Airlines' strategy on air cargo business and its Open Sky in Asia

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Importance of Air Cargo

Air cargo - a backbone of modern economy

- Air cargo provides reliable and fast "just-in-time" logistics service for high-value and perishable export goods in the global free trade environment
- Air cargo connects distant nations into global supply chain network of materials and goods
- Air cargo facilitates competitive advantage in a nation's trade and economy
- Air cargo drives economic development in the world

⇒ **Even the countries with less competitive carriers want to open their air cargo market**

Passenger vs. Cargo

- Round Trip
- Unspecified Public Travelers
- No further Ramp Services
- Cabin Services
- Daytime departure/arrival
- Sensitive to time, routes and stops
- Airport-to-airport service
- Annual growth rate(passenger) 4.5%

- One Way
- Limited Shippers
- Need Ramp Services… Loading/unloading, Break down, Storage, Customs, etc.
- No Cabin Services
- Night departure/arrival
- Less sensitive to time, routes and stops
- Door-to-door and Intermodal service
- Annual growth rate(ton) 5.4%

Air Cargo in Asia/Pacific

- Value of air cargo is more than 30% of all export/import cargo, while its weight is only 2% (OECD)
- Air cargo market grows faster than passenger market
- Air cargo market in Asia/Pacific grows faster than the world market
  - With 3,000 aircraft (20% of world fleet), air cargo market in Asia/pacific takes 25% of world air cargo revenue

Growth trend and forecasting
(annual growth rate)

Subject		1992-1995	1995-2000	2000-2005	2002-2015
Passenger	World	5.2%	6.2%	4.1%	4.4%
	Asia/ Pacific	10.4%	6.0%	5.7%	6.1%
Freight	World	9.9%	7.3%	3.8%	5.5%
	Asia/ Pacific	15.4%	7.0%	4.7%	6.4%

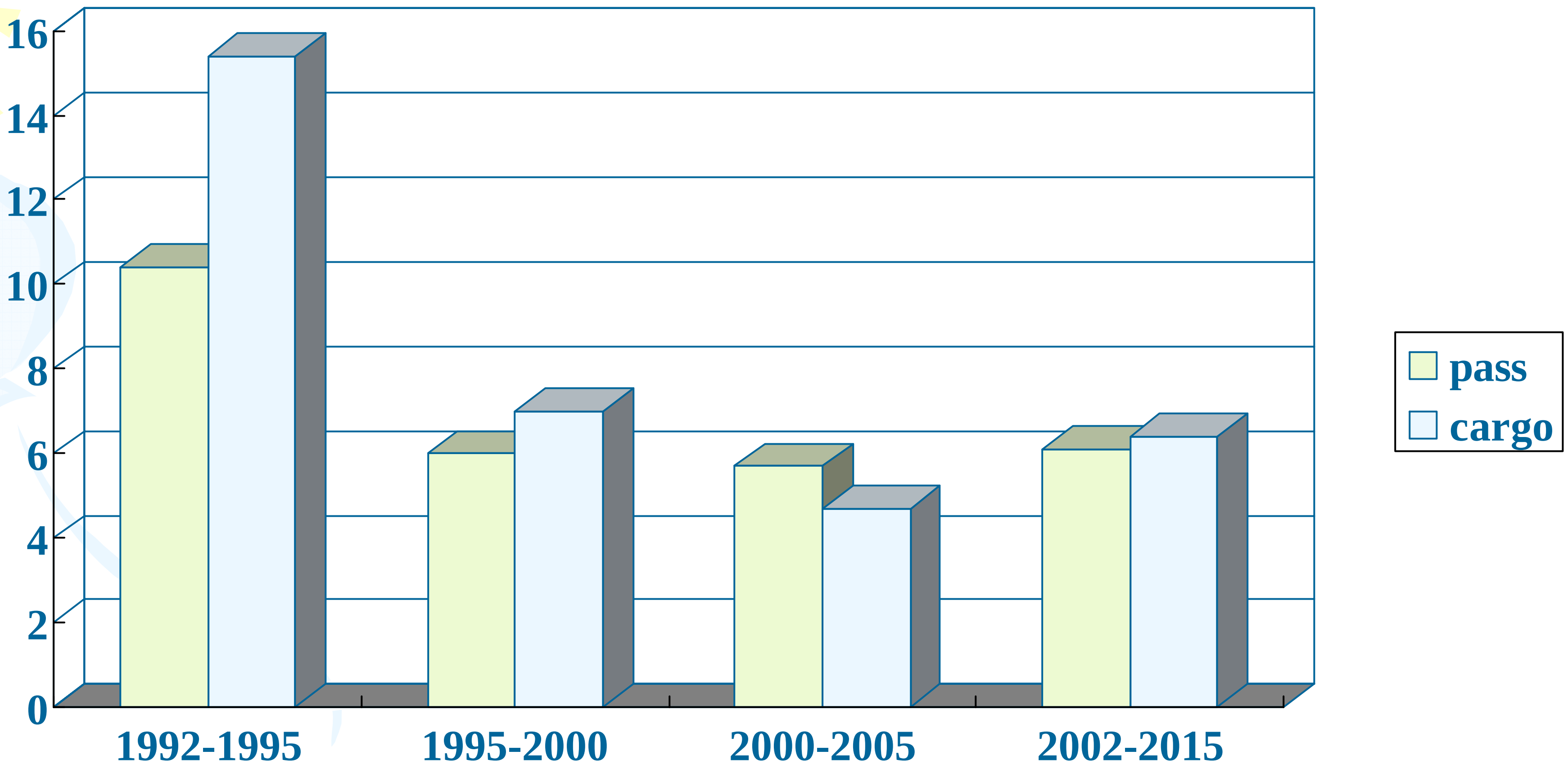
Note : Passenger-Kilometer, Freight-Ton-Kilometer

Source : 1. ICAO, Outlook for Air Transport to the Year 2015, 2004. 9

2. ICAO, Passenger & Freight Statistics Data, 2006

Growth trend and forecasting

(Asia/Pacific, annual growth rate, %)



Favorable Environments for Air Cargo Business

Economic growth and trade factors

- Most countries agree that efficient air cargo services promote economic growth and trade development
- Countries with less sufficient air cargo services tend to open or liberalize their air cargo market
- Due to the increasing globalization of manufacturing process and subsequent user demands of efficient and sufficient air transport, countries realize that the notion of "national O-D traffic", which forms the basis of traditional bilateral ASA negotiations, should not be applied to air cargo negotiations

⇒ **Pursue air cargo liberalization separately from passenger liberalization**

Lower Institutional Barriers

- Free Trade Agreements
- Open Skies and Liberalized Bilateral Agreements
- Mr. Yang, CAAC minister: open Chinese air cargo market actively, gradually, and orderly following expanding air cargo market (2005)
  - market access and joint venture with foreign companies
  - open logistics market after joining WTO
    ⇒ DHL, TNT, UPS, FEDEX
  - expect 10%+ average annual growth rate of air cargo, much higher than 6.2% worldwide
    ⇒ the highest in the world

Demand factors

- Trade of small and light valuable goods such as IT, NT and BT products
- No inventory just-in-time delivery service
- Global supply chain logistics network with global manufacturing and global market
- Speed is vital with increasing time-value of cargo

  ⇒ **Favors air transportation**

Cost factors

- Night departure/arrival with lower landing charges
- Hub and spoke logistics network

Network and supply Factors

- Cargo alliance: Skyteam/Star cargo alliance
- Cargo terminal operated exclusively for own use

Effects of LCCs and A380 on Air Cargo

- LCCs reduce cargo allowance for quick turn-over
  - ⇒ no significant increase in air cargo capacity
- A380 freighter and belly compartment
  - ⇒ significant effect on intercontinental air cargo capacity and rate

Strategies of Airlines on Air Cargo and Open Sky Policy

Open Skies in air cargo comes first

- Whenever open skies, cargo came first and in faster track
  - Central America granted 7th freedom rights for all cargo services to US in 1997
  - India announced Open Skies for air cargo unilaterally to any foreign carriers in 1990
  - Australia and New Zealand signed MOU of allowing 7th freedom rights for all-cargo services in 2002

- 28 bilateral open-skies on all cargo services with 7th freedom worldwide(2003)
- In many bilateral ASAs, special provisions for air cargo operations and their greater route flexibility
- OECD published a special policy report on air cargo industry and model Protocol of ASA for liberalizing air cargo (2002)
- WTO considers air cargo to include in GATS

Strategies of Airlines on Air Cargo

- Flexible network design, routing, crew/fleet scheduling
  - While passenger flights usually return to their starting point, freighters fly to a 3rd destination to find a load to avoid empty legs

- Establishing a cargo division for dedicated all cargo operations (ex: Lufthansa Cargo, Northwest Cargo, Singapore Air Cargo, Japan Air Cargo)

- Establishing a joint venture of all cargo carrier for feeder service in the continent (ex: Chinese subsidiary of Korean Air)

- Active business of the freighter-only carriers(ex: NCA, Cargolux, Polar air cargo), integrators(ex: FedEx, UPS, DHL), and international non-scheduled all cargo carriers(ex: Kalitta air cargo)

Why we need to liberalize air cargo first?

- In liberalized global economy (with FTAs), air cargo operations need to be as efficient, economical, and expeditious as possible to meet user demands, particularly transporting high value and time-sensitive freight
- E-commerce relies heavily on efficient delivery network of air cargo
- With traditional limitations on market access and capacity usually imposed on passenger service, they cause major problem in air cargo logistics and economically viable all cargo service

- While belly cargo was 58% of total air cargo in 2002, the share of freighters has been increasing significantly due to integrators, all cargo carriers and cargo-oriented carriers (source: Boeing, Airbus)
  - ⇒ **increasing pressure on liberalizing all cargo operation**
- Concerns on the carriers' competitive position as an indivisible combination of passenger and cargo
  - ⇒ liberalization of air cargo may lose leverage in passenger negotiation
  - ⇒ **pursue liberalization focused on all cargo services**

Constraints to be eased in all cargo services

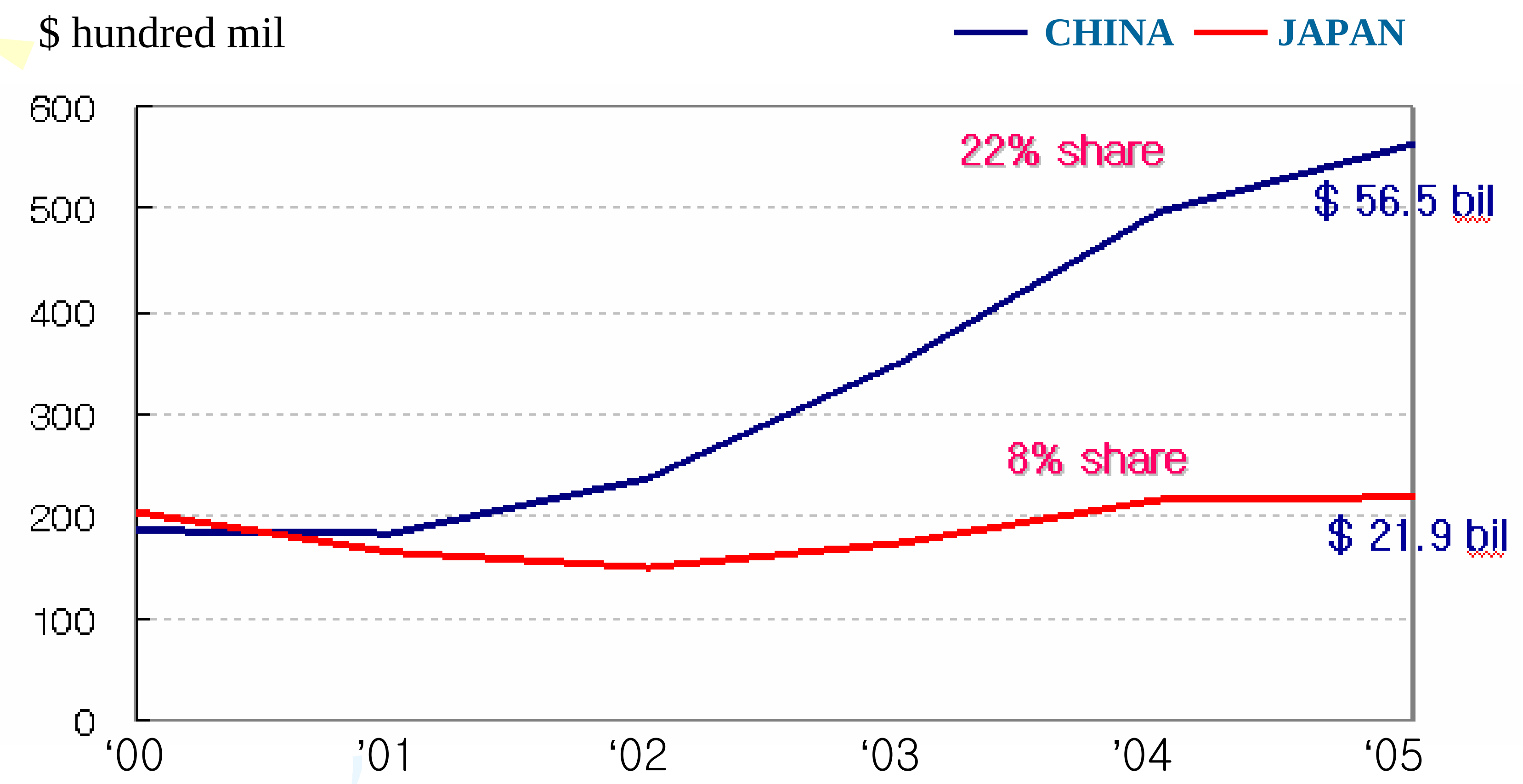
- More traffic rights
  (mostly 3/4 rights, including beyond rights, 7th freedom, unilateral open-sky)
- National ownership and effective control
- Leased aircraft (make it financially feasible business)
- More route and operational flexibility
  - ground handling
  - block space and code-sharing

- airport curfews (particularly essential for express cargo)
- airport slots (all cargo operations are often given lower priority at congested airports)
- pricing
- intermodal service

- Easy customs clearance: direct, transit, re-forwarding
- Facilities: airlines' cargo terminal, forwarders' warehouse

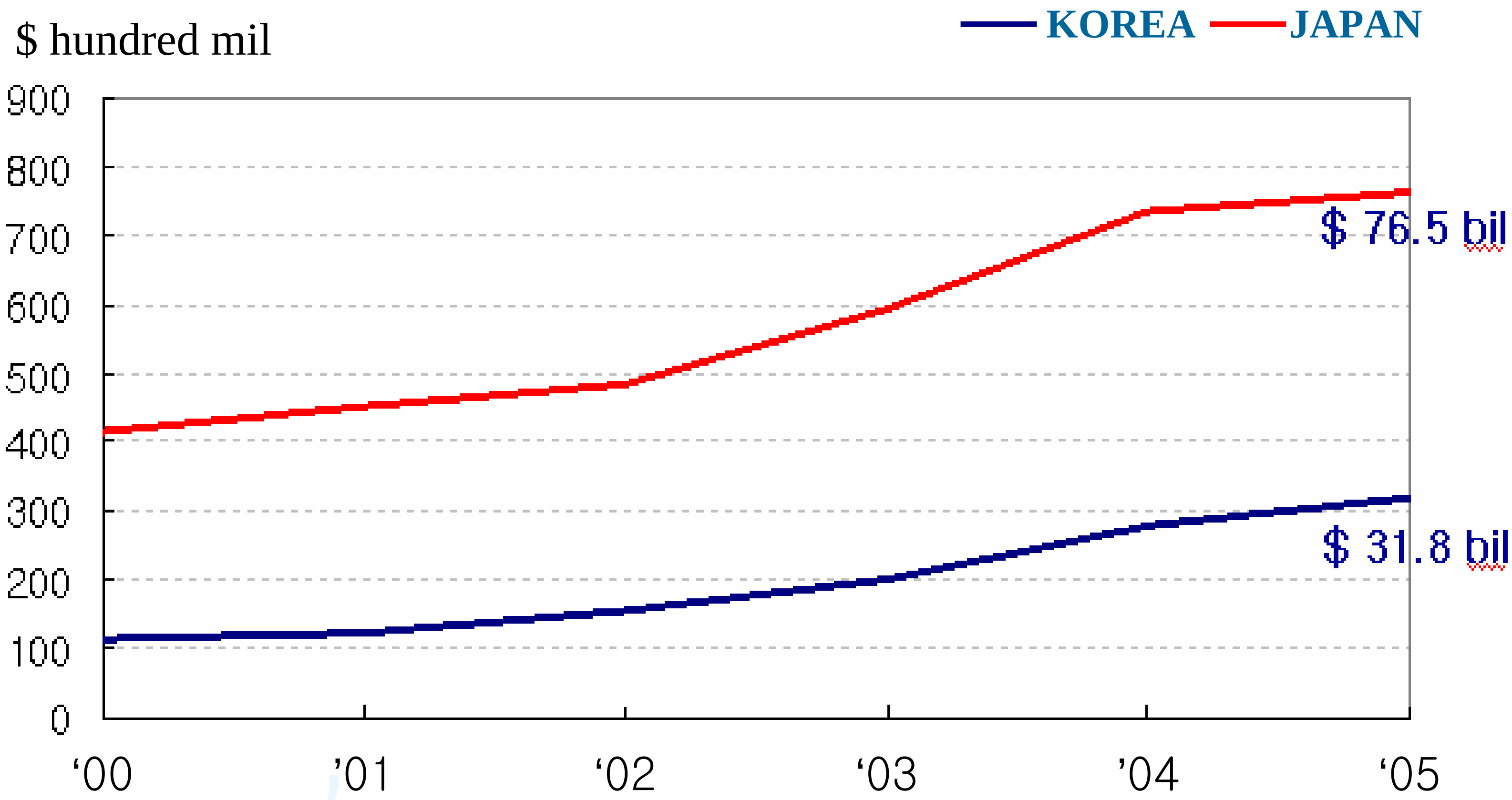
Increasing Interdepence between NE Asian Countries

Korean Exports to China and Japan



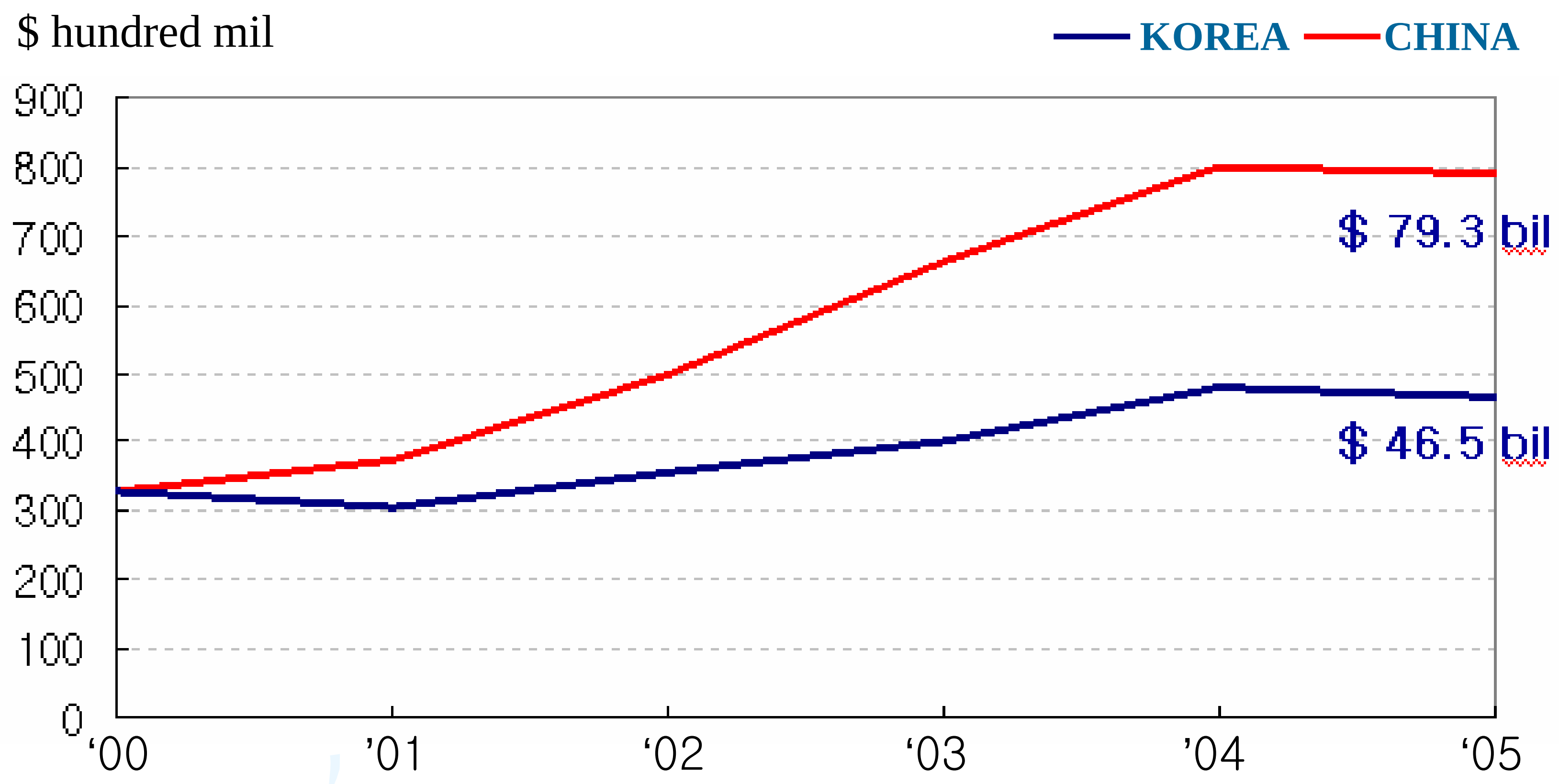
Source: Trade statistics, Korean Air

Chinese Exports to Korea and Japan



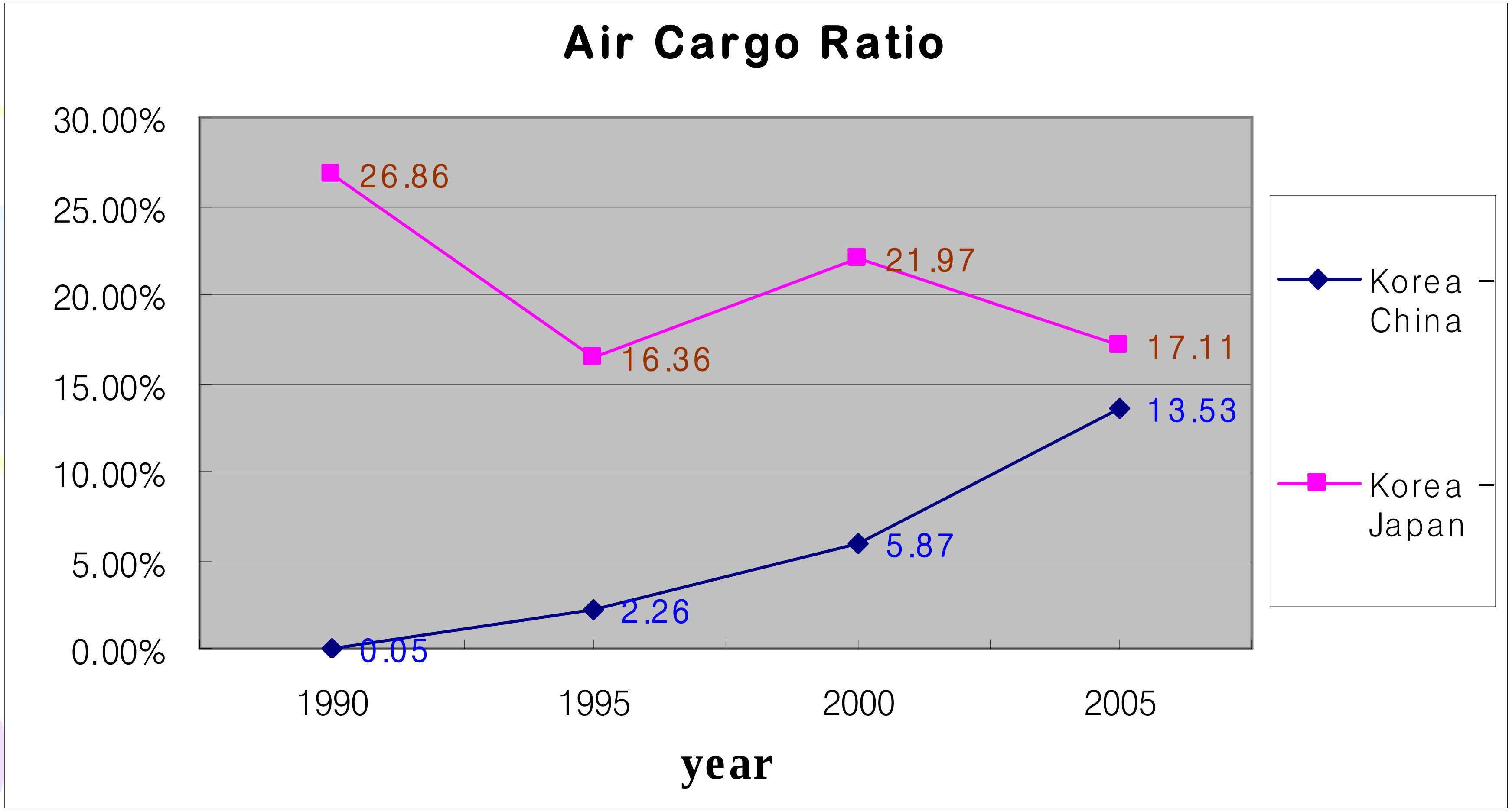
Source: Trade statistics, Korean Air

Japanese Exports to Korea and China



Source: Trade statistics, Korean Air

Air Cargo Ratio between Korea–Japan & China



Source: Airport & Trade Statistics, IAC & KITA

Bilateral ASAs between NE Asian Countries

Korea-China bilateral ASA

- Signed in 1994, revised 6 times since then
- The 1st tri-partite symposium and subsequent Korea-China bilateral talk in June 2006

⇒ **Major step toward NE Asian open sky**

- Open sky in Korea-Sandung and Korea-Hainan, and increase frequencies to major cities
- Passenger: 33 routes, 204 flights a week

  ⇒ 43 routes, 401 flights
- All cargo operation: 7 points, 24 flights a week

  ⇒ 9 points, 36 flights

⇒ **But strict limit on 3/4 freedom still remain**

- 2 designated carriers in the route of more than 10 flights a week ⇒ 3 designated carriers for more than 15 flights a week
- But no limitation on multiple designation of freighters
- 5th freedom rights for Chinese carriers beyond Korea to one point in North America (3 flights a week since 1997 ⇒ 7 since 2004 ⇒ 21 since 2006, currently not in use)
- 5th freedom rights for Korean carriers beyond China to one point in Europe (3 flights a week since 1997 ⇒ 7 since 2004 ⇒ 21 since 2006, but will be approved 3 years later after Chinese carriers use them)

- Fares … maintain double approval system
- No limit on aircraft size, code-share, and route merger
- Wet-lease operation permitted since 2006

Korea-Japan bilateral ASA

- Signed in 1967
- Revised 25 times since then
- Strict limit on 3rd/4th freedom
- Double tracking from each country
- 5th freedom rights for Korean carriers beyond Tokyo to Honolulu and LA (currently in use), and beyond Osaka to Taipei, Hongkong, Hochimin and Bangkok (currently not in use)

- 5th freedom rights for Japanese carriers beyond Seoul/Busan to any cities of any country (currently not in use)

- Lease of unused 3rd/4th freedom rights of Japanese carriers to Korean carriers

- Code sharing is permitted

- Wet-lease operation is permitted

Korean bilateral talk in 2006 toward open skies

- With Vietnam in April 2006
  - Liberalize all cargo operation immediately
  - Passenger: 8 flights a week → 16 until 2008
  - Open sky after 2008
- With Thailand in May 2006
  - All cargo operation was already liberalized in 2004
  - Open sky immediately
- With Cambodia in Sep. 2006
  - 4 flights a week → 28 until 2010
  - Open sky after 2010

- With Ukraine in Nov. 2006
  - Liberalize all cargo operation immediately
  - Passenger: 7 flights a week until 2010
  - Open sky after 2010
- With Germany in Nov. 2006
  - Increase frequency from 11 a week to 21 a week
- With France in Jan. 2007
  - Increase frequency from 7 a week to 10 a week after March 2008, and to 11 a week after March 2010
  - Permit double tracking and accept EU clause

Benefits of Liberalizing Air Cargo in NE Asia

Factors against Air Cargo Liberalization

- Difference in competitive power among carriers
- Protective industrial policy
- Practice of route rights lease
- Lack of airport facility, ATC capacity, airspace, and air manpower

Benefits of Air Cargo Liberalization

- Consumer(shipper) benefits
  - frequency, routes, capacity(booking), fare
- Airlines benefits
  - traffic increase
  - forming efficient network
  - establishing hub airport
  - competitive power in the long run
- Benefits of national economy
  - efficient and JIT transportation of export goods
  - seamless logistics service in SCM network

Effects of Air Cargo Liberalization

- Increasing competition with more carriers, more supply and lower fare

- More flexible freighter operation
  - Downsizing aircraft
  - Developing regional airports
  - More operation to the strictly regulated big cities
    ⇒ stop/reduce operation to the secondary airports in the neighboring small cities
  - More direct flights than hub operation
  - Increasing intra-continent hub competition

Effects of open sky in Incheon-Sandung(1)

Subject		Incheon – China				Incheon – Japan	
		Weihai	Qingdao	Yantai	Shenyang	Osaka	Fukuoka
Distance (mile)		250	371	306	338	509	335
A/C movement	’06. 3	110	394	162	157	728	215
	’06. 10	248	681	349	220	691	281
Passenger	’06. 3	9,343	42,521	11,650	22,443	118,374	45,646
	’06. 10	18,031	62,691	22,838	24,380	122,406	53,436
Freight (ton)	’06. 3	25	644	137	330	3,550	594
	’06. 10	28	685	129	281	2,760	727

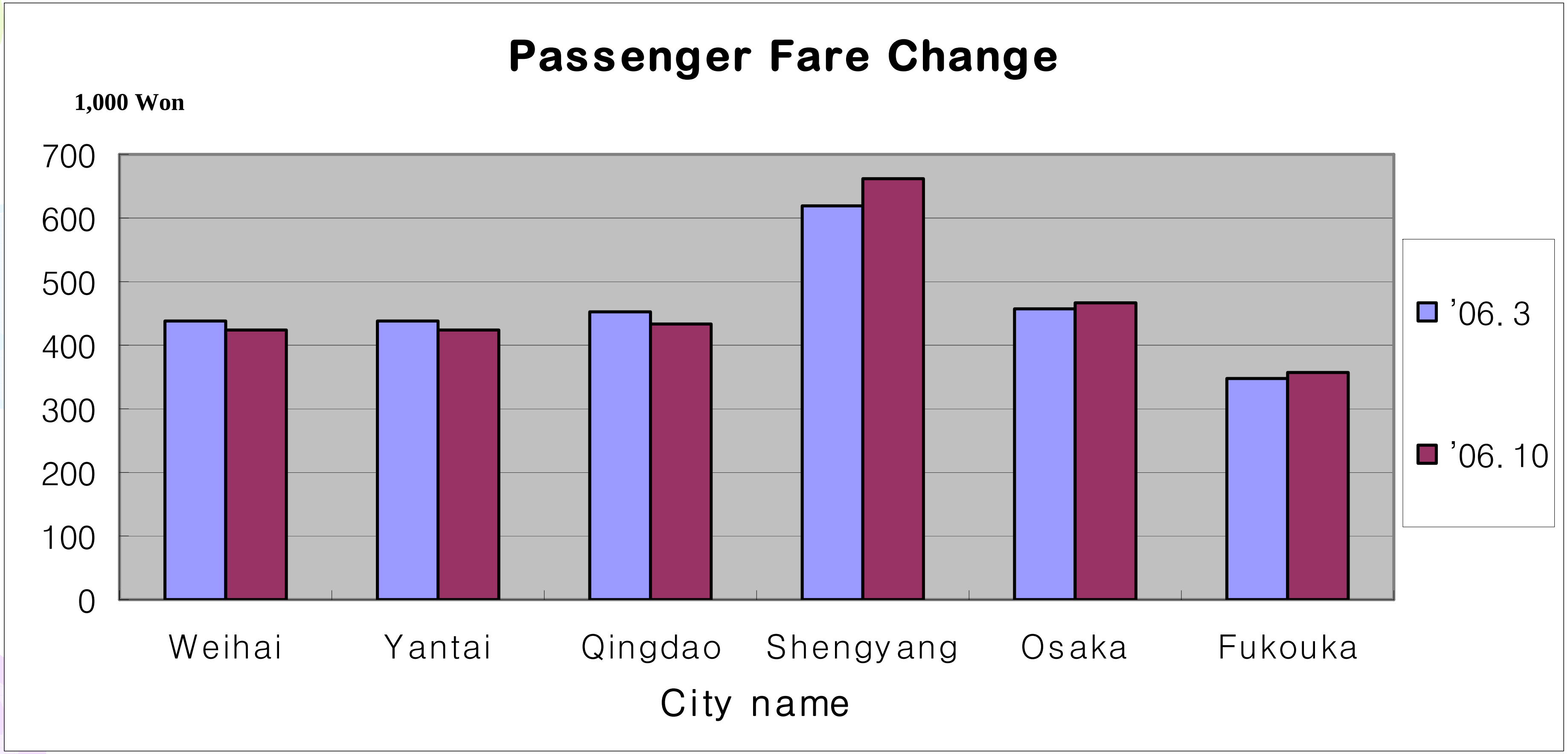
Source: Airport & Trade statistics, IAC & KITA

Effects of open sky in Incheon-Sandung(2)

Subject		Incheon – China				Incheon – Japan	
		Weihai	Qingdao	Yantai	Shenyang	Osaka	Fukuoka
Distance (mile)		250	371	306	338	509	335
A/C movement	’06. 3	110	394	162	157	728	215
	’06. 10	248	681	349	220	691	281
Passenger Fare [1)]	’06. 3	439.6	451.2	439.6	617.4	455.9	345.5
	’06. 10	423.2	434.7	423.2	660.8	467.9	357.5
Freight Fare [2)]	’06. 3	1,819	1,236	1,336	926	769	805
	’06. 10	1,615	1,043	1,077	887	605	714

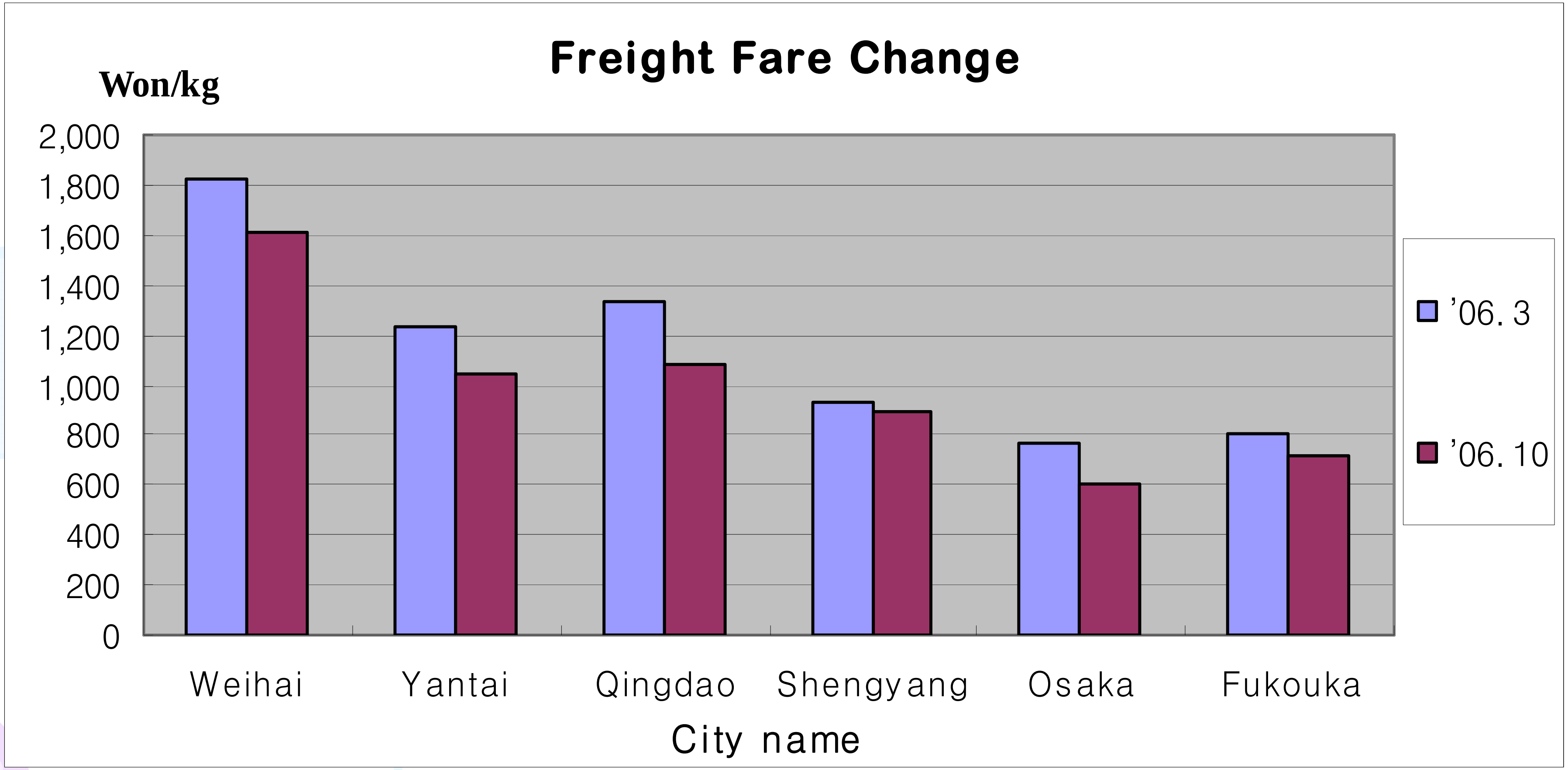
Note: 1) round trip economy class passenger fare (Korean thousand won), fuel surcharge included
2) Incheon departure freight fare (Korean won/kg), fuel surcharge not included
Source: Airport & Trade statistics, IAC & KITA

Effects of open sky in Incheon-Sandung(3)



Note: Round trip economy class passenger fare (Korean thousand won), fuel surcharge included
Source: Airport & Trade statistics, IAC & KITA

Effects of open sky in Incheon-Sandung(4)



Note: Incheon departure freight fare (Korean won/kg), fuel surcharge not included
Source: Airport & Trade statistics, IAC & KITA

Policies of Liberalizing All Cargo Operation in NE Asia

Two transport modes of export/import

- Sea mode of transporting export/import cargo in NE Asia
  - Except 7th freedom(Korea-China) and cabotage(Korea-Japan), all freedoms are allowed to the 3rd flag carriers
    ⇒ adverse discrimination is expected
  - Korea-Japan market is already bilaterally open, and Korea-China market will be open bilaterally by 2010
  - Common maritime market in Korea-China-Japan will be formed by 2015

- Air mode of transporting export/import cargo in NE Asia
  - Korea-Japan: currently no serious constraints from bilateral ASA, except lack of operational flexibility and insufficient airport slot(ex: Narita)
  - Korea-China: no serious constraints from bilateral ASA since June 2006, except lack of operational flexibility and insufficient cargo terminal capacity(ex: Pudong)

Adverse discrimination should be prevented

- Increasing bilateral open skies or liberal bilaterals of each nation with 3rd countries in air cargo
  - Korea: with US(1998), Thailand(2004), Ukraine(2006), Vietnam(2006), Cambodia(2010)
  - China: with Thailand, US
  - Japan: with US
- Regional block and plurilateral open sky
  - EU and NAFTA
  - Brunei, Chile, New Zealand, Singapore, US
  - Singapore, Thailand, and Brunei

⇒ **Needs for regional open sky and corresponding block in NE Asia**

Stepwise approach to liberalization

- Liberalizing cargo ⇒ passengers
  - especially for export-oriented NE Asian economies
- Liberalizing charter/non-scheduled ⇒ scheduled
- Liberalizing small cities ⇒ big cities
- Liberalizing airports with no capacity constraints

- Liberalizing 3rd/4th freedom ⇒ 5th freedom
- Increasing designated carriers
- Unilaterally liberalizing own market
- Liberalizing each bilateral ASA
  ⇒ liberalized plurilateral ASA
  ⇒ common air cargo market

Thank you !