatment</b>	Domestic and foreign carriers are currently paying different categories and levels of airport fees in China. After adjustments, airport fees will be charged based on routes (international vs domestic) rather than the nationality of the carriers. This is in line with the spirit of WTO.
<b>Modification of airport fees</b>	The draft circular proposes to eliminate various surcharges (peak hour, night flight, lighting, etc.). Instead, the future take-off and landing fee will only be based on the aircraft's maximum take-off weight and its destinations. Furthermore, passenger service charge and security fees will be set based on actual number of passengers or tonnage of the cargo on board instead of a percentage of aircraft's maximum available seats or tonnage.
<b>Greater pricing flexibility for airports</b>	Airports and airlines will be able to negotiate fee levels going forward. According to the draft, airports are allowed to have a ceiling of 10% increase from proposed benchmark but no floor for discounts.

*Source: Newspaper reports*

### *The future of domestic cargo in China*

CAAC forecasts China's domestic cargo market to grow at 10 per cent annually from 2006 to 2010. The Boeing *World Air Cargo Forecast 2006/07* also holds an optimistic view for the domestic China market, describing it as the "fastest growing contiguous market in the world" and projecting an annual growth of 10.8% a year for the next 20 years, compared with the projected global average of 6.2 per cent.

It is expected that domestic freight will ride on the back of the international freight growth. As inland and Western regions see their manufacturing and trading sectors catch up with the coastal regions, there will be increasing demand for the transfer of products, raw materials and parts between second and third tier cities, in order to feed into the international flight network.

International and domestic players in the airline industry have been eyeing the domestic market. Recognising the importance of a domestic network, for example DHL Global Forwarding is investing US\$12 million to upgrade and expand its infrastructure in China, increasing the number of branches from 20 in 2005 to 37 in 2007. In January 2007, DHL Global Forwarding launches its domestic air freight service, becoming the first international logistics company to obtain such a license from the China Air Transport Association.

FedEx and UPS are also building substantial land-based networks to support their regional hubs.<sup>6</sup> China's own domestic airlines, including the "Big Three", as well as Shanghai Airlines, Hainan Airlines, Shenzhen Airlines, and other private sector start-ups, have all been forming joint ventures with foreign partners to seize the domestic market. (See Figure 11 for details.)

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<sup>6</sup> FedEx is investing US\$150 million in its hub in Baiyun, in a facility that doubles the handling capacity of Subic Bay. Also, in February 2006, FedEx bought out its mainland joint venture partner, the Tianjin-based Datian W Group (DTW Group) for US\$400 million. The deal gives FedEx control of the International Priority Express joint venture set up in 1999, including 86 DTW locations in mainland China and more than 6,000 employees. UPS's Shanghai hub is expected to be up and running in 2007, handling 200,000 tons a year. DHL Express signed an MOU with Shanghai Airport Authority earlier this year, indicating that it is considering setting up a hub in Shanghai.

**Figure 11: Mainland airlines' cargo ambitions**

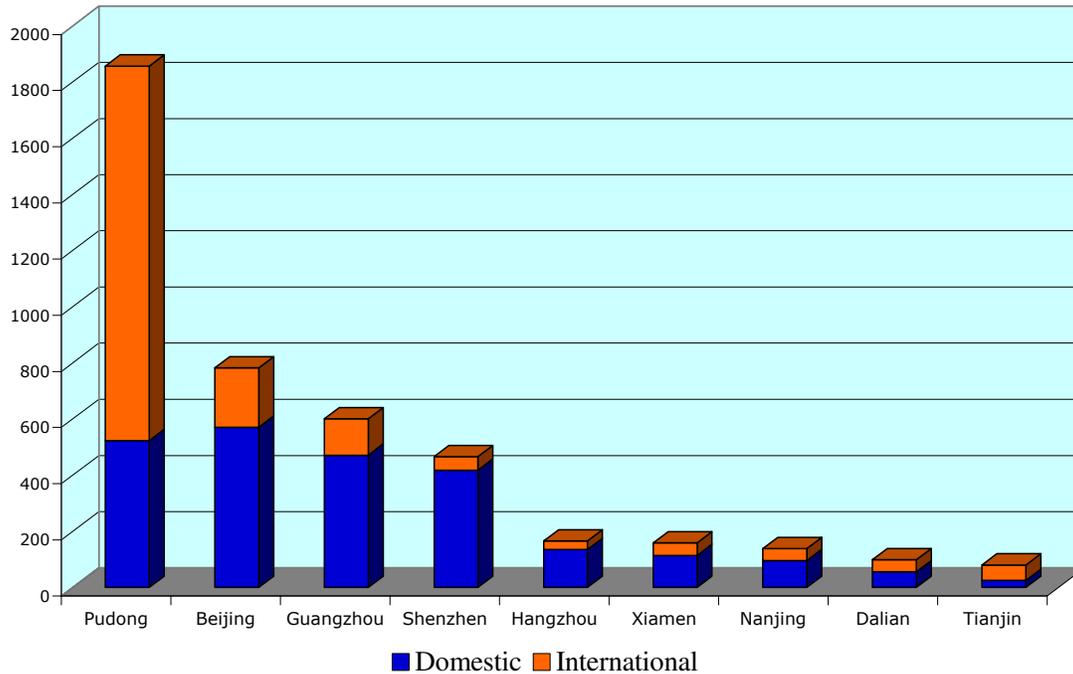
<i>Airline</i>	<i>Hub</i>	<i>Developments</i>
China Eastern	Shanghai	Set up China Cargo Airlines in 1998 with COSCO
Air China	Beijing	Set up Air China Cargo in 2003 with Beijing International Capital
China Southern	Guangzhou	Deputy general manager Xu Jiebo announced plans to set up a cargo airline with a foreign partner by end of 2006, to be based in either Guangzhou or Shenzhen.

*Source: Newspaper reports*

In fact, the domestic cargo throughput at major Chinese airports is already comparable to a mid-size international hub in Europe. For instance, Guangzhou Baiyun handled 554,000 tonnes of domestic cargo in 2005, equivalent to 84% of Brussels' throughput in the same year. Brussels ranks #30 worldwide in cargo throughput volumes. Although deducing from Baiyun airport's projection that its domestic cargo will reach 1 million tonnes in 2010, that means the domestic cargo growth rate would be 13% for the next five years. The potential for this market appears huge. Figure 12 illustrates how airports in Beijing, Guangzhou and Shenzhen are still predominantly catering for domestic cargo.

In planning future construction of new capacity in these Mainland Chinese cities, it would be appropriate for airport authorities in China, as well as any cargo agents and forwarders with on-airport facilities, to take into account the scale of the domestic market.

**Figure 12: Domestic vs international cargo at selected airports in China, 2005 ('000 kg)**



Source: CAAC Yearbook 2005

## The transshipment competition

The benefits and possible strategies of developing transshipment in Hong Kong will be further discussed in Chapter 7. In this section we look briefly at Hong Kong's transshipment rivals – Shanghai, Singapore, Incheon and Dubai – to see what competitive edge they might have gained given that these airports have given priority to the transshipment business.

### *More price competitive than Hong Kong:*

Transshipment cargo is price sensitive, since there are usually several airports offering possible routes. Currently, Hong Kong is geographically at a disadvantage to Shanghai, Singapore, Incheon and Dubai because these competitor hubs are closer to US and Europe destinations.

### *Multimodal transshipment capabilities available:*

While the airport of Hong Kong receives most of its cargo by trucks from southern China, our regional competitors are able to leverage their multimodal capabilities as a lower price point than paying air freight rates on the entire

journey.<sup>7</sup> The short distance between southern China manufacturing centres and Hong Kong justify using trucks rather than sea or river transport.

*Home carriers have grown with the airports:*

The respective home carriers of Dubai, Incheon and Singapore - Emirates, Korean Air and Singapore Airlines, have historically aggressively promoted their hubs as the infrastructure at these hubs expands. (See Figure 13)

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<sup>7</sup> Dubai's two seaports - Port Rashid and Jebel Ali -- channel 30,000 tonnes of freight from sea to air each year, according to the airport website.

**Figure 13: Expansion plans of Hong Kong's selected regional competitors**

<i>City</i>	<i>Airport expansion ambitions</i>	<i>Home carrier cargo plans</i>
Dubai	<p>The Dubai World Central International Airport (also known as Jebel Ali International Airport) is being built to become the largest airport in the world.</p> <ul style="list-style-type: none"> <li>• The airport, logistics city, residential and resort area form six zones, with total land area twice the size of Hong Kong Island</li> <li>• 6 runways, 16 cargo terminals with capacity of 12 million tonnes, a capacity 3 times of Memphis, currently the busiest cargo airport in the world</li> <li>• Passenger capacity will be 120 million, 50% more than Atlanta, currently world's busiest airport for passenger traffic</li> <li>• Connected with Jebel Ali port which handled 7.6 million TEU in 2005; projected to reach more than 15 million TEU by 2010</li> </ul>	<p>Its freight fleet currently includes nine B747F and A310F. Orders to be delivered include eight B777F and 10 B747-8F.</p> <p>Plans to grow fleet from the current 95 to 100 by 2010.</p> <p>In the latest financial year, Emirates depends on cargo for 21% of its revenues (29% increase from 2004 by value).</p>
Incheon	<ul style="list-style-type: none"> <li>• Current capacity: 30 million passengers, 1.7 million tonnes cargo</li> <li>• Phase 2, by 2008: 44 million passengers, 4.5 million tonnes cargo</li> <li>• Phase 3: New passenger concourses</li> <li>• Phase 4, by 2020: 100 million passengers, 7 million tonnes cargo</li> </ul>	<p>Korean Air, largest cargo carrier in the world by FTK, has 19 freighters and plans to expand to a fleet of 30 by 2010. In recent years it has been converting several of its B747-400 passenger aircraft into freighters to expand cargo capacity.</p>
Singapore	<p>Swissport's 250,000 tonne facility was opened earlier this year, with plans to increase capacity to 400,000 tonnes. This third terminal in Singapore has driven down prices by roughly 25%.</p>	<p>Singapore Airlines Cargo, also one of the largest cargo carriers worldwide, has set up Great Wall Airlines in China, but had since suspended services.</p> <p>SIA Cargo offers strong networks to booming markets such as India and the Middle East. Its fleet of 14 freighters may be boosted as its parent Singapore Airlines has 20 Boeing 787 and 29 Airbus aircraft on order and may transfer some to SIA Cargo.</p>

Source: Websites and press releases of respective airports and airlines; newspaper reports as of September 2006; Strategic Access interviews.

## 4. Developments in the Logistics Sector

After extensive interviews across the logistics supply chain in the Pearl River Delta, our conclusion is that the majority of shippers and freight forwarders concentrate large amounts of their business through Hong Kong, valuing the connectivity of the hub, and the reliability and efficiency with which consignments are dispatched. This is in spite of a perception that the cost of handling consignments through Hong Kong may be nominally higher than comparable costs on the Mainland.

However, there is one significant change that appears to have occurred in the five years since the last Air Cargo study undertaken by the author: freight forwarders today have strong operations in competitor hubs like Baiyun and Baoan, and have developed the ability to “flip” consignments speedily and with reasonable ease through these hubs rather than Hong Kong. Already, a process of arbitrage occurs by which freight forwarders optimise their efficiency, and minimise costs, but splitting consignments between these hubs and Hong Kong. Such arbitrage would likely be greater if Baiyun and Baoan had services to more international destinations, and more frequent services to those cities already served. The development of dedicated air cargo services by China Southern, and the growth of Air France in Baiyun and Lufthansa (through its Jade joint venture) in both Baiyun and Baoan appears likely to augment this arbitrage. In short, as the major PRD air cargo hubs improve their connectivity and their physical air cargo handling capacity, then any erosion of the competitive efficiencies that currently persuade freight forwarders to prefer Hong Kong could quickly result in diversion from the Hong Kong hub.

It is also clear that if Hong Kong is to retain its competitive leadership as the connectivity advantage erodes, so the higher costs currently justified through Hong Kong will have to fall closer to levels prevailing at Baiyun and Baoan.

This threat of diversion applies largely to simple components destined for factories in the PRD, and to finished products leaving the PRD for consumer destinations in Europe and the US. By contrast, Hong Kong’s strength as a consolidation hub remains considerable and barely challenged: Hong Kong’s free port status, which allows the easy import and consolidation of components and sub-assemblies from around Asia, contrasts sharply with the Mainland’s complex and onerous customs regime. Value-adding freight forwarders that have experimented with moving consolidation operations into the Mainland appear to have quickly recoiled because of complexities in splitting and reconsolidating consignments.

## 5. Connectivity: a fast-eroding advantage

Much is said of Hong Kong's superior connectivity, and the frequency of flights on key international routes which facilitates efficient "just-in-time" operation for exporters and the integrators that serve them. However, Hong Kong's competitive edge in this area is fast-eroding on three counts: first, direct competitor hubs for the PRD's "origin-destination" business are building their international connectivity at speed (see Figure 14 below); second, regional transshipment hubs like Singapore, Incheon and Dubai already have intercontinental connectivity that is comparable to - or in some cases superior to - Hong Kong (see Figure 15) ; third, the domestic Mainland connectivity of hubs like Baoan and Baiyun is strikingly superior to Hong Kong's Mainland connectivity (see Figure 16), and may (if not remedied) become a source of significant competitive disadvantage to Hong Kong as China's domestic air cargo business begins to grow. Each of these issues requires separate examination.

In the year 2000, the international connectivity of the Guangzhou and Shenzhen hubs was negligible. A clear policy in Beijing aimed at favouring Shanghai and Beijing in international air services negotiations left the PRD hubs with limited hopes of building superior international connectivity. This policy bias away from the PRD hubs - in particular as it applies to Guangzhou - has clearly been reversed over the past two years. The result has been a sharp rise in international destinations connected to the new Baiyun airport in the past five years (see Figure 14). Meanwhile, Shenzhen remains frustrated in any ambitions to build its international connectivity, and appears reconciled to the role of domestic transshipment.

At present, Hong Kong's international connectivity remains significantly superior. Even more emphatically, the frequencies of flights to key air cargo destinations (whether passenger flights or dedicated air cargo services) deliver competitive strength to Hong Kong. But significant air cargo airlines like Air France are beginning to build services from the Guangzhou hub. China Southern is also determined to build both international passenger services and dedicated freighter services from its home hub. A major development will also occur in 2009 when the new dedicated FedEx facility is completed. While this may not add a large number of destinations, it will without question improve frequencies, and raise the cargo uplift capacity through the Baiyun hub.

This self-evidently illustrates that it is only Hong Kong's home carriers - Cathay Pacific and Dragonair - that can be relied upon to build the Hong Kong hub rather than arbitrage with other regional hubs. This is not driven by any philanthropic instincts, but from the simple reality that all of their traffic rights originate from, and rely upon, Hong Kong. Unlike non-home carriers who can

migrate operations, Cathay Pacific and Dragonair have no option but to stay and build. Going forward, as other airlines explore wider choices of hub locations, Hong Kong's growth as an air cargo hub is going to rely even more heavily than the port on the success and growth of its home carriers.

Hong Kong's transshipment competitors – significantly Singapore, Incheon and Dubai – appear at present to be more muted in their challenge to the Hong Kong hub. Their strong international connectivity over the past decade has not in any way translated into any erosion of Hong Kong's leadership as an air cargo hub. In fact, the opposite is the case: Hong Kong's air cargo growth has been more rapid than any other hub in Asia, except for Pudong in Shanghai which as a new airport must be regarded as a special case. This superior growth in air cargo business has been driven in large part by the rapid growth of the PRD's export manufacturing base, and in spite of Hong Kong's locational disadvantages for intercontinental services (please refer back to Figure 5 and 6 on flight hours between Asian hubs and intercontinental hubs). It remains moot whether Hong Kong's reliance on "origin-destination" activity leaves it vulnerable to the transshipment-based growth of hubs like Incheon and Singapore. This is examined in detail in another chapter (see chapter 7).

**Figure 14\*: Mainland airports gaining international connectivity, from 2000 to 2005**

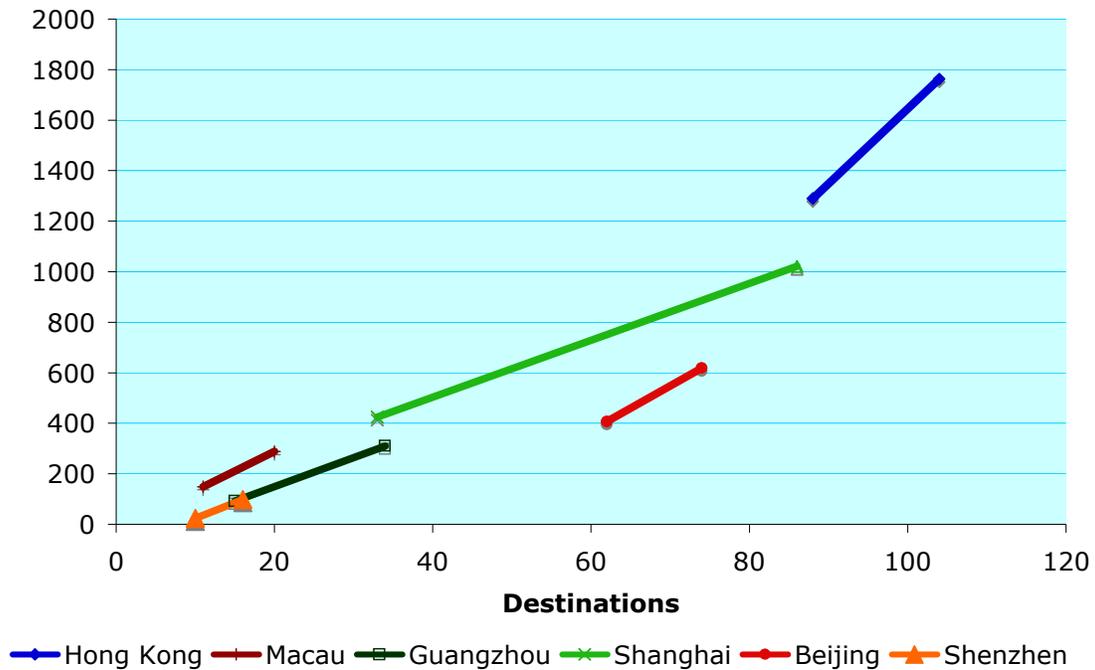


Figure 15\*: Regional hubs gaining international connectivity

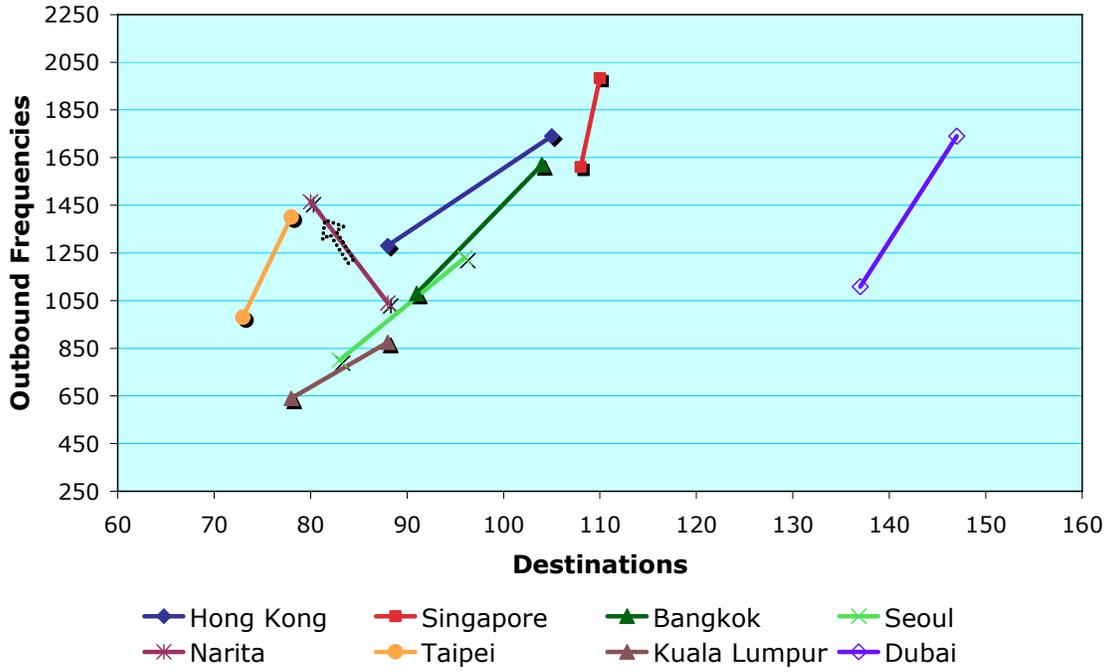
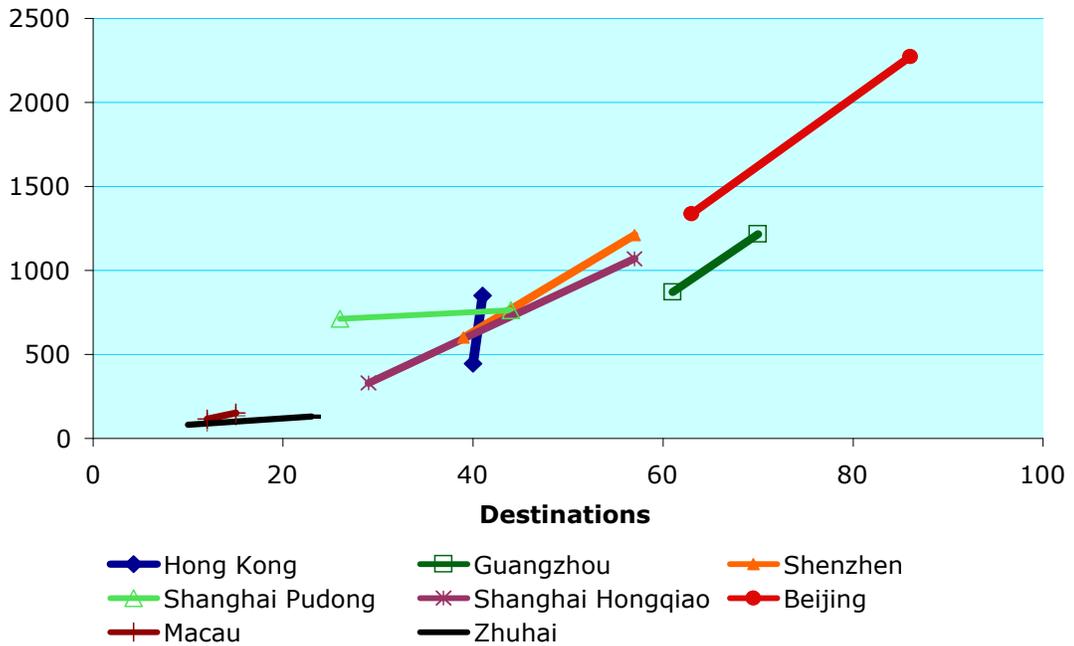
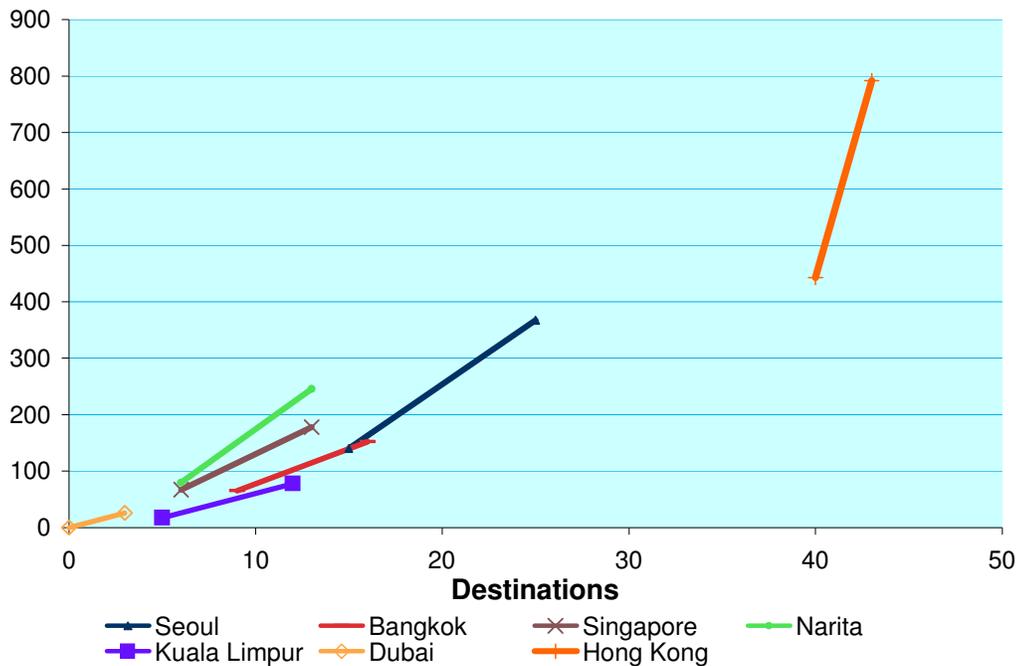


Figure 16\*: Airports in China gaining domestic connectivity, from 2000 to 2005



**Figure 17\*: Regional airports' Mainland connectivity, from 2000 to 2005**

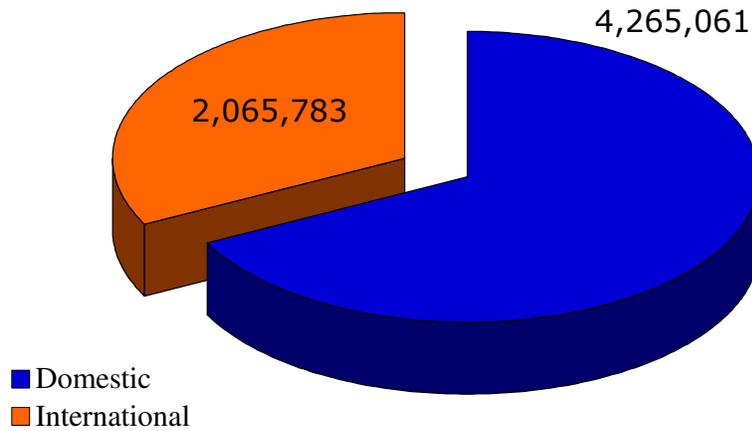


Source, Figures 14-17: References have been made to the published schedules of HKIA, CAAC and respective Asian airports, as well as OAG weekly. Effort has been made to reconcile discrepancies among these sources, caused by seasonal fluctuation in demand and counting of stopover destinations.

In the cases of Seoul and Baiyun, 2000 data referred to the old airports, which have since been replaced. In Figure 15, note that Narita's number of destinations dropped from 88 in 2000 to 80 in 2005, while frequencies rose.

The comparative paucity of Hong Kong's Mainland connectivity (see Figure 16) has in the past been competitively inconsequential, especially since regional hubs such as Singapore and Seoul have not been able to match Hong Kong's Mainland network (see Figure 17). The volume and importance of air cargo being moved within China's economy has been insufficient to translate the superior connectivity of Baiyun and Shenzhen into any measurable competitive advantage. Even today, while Baiyun reports significant growth in domestic air cargo activity, a large proportion of this appears to be the movement of cargo between Shanghai, Beijing and Guangzhou in support of onward international air cargo movement (see Figure 18). But this cannot remain the case indefinitely. As air cargo activity within China begins to grow, so the Hong Kong hub is at a significant disadvantage unless its own domestic connectivity is boosted. Despite some important liberalisation in the 2005 air services arrangement between Hong Kong and Beijing, there is at present little grounds for confidence that this competitive weakness can be remedied at speed.

**Figure 18: Domestic vs International Air Cargo in China, 2005 (in tonnes)**



*Source: CAAC Yearbook 2005*

Potentially mitigating this challenge, it must be noted that strong growth in domestic air cargo activity would constrain the capacity of Baiyun, Baoan and Shanghai to accommodate international air cargo growth. Whether supply-side limitations on the construction of air cargo handling facilities serves to suppress their challenge to Hong Kong in international air cargo movement has yet to be seen.

In short, Hong Kong's long-standing competitive advantage based on superior connectivity is an eroding advantage. The hub may already be vulnerable in terms of transshipment connectivity and domestic China connectivity. In the past these shortcomings have been competitively inconsequential, but this cannot be expected to remain so going forward.

## 6. Other perceived competitive advantages

### Home carrier stimulus

Whether or not a hub is successful, either as a passenger or cargo hub, depends heavily on the commitment and strategic astuteness of its home carrier or carriers. As already quoted in passing on page 33-34, in so far as a home carrier is successful in building activity through the hub, then this clearly constitutes an important part of a hub's competitive advantage. As one scans hubs worldwide, the correlation between strong carriers and dynamic hubs is clear. Evidence comes from British Airways in Heathrow, Lufthansa in Frankfurt, Singapore Airlines in Singapore, or FedEx in Memphis and United Airlines in Chicago. By the same measure, the comparative weakness of airlines like Sabena, Philippine Airlines, Alitalia or China Airlines has been an important factor in the competitive weakness of their home hubs. Going forward, a primary factor in whether emergent hubs like Guangzhou or Shanghai become global leaders will be the competitive success and dynamism of their home carriers, China Southern and China Eastern respectively.

For Hong Kong, the strategic dynamism and commercial success of Cathay Pacific has for many years been a key factor in the competitive success of Hong Kong as a hub. Clearly it is not the only factor - much rests on the happy accident of an excellent location, and on timely investment by the Government in superb airport infrastructure - but it has been critical nevertheless, and is likely to remain so going forward.

Just as striking as the linkage between strong hub and strong carrier is the extensive development of self-operating air cargo facilities as a key competitive driver for the successful development of an airline's air cargo business. From this vantage point, Cathay Pacific and Dragonair are extraordinary outliers in not having their own dedicated handling facilities (see Figure 19). Even China Southern has its self-handling hub at Baiyun airport in Guangzhou, which is now ranking 23rd among the world's international general cargo hubs by throughput. Jade Cargo International, which started operations in August, has also built its dedicated handling facility at Baoan airport.

**Figure 19: Status of dedicated cargo handling facility among the world's top cargo hubs and cargo carrying airlines**

<i>World's top air cargo hubs by throughput</i>	<i>Dedicated cargo terminal?</i>
1. Hong Kong	No
2. Tokyo	Yes
3. Seoul	Yes
4. Paris	Yes
5. Frankfurt	Yes
6. Los Angeles	Yes
7. Shanghai	Yes
8. Singapore	Yes
9. Miami	Yes
10. Taipei	Yes

*Source: Airport Council International, 2005 data for hub ranking by international cargo tonnage. Note: Only international general cargo hubs are included. Therefore, Memphis and Louisville, whose hubs specialise in express cargo, are excluded. Anchorage is not included because it is in most cases a technical stop.*

<i>World's top airlines by FTK (carried freight tonne kilometre)</i>	<i>Has dedicated cargo handling facility at home hub?</i>
1. Air France	Yes
2. Lufthansa	Yes
3. Singapore	Yes
4. Cathay Pacific	No
5. Korean Air	Yes
6. China Airlines	Yes
7. Atlas	Yes
8. Cargolux	Yes
9. EVA	Yes
10. JAL Group	Yes

*Source: Air Transport World, July 2006 for 2005 airline ranking data. Note: FedEx and UPS are excluded because they handle express cargo.*

As a result, the simple fact that Cathay Pacific has ambitious plans to grow its air cargo business, in partnership with Dragonair, Hong Kong's second largest home carrier, and with Air China, must augur well for Hong Kong's competitive

future. This ambition can be clearly measured in investment in dedicated freighter aircraft – its fleet, which included 10 freighters in 2000, stands at 17 today, and is set to add another 8 by 2009, at a multibillion dollar investment. Even more striking is its aim to invest billions in its own self-handling air cargo terminal in Hong Kong, which could open in 2010 with a capacity of 2.5 million tonnes per year, and be expanded in time to 5 million tonnes if necessary approvals are obtained. While some in the air cargo industry have challenged whether air cargo growth through Hong Kong will be sufficiently strong to justify such additional capacity, it is clear that Cathay Pacific's own ambitious growth plans will be an important factor in Hong Kong's competitive future. Its own success in drawing cargo into its home hub, as it vies with competitor airlines in the region, will correlate directly with Hong Kong's broader success, providing scale which in its own right will drive efficiency, and bolster competitive leadership. So too will the development of its own air cargo handling terminal.

While Cathay Pacific is likely to provide the strongest home carrier stimulus, it is important not to underestimate the stimulus that may come as carriers like Dragonair and Air Hongkong grow operations from Hong Kong as their home hub. No doubt in time newly emerging carriers like Oasis and Hong Kong Express may also contribute to this home-carriers stimulus.

By contrast, judgments about the competitive challenge likely to develop from hubs like Guangzhou, Shenzhen and Shanghai will depend on the dynamic drive of their own home carriers, respectively China Southern in Guangzhou and Shenzhen and China Eastern in Shanghai. At present, China Southern appears to be developing strongly on the back of strong and focused management activity, which augurs well for their home hubs and the challenge they bring for Hong Kong. The message from Shanghai is a little less clear-cut. China Eastern currently suffers severe losses, and has been managerially challenged by the need to integrate into its operations a number of smaller, loss-making Chinese airlines. At present, Pudong is growing strongly on the back of strong administrative support from the political leaderships in Beijing and Shanghai, but how this is likely to be sustained as China Eastern is required progressively to rest on its own competitive laurels is open to question.

## **Clustering**

Hong Kong retains clear competitive advantage from the fact that over several decades of success as a regional air cargo hub, it has built a massive cluster of thousands of companies engaged in managing air cargo business through Hong Kong, who have developed skills that cannot easily be built or replicated in hubs lacking Hong Kong's critical mass.

Hong Kong-based logistics and supply chain operators talk frequently of the difficulty of finding or training personnel in Shenzhen and Guangzhou as they begin to build their businesses in these emergent hubs. Some have addressed this challenge by persuading Hong Kong-based staff to move to these neighbouring hubs, both to take senior positions, and to train local staff. As neighbouring hubs begin to build critical mass in air cargo throughput, so it can be expected that their skills shortages may eventually be addressed, but competitiveness analyses worldwide suggest that once clustered strengths have been built, they are not easily dismantled or eroded. Despite anxieties about competitive challenges from other hubs in Asia, Hong Kong can take some comfort from this experience worldwide: the hub's leadership will not easily be eroded.

### **Consolidation and value-added activity**

Linked with Hong Kong's large cluster of import-export-related skills is the fact that Hong Kong's unusual "free port" status has facilitated the growth of a substantial critical mass of air cargo consolidation activity, and of value-added activity based on the need to mix or integrate components and sub-assemblies originating in a wide range of countries, before shipping them onward to a variety of markets both inside and outside Asia. The complexity of customs procedures in competitor locations, and the simple fact of customs-related documentation, generates a competitive advantage for Hong Kong that is distinctive, and is unlikely to be eroded within the near future.

Offsetting this clear and unusual competitive advantage is the irritating documentary friction linked with the Government's tiny levy on imports and exports - the Trade Declaration Charge. This is examined later (see chapter 7), and should be abolished if Hong Kong's distinctive "free-port" advantage is to be optimised. At the time of writing, the Government is also considering the introduction of a Goods and Services Tax (GST). Initial analysis suggests that such a tax would effectively eliminate Hong Kong's "free-port" advantage, requiring the establishment of an "in-bond" infrastructure for the management of import and export trade. Simply zero-rating exports does not appear to solve the problem. At this point it is impossible to quantify how negative an impact such a change would have on the logistic sector in general, and consolidation and value-added activity in particular, but initial examination appears ominous. This issue is examined in more detail later. (See Chapter 8, page 51-52.)

## **7. Transshipment business: second best business, or key to a competitive future?**

It has been recognised for many years that Hong Kong's location at the heart of the huge and dynamic PRD export economy has resulted in an air cargo strategy that is distinctive from key competitor hubs like Singapore, Bangkok, Seoul, Taipei or Dubai. The volume of "origin-destination" air cargo linked to the activities of the 90,000-plus export manufacturers in the PRD has been so large that there has been no clear reason to focus on other business flows. While less-well located hubs like Singapore and Seoul have had no choice but to build hub services tailored to the air-to-air transshipment of consignments through the hub, Hong Kong has had the luxury of regarding such transshipment business as "second-best business".

From a value-adding and job generation point of view, such an attitude was not unreasonable: tonne for tonne, origin-destination business generates significantly more economic benefit through the Hong Kong economy than transshipment business. While air-to-air transshipment brings benefit only within the immediate airport community - to airlines, the air cargo handling facilities, and the Airport Authority - origin-destination business generates thousands of jobs for companies managing the supply chain between the airport and PRD factories. Such shippers, freight forwarders, integrators and truckers account for the lion's share of Hong Kong's trade-related economy.

More recently, concern has begun to arise over the consequent neglect of air cargo transshipment business through Hong Kong. While the higher value-added contribution from origin-destination business is not in dispute, air cargo operators have come to recognise that transshipment activity brings clear and distinctive benefits. The simple fact of more landings and take-offs brings additional revenue to the Airport Authority and to operators inside the airport.

Hong Kong-based operators fear that hubs like Singapore and Seoul, which have captured large volumes of air cargo business as a result of policies targeted specifically at transshipment activity, may have garnered a competitive advantage that could prejudice Hong Kong's future competitive position. Transshipment business, by channeling large volumes of air cargo activity through their hubs, has enabled them to build route networks and flight frequencies that neither passenger activity nor origin-destination business could have achieved. Many air routes would not be commercially viable if they were passenger-only routes; they only become viable when supported by the revenue stream from cargo.

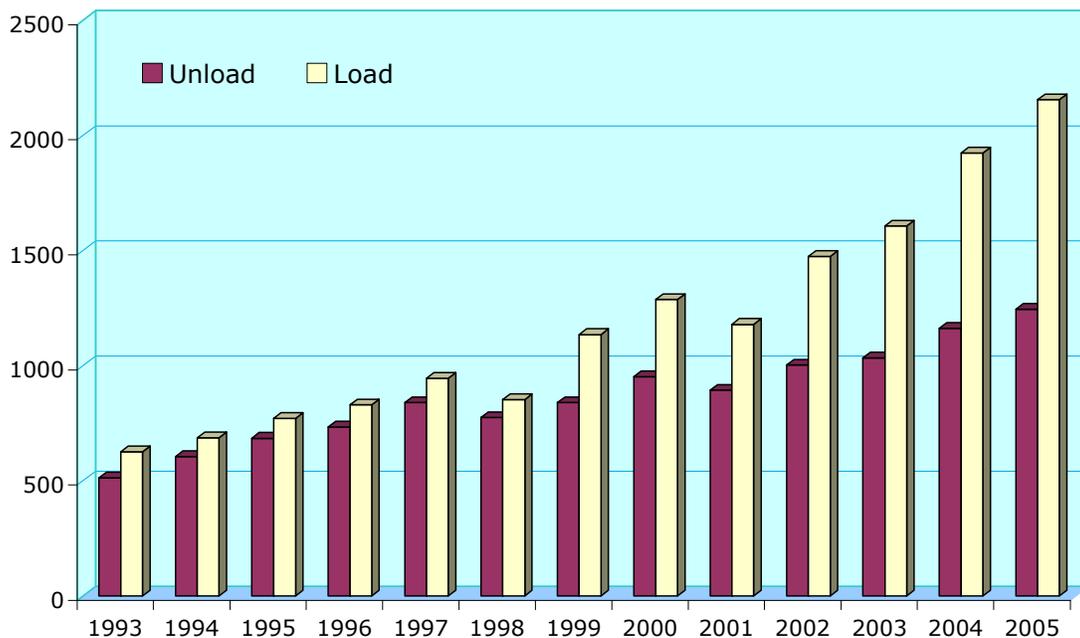
Analysts of Hong Kong's air cargo business fear that any significant downturn in the export activity of factories in the PRD (which could be a possibility in the event of a severe US recession) or an erosion of origin-destination business to

emergent hubs in the PRD could leave the Hong Kong hub extremely vulnerable. Past neglect of transshipment business has denied Hong Kong a second stream of air cargo activity that could prove critically important in the face of increasingly severe competition from emergent competitors.

### **Exposure to import/export imbalances better balanced through transshipment**

The trade imbalance between China and the US or Europe has been a well documented story. High value electronic goods and equipment, as well as garments, are exported to European and American consumers in full plane loads. Yet these aircraft return to China almost empty, forcing airlines to increase freight rates for the export leg in order to subsidise the import leg. Figure 20 illustrates the situation for Hong Kong. This is not a problem specific to any particular airport in the region; all Asian hubs and international airlines based in Asia are struggling with the challenge of trade imbalance.

**Figure 20: Worsening trade imbalance, Hong Kong, 1993-2005 (thousand tonnes)**



Source: Census & Statistics Department, HKSAR

How each hub resolves this quandary is likely to play a large role in future competitiveness. Undoubtedly, the trade imbalance is a result of macroeconomic trends that an individual airport cannot alter in the short run. One point of view has been that China's economic growth will lead to a huge consumerist force that will eventually turn the tide and make China a strong buyer of the same high

value products it now manufactures and exports, so the air cargo industry should simply wait for that day to come. Before that day comes, then, it is essential for Hong Kong to deepen its ties within China, whether in developing its Mainland Chinese flight network, or in improving road links with China, or in breaking down border barriers. It would also be essential for China to remove the red tape surrounding its import procedures.

At the microeconomic level, airlines and freight forwarders at present have little choice but to slash import cargo prices, or negotiate large and discounted import deals, clearly compromising the profitability of their air freight operations. For many such operators in Asia, developing air-to-air transshipment capabilities has been a rational – and moderately successful – means of at least partly correcting the imbalance of imports and exports. But Hong Kong, with its traditional reliance on origin-destination business, and the relative “unfriendliness” of its transshipment regulations, appears to have been less successful than other hubs in building such air-to-air transshipment business. For as long as this remains the case, Hong Kong is likely to retain a larger import-export imbalance than operators at other hubs where transshipment has been more extensively developed. This compromises the profitability of operators using the hub, and weakens Hong Kong’s attractiveness as a hub relative to locations like Singapore, Seoul and Dubai.

But efforts to remedy this imbalance between origin-destination and transshipment business have run into problems. In short, an antiquated Import-Export Ordinance and complex import licensing arrangements for a long list of “dangerous” items has made it difficult to build air cargo transshipment activity. These difficulties apparently apply not simply to air-to-air transshipment, but also to the multi-modal transshipment which is a core element of Hong Kong’s role at the heart of import-export activity between PRD factories and the markets of the world. A recent comprehensive analysis of the underpinning challenges, completed for the Airport Authority<sup>8</sup> suggests major competitive problems for Hong Kong going forward unless Hong Kong’s Import-Export Ordinance is urgently and comprehensively redrafted, with specific legal provisions for transshipment activity. In view of the comprehensive nature of the GHK report, it would be superfluous to repeat its arguments here, except to concur with the large majority of its recommendations.

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<sup>8</sup>“*Study on Competitiveness of HKIA as an International and Regional Air Cargo Hub*” – Volumes I and II, by consultants GHK, published in April and July 2006

## **Trade Declaration Charge and other regulatory barriers**

A further factor retarding the development of transshipment activity is Hong Kong's Trade Declaration Charge, a tiny levy on all imports and exports that was put in place some decades ago primarily to provide funds for the establishment and operation of the Trade Development Council, Hong Kong's quasi-Governmental trade promotion agency. The Trade Declaration Charge has proven onerous for the development of transshipment activity not because of its size: at approximately 0.05%, the cost burden to traders is modest. Rather, the document trail associated with gathering the levy appears to be neutering much of the competitive advantage arising from Hong Kong's free port status: as the GHK report notes, "it acts as a de facto import/export tax and does not appear to sit easily with the notion of Hong Kong being a free port"<sup>9</sup>. The assessment is that the TDC gathers only a small amount of revenue, but is the process creates disproportionate "friction" in Hong Kong's competitiveness as a "free-port". The clear logic of the evidence collated in the GHK report points to the need to abolish the charge.

## **Regional distribution centre business**

Encumbrances such as the Import-Export Ordinance and the Trade Declaration Charge are not only hampering the development of transshipment business through Hong Kong. Logistics operators and integrators in Hong Kong repeatedly expressed concern that they were blocking the development of Regional Distribution Centre (RDC) activity in Hong Kong. Such centres have become increasingly important worldwide as just-in-time pressures have forced companies to locate spare parts, components, drugs and a wide variety of other items in well-connected locations from where they can be dispatched unpredictably and at short notice. These centres have been important drivers of high-value adding logistics activity in Singapore, Seoul and Dubai. In summary, an appropriately drafted Transshipment Ordinance, simplification of licensing arrangements and the abolition of the Trade Declaration Charge would greatly facilitate transshipment activity, logistics operators argue, enhancing the potential to build RDCs in Hong Kong.

Freight forwarders also complained that RDC activity, and other air cargo consolidation activity, was hampered by the lack of fluent multimodal integration of cargo services in Hong Kong. They argued that many consignments were being consolidated after arrival not just by air, but by sea, and by land from the PRD. At present, no cargo-handling infrastructure exists that facilitated such multimodal consolidation. This is perhaps the role that a Logistics Park might fulfil, but it also suggests that such facilities might

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<sup>9</sup> *Ibid Volume II*, page 43

optimally be located not on the airport platform, but in the New Territories north from Kwai Chung container port towards the Shenzhen boundary.

### **Strengthening Hong Kong's multimodal capabilities**

It is conventionally believed that linking the seaport and the airport of Hong Kong could enhance the hub's competitiveness, but Hong Kong's proximity to China makes this a low priority. Development of sea-to-air multimodal capabilities may seem to have served Singapore and Dubai well, because shipping the freight partly by sea could reduce cost as well as allow some additional flexibility for consolidation. However, Hong Kong's case is different in that it is located just next door to the Pearl River Delta, where most of Hong Kong's cargo flow originates. Even other coastal cities such as Xiamen are located close enough to Hong Kong that trucking across the border is faster and cheaper than shipping by sea. In comparison, Singapore and Dubai are located en route between industrial bases along the coast of China and in south and southeast Asia - a more suitable geography for sea-to-air transshipment to make sense.

Therefore, the priority for Hong Kong's air cargo sector should be to strengthen road links and facilitate trucking from factory to airport. Hong Kong has already benefited from the rapidly improving road and highway infrastructure in China. The logistics sector has also touted for years the merits of the Hong Kong-Macau-Zhuhai bridge, but construction of such a massive piece of cross-border infrastructure has been stalled by political complications.

While Hong Kong waits for decisions to be made on the Hong Kong-Macau-Zhuhai bridge, a simpler and equally pressing improvement to the factory-to-airport road infrastructure is to build a bridge linking Lantau and the airport platform to the Shenzhen border via Tuen Mun. The only current road link to Chek Lap Kok, via the Tsing Ma Bridge has been clogged with traffic whenever there is an accident or a typhoon. In addition, the completion at mid 2007 of the Western Corridor superhighway from Shenzhen into the north west of Hong Kong is set quickly to bring severe congestive to the Tuen Mun area as traffic spills from the superhighway into Tuen Mun's local road system. Built at speed, the Tuen Mun link can help ease the pressure on Tsing Ma, and facilitate cargo trucked from the Lok Ma Chau and Huanggang border or from the consolidation facilities in Kwai Chung and Tsing Yi to the airport.

## 8. Other key challenges:

### High cost – terminal, land and labour

Costs of operation, including terminal handling charges, rent cost and labour cost, are inevitably higher in Hong Kong than our Mainland competitors. Air cargo handling charges from Hong Kong to Europe, for instance range from three to four times those of Guangzhou and Shanghai, and four to five times those of Xiamen, according to industry sources.

There is nothing wrong with high cost itself, since cost to a certain extent signifies value.<sup>10</sup> But high cost can only be justified in terms of much higher levels of efficiency in operation: the reality is that consignments often sit at the boundary between Hong Kong and Shenzhen for four to six hours; that transport through Hong Kong is often delayed because of urban traffic congestion; and that truckers often wait four or more hours to unload or drop off consignments at the air cargo handling terminals. Truckers and freight forwarders repeatedly commented that extended “dwell time” caused delays for consignments that made Hong Kong’s price premium hard to justify. In short, everything that can be done to reduce the time taken to get consignments from a factory into the belly of an aircraft, or vice versa, should be considered as a matter of acute urgency if Hong Kong’s price premium is to remain justified.

Linked with this, they argued that stronger efforts are warranted in making more transparent the terminal handling cost structure and to bring air cargo handling charges down. As the efficiency and reliability of regional competitors rises, so the premium currently justified in Hong Kong will become progressively tougher to justify. In recent years, the Hong Kong Airport Authority has already undertaken initiatives to review cost. An industry task force has been set up to review air cargo handling cost, and consultancy studies have been conducted on the handling cost and competitiveness of the Hong Kong airport. In this context, the case would seem strong for a third air cargo handling facility to be commissioned as soon as possible, since this would without question provide competitive stimulus on handling charges, and would probably lead to higher levels of transparency in charging. There is already evidence that this has occurred as AAT has neared completion of its new 1 million tonne handling facility, and such stimulus would unquestionably be stronger if a third new handler were to join the competitive fray.

Apart from justifying a high premium in various types of operation cost, Hong Kong would also retain a significant advantage by offering multiple price points

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<sup>10</sup> To this end, interviewees have explained to us that although Hong Kong logistics staff cost several times’ salary of someone hired across the border, their quality and flexibility justifies the premium.

in the freight services offered. From overnight express to two days to five days' delivery, choices of varying price range would help Hong Kong extend its appeal to customers with varying needs.

### **Customs related frictions**

Many freight forwarders and shippers involved in the air cargo supply chain complained that customs procedures crossing the boundary between Hong Kong and Shenzhen remained cumbersome, and constituted a serious competitive challenge to the future of the Hong Kong hub if not remedied. For air cargo, even more than consignments being carried by sea, delays in the movement of consignments through the boundary appear to constitute a major competitive headache. Most exporting factories in the Pearl River Delta are physically closer to Baiyun or Shenzhen, and as customs procedures improve at these new airports, so the case for shipping consignments through the Hong Kong hub weakens unless current delays are wrung out of the supply chain. Many shippers and truckers complained of 4-6 hour waits at the border crossing.

While these are clearly serious problems for air cargo operations through the Hong Kong hub, there have been recent indications that relief may arrive in the not-too-distant future. First, the opening in July 2007 of the Western Corridor, a new multi-lane crossing point at the western end of the border, is expected to quadruple the vehicle-handling capacity across the border. This is expected to relieve tail-backs into Hong Kong, and could make the "Green Lane" arrangements more effective. However, this might only result in congestion shifting to the metropolitan Tuen Mun area as traffic from the Western Corridor spills into smaller local roads onward to the airport platform. As already mentioned, many argue that no long term solution will be found to the cross-boundary congestion until a second bridge directly links the Western Corridor to Lantau island, and until the Hong Kong-Macau-Zhuhai Bridge is agreed and completed. This will provide a crucial direct link to the western municipalities of the PRD, and break the monopoly Shenzhen maintains on Hong Kong's land access to the Mainland.

Secondly, there has been intensive cross-boundary consultation over the past two years between Mainland and Hong Kong customs officials, and frequently-voiced commitments to streamline customs coordination appear to be starting to bear fruit. A Pan-PRD Customs Trade Facilitation Forum is planned for 2007 which is intended to tackle issues such as air cargo point-to-point express lane clearance, and simplified clearance procedures. The Hong Kong-Shenzhen customs authorities have already agreed that only one form needs to be filled for the two customs checkpoints at the border.

Electronic advance information arrangements are being implemented by Hong Kong Customs, with the feasibility now being examined of information sharing with Mainland Customs.

While these improvements may yet take time to bear fruit, evidence of high-level recognition of customs clearance problems suggests that challenges facing air cargo operators may become more manageable over time. Operators appear clear that Hong Kong's future competitiveness as an air cargo hub will depend on it.

This customs-clearance "friction" has massive impact on the efficiency of cross border truckers, and will need to be remedied if Hong Kong's competitive leadership is to be preserved. Delays of 4 to 6 hours at the border not only mean missing cut-off times at the air cargo handling terminal, and dollars lost for the shipper, the air cargo terminal and the airline, but even more critical for the trucker, long waits limit them to one cross-border journey a day, rather than two. Compounding the problem, only Hong Kong drivers can operate cross-border, and a "four up, four down" rule massively hampers the flexibility of operations. The "four-up-four-down" restriction - which mandates that a driver, the truck, the trailer and the container must enter and leave the Mainland together - has been slated for abolition since January 1, 2005, but still awaits effective implementation. Officially, "four-up-four-down" is now relaxed as "two-up-two-down" -- the driver and the truck still has to enter and leave the Mainland in one piece, allowing flexibility for the truck to pick up a different trailer and/or container on the Mainland. However, truckers have complained that frontline customs at the border have not fully implemented this relaxed policy.

Guangdong-Hong Kong authorities have in the meanwhile managed to liberalise - although to a very limited extent - the "one truck one driver" rule, as well as relax the licensing fee terms for Hong Kong truckers. Instead of allowing only one driver registered to one truck, a stand-by driver is now permitted. Instead of paying RMB \$100,000 to obtain a truck license for three years, the same fee can now pay for a five-year license.

Other concerns raised by cross-border truckers include double insurance and different retirement age in Hong Kong and on the Mainland. (Mainland authorities do not recognise insurance policies bought in Hong Kong, and instead truckers must purchase a policy from companies on the transportation bureau's approved list. Also, Hong Kong drivers' retirement age is 65 while their Mainland counterparts must retire at age 60. Although Hong Kong drivers, in theory, can legally operate on the Mainland beyond age 60, in daily practice they are often delayed by police questioning whenever their identification documents are spot checked during their Mainland leg. These more senior truckers number about 3,000 currently, among the 8,000 total cross-border truckers).

China Customs has in recent years revealed intentions to establish “Green Lane” arrangements for cross border cargo traffic. The pilot scheme this year<sup>11</sup> has been restricted to full container load (FCL) and entirely sea and road freight.

The Green Lane, launched in late May 2006, attempts to streamline customs procedures by pooling cross-border trucks, Mainland trucks, Mainland and Hong Kong customs at a 24-hour bonded logistics centre in Shenzhen, making it possible for trucks to operate laden-in and laden-out. A dedicated lane in Lok Ma Chau means that bonded trucks can cross the border without waiting.

The success of this Green Lane is dependent upon Hong Kong Government’s endorsement and wider scale adoption, including extending the arrangement to Kwai Chung Terminals via Lok Ma Chau, as well as to other points in Shenzhen. So far, Chinese customs have indicated that if the pilot scheme is shown to be effective for industry and secure and easy to monitor for customs, it can be widened to less container load (LCL) and air cargo.

### **Migration of Manufacturers**

Hong Kong’s proximity to the industrial hinterland in Guangdong Province has historically been one source of its competitive advantage. The closer an airport is to the manufacturing base, the higher ease of transportation makes the airport more attractive to shippers and end-use buyers. The same advantage has traditionally applied to hubs such as Singapore and its hinterland in Malaysia, as well as Taipei with its proximity to Taiwan’s electronics and high-tech industries. Being located near a manufacturing base means that the more value-adding origin-destination cargo is possible, whereas hubs without a manufacturing base nearby increasingly has to target the lower value-adding transshipment cargo, as Incheon and Dubai have done.

In the case of Guangdong Province, we are increasingly observing a trend of factories relocating to the north and west of the province. This is driven both by market mechanisms and government policies. Land prices and minimum wages in the less developed areas of Guangdong Province are a fraction of those in Dongguan.

The Guangdong provincial government has also made an official declaration that factories that are highly pollutive and low value-adding would have to be relocated out of the immediate PRD area. Estimates according to media reports

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<sup>11</sup> Jointly developed by the industry initiative OnePort, Hong Kong’s Modern Terminals and state-owned South China International Logistics Company (SILC) and Shenzhen customs authority.

and interviewees indicate that 40,000 out of 60,000 Hong Kong-owned factories and workshops in Guangdong Province would be forced to move.

Since 2005, a dozen “production transfer parks” have been set up throughout the northern Guangdong areas of Qingyuan and Shaoguan, and the northeastern town of Heyuan, organising study tours for Hong Kong and Taiwanese investors whose factories are being forced to relocate.

This trend presents two problems for Hong Kong. First, the Guangzhou Baiyun International Airport is located much closer to these outlying areas than Hong Kong. Holding other factors equal, Baiyun would increasingly become a more economic option for shippers handling goods from these relocated factories.

Second, even without competition from Baiyun, the trucking time from factory to Hong Kong’s airport would be rising by at least one hour per trip, exacerbating Hong Kong’s current weakness in price competitiveness.

The implications for Hong Kong, then, are twofold. First, it is becoming obvious that Hong Kong can no longer depend on direct cargo as the primary driver for growth in throughput. Diversifying into transshipment would appear to be increasingly necessary. Second, reducing trucking costs and improving the efficiency of trucking will be taking higher priority on the agenda of air cargo industry stakeholders in the near future.

### **A possible Goods and Services Tax (GST)**

A consultation is currently being conducted in Hong Kong over the need to broaden the tax base, and the role a Goods and Services Tax might play in achieving this. Opinions appear strongly divided. The Hong Kong Government proposes to include the air cargo sector (indeed the entire import-export sector) within the net of a future GST regime, but has sought to assuage potential criticism by assuring the industry that a 0% tax rate would apply to all goods passing through Hong Kong, or being handled here as part of regional supply chain activity. In short, only goods entering Hong Kong for consumption in Hong Kong would be subject to GST, with all other goods being zero rated.

Extensive meetings with companies in import-export trade in general and air cargo in particular suggest that a GST would create grave problems for the sector that a zero rating would not solve. In short, it appears the documentary requirements linked with introduction of GST as currently proposed would force a fundamental restructuring of the import-export economy. Hong Kong’s free port status would effectively be eliminated, destroying one of the most fundamental factors underpinning Hong Kong’s competitive advantage in recent decades. Logistics operators say Hong Kong would need to introduce an “in

bond” infrastructure to manage all import-export activity, rendering Hong Kong identical to Singapore, Shanghai, Seoul or other transshipment hubs in Asia. Instead of performing consolidation in any location the shipper chooses, value-added activities would have to be restricted within designated bonded facilities. They say this would not only eliminate one of the most important sources of competitive advantage, but would also put in jeopardy many tens of thousands of jobs in the sector. The scale of this challenge, and whether a GST could be introduced that finessed so fundamental a problem, is only now being examined in detail. However, on the basis of input from many interviewees, the introduction of GST would pull an important foundation stone out from under the distinctive efficiency and competitiveness of Hong Kong as a “free port” and an air cargo economy.

### **Potential damage of direct Taiwan-Mainland air traffic links**

Hong Kong has for decades been a beneficiary of the ban on direct traffic links across the Taiwan Strait. In 2005, Taiwan accounted for 14% of Hong Kong’s cargo throughput, totaling 474,368 tonnes out of Hong Kong’s 3.4 million total throughput. If and when cross-strait relations warm and the much anticipated direct links materialise, some of the cargo and passengers currently transiting Hong Kong as they move to and from Taiwan would no longer need to transit through Hong Kong or Macau to arrive on the Mainland. Direct links are predicted to be a significant challenge to Hong Kong, redirecting cargo and passenger traffic to benefit the Shanghai Pudong airport, and perhaps also Xiamen, Guangzhou and Shenzhen.

This challenge cannot be underestimated, but in reality, it may be less daunting than some have imagined:

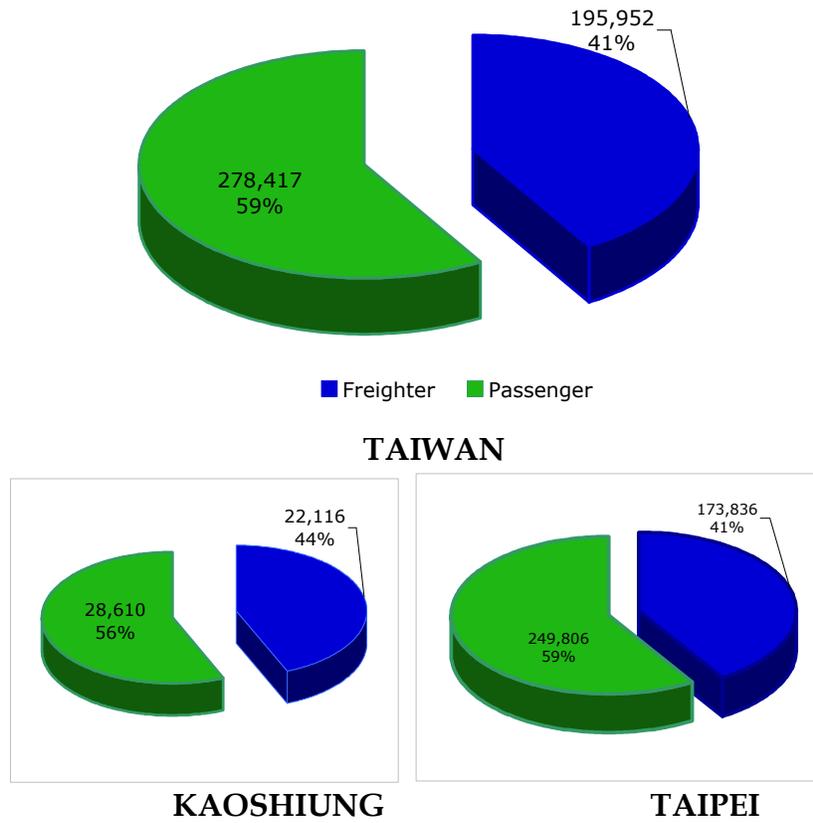
- First, much of the passenger traffic likely to benefit from direct links has already for several years been diverted from Hong Kong to Macau.
- Second, a considerable number of Taiwan-incorporated companies have taken root in Hong Kong, managing their international operations and their fund-raising activity in Hong Kong. In 2005, Taiwanese companies have set up 33 regional headquarters, 133 regional offices and 170 local offices in Hong Kong, according to data from the Hong Kong Census and Statistics Department. The true number is thought to be many times greater than this, but since tax management is one of the factors explaining Hong Kong operations, their presence is normally discrete. Many of the businessmen involved in Taiwanese companies will continue to travel to Hong Kong to manage their international operations, and to consult with financial advisors, meaning that a certain capacity of bellyhold cargo will continue to be accommodated in Hong Kong

regardless of the establishment of Taiwan-Mainland direct air service links. Since passenger demand will continue, the capacity for bellyhold cargo will continue. With significant Taiwanese investment in factories in the Pearl River Delta, especially in the Dongguan area, products from these factories are likely to fly out of Hong Kong instead of Shanghai, thus filling the bellyhold capacity.

- Third, any opening-up between Taiwan and the Mainland is likely to be gradual, both in terms of city-to-city links, and flight frequencies. This will put a brake on the potential for diversion for passenger and cargo activity.
- The most gloomy prognoses also ignore the reality that the establishment of direct links will for the first time allow Mainlanders to travel directly to Taiwan, transforming the current one-way flow of passengers and cargo into a two-way flow. The scale of this reverse flow is difficult at this point to estimate, but clearly suggests that the overall volume of air services between Taiwan and the Mainland will grow significantly. In such a context, the overall impact on Hong Kong of direct links might be quite muted.

Perhaps the single greatest challenge comes in the development of dedicated freighter services. (See Figure 21 for breakdown between Taiwan-Hong Kong cargo carried by passenger bellyhold and freighter in 2005.) These are unlikely to be as politically sensitive as passenger flights, so rights for new direct services might be offered quite speedily on a significant scale, not just to destinations in the Shanghai hinterland, but also to Shenzhen and Guangzhou. Such a development is already being anticipated by the launch of Mainland-Taiwan joint ventures, in particular focused on Shanghai.

**Figure 21: Taiwan-Hong Kong cargo throughput, 2005 (tonnes)**



*Source: Civil Aviation Department, HKSAR. Data excludes courier and mail.*

## 9. Supply-side challenges:

### Growth and on-airport facilities

When Hong Kong International Airport opened at Chek Lap Kok in July 1998, long-standing supply-side constraints on Hong Kong's air traffic handling capacity were lifted. Not only was HKIA praised as one of the world's most efficient airports, but the expectation was that it would be able to manage growth far into the future, with an ultimate capacity of around 87 million passengers and 9 million tonnes of cargo.

Eight years later, a combination of continuous and extraordinarily rapid growth in passenger and cargo activity, and unanticipated restraints on the use of the airport, have brought Hong Kong close to capacity many years earlier than expected. Already the airport is close to operational capacity for most daylight hours, as illustrated in Figure 22. A reduction in the average size of aircraft landing at HKIA, as Figure 23 indicates, perhaps due to the expansion of low cost carrier operations, has squeezed even further the likely passenger capacity of the airport. Planners are now talking of a capacity closer to 55 to 60 million.

With passenger numbers already passing 40 million, the need has become urgent not just to expedite plans to add new on-airport facilities, but to tackle the unexpected air traffic management constraints that are limiting future growth potential. Without such urgent action, then the danger exists that unconstrained new hubs like Baiyun (which boasts plans to build a total of five runways) will in due course attract airlines away from the Hong Kong hub.

It appears that plans for new on-airport facilities are well in hand. The Master Plan 2025 embraces plans for a new mid-field passenger terminal, new baggage-handling facilities, air cargo handling facilities, and new parking areas for passenger and cargo aircraft. It thus appears that supply of these facilities can be ensured timely enough to meet anticipated needs to 2025. The same cannot be said for air traffic management constraints, in part because of the need for Hong Kong to tackle and coordinate a response to such constraints jointly across the air traffic control regimes of Macau, Shenzhen, Zhuhai, Guangzhou and Hong Kong, and in part because of strong and unanticipated growth in air traffic activity around the PRD's newly-emergent hubs.

Master Plan 2025 also raises the critically important issue of whether and when a new, third runway is to be built. Location and alignment of such a runway is likely to depend on resolution of the difficult air traffic management constraints discussed in the next section. It is also likely to depend on effective management of fierce opposition expected from environmental groups concerned about future disturbance of Lantau's marine environment. Strong prima facie evidence exists

in support of a new airport runway as part of the necessary enhancement of the airport's physical capacity, but progress is needed on traffic management issues in particular before views on location and timing can be elaborated.

Some have suggested that these supply side challenges can be resolved by some form of interconnection between the Hong Kong airport and counterparts in Shenzhen and Zhuhai. Such suggestions appear naïve and shortsighted, given Basic Law (Articles 132-133) constraints on cross-boundary collaboration, on eligibility for air service rights, and – perhaps most important of all – passenger resistance to land transfers between separated airports as they transit a hub.

**Figure 22: HKIA Slot Situation**

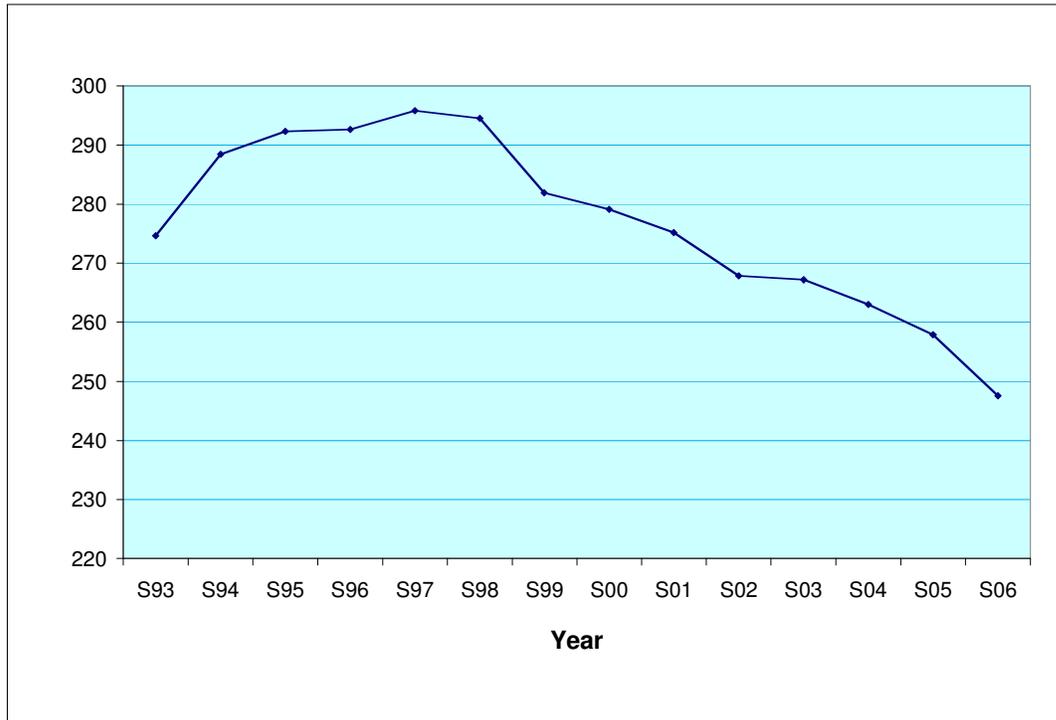
Day of week	Slot Availability						
	1	2	3	4	5	6	7
0000-0059							
0100-1059							
0200-0259							
0300-0359							
0400-0459							
0500-0559							
0600-0659							
0700-0759							
0800-0859	P	X	X	X	X	X	X
0900-0959	P	P	D	D	X	P	D
1000-1059	X	X	X	X	A	X	X
1100-1159	X	X	X	X	X	A	A
1200-1259	X	X	X	X	X	X	X
1300-1359	A	A	X	X	A	A	X
1400-1459	X	X	X	X	A	A	X
1500-1559	X	X	X	X	X	X	X
1600-1659	X	X	X	A	X	X	X
1700-1759	A	A	A	A	X	A	A
1800-1859	A	A	A	A	X	A	A
1900-1959	P	X	P	P	X	D	X
2000-2059	P	X	A	P	P	P	A
2100-2159	A	A	P	P	A	A	A
2200-2259	A	P	A	A	A	P	A
2300-2359	P	P	P	P	X	P	P

**A Typical Week in Summer 2006**  
Period 21-27 August 2006

- X Full for both departures and arrivals
- A Full for arrivals
- D Full for departures
- P Close to full for departures, arrivals or both
- Open

Source: HKIA, Cathay Pacific

**Figure 23: Declining average aircraft size, 1993-2006**



Source: Cathay Pacific

### **Air traffic management and air space management**

Hong Kong's current air space congestion challenge has been mistaken as a problem solely for passenger flights, because congestion occurs mostly during the day while dedicated freighters usually take off at night. But the reality is that it equally diminishes Hong Kong's competitiveness as an air cargo hub. (Figure 24 illustrates the number of flights is at capacity for 11 hours of a given day, and approaching capacity at another five hours.)

Interviews with manufacturers, shippers and freight forwarders have consistently revealed industry concerns about Hong Kong's relatively inadequate flight network to Mainland China and the inability to get slots for unscheduled flights. What is not commonly understood is that Hong Kong's airspace is soon reaching saturation. This means even if airlines wish to increase frequencies to the Mainland, or even if Hong Kong wants to attract more charter traffic, the air space would not in current circumstances be able to accommodate this.

Although many dedicated freighters depart late at night and arrive early in the morning, about 45% of Hong Kong's cargo throughput is arriving in the

bellyholds of passenger flights. The squeezed capacity in adding passenger routes during the day means that the cargo capacity provided by airlines would also be limited.

Although the Hong Kong air cargo industry has been most vocal on the issue so far, Shenzhen and Macau would very soon feel the same pressures. Because the PRD region has five airports within a 100km radius, their air spaces overlap. Aircraft flying into and from Shenzhen and Macau usually have to pass through Hong Kong air space, and vice versa. As Shenzhen builds its second runway by 2009 and as Macau's low cost carrier focus begins to bear fruit, demand for landings and takeoffs would undergo dramatic growth.

Air traffic control for the airports of Hong Kong, Macau, Shenzhen, Zhuhai and Guangzhou lacks coordination and is characterised by very conservative regimes. Despite continuous efforts to enhance cooperation, one of the five jurisdictions would be blamed if any incident appearing to compromise safety were ever to occur. So each have the tendency to be more conservative than many of the world's major international airports, on rules such as the distance allowed between two flights. The result is that Hong Kong's air traffic controllers limit movements to 54 per hour, and arrivals to not more than 29 per hour. This is a conservative restriction, given that the Hong Kong International Airport was originally designed for 80 to 85 movements an hour. In the 1992 Airport Master Plan, its capacity was revised down to 75 movements an hour. As the average size of aircraft using the HKIA declines, so these factors combine to put a throttlehold on airport capacity. In short, HKIA was designed to accommodate 87 million passengers a year, but in reality will be capped around 60 million unless these challenges are resolved.

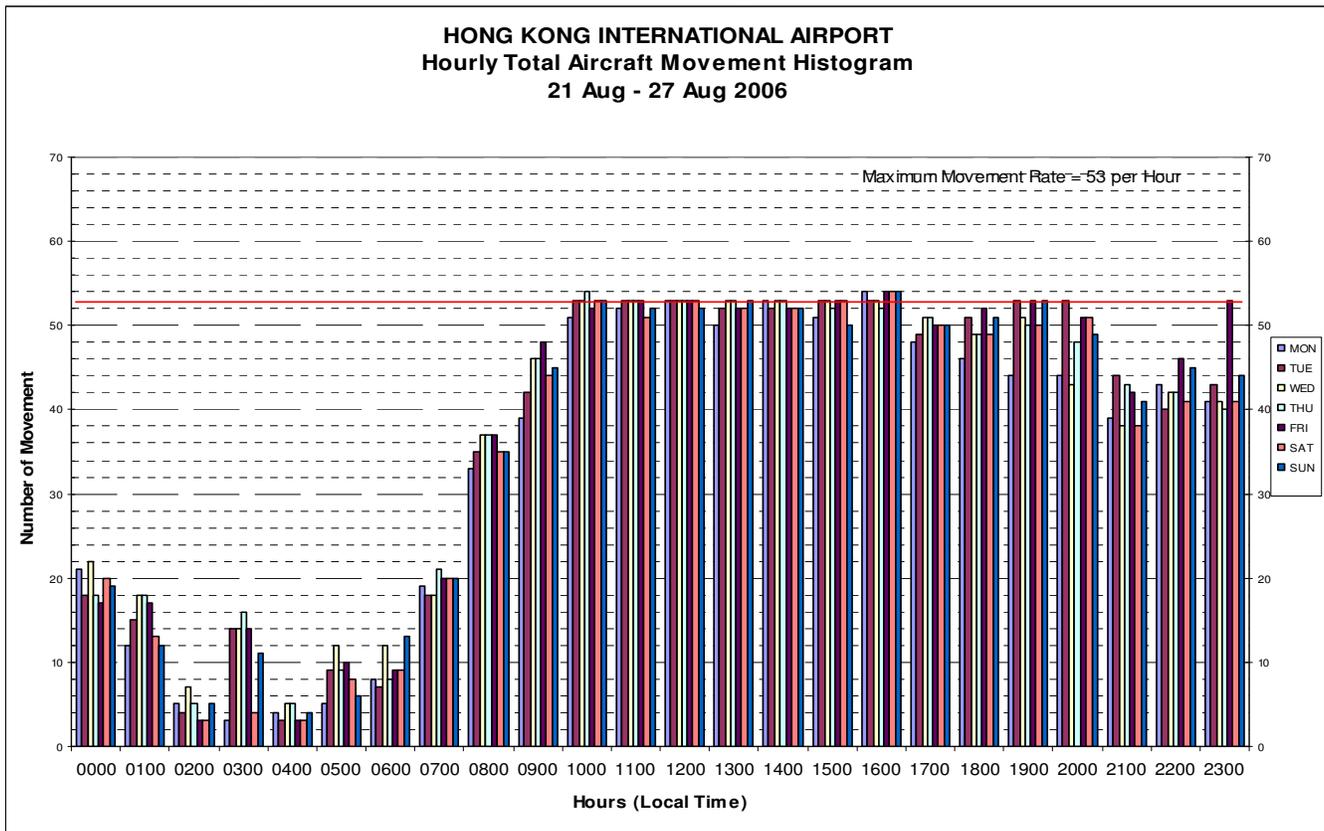
In Hong Kong's latest policy address, the Civil Aviation Department has been granted its request to invest in a new air traffic control system. In theory, with more sophisticated technology, the new ATC system is expected to improve Hong Kong's ATC capabilities, allowing more aircraft to be managed in Hong Kong's air space at a given time. In practice, whether Hong Kong would benefit from new ATC technologies installed locally would depend on continued cooperation with Mainland airports' ATC systems. Managing Hong Kong's air traffic control is thus a regional problem that requires a regional solution.

While regional cooperation on air traffic management should be encouraged, recent attention has mistakenly been focused on cooperation with Mainland airports as preambled on page 56. It has been hoped that the Hong Kong Airport Authority's management of the Zhuhai airport would make Zhuhai a de facto third runway of Hong Kong. The idea of building Hong Kong's third runway in Shenzhen has also been recently floated. Unfortunately these ideas appear to be impracticable, as noted earlier, not least because of Basic Law constraints. Hong

Kong’s air traffic rights are restricted to Hong Kong alone, and it would require amending the Basic Law to allow Zhuhai and or a piece of land in Shenzhen to win entitlement to the same air traffic rights that Hong Kong has. Evidence from other “split hubs” – like London (Heathrow and Gatwick), New York (JFK and Newark), Tokyo (Narita and Haneda) and Shanghai (Pudong and Hongqiao) also makes clear how hostile passengers are to inconvenient and time-consuming land transfers as they transit cities during already-long journeys. It is noteworthy that such splits have in almost all instances hindered rather than aided the efficiency or reliability both of the airports themselves, and of the operators using them. Thus the Zhuhai airport and a runway in Shenzhen would appear to be impracticable both from a passenger point of view, and under the current regulatory environment.

In addition, using Zhuhai or Shenzhen as surrogates for Hong Kong’s third runway would require the Hong Kong hub to split its resources. For instance, airlines would have to operate aircraft at two airports. This contradicts efforts in strengthening the hub, since the concept of a hub hinges upon concentrating all resources in one place.

**Figure 24: Hourly total aircraft movement histogram**



Source: Cathay Pacific

### **Conservative military control**

Compounding this problem of conservative and constrained air traffic management within Hong Kong is a challenge peculiar to Hong Kong and China. In short, China's airspace is controlled not by civilian authorities, but by the air force of the People's Liberation Army, through the Air Traffic Control Committee (ATCC) of the Central Military Commission. The ATCC determines a narrow area as civil airspace, controlled by CAAC.

Frequent and unexpected military exercises, particularly in the coastal area near the Taiwan Strait, require use of the civil airspace at very short notice. This practice disrupts the flight paths between southern China and major hubs of Beijing and Shanghai.

In addition, the ATCC requires that all aircraft landing at, or departing from HKIA reach a height of 5,000 metres before entering Chinese airspace. This in effective terms creates an insurmountable 5,000-metre wall just a few kilometres north of HKIA. This means Hong Kong flights have to fly far to the south of HKIA after take-off and before landing to reach the required height before entering Mainland air space. Apart from adding time and fuel cost, this rule makes the Hong Kong airspace more congested and limits aircraft to a single narrow flight path into and out of Hong Kong.

The ultimate throttlehold on Hong Kong's ability to build sufficient capacity to meet future passenger and cargo needs is thus not on-airport facilities, but the capacity of the single narrow flight path into and out of the airport. Paradoxically, the addition of a third runway – a proposal now being expedited because of the perceived urgency of supply-side pressures – is unlikely to provide relief. Seeking solutions to the air space and ATC management problems appear to be the most urgent priority and would need to precede the construction of a third runway; since until these issues have been resolved, no decisions can be made on location and alignment of the runway.

Emerging supply side pressures nonetheless appear to make it important that Hong Kong should prepare itself for building a third runway as soon as ATC issues are resolved. A study is urgently needed to evaluate different options for building the runway, including alternatives in its location, alignment, capacity, timing and construction cost. Consultations with relevant stakeholders could cast light on which option for the runway would be best for the future development of the Hong Kong aviation hub.

It thus appears that one of the severest challenges to Hong Kong's future competitiveness as Asia's leading air cargo hub may come not from emergent competitors on the Mainland, but from ATC and airspace constraints on the capacity of our own hub.

## 10. Potential responses to growing challenges:

- a. **Liberalise cross border customs arrangements:** harmonisation of customs documentation and procedures on both sides of the boundary, including electronic pre-clearance of customs documentation; the liberalisation of cross-boundary trucking; the opening of more border crossing points coupled with extensive adoption of “Green Lane” arrangements; abolition of the Trade Declaration Charge and simplification of arrangements dealing with controlled cargos.
- b. **Revise transshipment regulation:** Redrafting of the Import-Export Ordinance, and the drafting of a new Transshipment Ordinance, to take account of modern trade practices.
- c. **Preserve free port status and resist GST:** it appears the introduction of GST as proposed may create severe competitive challenges for the import-export and air cargo sectors, requiring wholesale reform of trade practices around customs bonded arrangements. Large scale migration of operations into the Pearl River Delta is forecast if GST is introduced. Either new and specific provisions are required to avert this need, preserving Hong Kong’s long-standing strength as a “free port”, or alternative means of broadening Hong Kong’s tax base need to be considered.
- d. **Aggressively free up air space and air traffic management:** unification of air traffic management around the Pearl River Delta is an essential long term goal, with eased access to Mainland air space. In addition, investment in new air traffic control technology and the training of new controllers is an urgent short term objective, in order to increase the number of arrivals and departures that can be handled every hour. A study on options for the third runway is urgently needed, so that Hong Kong would be ready to build it once air space issues are resolved.
- e. **Invest in airport and cargo handling infrastructure:** Air cargo growth rates suggest that significant new investments are needed in facilities on the airport platform. This includes not just investment in new air traffic control technology noted above, but also in more cargo aircraft stands, a new cargo handling facility, and a third runway and associated infrastructure. Expansion of Hong Kong’s cargo handling capacity will draw cargo traffic that would otherwise be diverted to competitor hubs. A cost-effective and optimally located logistics park should also be considered. While Airport Authority’s Master Plan

2025 addresses on paper many of these needs, how and when Hong Kong can manage to add these infrastructure, in particular a new runway and logistics park, on the environmentally sensitive location of Lantau Island, remains to be seen.

- f. **Improve road infrastructure:** Building the Tuen Mun link can relieve pressure on the Tsing Ma Bridge, which is currently the single available road link to Chek Lap Kok. Ultimately, the Hong Kong-Macau-Zhuhai bridge will be instrumental in facilitating cross border cargo flow.
- g. **Reduce cost:** air cargo handling charges need to be trimmed, and other airport charges kept under fierce control.
- h. **Coordinate lobbying both locally and internationally in support of hub needs:** under the potential leadership of the Logistics Council or the Hong Kong Trade Development Council, strong and coordinated lobbying is likely to be needed if the common needs of the air transport and logistics sectors are to be served.

## **11. Conclusion:**

Hong Kong is a formidable and highly successful air cargo hub, with advantages over competing hubs that may take some time to erode. Hong Kong nevertheless faces serious challenges which require extensive and challenging policy responses from Government. Because many responses require close collaboration between officials in Hong Kong, Guangzhou and Beijing, it is open to question whether initiatives can be implemented with the speed necessary to protect Hong Kong's leadership position. Given the difficulties the Hong Kong Government may face, a concerted and coordinated effort by operators across the trade and logistics sector to press for appropriate and timely responses may be a critical factor in protecting the future success of the hub.

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