China's Air Transport Market: Developments, Challenges and Prospects

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Outline

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2. Growth prospects and challenges
3. Prospects on low-cost carriers
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1. Developments

- Chinese air passenger traffic grows at 17% annually from 1978 to 2007
- China has become 2nd largest aviation market (behind US) since 2005
- From 2000 to 2008, passenger aircraft of Chinese airlines increased from 527 to 1,279 (to 1,400 in 2009)
- Rapid growth can also be seen from airport throughput …

Passenger throughput at world's major airports (million): 1991-2008

City	Airport	1991	1997	Ann. growth (1991-97)	2001	2008
Beijing	Beijing & Tianjin	6.5	17.7	18%	25.1	60.6
Shanghai	Hongqiao & Pudong	4.9	13.3	18%	20.7	51.1
Guangzhou	Guangzhou	7.4	12.5	9%	13.8	33.4
Shenzhen	Shenzhen	0.02	4.4	138%	7.8	21.4
Hong Kong	HKIA	19.2	28.3	7%	32.0	47.1
Tokyo	Narita & Haneda	62.7	75.0	3%	84.1	100.3
Seoul	Gimpo & Incheon	18.5	36.8	12%	36.5	44.2
Chicago	O'Hare & Midway	59.9	70.4	3%	83.0	88.2
Atlanta	Hartsfield	37.9	68.2	10%	75.9	90.0
London	Heathrow, Gatwick & Stansted	59.3	85.1	6%	105.6	123.4
Paris	Orly & Charles De Gaulle	45.3	60.4	5%	71.0	87.1

- Growth is driven largely by China’s GDP growth: 10% per year from 1978 to 2007
- … and by its integration into regional & world economies
- China’s international outbound travelers increased much faster than inbound travelers (as well as domestic travelers):

  - Driving force: ‘For Private Purpose’ tourists

- China’s growth in context of the region: **Asia** is most rapidly growing region in air transport

  - According to IATA: In 2009, for the first time, more passengers took flights in the Asia-Pacific region than in North America, thanks in part to economic growth in China and India

  - … and about half of the world air traffic by 2050

- New international airports opening one after another in Asia …

Major airports opened in East Asia since 1991

Shen-zhen China	Kansai Osaka	Zhuhai China	Macau	KL Sepang	Hong Kong	Shanghai Pudong	Incheon Korea	Guang-zhou China	Nagoya Japan	Bang-kok Thai.
Oct. 1991	1994	June 1995	Nov. 1995	July 1998	July 1998	Sept. 1999	April 2001	Aug. 2004	2005	2006

Major airports in East Asia

- Liberalization & integration in air transport
  - EU's single market
  - EU-US 'open skies' agreement
- Yet, Asia's market is fragmented
- China plays a pivotal role in liberalization & integration of Asia's market, and in formation of inter-continental networks

- Chinese market is dominated by state-owned ‘Big 3’ (831 of total 1,279 passenger planes):

  Air China, China Southern, China Eastern

- Chinese carriers were less competitive, with limited capacity and inefficient management → Conservative approach to regional & international ‘open skies’

Attempts to improve carriers' competitiveness

- Join alliances to develop international network: at end of 2007,

  - Air China and Shanghai Airlines joined Star Alliance

  - China Southern joined Sky Team

  - China Eastern / Taiwan's China Airlines cooperation

- M&A: in 2010,

  - China Eastern merged with Shanghai Airlines (6^{th} largest carrier)

  - Air China acquired Shenzhen Airlines (5^{th} largest carrier)

Recent ‘open skies’

- Open skies for Hainan province
- Open-skies agreement with Korea (June 2006)
- Creation of ‘ASEAN+3’ (China, Japan, Korea) as a formula for regional integration
- China-US Air Service Agreement (2007):

  By 2012 passenger flights will increase to 180/week, and open sky for cargo flights by 2011

2. Growth prospects and challenges

- Total passenger enplanements grew by 15.5% (2006) and 16.3% (2007)
- Growth dropped to 4.7% in 2008, but rebounded in 2009, especially in domestic market:

    overall, 19.7% year-on-year

Growth prospects

- In 2008, 210 million passenger enplanements in China (193 mil. by Chinese carriers; 17 mil. by foreign carriers)

  = less than 0.2 flights per person per year

- US: 1 billion enplanements/year

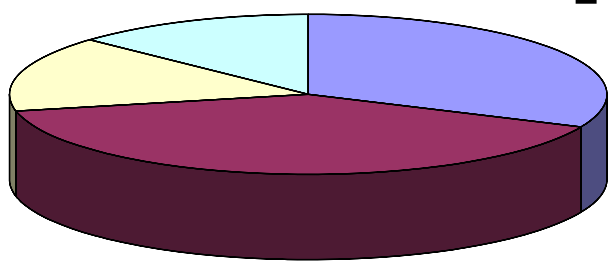
  = over 3 flights per person per year

- Traffic potential is huge in China, owing to continued growth in GDP (7.2% per year to 2020) and in tourist market, and continued liberalization

Challenges

- In 2008, 152 airports in operation, but heavy concentration of traffic at major airports
- Beijing, Shanghai and Guangzhou accounted for 35% of total passengers, 57% of total cargo, and <u>85% of international passengers</u>

International passenger traffic in China, 2007



Source: Statistics from China MOC

Capacity shortage at top-7 Chinese airports

Airport	Daily aircraft movement, 2008	Peak-hour limit (per hour)	Daily limit
Beijing	1,177	75	1,350
Guangzhou	768	48	800
Shanghai (Pudong)	728	47	780
Shanghai (Hongqiao)	508	33	510
Shenzhen	515	30	510
Chengdu	435	29	500
Kunming	412	27	480

Source: Civil Aviation Administration of China (CAAC)

- Capacity expansion at major airports, and construction of new airports – mainly in central and western regions (total 244 airports by 2020)
- However, airport capacity shortage will remain for Beijing, Shanghai and Guangzhou, even under most conservative traffic forecast (Y. Zhang, 2009)
- <u>Another factor for capacity shortage</u>: ‘Big 3’ move from point-to-point to hub-spoke networks:

    Air China hubs at Beijing (45%) & Chengdu

    China Eastern/Shanghai hubs at Shanghai (50%) & Xi’an

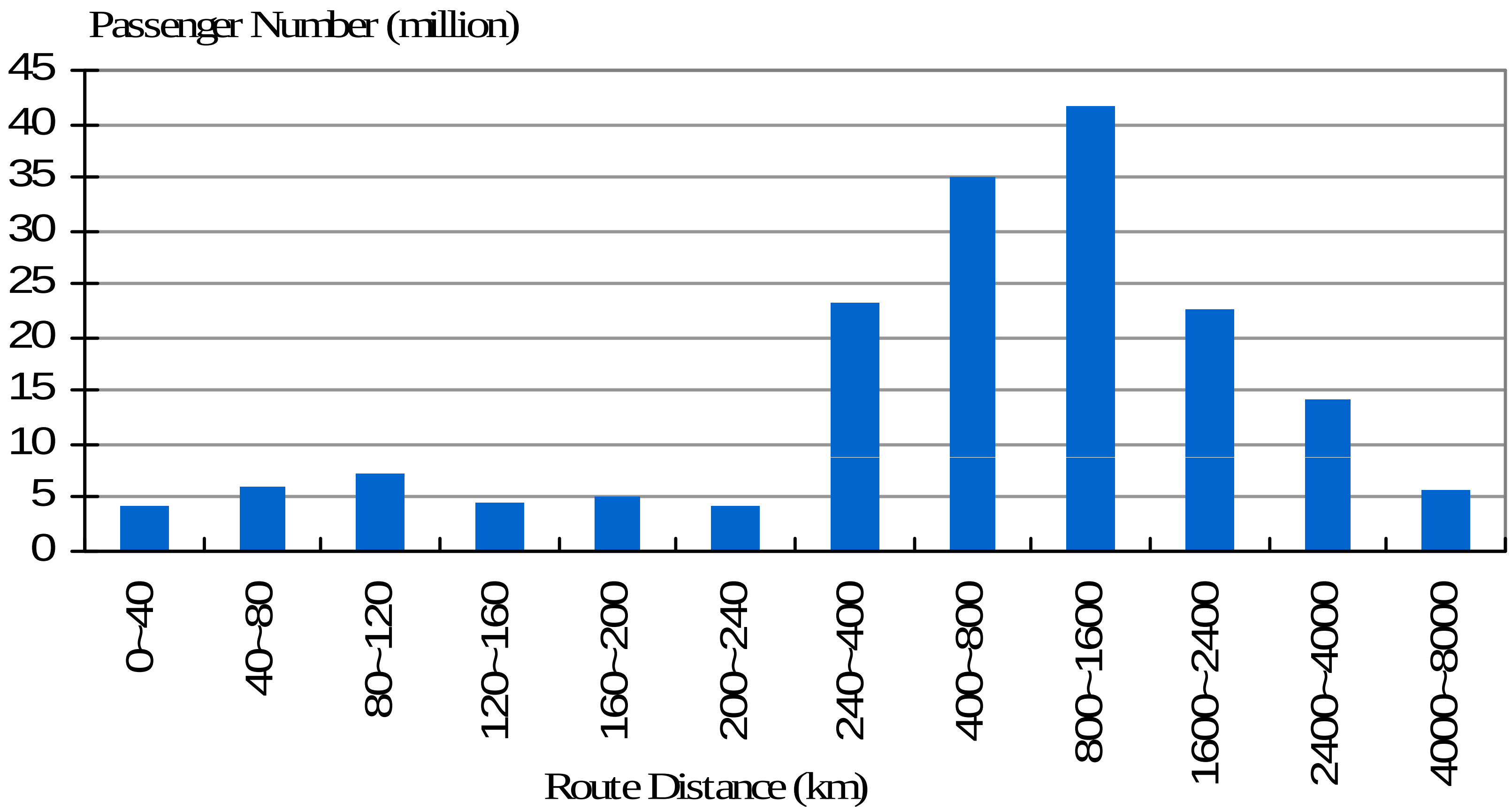
    China Southern hubs at Guangzhou (50%)

- Capacity shortage at hub airports will be a bottleneck for China’s future growth
- Another threat to domestic air transport is competition from high-speed rails (HSR) which are under rapid and ambitious development

  - 42 HSR lines spanning 13,000 km over next 3 years (18,000 km by 2020, with speed at least 200 km/hr)

  - Beijing-Shanghai line completed as early as 2011
- Air routes < 1,200 km would be affected

Air passenger distribution of Chinese carriers



3. Prospects on low-cost carriers

- Yet another challenge: develop competitive low-cost carrier (LCC) sector
- While air traffic has grown faster in China than in North America and Europe, LCC development lags much behind
- Starting in 2004, private capital entered into China’s low-cost aviation, growing to seven LCCs by 2007

- Spring Airlines: a LCC success
  - Highest load factor (95%) and aircraft utilization rate among Chinese airlines
  - Operational cost 18% lower than domestic industry average
  - Profitable in first two years of operation (2005-06)
  - In 2007, highest profit per plane in domestic market
  - The only profitable airline in China in 2008
  - Achievements due largely to its travel agency background

- High LCC traffic growth 2004-2007, and success story of Spring Airlines
- Overall, however, LCCs have not been successful in China: in 2009,

  - Bankruptcy of East Star (September)

  - Okay Airlines was grounded because of cash flow problem and is trying to get help from Tianjin government

  - United Eagle was in financial trouble and was taken over by Sichuan Airlines (a second-tier government-owned airline)

- In addition to scarcity of secondary airports in metro areas and capacity shortage at major airports, a major reason for unsuccessful LCCs: **Significant regulatory barriers for private-owned LCC start-ups**
  - Aircraft purchase and fleet buildup
  - Pilot recruitment
  - Fuel purchase
  - Airport charges
  - Route entry
  - Pricing
- 80% of costs are out of airline control in China
  → Some of LCCs are better called the ‘Low fare’ carriers
- Problem of competitors (state airlines) also being the regulator
  → distort the ‘level playing field’

- China's GDP growth has been highest, but its per capita GDP is still low by world standard: in 2007,
  - Coastal region: $4,150
  - Central region: $1,990
  - Western region: $1,780

  → Great potential in demand for low-cost air travel

- Supply-side developments will help LCCs:
  - Expansion of airport capacity
  - China is aggressively developing indigenous regional aircraft

Policy changes that facilitate LCC growth

- Localization and privatization of airports
- Monopoly control by China Aviation Supplies, China Aviation Oil, and China TravelSky to be loosened

  → LCCs can expect to have lower aircraft acquisition cost, and lower operating cost on fuel & supplies
- Open-skies brings in foreign LCCs: AirAsia, Air Berlin, etc.
- Yet, need clear national aviation policy

4. Air cargo market

- China's air cargo sector has benefited from continuous relocation of manufacturing activity to low-cost centers (notably, China and India) – China just became world's No. 1 exporter
- China's largest trading partner is EU (17%), followed by US (13%), Japan (10%) and ASEAN (9%)
- Cargo liberalization ahead of passenger liberalization: Grant transshipment hub and 5th/7th freedoms, provided the hub carrier maintain sufficient number of flights

  - Recent relocation of FedEx's Asian hub from Subic to Guangzhou

  - UPS hubs in Shanghai

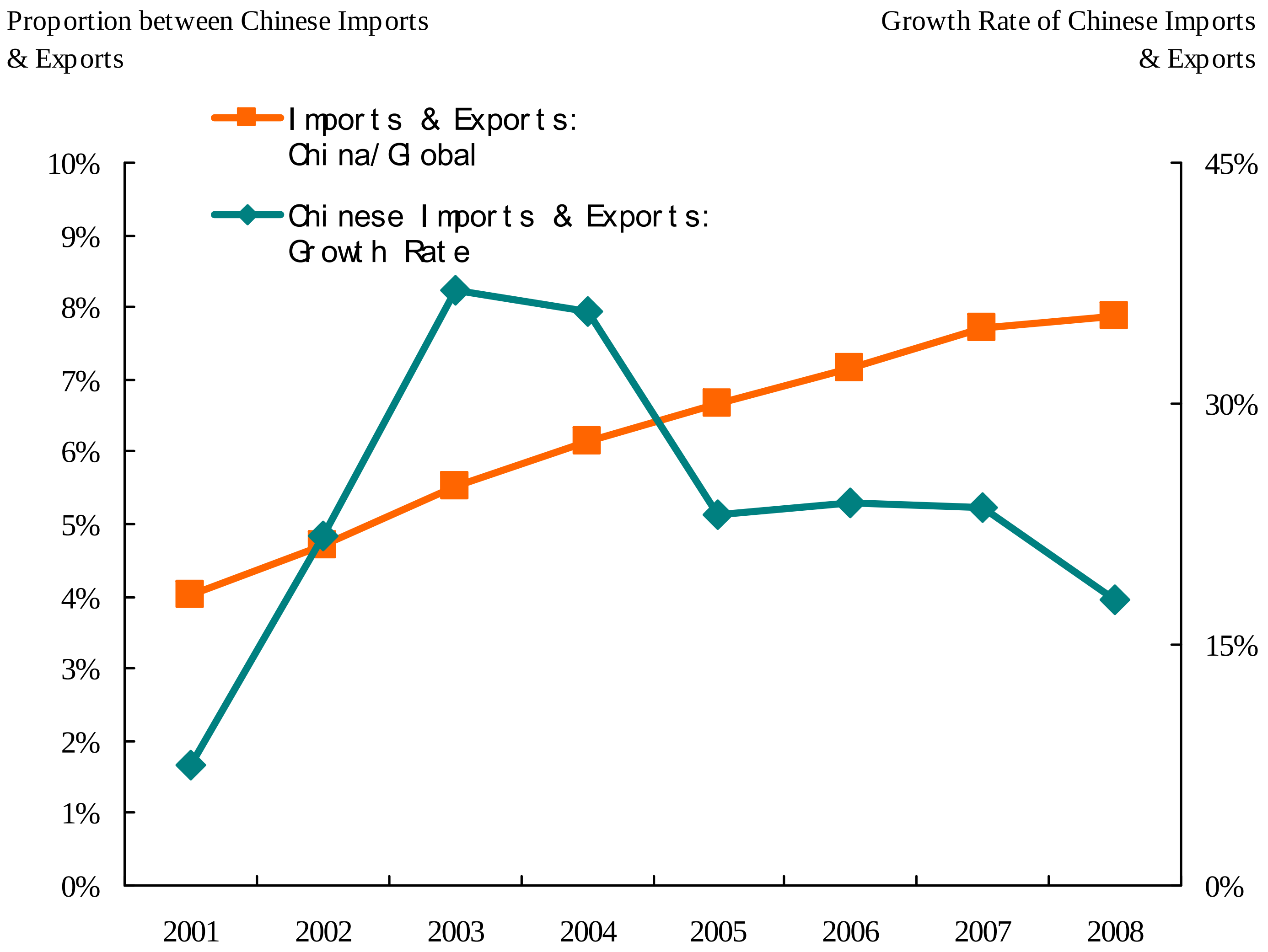
  - DHL uses Shanghai for its Northeast Asia hub

Potential economic risk in such relocations?

- In 2008, world air cargo posted its largest 12-month drop since 2001, with Asia-Pacific region and consumer-goods airfreight declining the most

- After reaching a high point in 2003, China's trade has grown slower, although its share of world trade has risen over time …

Chinese Imports & Exports, 2001-2008



Source: China Statistics Yearbook

Prospect on China’s air cargo

- Over 17% annual growth in cargo since 1978
- In 2008, while world’s air cargo traffic fell, Chinese cargo saw positive growth
- Foreign joint ventures to set up all-cargo carriers encouraged: e.g. Cathay Pacific/Air China alliance in 2010 (earlier: Jade; Yangtze)
- Development of air cargo services across the interior of China is likely to be slow in developing, but should become substantial businesses

Asia's busiest cargo airports, 2008

World Ranking	Airport	Cargo (tons)	% Change over 2007
2	Hong Kong (HKG)	3,660,901	-3.0
3	Shanghai (PVG)	2,602,916	1.7
4	Incheon (ICN)	2,423,717	-5.2
8	Tokyo (NRT)	2,100,448	-6.8
10	Singapore (SIN)	1,883,894	-1.8
15	Taipei (TPE)	1,493,120	-7.0
18	Beijing (PEK)	1,365,768	14.5
20	Bangkok (BKK)	1,173,084	-3.9
23	Tokyo (HND)	852,444	-0.1
24	Osaka (KIX)	845,497	-0.1
26	Guangzhou (CAN)	685,868	1.3
27	Kuala Lumpur (KUL)	667,495	-2.2

Source: Airport Council International

- China may move towards the U.S. model of separating airfreight from passenger services
  - In 2002: 46% of world's air cargo, measured by freight ton-kilometers, moves on freighters
  - 1980s: about 30%
  - 2010: 60% will be on freighters
- In 2008, nine cargo airlines and 70 freighters in China
- If so, this will have a significant impact on policy and airfreight liberalization for China, Asia and world
- Further consolidation among Chinese carriers expected, to improve their competitiveness in international cargo (only 18% in 2007)

Thank you