

International Symposium

Challenges and Opportunities of Port Logistics Industry in Korea

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Introduction

1. Introduction

- ❑ Port logistics industry integrates national economy into international economy
 - ◆ **The ocean provides low cost/massive transport means**
 - ◆ **About 8 billion ton(about 75% of total trade) of international freight was transported by sea in 2007**
- ❑ Korea is well positioned to take advantage of globalization, which is now the general trend
 - ◆ **Korea functions as a logistics hub in the region**
- ❑ New development strategy paradigm is required for Korean port logistics industry
 - ◆ **Growth rate of cargo traffic through Korean ports is slowing down**

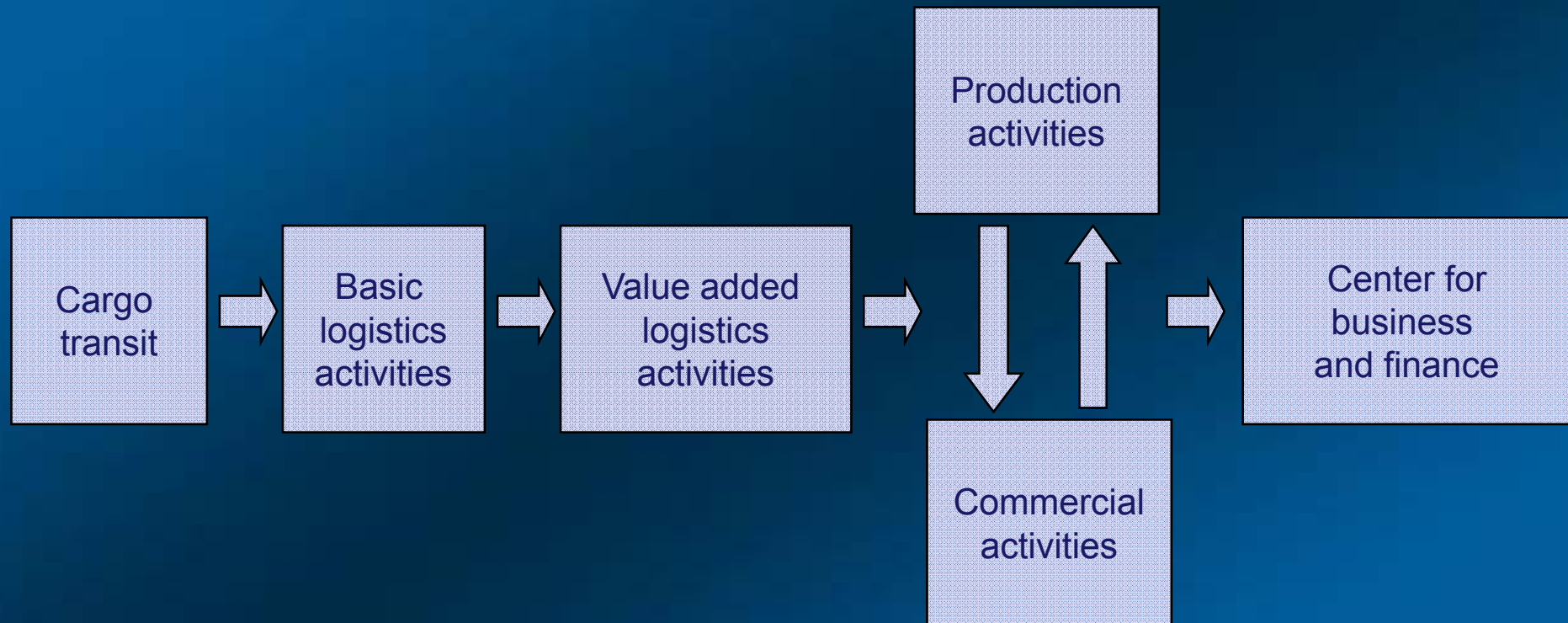


Major Changes of Port Logistics Industry

2. Major Changes of Port Logistics Industry

1) Structural Changes of Port Logistics Industry

Change of Functions of Ports

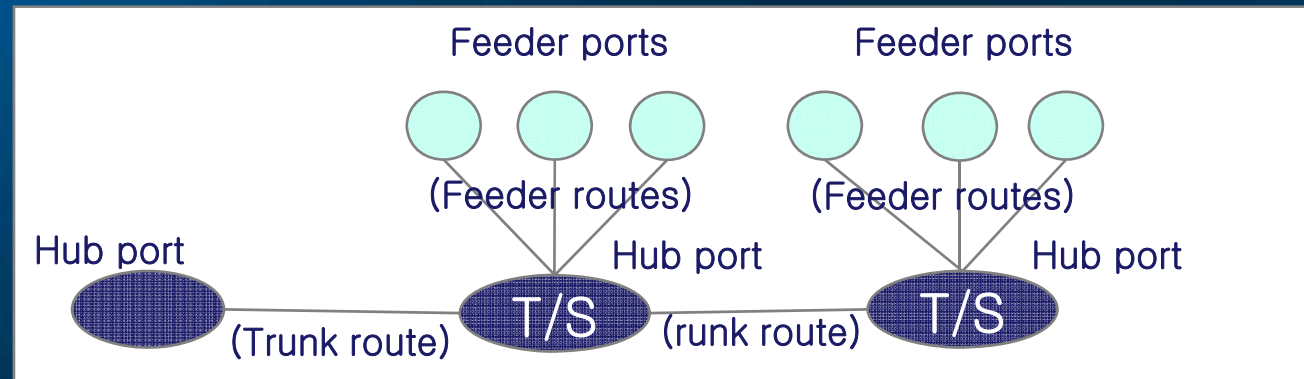


2. Major Changes of Port Logistics Industry

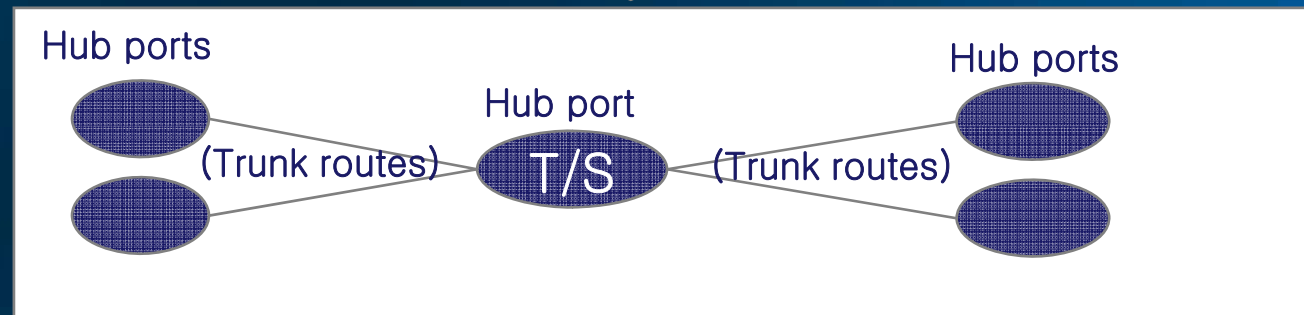
1) Structural Changes of Port Logistics Industry

Change of Transshipment Pattern

Scattering/
Feeder T/S



Interline T/S



2. Major Changes of Port Logistics Industry

2) Problems of Port Logistics Industry in Korea

Slowdown in Shipping Demand

❖ Unfavorable Economic Conditions

❑ Weakened growth momentum in Korean economy

- ◆ Annual growth rate fell to around 4% after foreign exchange crisis(1997)
 - ✓ Previously, it used to be more than 8 % on the whole

❑ Korea also needs to solve the current global economic crisis beginning early 2008

- ◆ Decrease in port logistics service demand

2. Major Changes of Port Logistics Industry

2) Problems of Port Logistics Industry in Korea

Slowdown in Shipping Demand

❖ Slowdown in cargo traffic through ports

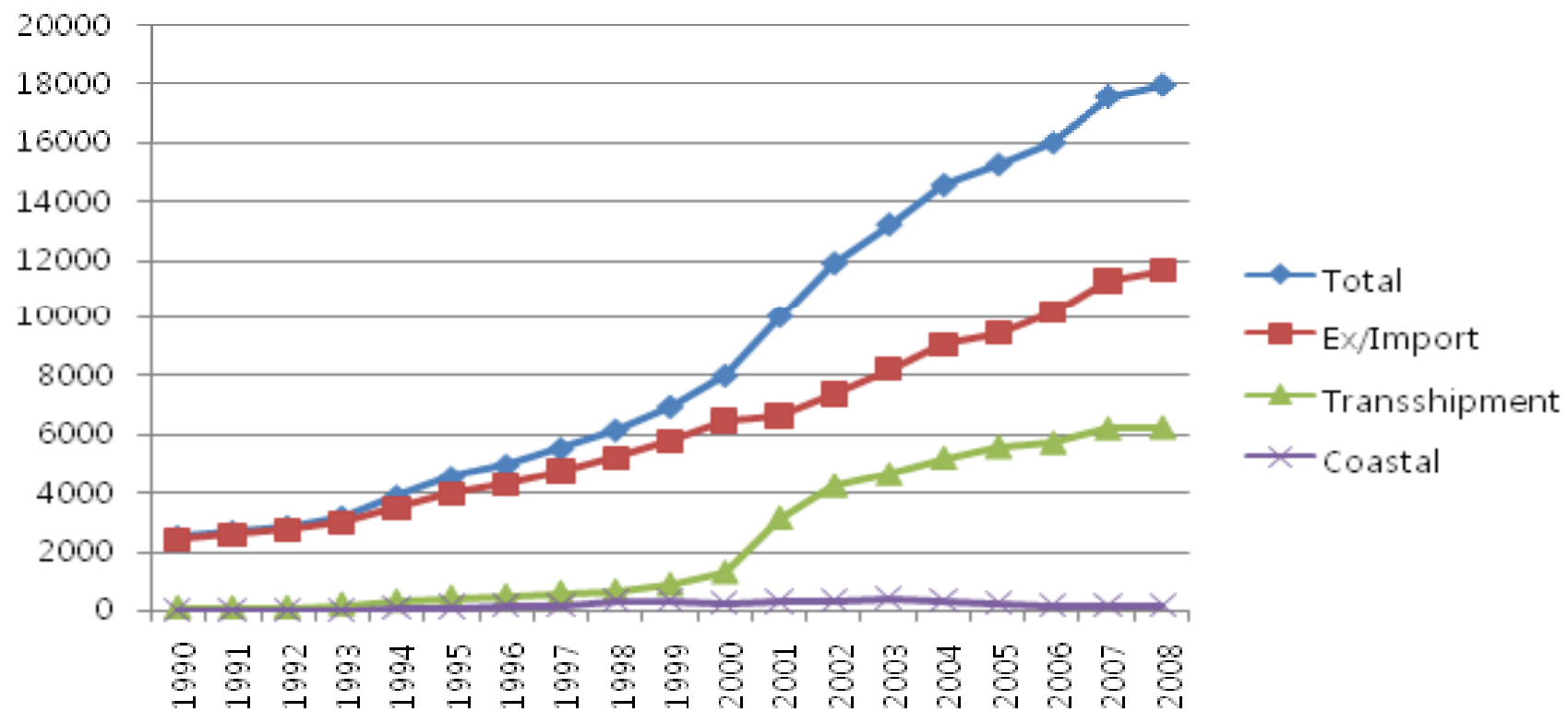
- ❑ Slowdown in container traffic through Korean ports
 - ◆ Annual growth rate of container traffic decreased drastically
 - ✓ 1990-2003 : 13.8%
 - ✓ 2003-2007 : 7.4%
 - ✓ 2008 : 2.2%
- ❑ Causes of slowdown in cargo traffic through ports in Korea
 - ◆ Rise in unit price due to development of technology
 - ◆ Slowdown in foreign trade due to change of industrial structure(rise in the portion of service industry)

2. Major Changes of Port Logistics Industry

2) Problems of Port Logistics Industry in Korea

Slowdown in Shipping Demand

❖ Trends of Container Traffic through Korean Ports



2. Major Changes of Port Logistics Industry

2) Problems of Port Logistics Industry in Korea

Failure of Port City Economies

- ❑ Per capita GRDP of major port cities dropped below national average
 - ◆ Per capita GRDP of Busan and Incheon were 14.52 and 16.85 million Won respectively in 2007
 - ✓ National average was 19.56 million Won
 - ✓ Busan and Incheon ranked 13th and 9th among 16 provinces and metropolitan cities of Korea
- ❑ However, supportive and facilitative function of ports to regional economies is beyond question
 - ◆ Plenty of studies prove positive reciprocal relationships between ports and regional economies

2. Major Changes of Port Logistics Industry

2) Problems of Port Logistics Industry in Korea

Failure of Port City Economies : continued

- ❑ Causes of poor economic performances of port cities in Korea
 - ◆ Hinterland which a port covers has been extended
 - Especially, containerization extended the range of hinterland of a port
 - ◆ Port cities failed to correspond to structural change of national economy
 - Port cities lost competitive advantage in traditional labor intensive light industries
 - Failed to induce newly emerging high technology capital intensive industries

2. Major Changes of Port Logistics Industry

Intensified Competition(Change of Port Market Structure)

❖ World Port Market Structure

- ❑ Hirshman-Herfindahl Index(HHI) of world port market decreased from 0.021 to 0.018 during last 27 years
 - ◆ Intensity of world port market concentration has been slightly eased

<Trend of HHI of World Port Market>

	1980	2000	2005	2007
HHI	0.0214	0.0220	0.0189	0.0184

2. Major Changes of Port Logistics Industry

2) Problems of Port Logistics Industry in Korea

Intensified Competition(Change of Port Market Structure) : continued

- ❑ General guidelines of market concentration based on HHI
 - ◆ $HHI \leq 0.1$: unconcentrated
 - ◆ $0.1 < HHI < 0.18$: moderately concentrated
 - ◆ $HHI \geq 0.18$: highly concentrated
- ❑ Above guidelines cannot be applied to port market because competition among ports is limited in a certain region
 - ◆ Competition in port markets is relatively weak though the value of port market HHI indicates otherwise

2. Major Changes of Port Logistics Industry

2) Problems of Port Logistics Industry in Korea

Intensified Competition(Change of Port Market Structure) : continued

❖ Domestic Port Market Structure

- ❑ HHI of domestic port market decreased from 0.908 to 0.448 during last 18 years
 - ◆ Intensity of domestic port market concentration has been considerably eased
 - ◆ Still, Korean port market is deemed highly concentrated

<Trend of HHI of Port Market in Korea>

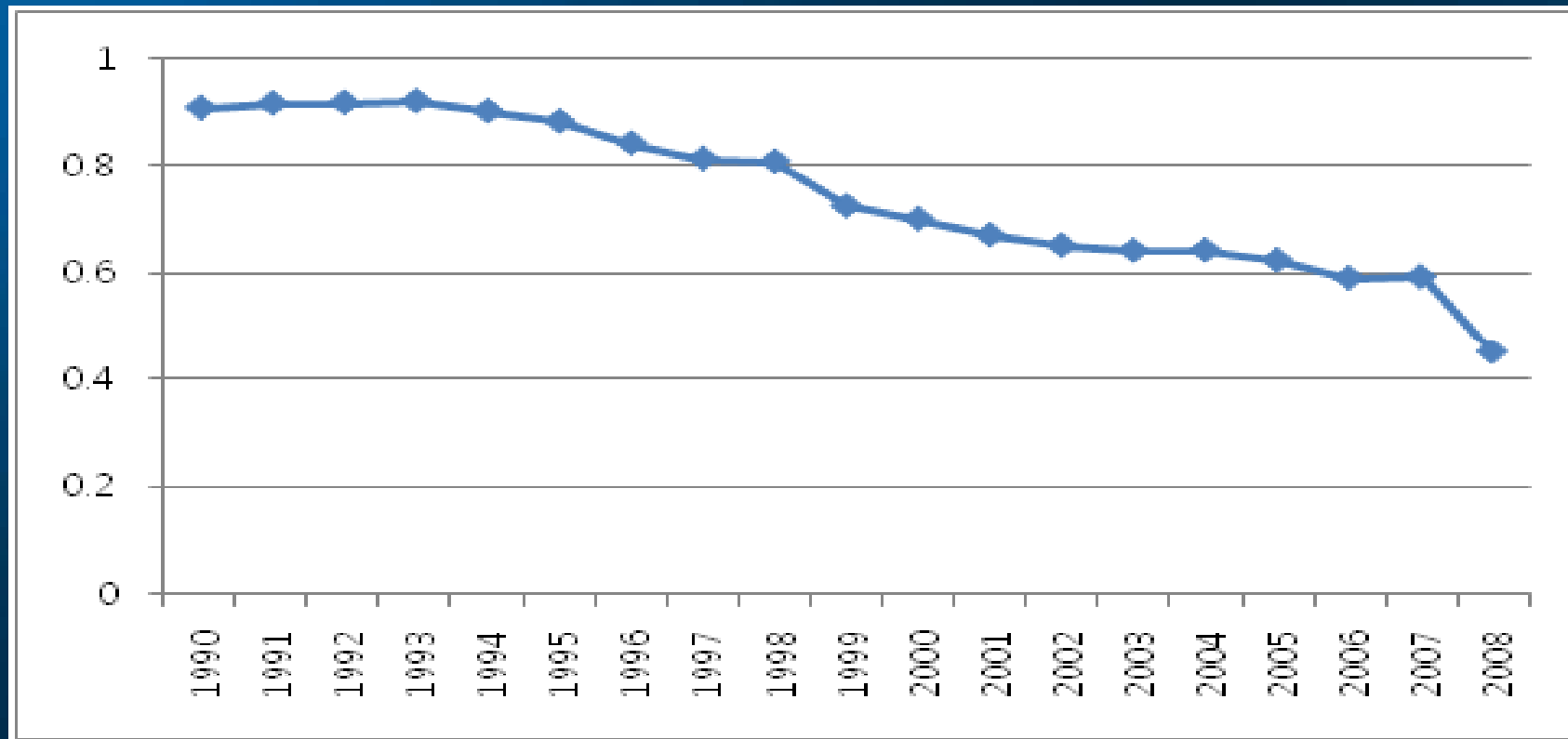
	1990	1995	2000	2005	2006	2007	2008
HHI	0.908	0.881	0.700	0.623	0.590	0.591	0.448

2. Major Changes of Port Logistics Industry

2) Problems of Port Logistics Industry in Korea

Intensified Competition(Change of Port Market Structure) : continued

<Trend of HHI of Port Market in Korea>



2. Major Changes of Port Logistics Industry

2) Problems of Port Logistics Industry in Korea

Underdeveloped Value Added Logistics Activities

- ❑ There used to be no logistics center(distributary park) near Korean ports
 - ◆ Port function was limited to traditional logistics activities such as stevedoring, storing, transshipment etc.
- ❑ Insufficient development of knowledge/technology based port logistics activities
 - ◆ Insufficient supply of qualified specialists in port logistics business

2. Major Changes of Port Logistics Industry

3) Potentials of Port Logistics Industry in Korea

Ideally Located in the Middle of Northeast Asia

- ❑ Korea is well positioned to lead the port logistics industry in Northeast Asia
 - ◆ Located in the center of Northeast Asia and functions as logistics hub in the region
 - ✓ In 2008 T/S at Korean ports was 6.2 million TEU, which accounted for 34.5% of total container traffic(17.9million TEU)
- ❑ Location is considered the most important factor that determines possibility of securing hub function in the region
(Flemming and Hayuth, 1994)

2. Major Changes of Port Logistics Industry

3) Potentials of Port Logistics Industry in Korea

Foreign Market Oriented National Economy - Basic Cargo is Secured

- ❑ The ratio of commodity trade to GDP was 84.1% in 2008
 - ◆ In 2007, about 99.6%(862.5 million ton) of ex/import cargo was transported by sea
 - ◆ Pot logistics industry plays an important role in national economy
- ❑ Container traffic in Korean ports ranked 6th in the world in 2007
 - ◆ 1st: China, 2nd: USA, 3RD: Singapore, 4th: Japan, 5th: Germany,

2. Major Changes of Port Logistics Industry

3) Potentials of Port Logistics Industry in Korea

Growth of Value Added Logistics Businesses

- ❑ Growth of value added activities are the general trend
 - ◆ Provide clients with customized products in a short lead time

<Value Added Logistics Activities>

Classification	Contents
Low end value added activities (little value added)	·labeling ·customizing ·adding of parts or manuals ·configuration ·decomposition
High end value added activities (Much value added)	·blending and mixing ·finishing and filling ·sterilization ·final assembly ·installation ·instruction ·repair ·reutilization/refurbishment
Back office activities	·managing of goods and information flows ·inventory control ·tracking of flows ·insurance, customs, taxes ·office rental ·call center function



Development Strategies of Port Logistics Industry in Korea

3. Development Strategies of Port Logistics Industry in Korea

1) Overview

Paradigm Changes of Port Development and Management

	Traditional strategies	New strategies
Definition of Market	Hinterland	Global logistics
Major customers	Shipping companies	-Multimodal transport companies -Logistics service providers
Transport network	Sea oriented	All transport modes
Port services	Labor intensive cargo handling	Value added logistics
Management type	-Service port -Natural monopoly, Public service provider	-Landlord port -Private company oriented, Global terminal operator
Management technique	Participation of port specialist	Participation of real estate/finance/ negotiation specialist
Marketing strategy	Passive customer management (advertisement, sales)	Positive customer management (long term contract)

Source ; Sletmo(1999)

3. Development Strategies of Port Logistics Industry in Korea

2) Selected Tasks to Develop Port Logistics Industry in Korea

Development of Value Added Logistics Activities

- ❑ Logistics center is to be developed and activated near port
 - ◆ Port can evolve into center of economic activities

<Supply Schedule of Logistics Center in Korea>

Unit : 1,000M²

	2011	2015	2020
Busan new port	4,650	6,703	7,890
Gwangyang port	3,878	3,878	5,465
Incheon port	4,143	5,147	6,665
Pyeongtaek/dangjin port	1,405	2,628	4,479
Ulsan port	456	456	456
Mokpo port	473	473	473
Pohang port	423	690	913
Masan port	331	331	331
Total	15,759	20,306	26,673

3. Development Strategies of Port Logistics Industry in Korea

2) Selected Tasks to Develop Port Logistics Industry in Korea

Restructuring Hinterland Economy

- ❑ Hinterland must be changed into high-tech industrial complex
 - ◆ Incentives including tax reduction, financial benefit and so on should be rendered to future oriented businesses

<Standard Business Models for Restructuring Industry Structure

Types	Projects
Restructuring business composition	Redevelopment of old factories, Transfer of business type, Business inducement, Network establishment, Business support service
Business support facilities	Construction of comprehensive business center/complex innovation center, Expansion/improvement of logistics facilities, Establishment of U-complex
Infrastructure	Improvement of road, Expansion of parking facilities, Operation of shuttle bus, Improvement of environment
Culture/welfare facilities	Provision of day care facilities, Construction of boarding houses, Creation of ecological park

3. Development Strategies of Port Logistics Industry in Korea

2) Selected Tasks to Develop Port Logistics Industry in Korea

Creation of Port Logistics Cluster

- ❑ Steps and measures to be taken to create port logistics cluster in a region

Constituents of the cluster must be determined



Connectivity among constituents of the cluster is to be defined and assessed



Relevant region for the cluster is to be determined



Optimum networks in the cluster are to be established among the constituents

3. Development Strategies of Port Logistics Industry in Korea

2) Selected Tasks to Develop Port Logistics Industry in Korea

Creation of Port Logistics Cluster : continued

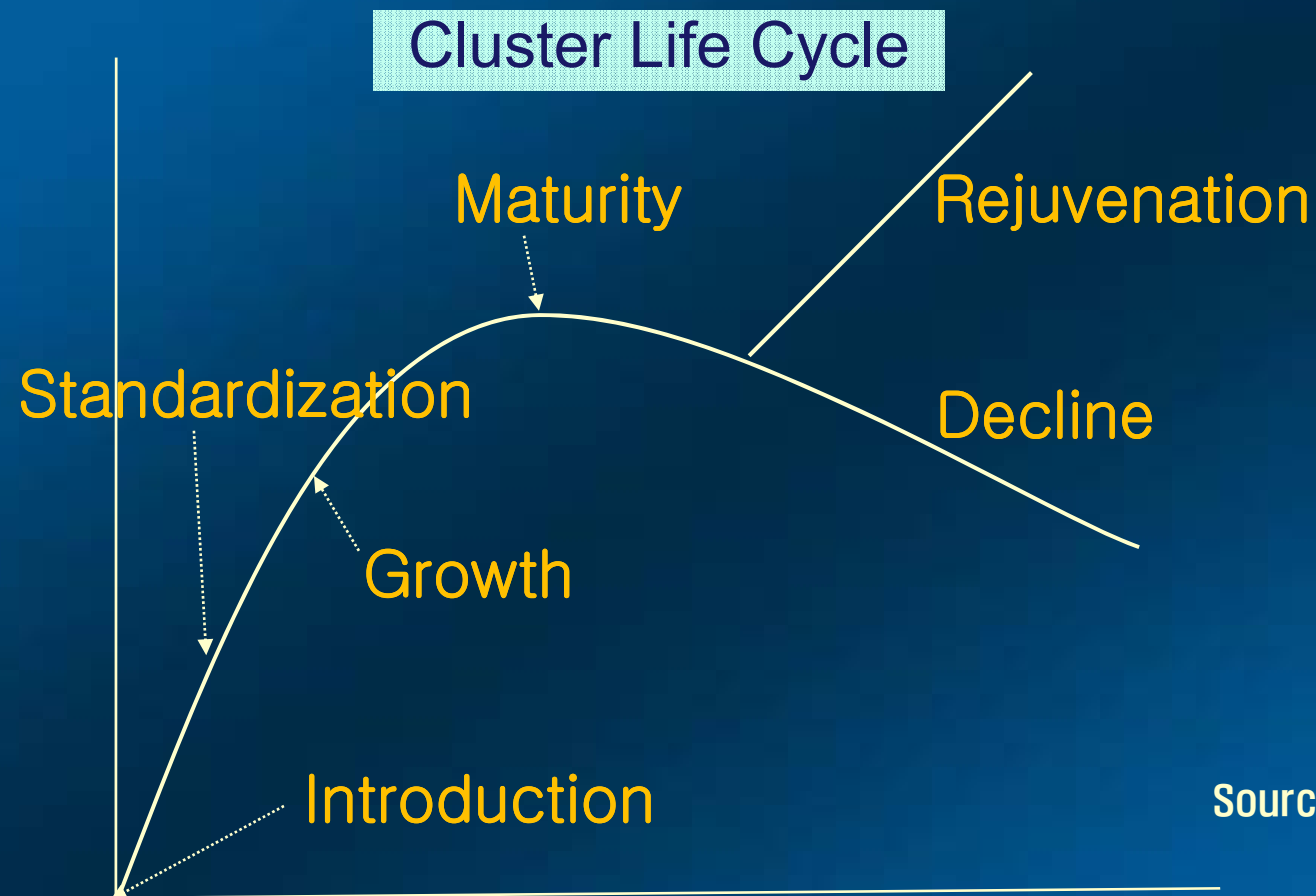
□ Role of government

- ◆ Central government : assist in securing port and logistics related infrastructure such as facilities, legal and institutional systems and so on as a grand designer
- ◆ Local government and port authority : coordinate members interests and take measures such as port marketing, tax and financial incentives and so on

3. Development Strategies of Port Logistics Industry in Korea

2) Selected Tasks to Develop Port Logistics Industry in Korea

Creation of Port Logistics Cluster : continued



Source: Adee Athiyaman(2008)



Concluding Remarks

4. Concluding Remarks

- ❑ Port logistics industry is extremely important for Korean economy
 - ◆ Port, as a node in supply chain, plays an important role in economic activities
 - ◆ Without reliable and low cost international transport means, Korean economy cannot be sustained and developed
- ❑ Korea has great potential to grow into a logistics hub in Northeast economies
 - ◆ Make the most of its strong points and overcome shortcomings

Thank You!
감사합니다!