

ECONOMIC EXCHANGES AND SECTORAL AND INTER-CITY COOPERATION IN NORTHEAST ASIA

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ABSTRACT: Northeast Asia with China, Japan and South Korea as the main components has drawn more and more attention worldwide. Many scholars have researched on the prospect of some alternatives of regional economic integration in Northeast Asia and/or Yellow Sea Rim as its core area. In this paper the authors start with an introduction of the major arguments embracing Yellow Sea Rim regionalism, and attempt to identify the dynamics challenging the proposed approaches of sub-regionalism of Northeast Asia. The paper firstly gives a brief review on the update development of bilateral economic exchanges, mainly Sino-Japanese and Sino-South Korean trades and direct investments with related contemporary issues. When the changing pattern of economic interactions is analyzed, special concerns are given to the possibility to realize the supposed potential of regional economic cooperation mainly based on economic complementarity among the related regions of China, North Korea, South Korea, and Japan. The authors then made their major efforts on putting forward possible approaches of multilateral cooperation of three countries in the near future, that is, deepened cooperation in selected sectors of industry and transportation and coordinated development among major cities. The authors stress that the development of sub-regional sectoral cooperation and the formation of interactive network of city-regions via social and economic interactions at local level are significant to the future regional integrated development in Northeast Asia.

KEY WORDS: Northeast Asia; economic exchange; cooperation

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Northeast Asia with China, Japan and South Korea as the main components has drawn more and more attention worldwide. The latter half of the 20th century has seen great changes taking place in this region in terms of geo-political pattern and economic performance. In view of the extremely rapid growth of national economy in and ever-increasing interdependence among the three countries, many scholars have researched on the prospect of some alternatives of regional economic integration in Northeast Asia and/or Yellow Sea Rim as its core area.

Among the arguments embracing Yellow Sea Rim regionalism, two voices sound loud. One argument advocates the functional sub-regional multilateral cooperation, assuming great potential of regional economic cooperation does exist due to economic complementarity among the related regions of China, North Korea, South Korea, and Japan. Rich opportunities for industrial cooperation, especially in the fields of traditional man-

ufacturing and natural resources related industries have been highly recommended(KIM, 1996; LI *et al.*, 1992; LI, 1999). Another argument emphasizes the practical development of sub-regional integration via social and economic interactions at local level. The local initiatives for regionalism have been recognized as particularly important in shaping the basic pattern of international interactions of the region. It is argued that the interactive network of city-regions in Yellow Sea Rim provides the opportunity of creating a virtual region (MCGEE *et al.*, 1999). However, both of these arguments are facing challenges by update development realities.

This paper attempts to identify the major dynamics challenging the two aforementioned approaches of sub-regionalism of Northeast Asia. It firstly gives a brief review on the update development of bilateral economic exchanges, mainly Sino-Japanese and Sino-South Korean trades and direct investments with related contem-

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porary issues, then puts forward possible approaches of multilateral cooperation of three countries in the near future, that is, deepened cooperation in selected sectors of industry and transportation and coordinated development among major cities.

1 THE DYNAMIC PATTERN OF ECONOMIC EXCHANGES IN NORTHEAST ASIA

1.1 Historical Development of Bilateral Relationship Among Three Countries in Northeast Asia

It took three to four decades after the end of World War II and Korean War to realize finally the normalization of diplomatic relation and close economic linkage between China and Japan and between China and South Korea. In the Authors' opinion, the whole process could be divided into three phases:

(1) 1953 – 1972 Under the shadow of cold war, official communications in any fields almost didn't exist between China and its two east neighboring countries. While China and South Korea were busy at recovering from war damage and dealing with domestic trouble, Japan made full use of the favorable opportunity to create a miracle of rapid economic growth in the world. There were adequate trade between Japan and South Korea, but only a small amount of non-governmental exchanges between China and Japan in the 1950s – 1960s.

(2) 1972 – 1992 Japan developed its national economy so fast that it was earnest to enlarge market for its goods and capital. Therefore it, 6 years prior to the United States of America, established diplomatic relation with China and consequently Sino-Japanese trade increased from 1.1 billion US dollars in 1972 to 10.3 billion in 1981. After signing a trade agreement with China in 1978, the bilateral trade further increased to 25.4 billion US dollars in 1992. In the meantime, a lot of direct investments entered into China. South Korea, implementing an ambitious development strategy in the 1970s – 1980s and benefiting from trade and economic cooperation with the USA and Japan, made remarkable achievements in its export-oriented economy, thus becoming one of the four dragons in East Asia. However, Sino-South Korean relationship didn't have any fundamental change, though there did appear some symbol of mitigation and small amount of indirect trade.

(3) 1992 – now The establishment of Sino-South Korean diplomatic relation in 1992 represents a strong impetus to develop the bilateral trade and economic cooperation. The growth rate was incredibly high that it

took only 7 years to increase the annual trade value from 1.9 billion US dollars (1990) to 24 billion (1997), compared with nearly 20 years for Japan's case. South Korean direct investments also squeezed into China. For Japan, 1993 – 1995 has seen the dramatic growth of trade with direct investments in China, with the trade value amounting to 56 billion US dollars (1995), making Japan the first trade partner of China since 1993. Japanese direct investments reached a considerable amount in the first half of the 1990s, only next to Hong Kong.

In short, by the end of the 1990s, a relatively complete network of bilateral economic exchanges have been formed in Northeast Asia, though there exist several challenging problems at present and in the coming decade.

1.2 Bilateral Trade in Northeast Asia: Basic Features and Relating Problems

1.2.1 Deepening of interdependence in trade within East Asia

Looking at a broader range of East Asia, most countries have increased their dependency on East Asian trade partners in the 1990s (Table 1). From early to mid-1990s, Japan increased as high as 1/3 the trade with East Asian countries. South Korea also decreased dependency on the USA while increased the share of trade with China and ASEAN countries. China's high trade dependency on East Asia dropped a little.

With regard to Northeast Asia, it can be seen from Table 1, 2 and 3 that three countries all regard each other as top trade partners, with annual trade value exceeding US\$ 30 billion for every bilateral trade. For China and South Korea respectively, the aggregate value of trade with other two partners account for 1/4 of its total foreign trade in recent years. For Japan, the share of China and South Korea in its foreign trade is smaller, but still making up 15% or so.

1.2.2 Serious imbalance of trade

There exist rather large deficit in Sino-South Korean and South Korea-Japanese trade. For the former, the deficit in 2000 reached US\$ 11.97 billion (5.65 billion according to South Korea statistics). The reason comes from the difference of commodity structure between import and export. The major imported commodities from South Korea are highly value-added such as electronics, set of equipment and chemical products, while China mainly export electronic components, general machinery and metal products as well as agricultural produce.

Table 1 Changing pattern of trade dependency among East Asian countries (regions) in the 1990s

Dependency		USA	E. Asia	Japan	Hong Kong	S. Korea	China's mainland	ASEAN-5
Japan	Early 1990s	28.87	23.43	...	2.95	5.92	3.95	10.61
	Middle 1990s	25.92	32.75	...	3.90	5.96	7.54	15.35
Hong Kong	Early 1990s	16.40	48.36	1.46	...	3.60	26.21	7.09
	Middle 1990s	14.51	56.99	10.46	...	3.45	34.94	9.11
South Korea	Early 1990s	28.90	34.09	24.26	3.35	...	*	6.48
	Middle 1990s	20.62	39.42	18.38	4.40	...	6.52	10.12
China	Early 1990s	10.31	55.14	16.51	31.91	0.95	...	5.77
	Middle 1990s	14.75	48.56	20.49	15.74	6.03	...	6.30
Singapore	Early 1990s	19.30	43.90	15.16	4.54	2.51	2.98	18.71
	Middle 1990s	17.01	50.17	14.18	5.93	3.35	2.81	23.90
Malaysia	Early 1990s	17.40	51.18	19.84	2.66	3.76	2.21	22.71
	Middle 1990s	18.03	52.16	19.61	3.75	3.59	2.53	23.68
Thailand	Early 1990s	3.58	45.64	26.45	2.56	2.38	2.75	11.50
	Middle 1990s	15.73	46.80	23.00	3.17	2.60	2.90	15.13
Philippines	Early 1990s	26.97	36.58	19.15	4.37	3.32	1.56	8.18
	Middle 1990s	25.34	42.62	20.30	4.62	4.00	1.79	11.90
Indonesia	Early 1990s	13.92	52.30	34.57	1.88	4.29	2.99	9.57
	Middle 1990s	12.90	49.06	24.54	2.15	6.31	3.82	12.24

Source: CHEN Song-chuan, 2001. * Negligible.

Table 2 Recent pattern of foreign trade between China and South Korea/Japan

	South Korea (US\$ million)			Japan (US\$ million)		
	Total	Export	Import	Total	Export	Import
1985	—	—	—	21144	6109	15035
1990	1943	1259	684	16599	9011	7588
1992	5028	2405	2623	25361	11679	13682
1994	11720	4402	7318	47894	21573	26321
1996	19981	7499	12482	60067	30886	29181
1998	21265	6251	15014	57935	29660	28275
2000	34500	11292	23207	83164	41654	41509
	Share of South Korea(%)			Share of Japan(%)		
	Total	Export	Import	Total	Export	Import
1990	1.7	2.0	1.3	14.4	14.5	14.2
1992	3.0	2.8	3.2	15.3	13.8	17.0
1994	5.0	3.6	6.3	20.2	17.8	22.8
1996	6.9	5.0	9.0	20.7	20.4	21.0
1998	6.6	3.4	10.7	17.9	16.1	20.2
2000	7.3	4.5	10.3	17.5	16.7	18.4

Source: China Statistica Yearbook 1986 – 2001.

The Sino-Japanese trade is somewhat different from Sino-South Korean trade in terms of commodity structure, and the former has been mostly balanced for the 1990s. Perhaps the main points includes: 1) Japan has a larger domestic market for agricultural produce and consumer goods; 2) since 1991, in China's export to Japan the proportion of primary products and manufactured goods have become about half to half. In the latter half of the 1990s China's export of machinery to Japan further increased and that of raw materials and fuel continuously declined; 3) more and more Japanese MNCs have established production bases in China and a

Table 3 South Korean trade flow with Japan in 1980s – 1990s(US\$ million)

Year	Export	Import
1980	3.039	5.858
1985	4.546	7.557
1990	12.638	18.574
1995	17.088	32.597
1996	16.002	31.396
1997	14.771	27.907
1998	12.238	16.840
1999	15.862	24.142
2000	20.466	31.828

Source: International Monetary Foundation, Direction of Trade Statistics, each edition for 1980 – 1998 period and Korean Trade and Industrial Statistics for 1999 and 2000.

large part of their final products return to Japanese market. This illustrates that the division of labor in industrial structure between China and Japan has changed to some contents toward a mixture of vertical and horizontal division, while differently from this case, Sino-South Korean trade structure still reveals a relatively unitary characteristics.

1. 2. 3 Emerging trade frictions

In recent years some trade frictions occurred in bilateral trade in Northeast Asia. For example, in early 2001 Japan posed restriction for the import of three kinds of agricultural produce from China and then China charged extra custom tariff for Japan-made car from June 2001 as a reprisal. This may be a signal that from now on Sino-Japanese trade has entered new period of co-existence of cooperation and friction. Of course occurrence of disputes and frictions, sometimes very serious and lasting for several years, are unavoidable in the

world, like those between Japan and the USA. In Northeast Asia, mutual benefits are much more than contradictions in terms of trade and other aspects of economic exchanges. With the over-all implementation of WTO rules and China's entry to WTO, along with China's sustainable economic development in the coming decade, both Sino-South Korean and Sino-Japanese trade will further go up and tend to be balanced.

1.3 Foreign Direct Investments in China: the Turbulence and Diversification

1.3.1 Dynamics and spatial feature

Until the end of the 1970s Hong Kong was almost the sole important source of overseas investments in China's mainland. Since the early 1980s Japan grasped the opportunity provided by China's open-door policies to become the second largest FDI source country (region), next to Hong Kong. With the improvement of investment environment in China's coastal areas, the USA and European countries were more and more interested in investing there. The USA soon approached the scale of Japanese direct investments annually after 1993. South Korea, though coming later than others, made paramount achievements for investing in some areas of China.

Influenced by geographical, historical and cultural factors, both Japanese and South Korean investors have a preference to invest in the northern China. Since the mid-1990s they have represented a considerably large share of the total FDI in Bohai Sea Rim. Taking provinces of Liaoning and Shandong as example, Table 4 shows that Japan has been the second largest source of FDI in Liaoning and South Korea the second in Shandong since the mid-1990s, both only next to Hong Kong. The most important factor for this contrast is the geographical proximity of South Korea to Shandong and historical close linkage between Japan and Liaoning.

It is particularly true for small enterprises to be set up preferably in northern coastal cities just because they largely want to minimize the production costs by cheaper labor force, lower land price and shorter distance for transportation of raw materials and final products. In this case, Bohai Sea Rim meets the demand very well. According to the results of a survey on South Korean-invested enterprises in Shandong Peninsula conducted in 1997 and 1998, about half (48.2%) of the surveyed enterprises take cost reduction as the major location motivation and most of them were satisfied with the local investment environment.

For large enterprises, wider range of consideration

Table 4 Changes of the source of FDI actually used in China and two provinces

Investors	China	Shandong	Liaoning
Amount in 1992 (US\$ million)	11007	973	439
Share of HK (%)	68.2	64.0	23.9
Share of Japan (%)	6.4	6.7	46.7
Share of South Korea (%)	1.1	6.2	4.8
Share of USA (%)	4.6	7.4	5.0
Amount in 1996 (US\$ million)	41745	2590	1671
Share of HK (%)	49.5	35.7	28.3
Share of Japan (%)	7.4	11.0	24.3
Share of South Korea (%)	3.2	18.7	9.2
Share of USA (%)	12.1	10.7	7.2
Amount in 2000 (US\$ million)	40714	2971	2552
Share of HK (%)	38.0	23.2	26.0
Share of Japan (%)	7.2	11.2	17.6
Share of South Korea (%)	3.7	19.1	10.3
Share of USA (%)	10.8	10.3	18.4

Source: Statistic Yearbook of China, Shandong, Liaoning of relevant years.

is imperative for their location decision. However, Japanese and South Korean corporations are still have a preference in the northern cities of coastal China. The example of MEI(National) and Samsung can illustrate it. Among MEI's 43 enterprises established in China, 7 in Beijing, 6 in Shanghai and several in other large cities like Hangzhou, Guangzhou, etc. respectively. Samsung has set up 19 manufacturing enterprises in China in 8 years, mainly in Tianjin(9), Suzhou(2) and other medium cities.

1.3.2 FDI turbulence related with Asian financial crisis

FDI into China has revealed a vigorous trend since the early 1990s, including those from Japan and South Korea.

Till 1996, China has become the first orientation of South Korean investment abroad, while Japan has invested in China at large scale since the late 1980s. The Asian financial crisis initiated in 1997 affected heavily on the scale and structure of FDI from Japan and South Korea. It caused a lot of environmental changes to South Korean and Japanese investment in China, which are the decreased ability for investors to motivate capital, the relatively higher price of raw materials and labors from home country and the dramatic decline of East Asian market.

A continuous decline of total FDI from South Korea in four years since 1997 has been recorded, with the lowest point (US\$ 1.04 billion) happened in 1999. Moreover, since 1998 South Korean investment into China has been partly retreated. The amount increased to US\$ 112.5 million in the first 5 months of the year 2001, compared to the US\$ 163.3 million newly added investment in China in the same period.

Clearly, the turbulence of FDI challenges sustainable regional development. According to the case study undertaken in Shandong Province, the most heavily affected types of South Korean-invested enterprises in China are identified as: 1) small-scaled enterprises with investment scale less than US\$ 1 million and single market; 2) enterprises with South Korea, Japan and Southeast Asia as major market; 3) enterprises with heavy dependence on parent companies in South Korea; and 4) enterprises still in inception period.

1. 3. 3 *Changing government attitude towards FDI*

The challenging problem facing FDI in China is how to adapt to China's investment-attraction policies such as encouraging more to high-tech industries, the transformation of traditional state-owned enterprises, as well as infrastructure in major construction areas. Meanwhile, China's governments of different levels are showing particular interest in attracting involvement of top large multi-national corporations(MNCs) worldwide in local development. So are the local governments of Bohai Sea Region(Table 5) . For instance, Tianjin government assumes large MNCs of Europe, North America, Japan and South Korea as ideal sources of FDI to be advantageous to long-term objective of development. Currently, the increase of technological level of South Korean investment projects into China has been highly concerned by Chinese central government as some structural problems in relation to the Sino-South Korea economic interactions have been manifested, such as the enlargement of bilateral trade deficit mentioned above.

With China's entering into WTO, increasing number of top 500 MNCs are making their appearance in the cities of Bohai Sea Region.

2 PROSPECT OF REGIONAL COOPERATION IN NORTHEAST ASIA

2. 1 A Broader Outlook

In order to deepen economic operation across the border in Northeast Asia, many scholars and officials have been considering some forms of regional economic integration, such as East Asia Mediterranean Free Trade Sphere, East Asia Free Trade Area, China-Japan-Korea Economic Cooperation Community, Yellow Sea Ecoomic Region, and, China's mainland-Hong Kong-Japan-Korea Free Trade Agreement etc. Besides, some cross-border projects such as Tumen Project have been operated.

From the practical development, more and more researchers have recognized that there is a rather long way to go to realize the proposed magnificent goals in Northeast Asia. The main lessons that we learned from experiences in the 1990s have been summarized as: 1) despite calls for regionalism, we must take into account deep-seated realities: 2) economics can not be separated from politics; 3) economic cooperation in the region must proceed in an incremental fashion with a great patience (KIM, 2000a). This argument is persuasive in view of the realities of geo-political and geo-economic circumstances.

Table 5 Current features of internationalization of Bohai Sea Region of China

City/region	Number of top world 500 firms entered	Features of investment projects
Beijing	158(by year 2000)	In 2000, 112 FDI projects with contracted investment above US\$ 10 million recorded, and about half of total approved FDI projects belong to IT industry
Tianjin	70	From 1996 – 2000, 398 FDI projects with investment above US\$ 5millionrecorded
Qingdao	22 into the western coastal urban area	In the first half year of 2001, Qingdao registered US\$ 25. 12 million of contracted FDI, of which 53. 4% is covered by projects with investment above US\$ 10 million. Hi-tech industries contributed to 39. 3% of total industrial output of western urban area
Dalian	54	In 2000, 74 FDI projects with contracted investment above US \$ 10 million recorded, of which 15. 5% belong to projects of IT industry

Unlike the case of EU and North American Free Trade Area(NAFTA) where economic integration has developed very well, three major countries of Northeast Asia are characterized by: fundamental difference on ideology and social system, wide gap on per capita GDP, low level of multilateral cooperation and complexity of external factors. Therefore, in the past ten years, despite the inspiring progress on bilateral trade and direct investments as well as exchanges in other

fields, no breakthrough has been made in the aspect of over-all regional cooperation in Northeast Asia as a whole. So far there isn't any institutionalized organization yet on economic cooperation operated by central governments. It is interesting that the state leaders and related ministers of China, Japan and South Korea are earnest to participate in the mechanism of ASEAN 10 + 3(10 countries of ASEAN plus China, South Korea and Japan), but have not established a separate three par-

ties meeting system until the end of 2000. This may prove that they have approached to a common understanding to push multilateral economic cooperation in near future.

From an over-all and long-term point of view, the scope of cooperation can be rather wide, covering not only economy, finance, environment, but also culture, science and technology. It is absolutely necessary and possible to form finally a well-designed and operated institution for multilateral cooperation, economic in particular. However, it seems that we had better to start from promoting cooperation targeted at several economic sectors and sub-regions such as Yellow Sea Rim, along with inter-city cooperation primarily concerned.

2. 2 Industrial Cooperation

2. 2. 1 *Manufacturing sectors*

As Japan and South Korea have been developed into industrialized countries and China is accelerating it's process of industrialization, manufacturing plays the most important role in domestic economy and foreign trade as well as in direct investments. Among various sectors, industries of textiles, household electric appliances and motor vehicles may be the better choice for negotiation on some sort of free trade agreements. The feasibility comes from following factors:

(1) Industries of textiles and household electric appliances are well developed in all three countries and account for a large share in foreign trade. Custom rate is very low in three countries and there will be no quota restriction in import soon. For the time being, competition is getting sharper among countries and enterprises. As the most important labor-intensive industries, a multilateral agreement on division of labor would benefit all parties and pose positive impacts on regional economy and employment.

(2) As for the car industry, Japan is the leading producer and exporter in the world. South Korea has also developed a strong system of car manufacturing. China, although having made some progress in this industry, is suffering from the small scale of 100-odd car factories, duplicate construction of production lines, high costs of production and shortage of capital for further development. Many MNCs have envisaged the great potential of China's domestic market and will invest in China for car manufacturing. On China's side, it is urgent to adopt a rational policy to cooperate with foreign corporations, and on sides of Japan and South Korea, they had better initiate some agreements in economic and technological cooperation in this industry

so that they could keep a reasonable share in China's further market. Anyway, Japan and South Korea have the advantage of geographical proximity, which can benefit both car producers and consumers.

(3) Bohai Sea Region is the most important manufacturing base in China (LI, 1999). It has not only strong foundation of heavy industries based on the regional abundant resources, but also well developed textile and other light industries representing a large share of China's total production of consumer goods. The bilateral or trilateral agreement on the cooperation of above-mentioned three sectors will promote more rational division of labor among three countries in manufacturing as a whole.

2. 2. 2 *Energy*

Multiple cooperation in energy in Northeast Asia has a brilliant prospect. Japan and South Korea are energy-lack countries, importing various mineral fuels from many countries, while China as the world's second largest country in terms of energy production and energy consumption, is abundant in coal, oil, natural gas and hydroelectric resources. However, The distribution of China's energy resources is uneven. Most of coal is distributed in North China, oil in Northeast, North and Northwest, and natural gas mainly in Northwest. Complementarity in energy supply between three countries is obvious.

China has long been world top coal producer and important exporter. Now millions of tons export to Japan and South Korea respectively every year. As for oil, because of inadequate proved reserves and ever-increasing demand of oil products, China is no longer net exporter but a net importer of crude oil since 1993. The import of crude oil reached 70Mt in 2000. But on account of the uneven distribution of oil fields, imported crude oil mainly go to East China and South China, while Northeast and North China are still able to export a moderate amount of crude oil reaching 10Mt in 2000. More than half of it goes to Japan and South Korea. So it will remain in the coming decade.

It is predicted that the total consumption of oil in Northeast Asia may rise to 800Mt in 2010, of which more than 3/4 have to be imported from outside (ZHOU and YANG, 2000). In order to guarantee the security of oil supply, it is necessary to search for international cooperation with both oil producers and relevant consumers. Among various measures the establishment of strategic reserves of oil and related coordination in Northeast Asia is crucial for the stability of regional oil market.

Apart from feasibility in international cooperation

on oil field development in China's Northwest, there have been some projects actually, perhaps more important projects for the three countries of Northeast Asia are the potential supply of oil and gas from Russia. In East Siberia and Far East of Russia there are abundant oil and gas resources. Showing interests for developing them and getting supply of oil and gas are not only Japan and South Korea, but also China, because Northeast China, Beijing-Tianjin area and the Changjiang River Delta are earnest to improve their structure of energy consumption but clean energy will be short of supply after 2010. Consequently, many a cooperative project has raised common concern among these countries.

Perhaps the most interesting cross-border energy project for China and South Korea is the natural gas pipeline from Russia's East Siberia to East China, which has been preliminarily designed for transporting 20 billion cubic meters of gas every year. As South Korea requested to take part in the cooperative project, three parties (China, Russia and South Korea) signed an agreement on South Korean joining the feasibility study during Russian President's visit to China in November 2000. Since it is necessary to add gas pipeline and transport volume to South Korea, the feasibility study will not be completed until 2002.

2.3 Transportation System

In the "International Symposium on the Strategies for Economic Cooperation and Transportation Development in the Yellow Sea Rim" held in Tianjin, August, 2001, scholars from South Korea and China made an over-all discussion on the transportation network and logistics strategy in Northeast Asia (CHIN, 2001; JIN, 2001; WANG, 2001). Some interesting ideas of theirs and mine relating to possible multilateral cooperation are briefly digested as follows.

2.3.1 Sea transportation

Situated in the Western Pacific Ocean and bordering along the Yellow Sea and East Sea, China, Japan and South Korea all take sea transportation as the major communication mode for foreign trade. With the rapid growth of bilateral trade, freight volume by sea routes has kept increasing in the past decades. At present there are around 12 major ports in the Yellow Sea Rim and surrounding area, which are playing important role in regional transportation network: Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Rizhao, Lianyungang, Shanghai, Inchon, Pusan, Kitakyushu and Fukuoka.

Emphasis should first be given to regional coordination in a wider scope. Instead of self-centered con-

sideration on the future position, every port has to regard itself as a component of an organic sea transport system. Through analyzing the general criteria of shipping centers and present and future functions of every port and comparing with other important ports beyond Yellow Sea, the major ports of this region can be classified into three levels (JIN, 2001):

First level: including Shanghai, Pusan and Kobe, regarded as global shipping centers or hubs of East Asia. They form the main hub system in the West Pacific Ocean together with Hong Kong, Kaohsiung and Singapore.

Second level: including Inchon, Tianjin, Dalian, Qingdao and Kitakyushu, regarded as regional shipping centers.

Third level: including Lianyungang, Yantai, Guangyang and Fukuoka, regarded as local shipping centers.

Competition definitely exists between related ports in terms of expanding hinterland, absorbing freight sources and enhancing functions. For example, Shanghai and Pusan would compete for main oceangoing trunk routes. For the time being Pusan, ranking the fifth of top 20 large container ports in the world is much more advantageous in transshipping the containers from China's northern ports. As for Shanghai Port, although its natural conditions are not so ideal as Pusan Port, its annual handling volume of containers has kept increasing dramatically since the mid-1990s (Table 6, 7). In 2000 it handled 5.6 million TEU, ranking the 6th in the world, compared to 3 million TEU and the 10th in 1998. Its hinterland is so vast, covering the whole basin of the Changjiang River, most part of the Huanghe River basin, Northwest China and even part of Middle Asia, that none of other ports could compete with.

Table 6 Throughput of containers in major ports of China (unit: 10000 TEU)

Classification	1999	2000	Growth rate (%)
Hong Kong	1620	1780	10
Shanghai	420	560	31
Shenzhen	300	400	34
Qingdao	150	210	38
Tianjin	130	170	31
Xiamen	90	110	27
Dalian	70	100	35
Ningbo	60	90	59
Fuzhou	30	40	25
China total	3430	4050	18
World total	20 590	22 500	9.3
Share (%)	16.7	18	

Moreover, Shanghai is China's largest economic center with the GDP accounting for 5% of China's total

Table 7 Changing sequence of the world top 20 container ports (1000 TEU)

Rank	1975		Rank	1985		Rank	1998	
	Port	Volume		Port	Volume		Port	Volume
1	New York	1621	1	Rootterdam	2655	1	Singapore	15100
2	Rotterdam	1079	2	New York	2405	2	Hong Kong	14650
3	Kobe	905	3	Hong Kong	2298	3	Kaoshiung	6271
4	Hong Kong	803	4	Kaoshiung	1901	4	Rotterdam	6302
5	Oakland	522	5	Kobe	1852	5	Pusan	5753
6	Seattle	481	6	Singapore	1699	6	Long Beach	4098
7	Saint John	452	7	Long Beach	1444	7	Hamburg	3550
8	Baltimore	420	8	Antwerp	1350	8	Los Angeles	3378
9	Bremen	410	9	Yokohama	1327	9	Antwerp	3266
10	Long Beach	391	10	Hamburg	1159	10	Shanghai	3066
11	Jacksonville	377	11	Keelung	1158	11	Dubai	2800
12	Melbourne	365	12	Pusan	1148	12	Felixstone	2500
13	Tokyo	359	13	Los Angeles	1104	13	New York	2450
14	Hamburg	332	14	Tokyo	1004	14	Tokyo	2450
15	Yokohama	328	15	Bremen	986	15	Yokohama	2200
16	Los Angeles	327	16	Saint John	882	16	Gioia Tauro	2125
17	Antwerp	297	17	Oakland	856	17	Kobe	2087
18	Hanptonrone	282	18	Felixstone	850	18	Saint John	1992
19	Sidney	262	19	Seattle	845	19	Tanjung Priok	1989
20	London	260	20	Baltimore	706	20	Algeciras	1825

Source: Container International Yearbook, 1975, 1986, 1999.

(about 20%, if adding GDP of surrounding cities in the Changjiang River Delta). With the full opening to the outside world, Shanghai has attracted much more attention of large MNCs in the world. These may be the main reasons to support the argument that Shanghai will play a role of hub port in western Pacific sphere, at least as Hong Kong before long.

However, rational division of labor should be carefully taken into account between ports of Shanghai and Pusan, Kobe as well as between Shanghai, Hong Kong and Kaoshiung

Another aspect is the co-ordinate development of major ports in Yellow Sea Rim, mainly concerning Dalian, Tianjin, Qingdao, Inchon and Pusan. Whether China's three ports should remain the feeder ports for Pusan or Shanghai? Which one should be expanded in priority? Not least important, direct sea routes should be well designed from an over-all point of view so as to avoid unnecessary waste of capacity. For example, in view of the closer and closer linkage between China's Bohai Sea Region and Korea's West Coast, it is of importance to work out a long-term cooperation plan for the sea transportation between Inchon and other ports on Korean side and Qingdao, Tianjin, Dalian, Yantai and other smaller ports on China's side.

As the first step toward the formation of a well planned and smoothly operated sea transportation network, regular inter-port exchange of information including dynamics of freight sources, shipping linkage, construction plan, etc. may be adopted.

2. 3. 2 Land transportation

For South Korea, land transportation should be as important as sea transportation in terms of linking with China, Mongolia, Russia, Middle Asia and even East Europe. However, because of half century's separation of Korean Peninsula, no land corridor exists between South Korea and others till now.

With the mitigation of political circumstance in Korean Peninsula, the rehabilitation of north-south railway can be expected before long. Taking into account the large capacity, short distance and time saving by train linking the whole Korean Peninsula with northern China, it is of great significance to launch negotiation of three parties—South Korea, North Korea and China—for opening an express rail transportation of Seoul, Pyongyang and Beijing. As for the Euro-Asian Land Bridge, because the railways of Beijing – Shenyang and Shenyang – Harbin have been greatly modernized and the railway from Shenyang to Dandong is easy to be reconstructed, the route linking Pusan with Moscow and even eastern Europe via China will be much shorter than via Russian Far East (WANG, 2001). Once these cooperative projects come true, they will definitely benefit all parties concerned. Of course, the cooperation of North Korea is crucial for any of these projects.

2. 4 Inter-city Cooperation

Northeast Asia has an aggregate population of about 1.5 billion and 26 super-large cities (over 2 million population), of which 11 are located in Yellow

Sea Rim. In the past decades various exchanges, no matter political, economic and cultural ones, have kept progressing among major cities of China, South Korea and Japan. However, no inter-city network has been formed so far because of late industrialization, relatively closed national markets, weak local authority, weak internationalism, etc. in this region (ROZMAN, 1999).

A few promising signs can be noted in the aspect of inter-city linkage in East Asia, such as the Association of Mayors of East Asian Cities formed in 1991. Its member cities include Kitakyushu, Shimonoseki, Tianjin, Qingdao, Dalian, Yantai, Inchon, Pusan and Ulsan. So far four Mayor's meetings along with a number of workshops have been held. Particularly the third Mayor's meeting held in Dalian in 1998 put forward many more practical policy recommendation, followed by a special symposium on urban research institution, logistics network and tourism development. However, the association has not produced significant results yet for the further regional cooperation of Yellow Sea Rim as a whole (KIM, 2000b). Based on the examination of the existing association and forums concerned, Dr. KIM Won Bae and other researchers from the three countries have proposed an Inter-city Council in the Yellow Sea Rim. Including many interesting contents, it should be paid much attention to. Of course, focusing on urban and regional economy is among the main prevailing concerns of port cities in this sub-region. Consistently important themes for the council's agenda may include trade and investment, culture exchanges, tourism and infrastructure links among cities and provinces in Yellow Sea Rim.

In China even inter-city cooperation in sub-regions are not satisfactory. For example, founded in the mid-1980s, the Association of Mayors of the Central Cities of Bohai Sea Region, with 26 member municipalities now, set its objective to establish cooperative partnerships so as to enhance regional linkages. But the practical achievements of economic cooperation so far remain much lower than expectation owing to disintegrated development and over-competition among major cities. When the development strategy for major coastal cities of China was issued in the mid-1990s, the projection for a stronger status of international linkage is always included.

Beijing and Shanghai set up an objective of world city in the early the 21st century, while Tianjin, identified as the major economic center of Bohai Sea Region, claims itself as the node city of Northeast Asia, linking northern China with the world. Besides, more cities have set a goal to become a modern internationalized city.

alized city.

Despite comprising of impractical contents, these ambitious plans show that many municipal governments are enthusiastic to enhance multiple-oriented international linkages. It seems that the increasing multiple-oriented linkages among cities of wide economic, social and geographic ranges allow the gradual formation of a network of sub-regions/cities.

The emerging pattern of international linkages in Yellow Sea Rim is a diverse series of linkages established by individual sub-regions/cities. Among them sister-city linkage is an important mechanism for the growth of regional identity. Despite the recent trend of multiple-oriented linkages among cities of wide geographical range, a large part of sisterhood has been particularly sought in Northeast Asia as a whole so far. For example, Liaoning Province in 1996 had 20 sister-city cooperation projects of which eight were with cities in Northeast Asia. In Qingdao, there exists a multi-layer friendship relation system with foreign cities. Among 8 sisterhood cities of Qingdao municipality two are Shimonoseki of Japan and Taegu of South Korea. Next, there are 7 friendly cooperation cities, one of which is Inchon. And then for the county-level cities under municipal jurisdiction, there are also 8 friendship cities, of which 3 are South Korean and 1 is Japanese. Besides, there are a lot of grass-root units having established friendship relation with foreign counterparts, mostly Japanese and South Korean.

As a supplementary proposal to promote inter-city network, international linkage among three capitals — Beijing, Seoul and Tokyo may be as important as that among port cities. Based on the experiences beyond the region, inter-capital exchanges can create many meaningful cooperative projects and promote common understanding at national level in various fields. In view of the dominant role of Tokyo, Seoul and Beijing playing in their countries respectively in terms of national economy and foreign affairs, along with the powerful position of three countries in the world's geo-political pattern and geo-economic structure, some mechanism for formal and regular exchanges is of great significance. For example, the construction of Beijing's CBD and planned hosting of 2008 Olympics are among good projects for foreign countries to cooperate with China. In this aspect, Seoul and Tokyo can contribute experiences and expertise for their success.

Taking into account three capitals and main port cities together from a broader view, it can be seen the prospect of the formation of grand megalopolis stretching from Tokyo via Pusan, Seoul, Pyongyang, Shenyang,

Beijing, Tianjin to Shanghai. This megalopolis was first envisaged as Beijing – Seoul – Tokyo Axis by Prof. Sang-Chuel Choe. Inter-city network in Northeast Asia should look ahead the prospect of spatial development of megalopolis.

3 CONCLUSION

Japan, South Korea and China, creating miracle of rapid economic growth successively in the past decades, have made Northeast Asia to be the most promising region of development in the world. The ever-increasing interdependency in terms of trade and investments among three countries based on the fundamental factors of geographical proximity, economic complementarity and cultural affinity call for greatly strengthening regional cooperation. It will definitely benefit all parties concerned and make Northeast Asia as a whole playing more important role in the world's development.

However, due to some objective constraints including complexity of external relationship, diversity of social system and disparity of development level, it will be a long way to reach the goal of economic integration as expected by some optimistic observers. What we had better to do first may be starting from the most favorable economic sectors and sub-regions for multilateral cooperation. The authors argued in this paper that multilateral cooperation in several industrial sectors, transportation system and an institutionalized inter-city network in Northeast Asia or Yellow Sea Rim can be preferably pushed on.

In the coming decades, the scope of economic cooperation in Northeast Asia will become much wider, covering not only production, technology and service, but also finance, environmental protection and so on. The general goal is liberalization of trade and investment so as to promote the process of regional economic integration. As the mechanism of ASEAN 10 + 3 has been firmly established and APEC also operated desirably (ZHANG and ZHAO, 2000), Northeast Asian countries especially China, South Korea and Japan should grasp the opportunity to intensify economic cooperation and expand other cooperative fields in the region. Nevertheless, integrated development in Northeast Asia is not just an unreal dream.

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