Recent Development in North East Asian Air Transport Markets & Their Impacts on Incheon Airport

SangYong Lee (Shawn) Ph.D.

International Biz 2 Group, Incheon International Airport Corporation, Incheon, 400-700 Republic of Korea

CV

SangYong Lee (Shawn Lee)

Education

Korea Aerospace Univ.,

Aviation Traffic & Logistics Ph.D. : 2005~2010

Helsinki School of Economics EMBA : 2003~2004

Korea Univ. Mechanics Bachelor/Master : 1987~1993

Career

Incheon International Airport Corporation : 1999~

AOC, Commercial/Airline Marketing,

Corporate Governance, International Biz Group

LG Electronics Co. Research Lab. : 1993~1999

Major Area

Research, Analysis, Marketing, Planning

Contents

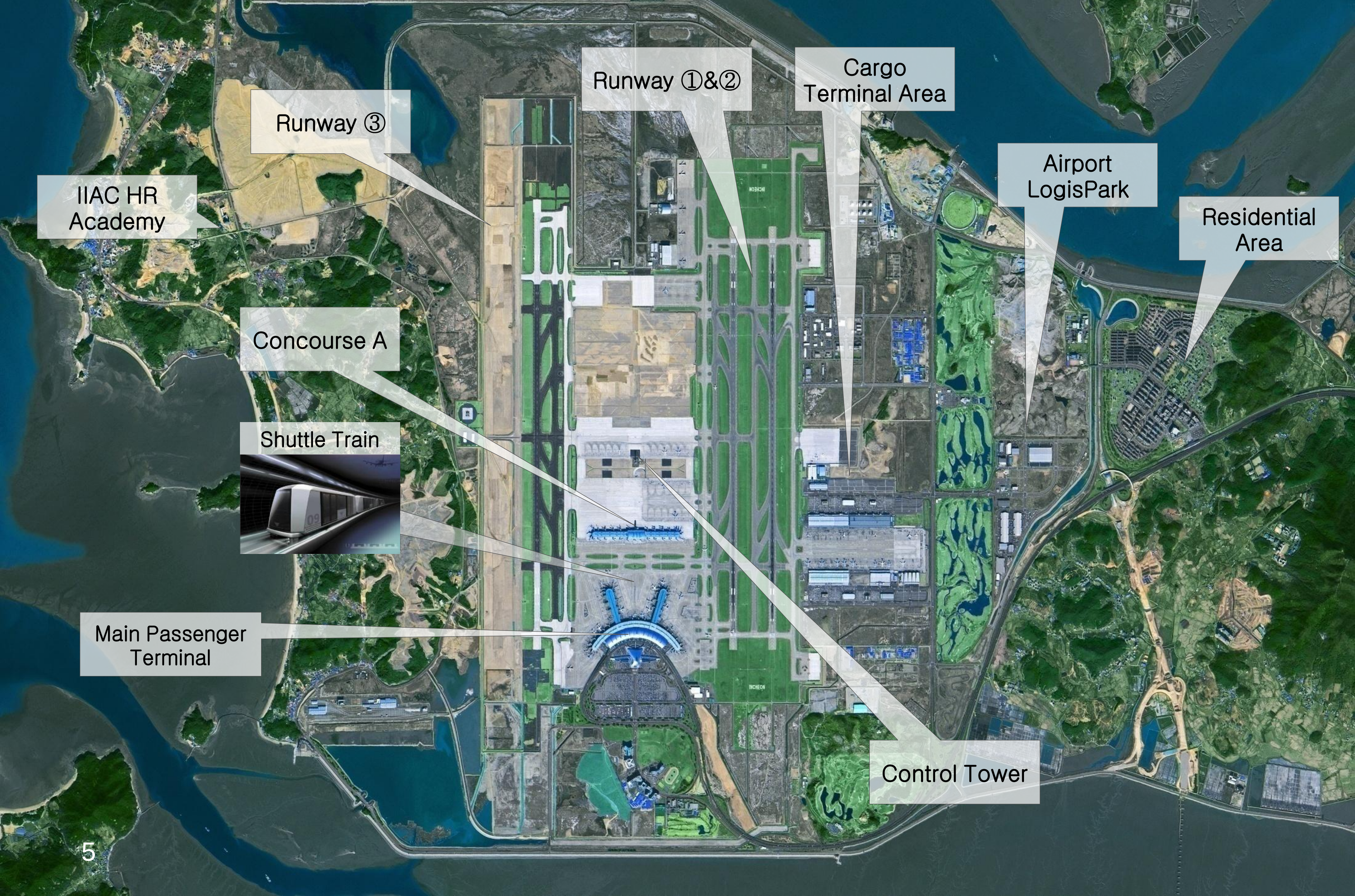
Ⅰ **Incheon International Airport**

Ⅱ **Factors Related to Air Transport** in North East Asia

Ⅲ **Impacts on Incheon Airport**

1 Incheon Airport

Overview of Airport Facilities



Key Facts & Figures

Korea's No.1 Gateway of import/Export

2nd in Cargo handing and 12th in passenger volume

Best Airport Worldwide by ASQ for 5 Consecutive years

Initiation of overseas business – Consulting agreement with Erbil Airport in Iraq

2001
Grand Opening

2003
Oprating CAT-IIIb (1st in Asia)

2005
- Best Airport Worldwide
- Cumulative 100 million PAX

2006~7
- Best Airport Worldwide
- 10th in int'l PAX
- 2nd in int'l Cargo
- Cumulative 10 million tons of cargo
- a million accident-free flight

2008
- 2nd phase Grand Opening
- 15% Passenger Transfer rate
- Best Airport Worldwide

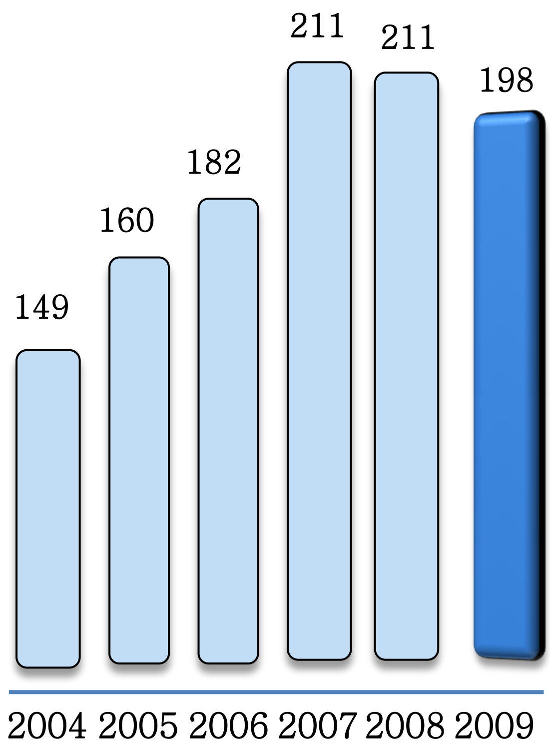
2009
- Consulting Agreement with Erbil Airport in Iraq
- Best Airport Worldwide
- 18.5% Passenger
- Transfer rate
- 5 million Transfer Passengers

2010
- Best Airport Worldwide in ASQ for 5 Consecutive years

Traffic Figures

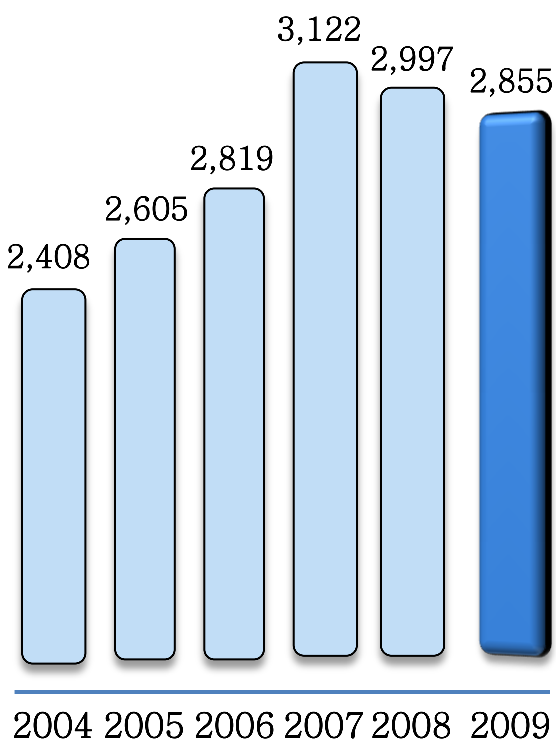
[Aircraft Movements]

(thousand)



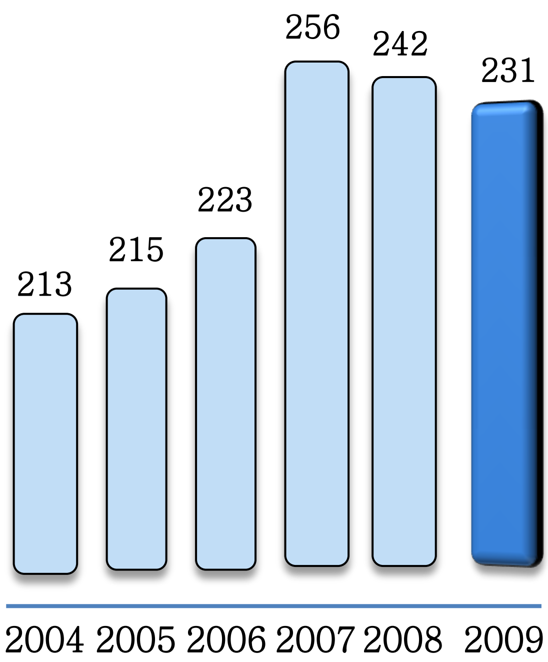
[Passengers]

(ten thousand)



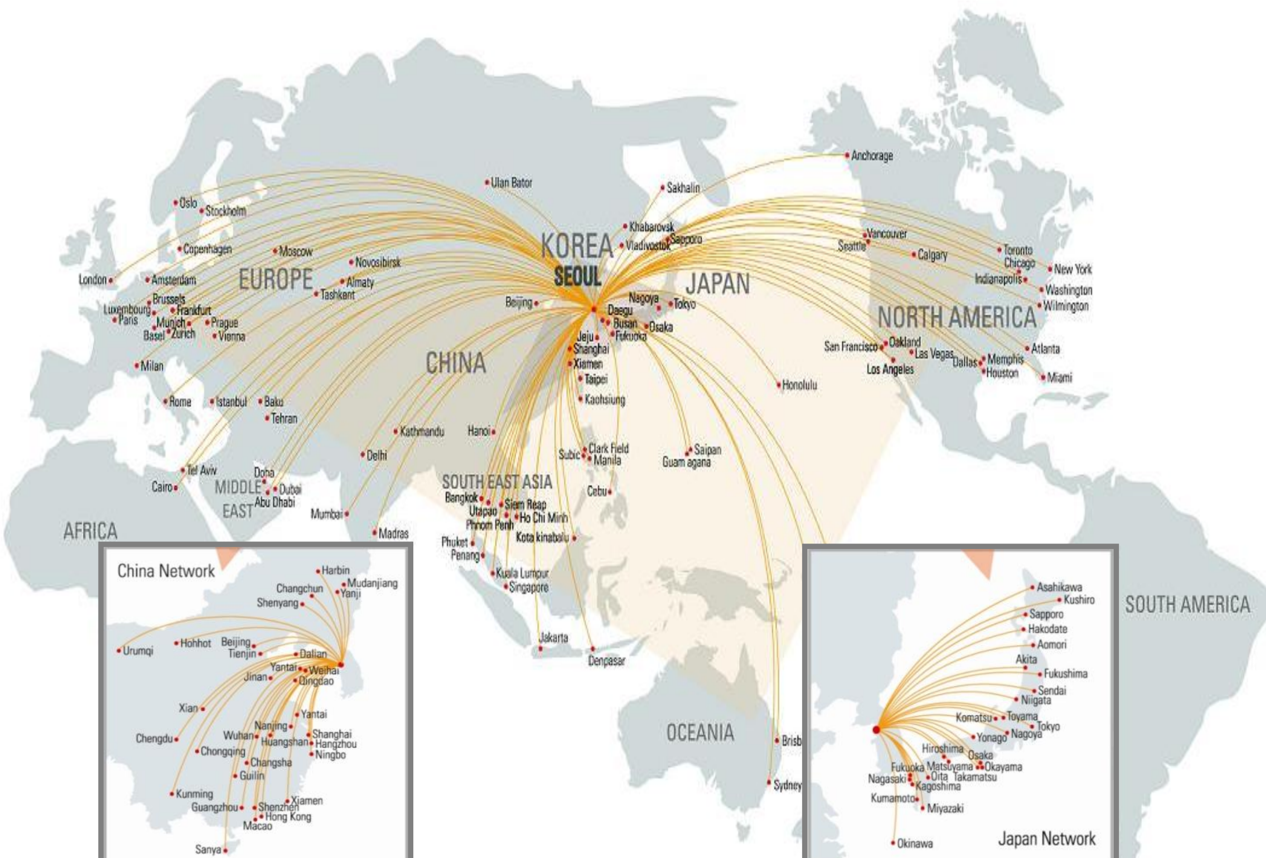
[Cargo]

(thousand metric tons)



Gateway to Northeast Asia

66 Airlines, 168 destinations worldwide in 48 countries including 65 destination in China & Japan (as of July 2010)

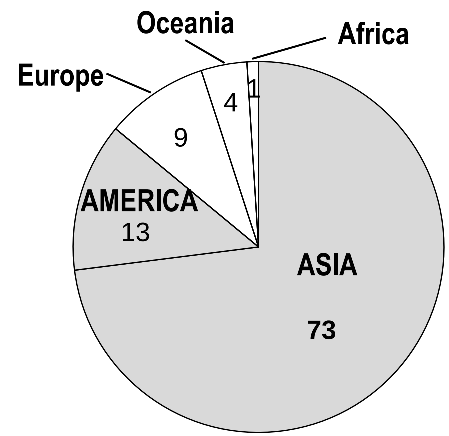


35 Cities in China

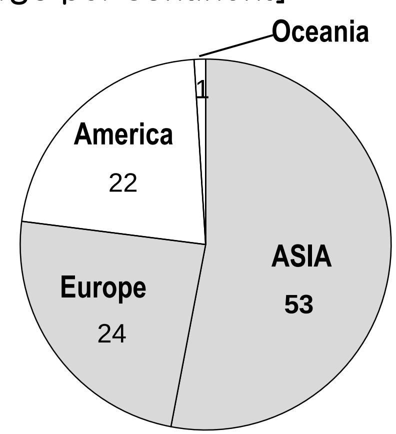
30 Cities in Japan

(Unit : %)

[Passengers per continent]



[Cargo per continent]



Financial Figures

Sales

(Unit : US$ million)

2004	681.3
2005	789.0
2006	942.6
2007	1,042.2
2008	818.8
2009	1023.8

Net income

(Unit : US$ million)

2004	144.5
2005	123.4
2006	156.3
2007	222.2
2008	117.1
2009	230.2

Asset/Capital/Liabilities

(Unit : US$ million)

	2004	2005	2006	2007	2008	2009
Asset	6,058.2	6,655.6	7,923.9	8,441.6	6,267.2	6,937.5
Capital	2,615.5	3,062.3	3,794.1	4,213.8	3,129.8	3,752.2
Liabilities	3,442.7	3,593.4	4,129.8	4,227.7	3,137.3	3,185.2

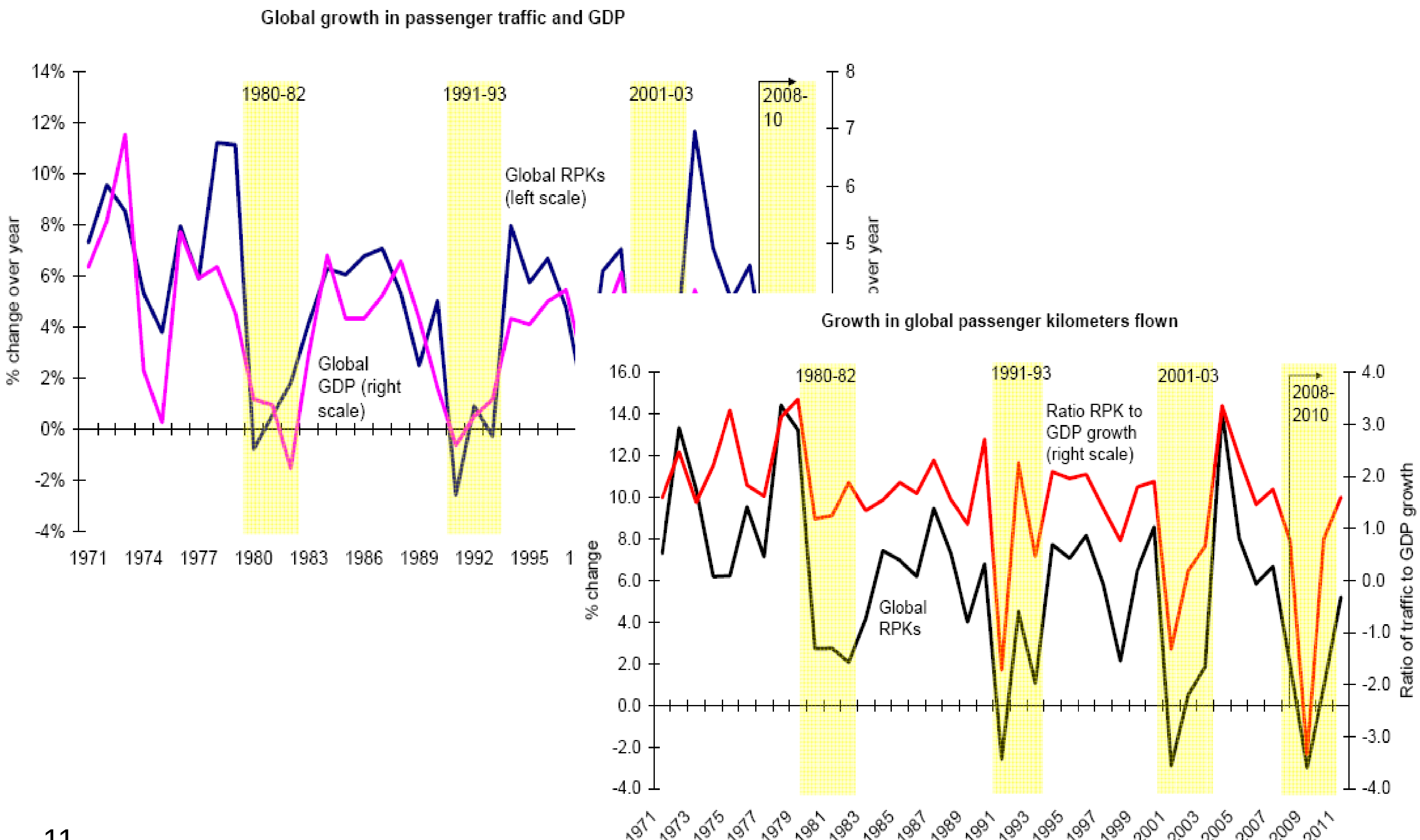
2

Factors related to Air Transport

in North Eastern Asia

Economic Recession & Recovery

- **World Trend**



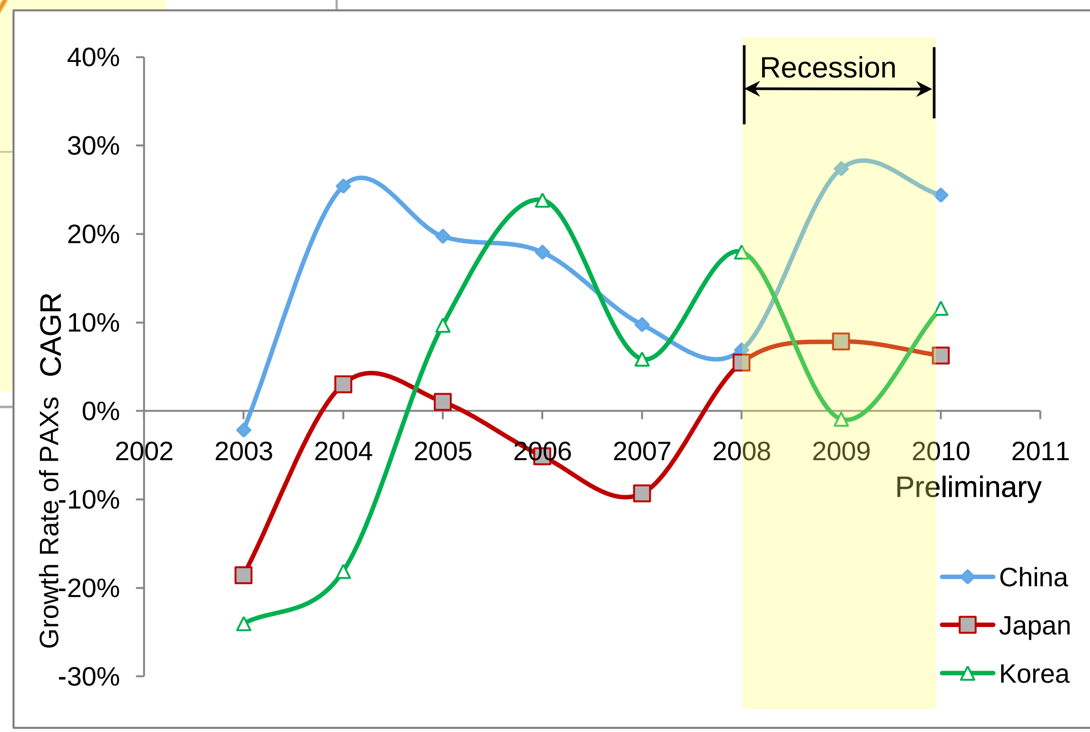
Source:
ICAO, E
IATA

Economic Recession & Recovery

- **North East Asian Market**

[Total Demands of China, Japan and S.Korea]

[Each Demand of China, Japan and S.Korea]



Open sky in North East Asia

S. Korea and China : Agreement (2006.6.14)

[Summary]

✓ Open Sky between S. Korea and Shandong region of China

✓ Full Open Sky by 2010 (Planned)

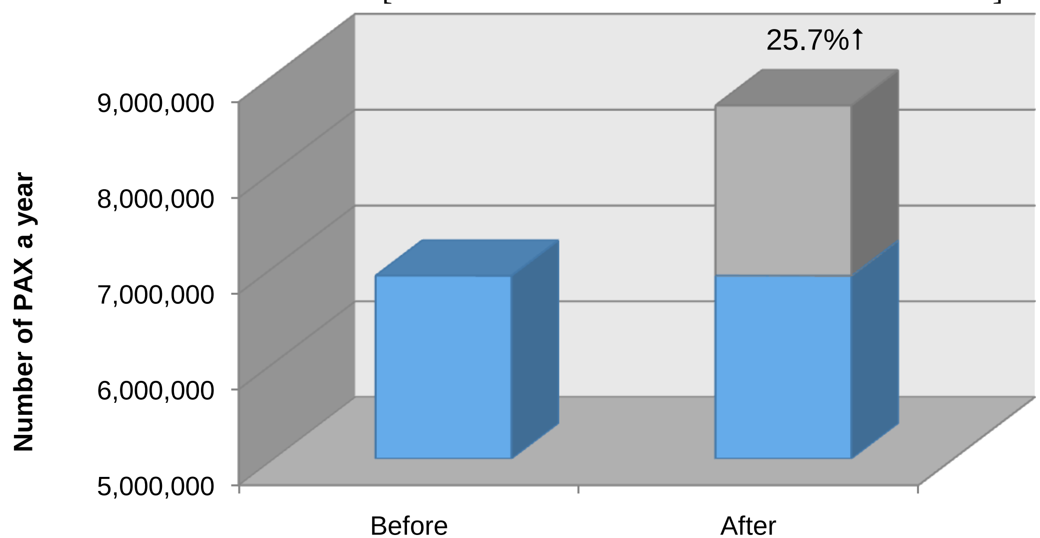
✓ Agreement to expand regions of Open Sky in China

. PAX : 33 routes, frequency 204 a week

→ 43 routes, frequency 401 a wee

. Cargo : 7 → 9 routes, frequency 24 → :

[Increased Demand between S.Korea & China]



Open sky in North East Asia

S. Korea and Japan : Agreement (2007.8.2)

[Summary]

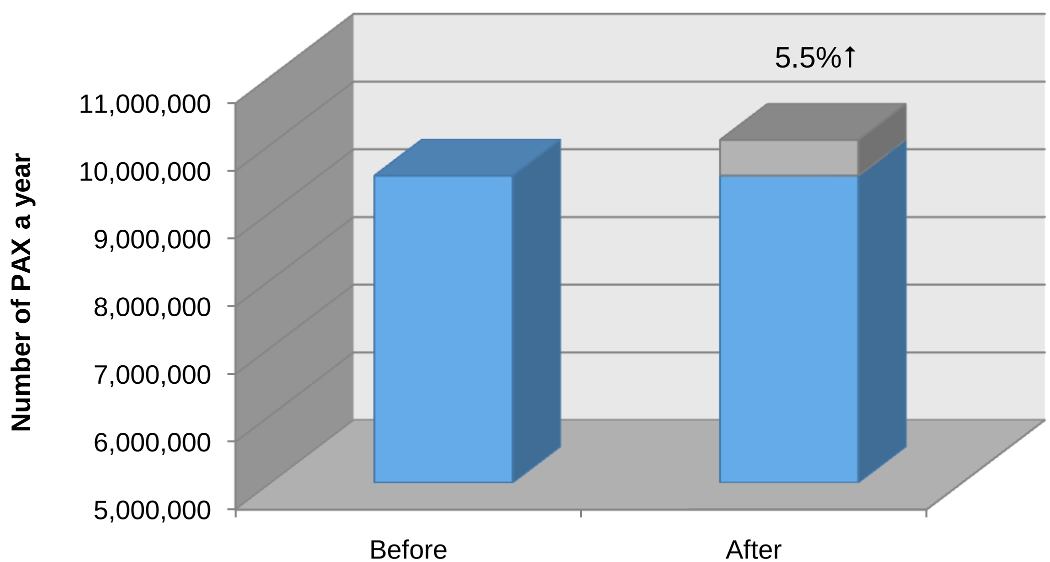
✓ No limitation of ACMs and routes

✓ Tokyo is excluded due to the restriction of capacity

✓ Increase of the flights with 5th and 6th freedom via Japan to America (frequency 3 → 7 a week)

✓ Improvement to notify air fare the govern "Permission" to "Report"

[Increased Demands between S.Korea & Japan]



Deregulation in S.Korea

- **1st Deregulation for new entrants to international routes (2008.7.11)**

• Before : more than 2 year operations in domestic routes without any casualty & incident
• After : more than 1 year operations in domestic routes without any casualty & incident

- **2nd Deregulation through revising Civil Aeronautics Law (2009.9.10)**

• The change of the structure of the license in Air transport business from regular and irregular to **domestic, international and small business**

• The diversification of air transport service, the change of the structure of the license, and the appeasement policy of the condition for a market **entrance to promote the participation of new airlines**

• The **vitalization of Air Taxi business** through the introduction of new system for the business of small airlines with below 19 seats

• **The abolition of the condition to restrict new entrants in international routes**

Rapid Growth of Low Cost Carrier

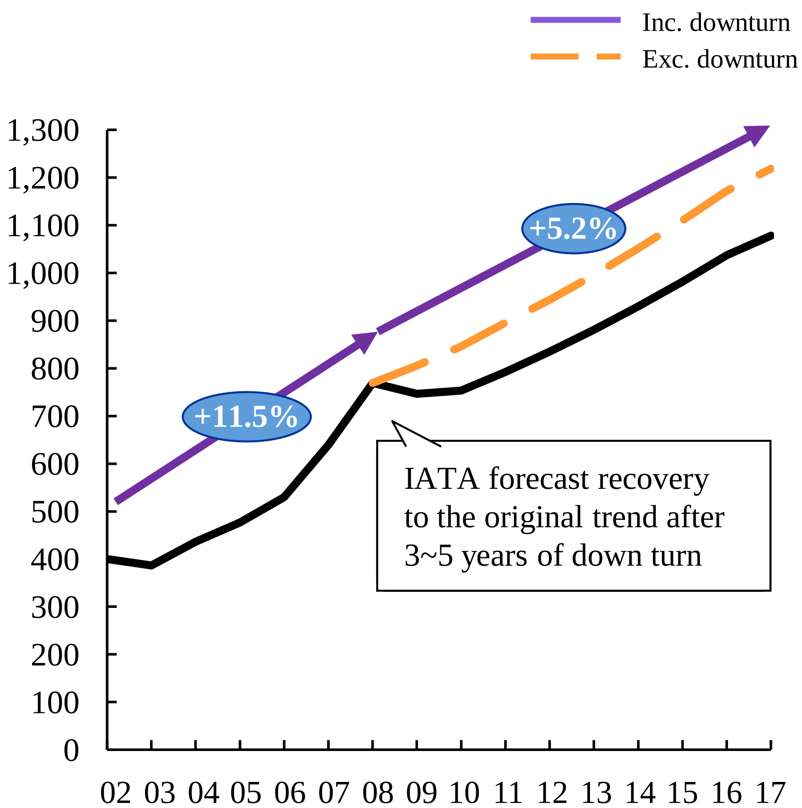
- **The prospect of the growth**

Region	2004		2014
	CAPA	Airbus	Airbus
U.S.A.	27%	23%	35~40%
Europe	19%	16%	30~40%
Asia	9%	3%	15~20%
Oceania	–	35%	45~50%

※ Source : CAPA, Airbus 2005

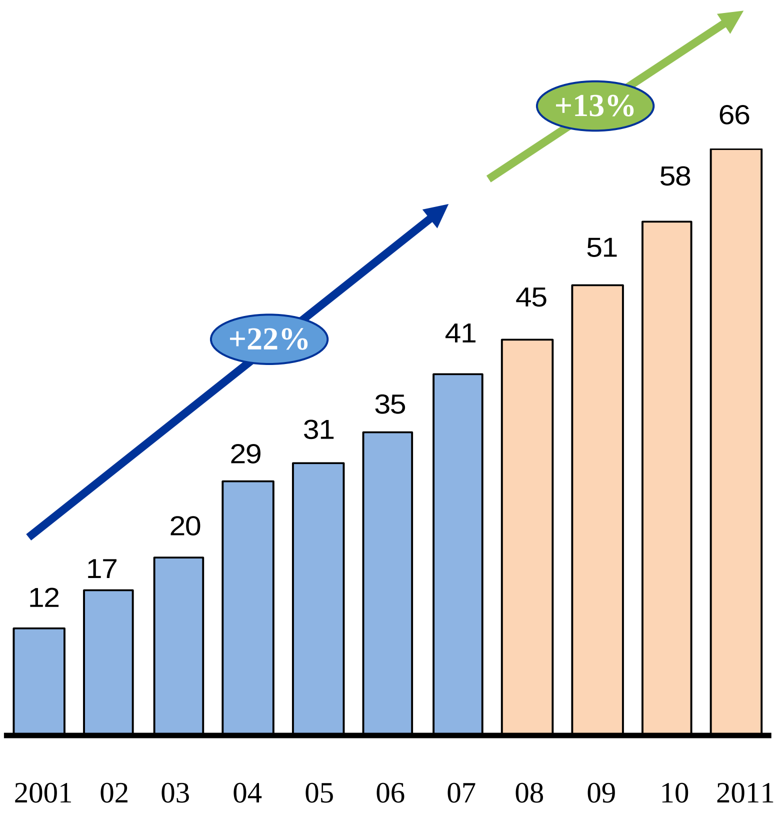
Air Traffic Demand in Northeast Asia

PAX demand in Northeast Asia
Annual number of passenger, million



✶ Resource: ACI Global traffic forecast 2007-2027

Prospect of international travel in China
Annual number of passenger, million



Expansion of Major Airports

- **Chinese government** set up and fostered Shanghai Pudong airport, Beijing capital airport, Guangzhou Baiyun airport as the three international hub Airports in 10^{th} 5-year plan
  - Shanghai Pudong : 500K ACMs, 60M PAXs, 5.5M Tons a year
  - Beijing capital : 780K ACMs, 82M PAXs, 1.8M Tons a year

- **Japanese government** increased the capacity of Haneda airport (34%), declared it as a 24 hour operation airport, and fostered it as international hub airport
  - The number of international passengers in Haneda is expected to increase from 2 million in 2008 to 35 million in 2011 if the increased capacity is applied for only international service

- The 2^{nd} phase construction in **Incheon airport** was completed in 2008 and a new expansion plan has been initiated to catch future demands.
  - 2^{nd} phase : 410K ACMs, 44M PAXs, 4.5M Tons a year
    3^{rd} phase : 410K ACMs, 62M PAXs, 5.8M Tons a year (2009~2015)

INCHEON INTERNATIONAL AIRPORT......

3 Impacts on ICN

in North Eastern Asia

Prerequisites of Hubbing

- **Countries in North East Asia initiated deregulations** as America and Europe experienced in 1980s and 1990s, which **brings in the reconfiguration and concentrations of networks** in hub airports.

	S.Korea	**China**	**Japan**
Open Sky	○	△	△
Deregulation	⊙	△	○
Others (Economy, Populations, etc.)	○	⊙	⊙

China still focuses on the domestic demand.

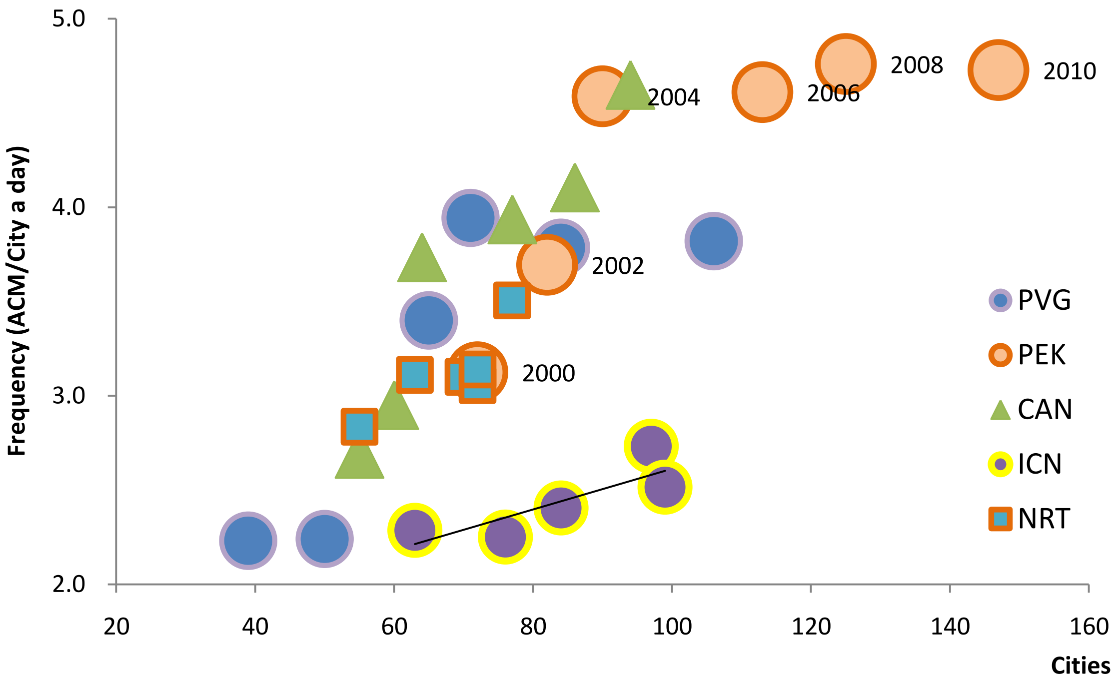
Japan is not proactive.
(N/W is structured mainly for the demand of local province)

S.Korea is ready to move toward the future in terms of network evolvement.

Network Evolvement

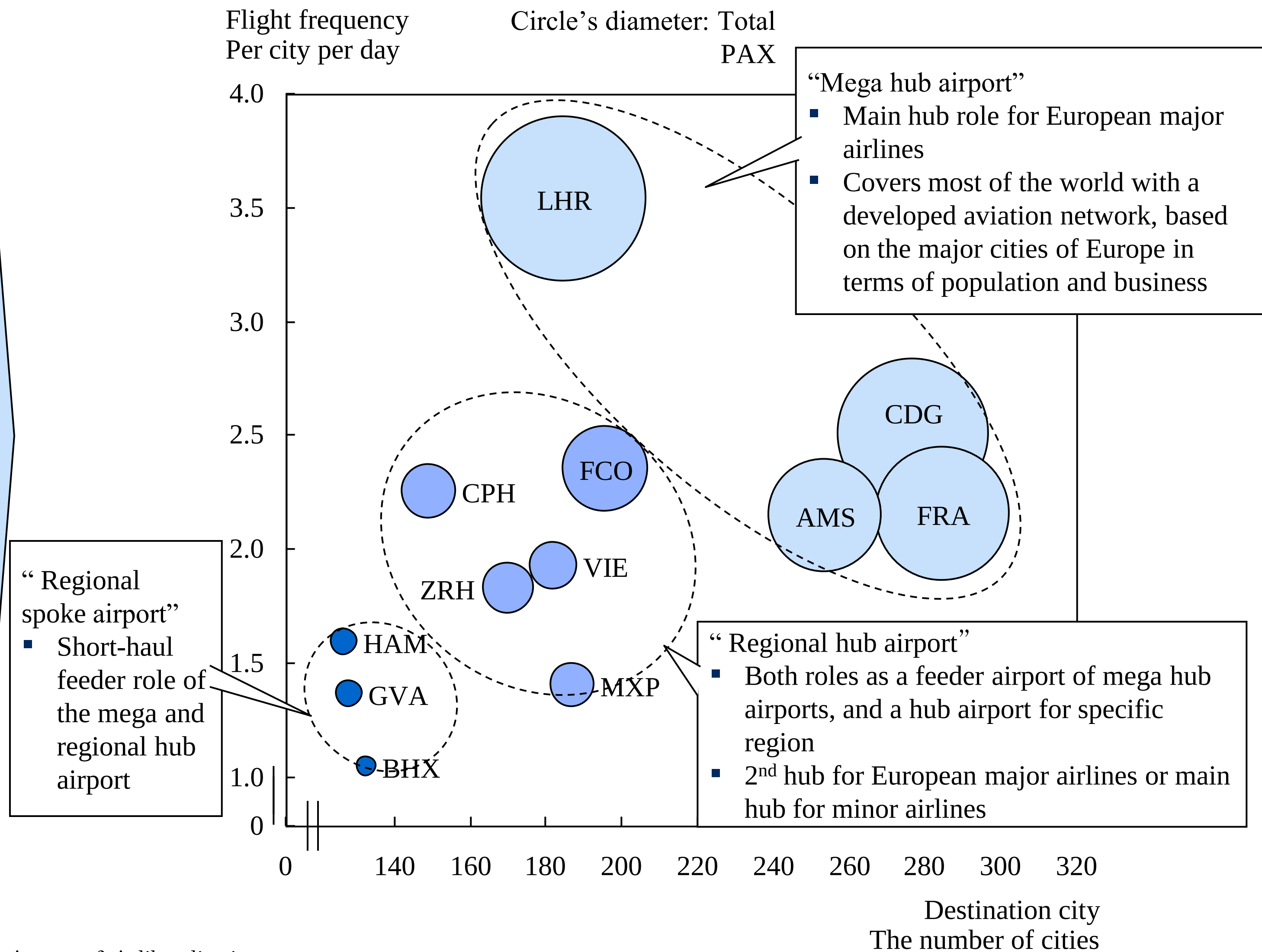
- Airports in North East Asia have **strengthened their networks through increasing frequency as well as the number of cities**

  - ICN comparatively pursued to enhance the coverage to all over the world which could weaken the market power in close markets.



Network Evolvement (example)

- Resulting from the open sky agreement in 1987, the most of the international flight regulations in EU were relaxed or removed.
- Therefore, European airlines could conduct business beyond their own national hub with almost non-restriction
- This liberalization lead the fierce competition of airlines and airports, so as to make some airports grow or some airports decline

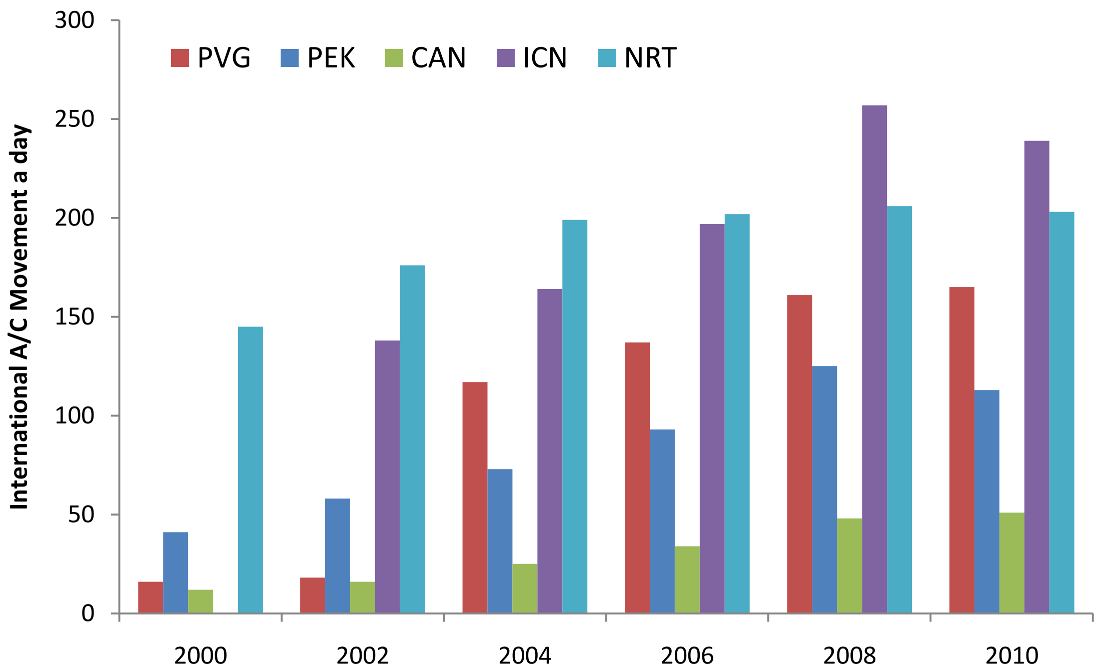


Source: InterVISTAS-ga, 'the economic impact of air liberalization

Network Evolvement

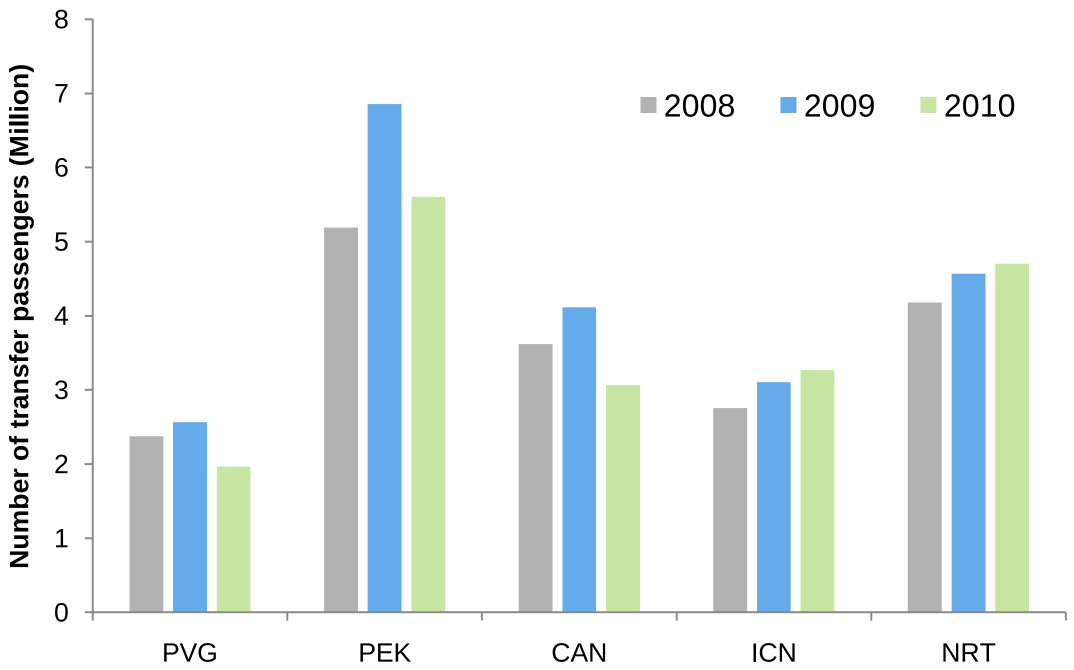
- **ICN** could have **relative competitiveness in international routes** because of different policy by Countries in Northeast Asia

  - Japan focused on the demand of internal travelers, which induced several regional hub airports
  - China currently does everything to fulfill domestic demand.



Hubbing; Growth of Transfer PAXs

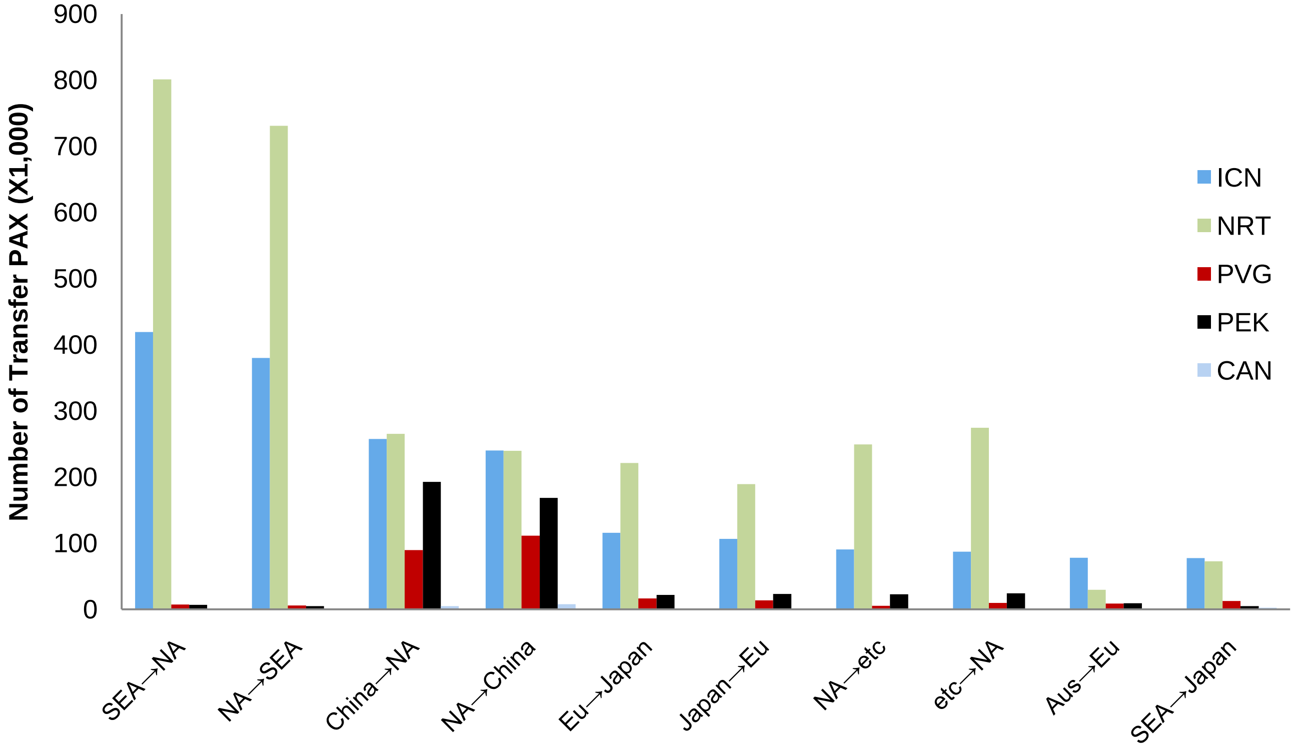
- ICN has to **increase the number of transfer passengers as well as O&D passengers** because it does not have many population compared with Chinese airports.



* The data in 2010 are provisional. (They are forecasted based on the data of half year)

Hubbing : Competition in Top 10 Transfer routes of ICN

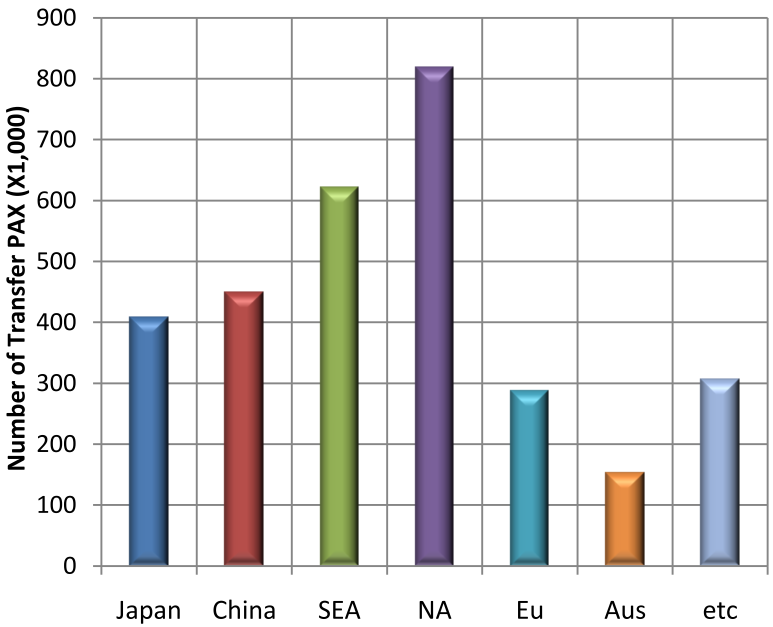
- **NRT has relative competitiveness at top 10 transfer routes of ICN** and there **are no strong competitions between ICN and Chinese airports** in terms of transfer.

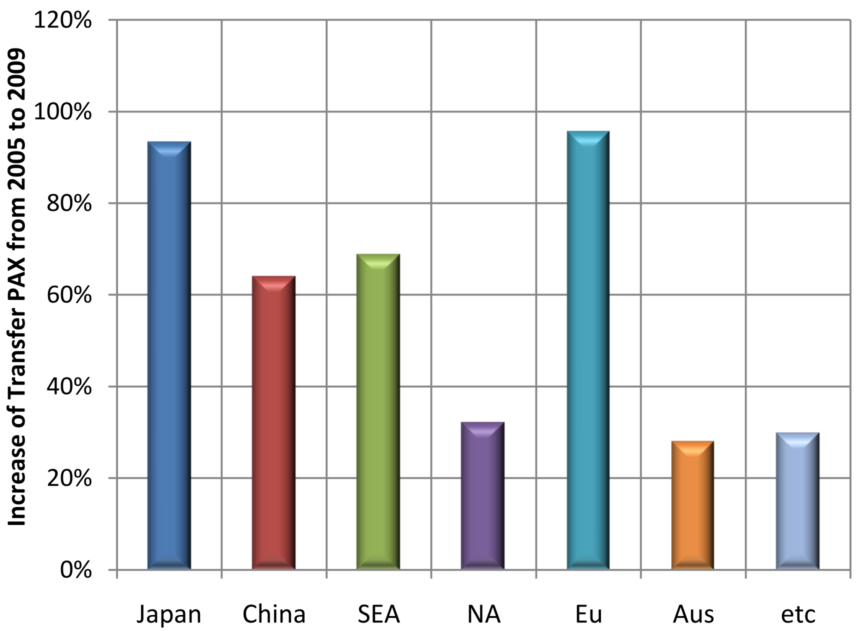


Hubbing : Transfer PAXs by Region at ICN

- ICN has a **geological advantage between North America (NA) and South East Asia (SEA)** in terms of transfer and as a result it has many transfer passenger from/ to NA
- The routes of **Japan, Europe and China** are conspicuous in the aspects of **the growth of transfer passengers**.

  - Recently increased **small body planes** are good contributorㄴ to attract many transfer passengers in **transfer routes between Japan and China**

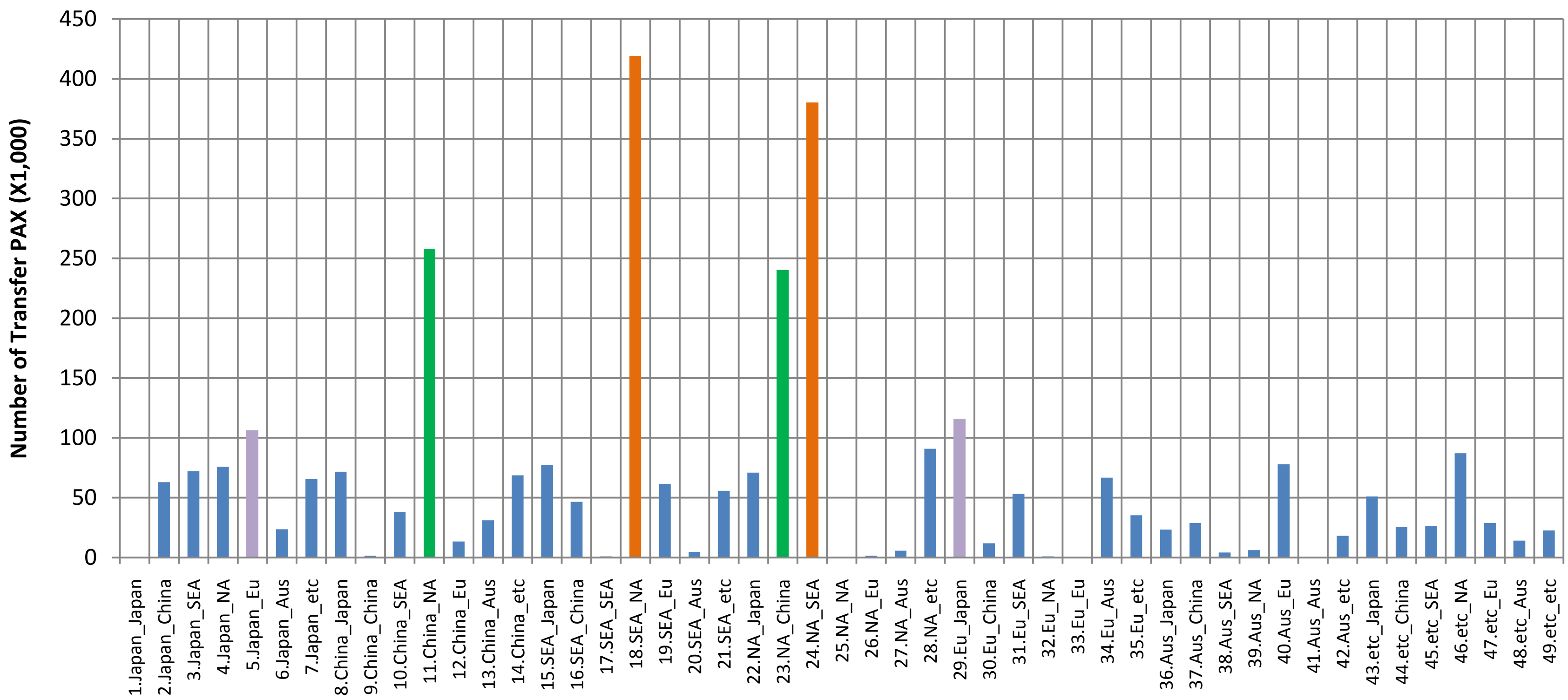




Hubbing : Transfer PAXs by transfer route

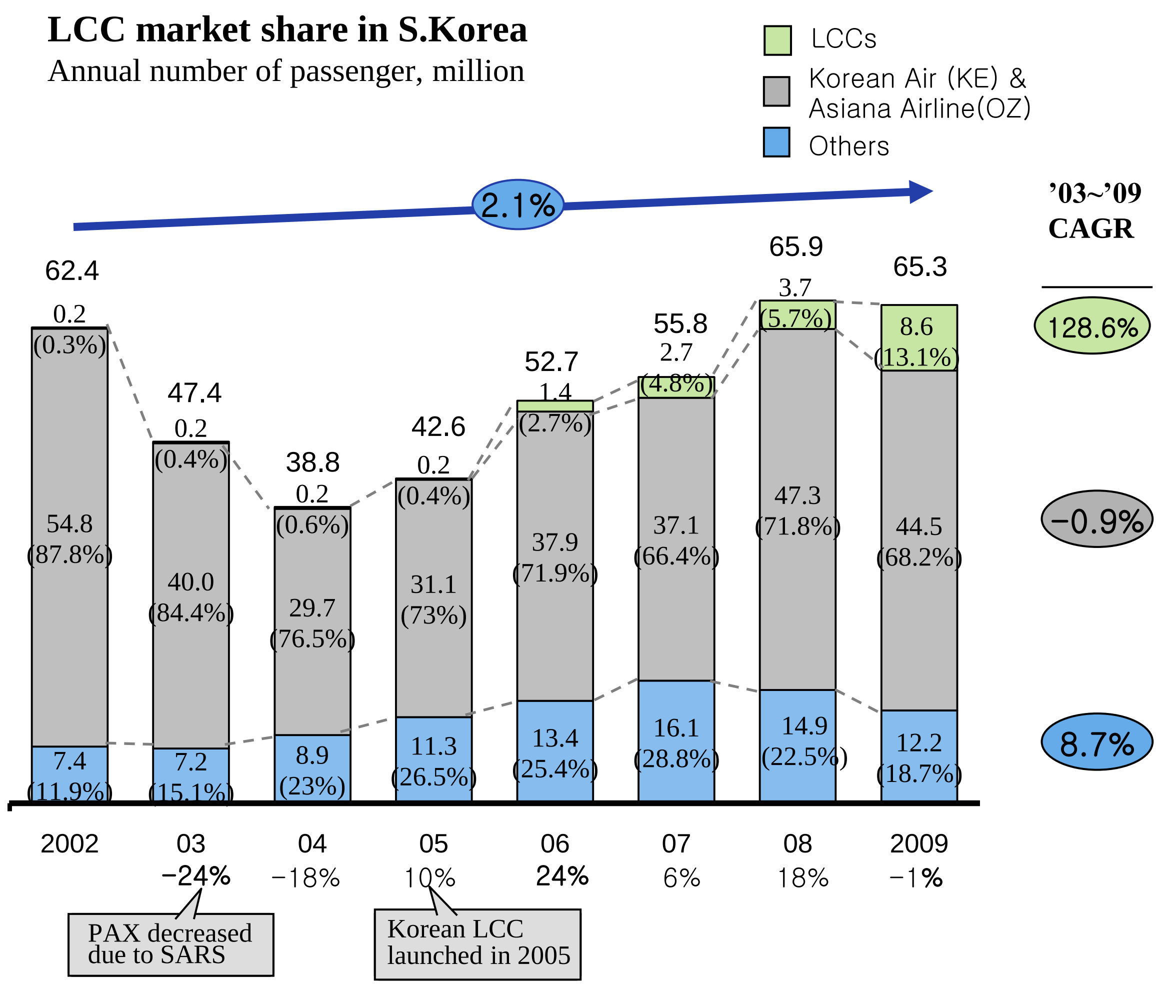
- Transfer PAX at ICN in 2009

  - **Strong competitiveness between NA and SEA (or China)** has been constructed thanks to geological advantage and home carriers' operation.
  - FSCs comparatively have pursued to enhance the coverage to all over the world which **weakens the market power in close markets.**



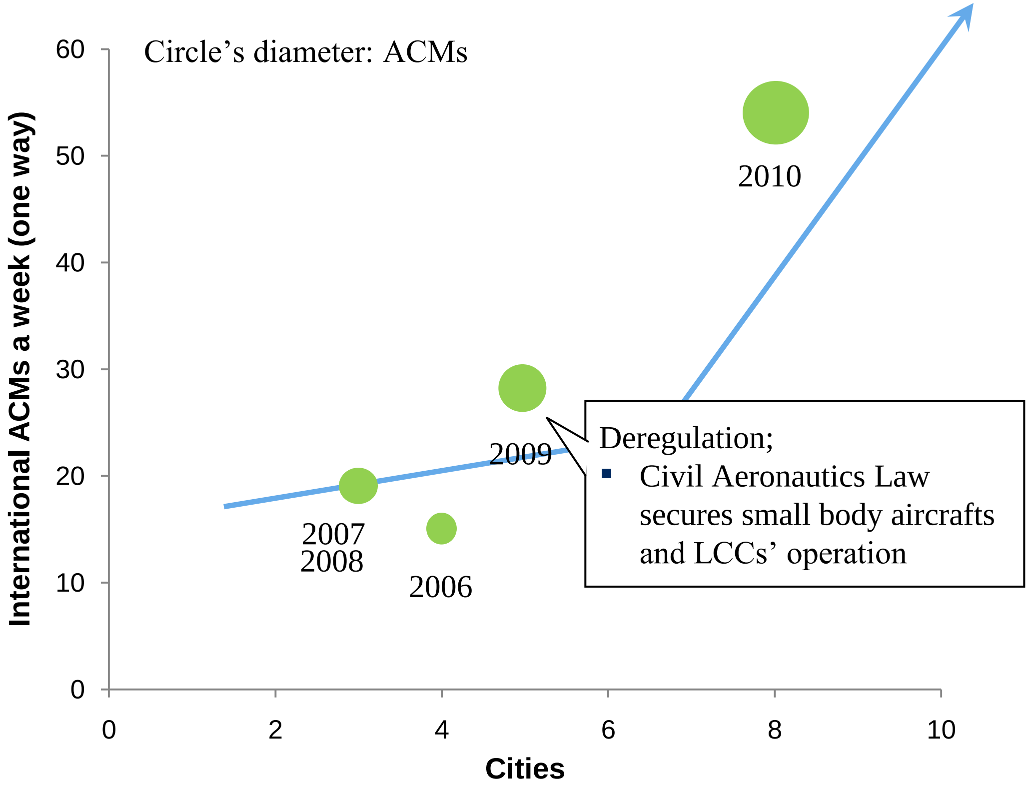
Development of LCCs at ICN

North East Asia



Development of LCCs at ICN

- Thanks to **the revision of Civil Aeronautics Law** in which no conditions for the operation of international routes are required, **LCCs could start their new international routes from 2009**.



[LCCs' operation in 2008]

Airline	Code	Airport	City	ACMs
Cebu Pacific	5J	CEB	CEBU	7
Citilink	GA	DPS	DENPASAR	5
Cebu Pacific	5J	MNL	MANILA	7

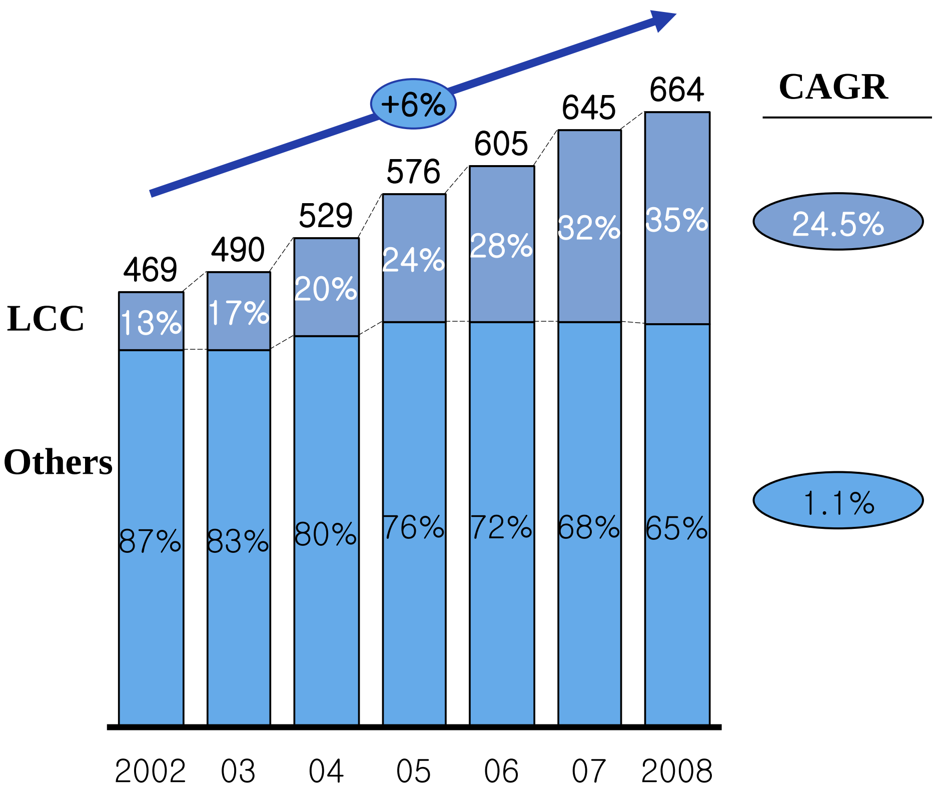
[LCCs' operation in 2010]

Airline	Code	Airport	City	ACMs
Jin Air	LJ	BKK	BANGKOK	7
Cebu Pacific	5J	CEB	CEBU	7
Citilink	GA	CGK	JAKARTA	5
Citilink	GA	DPS	DENPASAR	4
Jin Air	LJ	GUM	GUAM AGANA	7
Cebu Pacific	5J	MNL	MANILA	7
Jeju Air	7C	KIX	KANSAI	7
Jeju Air	7C	BKK	BANGKOK	7
Jeju Air	7C	KKJ	KITA	3

Development of LCCs (Examples)

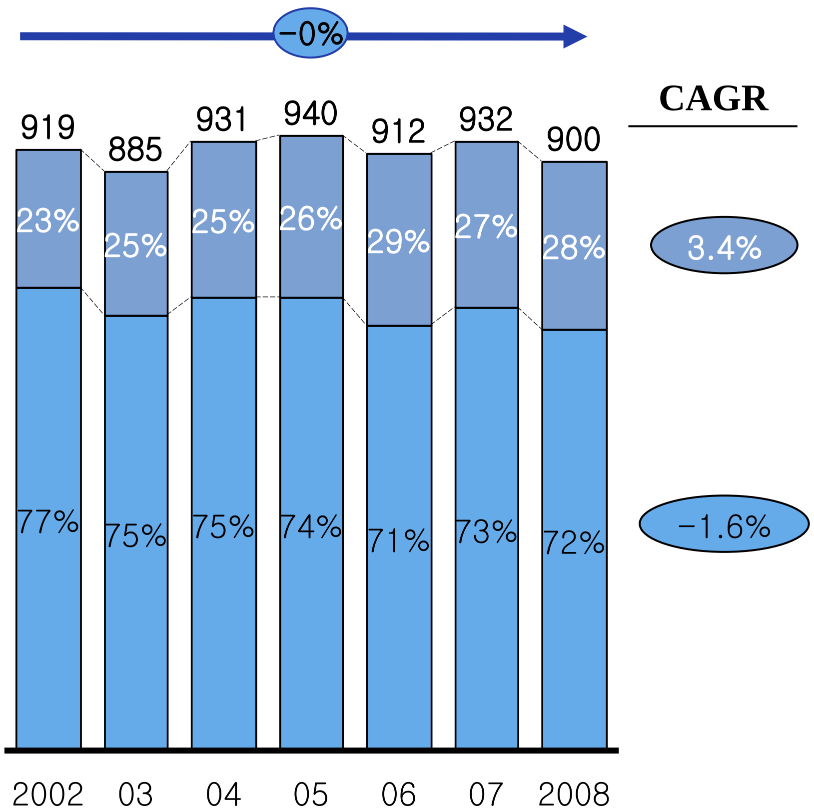
- **Europe and United States**

LCC market share in Europe
Available seats per week, million



Unit : Available seats, mn.

LCC market share in the United States
Available seats per week, million



Strategy for Growth

- ICN needs the **Integrative Strategy** not only to **pursue the best hub airport** in the North East Area but also to **boost potential demands by LCCs**

Strength

- Strong Home Carriers
- Geological Advantage
- **Open Sky Agreements**
- **Deregulated Environment**

Weakness

- **Insufficient ACMs in short and medium hauls**
- Insufficient O&D demand
- A Slowdown in Economic Growth
- **Insufficient N/W**

Opportunity

- Relative **Flexibility** among Countries in NEA
- **Plentiful Air Traffic Demands in Catchment**
- Growth of Chinese Economy
- Decentralized N/W of Japan
- **Many LCCs** (Candidates)

Threat

- Huge Investment to Chinese Airports
- **International ACMs of Kimpo airport**
- New Foreign LCCs

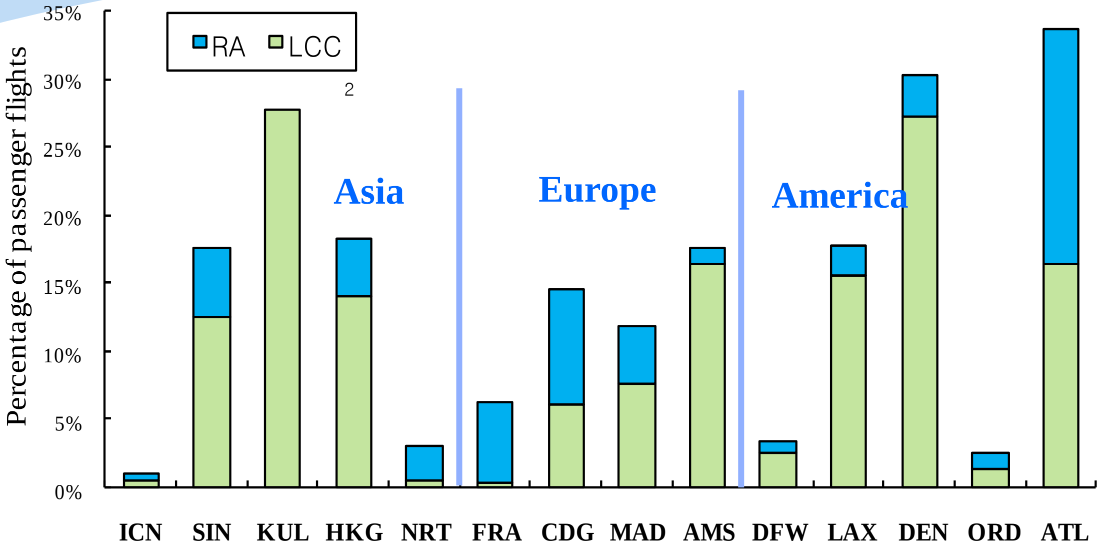
Plentiful Demands

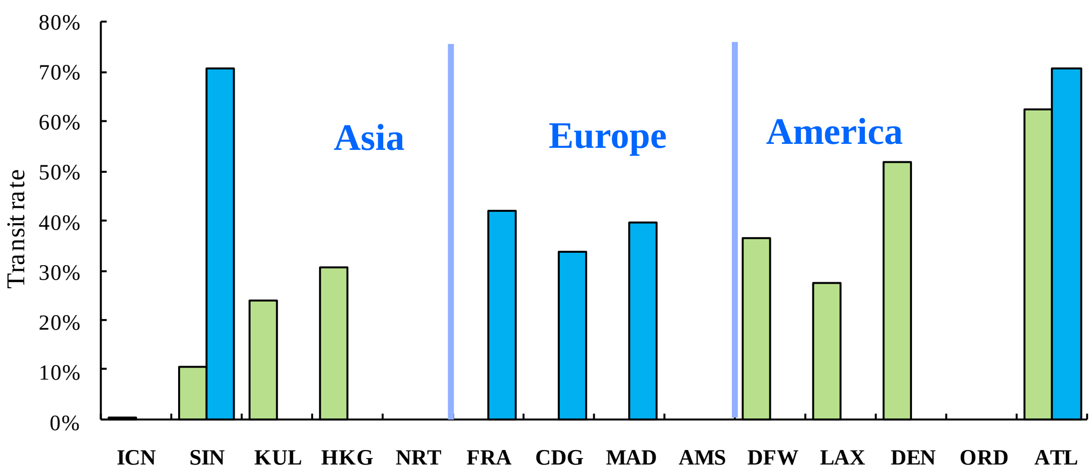
Open Sky / Deregulation

Insufficient N/W

Kimpo Airport

Strategy for Growth ; Options





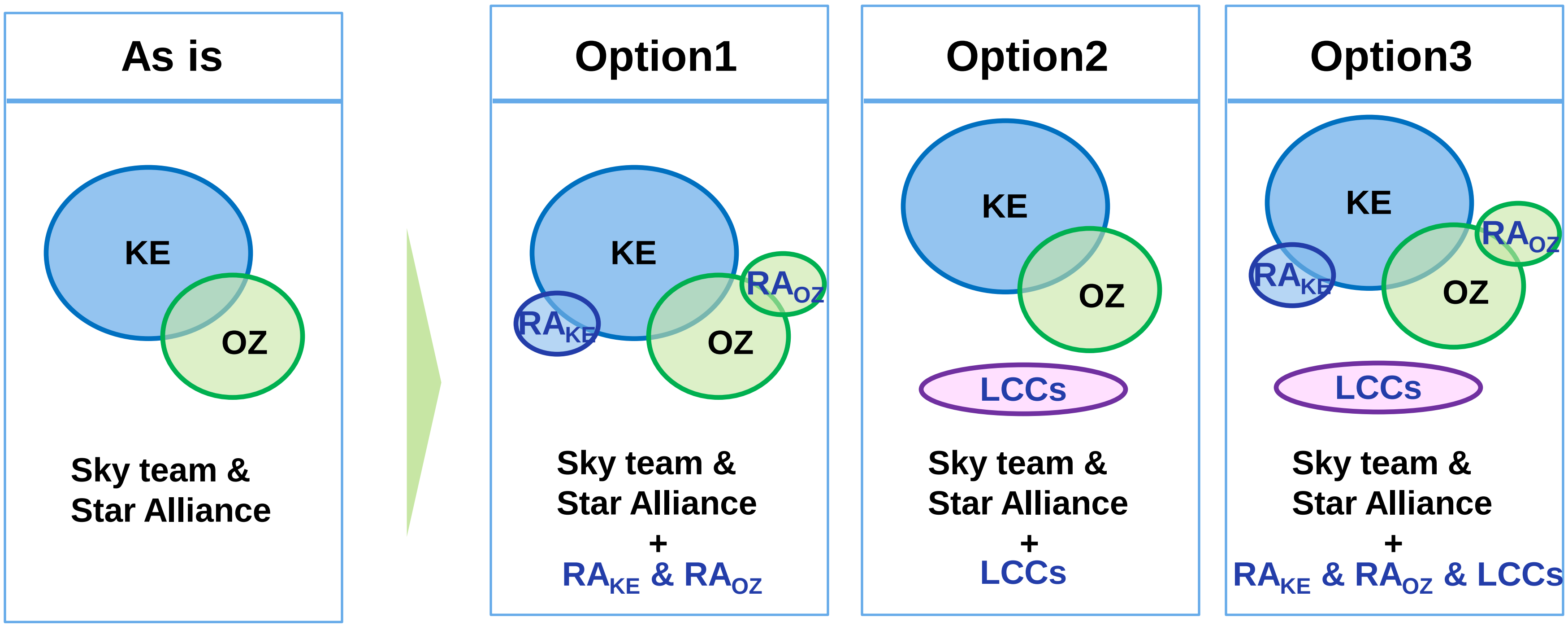
- Hub airports in America leverage LCC independent networks, attracts transfer passengers and reaches a 30% level of passenger flights
  (ATL leverages both RA and LCC)
- Hub airports in Europe are characterized by a cooperative system between RA and FSC with RA transfer rates reaching 30~40% levels
- In Asia, SIN attracts transfer passengers through RA, KUL uses LCC independent networks and HKG uses cooperation between LCC networks and FSC to attract transfer traffic
- Incheon will have to attract transfer passengers like ATL and HKG leveraging both LCC and RA at the same time

1) Regional Airlines: airlines operating mostly nearby distances

2) Based on data from Feb, 2007, major LCC/RA of airports are LCC/RA는 SIN(TR/MI), KUL(AK), HKG(KA), FRA(EW), CDG(YS), MAD(YW), DFW(SY), LAX(WN), DEN(F9), ATL(FL/EV)

Strategy for Growth ; Options

- **Challenges ; Optimum Network & Key Drivers**



Two big home carriers are good for hubbing?

Feeding/ Defeeding

More demand by LCCs

Feeding/ Defeeding & More demand by LCCs

Optimum Network Size for China & Japan Markets?

Good for hubbing but Potential demand by LCCs ?

Competitions among FSC & LCCs

Economic of Scale at one airport

Conclusions

- **Recent Development in North East Air Transport Markets**

- Air traffic **demands** in North East Asia (NEA) have been **recovered from 2008**
- S.Korea came to an agreement of partial Open Sky with China in 2006 and of full Open Sky Japan in 2007
- **S.Korea government initiated the deregulation** by revising the Civil Aeronautics Law; the abolition of any conditions to restrict market entry
- **LCCs in NEA are in the initiation stage of market growth curve**, but there is rapid growth in S.Korea (LCCs' market share 8.6%)

- **Network Evolvement in North East Air Transport Markets**

- **Networks in NEA** are expected to grow like Europe and to be **segmented to Hub, Regional Hub, and Spoke**
- **ICN gains a competitive edge in international ACMs** among Airports in NEA
- It is expected to increase more O&D demand rather than Transfer demand in 2010.

Conclusions

- **Impacts on ICN**

- **ICN** takes the **advantageous position** first with the policy of **deregulation & Open Sky**
- Main transfer origins (or destinations) of ICN are NA, SEA and China, and **the growth rates as transfer PAXs to (or from) Japan, China and SEA are conspicuous** thanks to the recent increase of short haul operations
- **ICN is currently competing with NRT**, but ICN is expected to have an edge through the dense concentration of network
- The **operations of LCCs** at ICN have been initiated from the middle of 2000s, and now it is forecasted **to explode from 2010**
- ICN needs to develop an **integrative strategy** not only to pursue a Hub airport but also to secure the potential growth by LCCs

Thank you

SangYong Lee (Shawn) Ph.D.
International Business 2 Group
Incheon International Airport Corp.
+82 10 4627 0242
mirtofly@paran.com