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## Enhancing Socio-Economic Development in the Pan Sea of Japan International Region: Focusing on the Growing Role of Pusan as Hub-Port

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### 1. Why and How?

The 1990s has been characterized by the development of globalization of capitalism worldwide, involving so-called "transition economies" such as former Soviet and Central and East European regions. Financial activities and its power, supported by information network, have grown so swiftly and widely as the main driving force for this change. On the other hand, it accompanied many movements for promoting international regional networks in order to reorganize existing division of labor and market systems to be more effective. We should study development of global cities in terms of being caused by these major

movements. The factors and causes of so called *Miracle of East Asia* and urbanization in these countries, and even the reasons of current financial and substantial economic crises should be analyzed under these situations of globalization.

In this paper, we would like to focus on city of Pusan, the major center for the international transportations in South Korean economy, ever shared the *Miracle of East Asia* phenomenon, and now, as a result of it, facing with the difficulties of reconstructing its roles and functions. To understand the characteristics of growing Pusan as a global city, especially to analyze realities of the strategic development as Korea's biggest port or hub-port, is our first concern. And then, we will examine the possibilities of the central role of Pusan port in

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terms of transportation in accordance with Northeast Asia socio-economic development. In this case, we should also distinguish relevant issues concerning the development of Pusan Port, which would be strongly affective to Japanese economy as well.

During last decade, the attempt to build a new international region using typical concept of the Pan Sea of Japan, became more popular. Mutual complementarity is the theoretical and policy making base for this. It seems to promise effectiveness of the strategic development of Pusan as the hub port, enhancing international transportation in this region. But it is a little easy thinking to introduce Ricardian model, that is, theory of comparative cost or that of international comparative predominance, directly into the concept of this object. Because it might rigidly organize and fix vertical division of labour under the control of financial and technological power over human and natural resources. In addition, regarding current globalization of capitalism, it becomes more necessary to stress market innovative factors based on the development of information network and academic infrastructure for education and training, or research and development.

It is obvious that the Pan Sea of Japan International Region has a special character. Not only do they share a long and deep history of socio-cultural exchanges and political conflicts, but also they have been compelled to live in peripheral regions and in isolate relations with each other during a half century. It has

enough reason why we have to distinguish this international region not as geographic Northeast Asia but as Pan Sea of Japan international region. If we adapt this concept, Japanese society itself will be suitably understood not only with its position and main role of economic activities but also with its absence of recognition for social and historical responsibilities. Japanese economy itself has been one of main reasons for causing mutual isolation of these countries in this region, and it has also developed peripheral regions even in domestic economy. We also have to indicate that Korean peninsula, which locates in the central area of Pan Sea of Japan International Region, is still a world front line of military strain and conflicts. And finally, Far-East Russia and northeast China are the regions now piling up more casualties on the way of transition. Therefore, positive cooperated initiatives of Japanese and South Korean are needed in order to develop and share the perspective of this emerging international region and realizing the way of co-living in this area.

## 2. Pusan - From Big-port to Hub-port

### 2.1. the Gate Way for S. Korea Economy

Pusan is the second city with 3.89 million, facilitated with biggest port in South Korea. It locates in the southeast of Korea Peninsula as the center of southeast industrial region. Internationally, it stands in the central part in Pan Sea of Japan Region. Pusan Port recorded

Table 1 Major Economy Index of Pusan(As of 1996)

Classification	Unit	Pusan	Nation	Pusan/Nation(%)
Area	km <sup>2</sup>	749	99,268	0.8
Population	Thousand	3,879	45,545	8.5
Economically Active Population	Thousand	1,731	21,188	8.2
Manufacturer	Firms	9,488	97,144	9.7
Manufacturing Production	Billion Won	9,488	97,144	9.7
Export	Million US Dollar	6,227	129,715	4.8
Bank Deposit	billiom Won	13,764	181,721	7.6
Bank Loan	billiom Won	12,991	177,184	7.3
Maritime Cargo	Thousand ton	97,598	579,927	16.8
Export Cargo	Thousand ton	39,433	98,893	39.9
Container Cargo	Thousand TEU	3,819	4,259	89.7
Foreign Tourist	Thousand	1,013	3,683	27.5

(Source) *Economic Survey of Pusan*, The Pusan Chamber of Commerce & Industry, International Division, 1998, p.6

5th ranked port in the world, handling 89.7% of the total Korean containers(1996, Table 1).

Pusan was opened to Japan for trade according to the Treaty of Amity with Japan in 1876 and to the rest of the world in 1883. The Kyungbu railway(between Seoul and Pusan) was completed in 1914. During the Japanese occupation(1910-1945), Japan developed Pusan as a modern port to function as a logistical supply and production center for the military expansion in Asia. During the Korean War (1950-1953), a huge number of refugees from throughout the nation fled to Pusan for a safe haven and Pusan became overpopulated. The Kyungbu pole has been developed as the main pole in Korea, occurring centralization to Seoul and socio-economic imbalance national wide.

In 1963, Pusan was granted the status of a special city under direct control of the government. With easy access to the port and abundant skilled and semiskilled labor supply, Pusan became the economic center of Korea with labour intensive and light industries such

as textile, footwear and plywood, acting the main role as the gateway of national economy.

But Pusan went through an overall change in the industrial structure during the 1980s and the 1990s because of high labour costs and competition from other developing Asian countries.

Now Pusan confronts with the reconstructing issues of regional economy and also its urban society, proceeding redevelopment of Pusan port, even though it is exposed to the current East Asian economic crise. It will be realized that Pusan is now adopting more positive strategies as the hub port city for the Pan Sea of Japan International Region, promoting policy issues such as improving social infrastructures (transportation, information network etc.), developing key projects like Tele-Port project, offshore center or stock market.

## 2.2. Functions and Development of Pusan Port Big-port or Hub-port?

“Transportation is a technology which

reduces the costs of overcoming spatial distance. Therefore, transportation has been a major force in promoting growth and change in any part of the world. The vital factor to the move toward greater prosperity in Northeast Asia is the existence of an appropriate transport infrastructure system which can increase accessibility to resources and markets, facilitate the delivery of goods and services. And it plays a key role in attracting investors. However, the long history of political and ideological confrontations among the Northeast Asian countries have created bottlenecks and missing

links in transport infrastructure which would have enabled them to link themselves with one another." (J. M. Kang & P. Jung, *Economic Interdependency and the Common Logistics System in Northeast Asia*, 1998)

Kang and Jung's indication means that currently, if we exclude the North-South Korea issue, it became much easier to transform from bilateral to multilateral transportation system based on economic rationality, and therefore the reconstruction of this transportation system is already possible. For this purpose, Kang and Jung list Kobe and Pusan (in the near future,

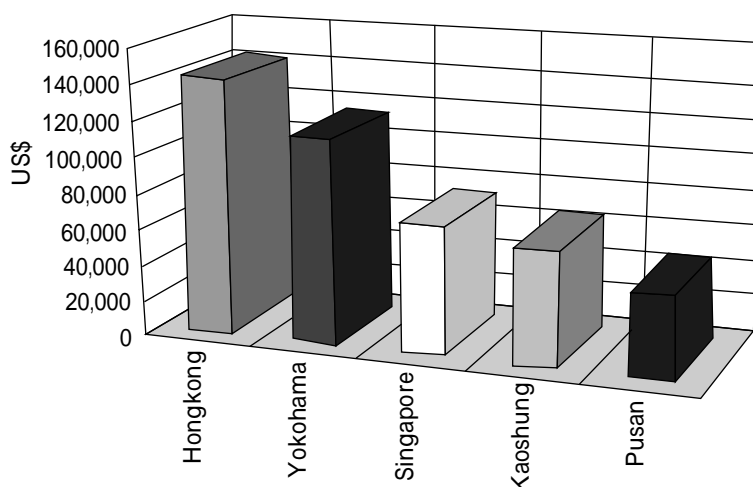
Table 2 Container Terminals at the Port of Pusan(As of 1997)

Classification	Jahsungdae	Shinsundae	Uam	Kamman
Handling Capacity	1 million TEU	1.28 million TEU	356,000 TEU	1.2 million TEU
Total Area	648,000 m <sup>2</sup>	1,039,000 m <sup>2</sup>	180,000 m <sup>2</sup>	750,000 m <sup>2</sup>
CY*	394,000 m <sup>2</sup>	672,000m <sup>2</sup>	120,000 m <sup>2</sup>	336,000 m <sup>2</sup>
CFS**	26,000 m <sup>2</sup>	10,000 m <sup>2</sup>	N / A	8,400 m <sup>2</sup>
Quay Length	1,447 m	1,200 m	510 m	1,400 m
Berthing Capacity	50,000 DWT*** x 4 10,000 DWT x 1	50,000 DWT x 4	20,000 DWT x 1 5,000 DWT x 2	50,000 DWT x 4

\*Container Yard, \*\*Container Freight Station, \*\*\*Dead Weight Ton

(Source)*Economic Survey of Pusan*, The Pusan Chamber of Commerce & Industry, International Division, 1998, p.18

Table 3 Total Cost of Handling



(Source)Estimated by the Bureau of Port, Yokohama City

Table 4 Cargo and Capacity of the Pusan Port

	1976	1981	1986	1991	1992	1993	1994	1995	annual rate
Cargo	383	925	1,645	2,762	2,982	3,448	4,132	4,918	14.4%
Capacity	610	970	1,510	2,420	2,420	2,420	2,420	2,420	7.5%
Shortage	112	145	135	42	562	1,028	1,712	2,498	17.8%
%	122.0	118.0	91.8	87.6	81.1	70.2	58.6	49.2	

(Source)Hong Seung Roh, *Why Pusan port could developed?* 1998

Kwang Yang of South Korea) as hub ports in terms of developing international transportation system in Northeast Asia. And they say that economic rationality will be maximized and regionalism will be stimulated internationally by linking each local port directly to these hub ports. For this purpose, the facilities of the container terminals for transship cargo will become more keen issue (Table 2). Then, does Pusan Port have enough possibility and condition for that?

As I already mentioned, Pusan Port is the fifth ranked in the world in terms of the total amount of container, and over 90% of maritime transportation in South Korea as a whole. But comprehensive competitiveness including direct handling cost is 14th in the world (6th in East Asia). And if we give attention to transportation service level, it is the 20th in the world, 5th in East Asia (Hong Seung Roh, 1997). Table 3 is a case study on the total cost of each port in case of full container ship of 37,389 Gton anchoring 7 hours and 600 containers (20 TEU) handling (Bureau of Port, Yokohama City). In any case, Pusan Port stays comparatively behind. Especially, when we suppose hub port strategy, even though its international geographical location is important factor, time and cost efficiency (technology, labour) are keen factors

to compete with neighbor ports.

As Table 4 shows, handling amount of container of Pusan Port has increased yearly. But the capacity has been always insufficient compared the handling demand, it compelled to pile up stocks, with superannuated facilities. Besides, the port gradually loses its competitiveness by increasing labour cost. Meanwhile, as shown in Table 5, even in the case of Shinsundae Terminal which is recently opened and has modern equipment, the weight of the transship cargo is not so big. It means that major container demand has been occurred from South Korea export/import. Big port policy was more keen than hub port policy for South Korea. But, port constructions were recently developed considerably, on the other hand export/import cargo stagnated because of depression. Consequently, it became necessary to develop hub port strategy, increasing transship cargo. The challenge to hub-port in Northeast Asia from big port of South Korea has started.

Construction of a new port in the west of present Pusan Port was decided recently. Container terminals and car terminals will be constructed with an industrial park project as its hinterland (1<sup>st</sup> step: 1997 ~ 2005. 36,000 billion Won, and 2<sup>nd</sup> step: 2006 ~ 2011. 19,900

Table 5 Total Import, Export &amp; T/S Cargo Handled in Shinsundae, Pusan

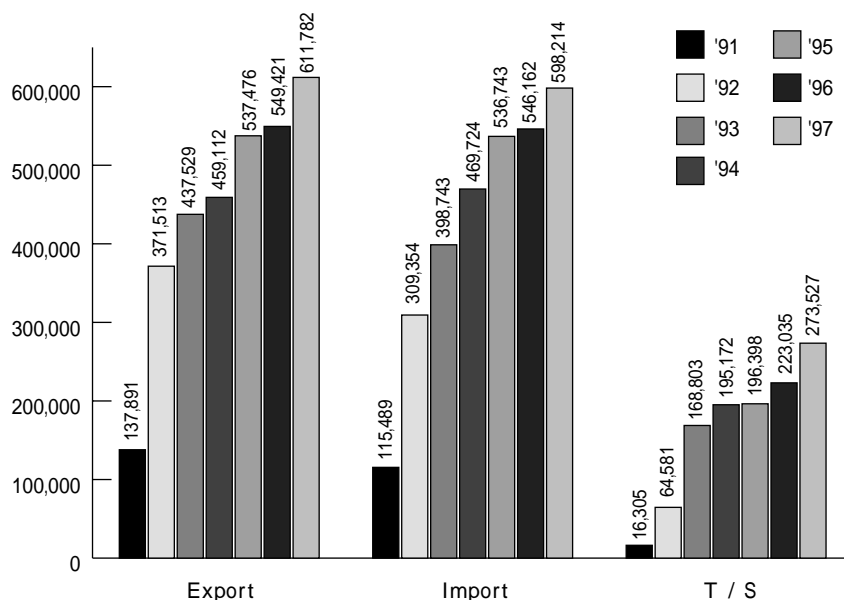
(Source)PECT, *PECT Prepares for the 21<sup>st</sup> Century*, 1998

Table 6 Two-Port System (Pusan, Kwang Yang) Container

		1995	1998	2001	2006	2011
Cargo		492	693	985	1,395	1,922
Capacity		242	628	905	1,242	1,713
Pusan		222	446	519	719	934
	-Jahsungdae	90	130	130	130	130
	-Shinsundae	96	120	120	120	120
	-Uam	-	120	120	120	120
	Kanman	36	76	149	149	108
	Pusan New Port	-	-	-	200	456
Kwang-Yang		-	96	235	331	523
	Phase 1	-	96	96	96	96
	Phase 2	-	-	139	139	139
	Phase 3	-	-	-	96	288
Others		20	86	151	192	256

(Source)Hong Seung Roh, *Why Pusan port could developed?* 1998

billion Won). Most part of the old port will be regenerated as the beach. This means that the central government decided to adopt two-port system programme. Targeting 2011, along with the development of Kang Yang Port, South Korea will have two big ports (Table 6). The

handling capacity of Pusan Port will increase 420% compared to 1995, and nationally 708% together with Kwang Yang Port and other ports at the same term. Even if we have full perspective of South Korea's economic development, it is clear that the policy making

of positive hub port strategy is in process.

### 2.3. 'U type' Scenario for Recovery

The East Asia crisis, involving South Korea economy as one leading part, has brought to these countries hard process of economic reconstruction. In South Korea, unemployment rate is already very close to 10%. Many companies went bankrupt and it is said that only 10 to 15% university graduates could find their job. Government issued a new skill-training program for unemployed graduates in order to conciliate student movements which might otherwise develop political crisis. In Pusan, Samsung was successfully introduced a new full line car plant several years ago and expected to change old traditional industrial structure. It stands now at the critical point whether it might be absorbed by another car company, Daewoo. Several hundreds of small and medium size companies related to car manufacturing have to rely on this risky proceeding.

For South Korea's Economy, or for Pusan's economy, it will be very difficult to expect swift recovery. The most hopeful scenario is not 'J type' recovery, but 'U type'. In this case, we could suppose and afford a new social and historical paradigm, not only directly based on the present situation of market and economic relations. The condition of isolated, fragmentary markets caused by the nation to nation conflicts is no more enough for an open and frankly organized new market. It becomes easier to develop more open market systems

where the region-to-region linkages could so easily appear. Current over accumulation will be put in order under this new paradigm so as to activate flow of capital or technology and to generate new needs for the actual economy of productions and services. This new paradigm will start its approach to minimize GDP and income differences, increase living standard developing their own cultural way of life, and create multilateral socio-economic environment in this Pan Sea of Japan International Region.

## 3. Prospect for the Pan Sea of Japan International Region

### 3.1. Characteristics under the Globalization

As I already mentioned, the Pan Sea of Japan International Region has been compelled to be isolated and fragmented socio-economic national relations, mainly caused by its historical disasters. Besides, it consists of different structures in terms of GDP and national income. Although Japanese economy still keeps world top level, in the case of South Korea, just after receiving membership of OECD, it was so deeply involved into the current East Asia economic crisis.

The ongoing process of globalization, generalizing open economy and liberalization including transition economies, restricting more and more the autonomy and the independence of nations calling de-regulations, requires economic competitiveness on the ground of the global standard, and also ironically, needs the development of individual regionalism.

In this line, it seems that the concept of Pan Sea of Japan International Region has become more realistic. It might bring us a certain scenario for organizing a new international region towards 21<sup>st</sup> century. Especially, current economic difficulties surrounding South Korea and even Japan show the necessity of their positive approach to this scenario.

### 3.2. Regional Development in Japanese ports

Japanese economy has been already confronting its conversion. For example, the centralization of economic power and presence to Tokyo or coastal regions of the Pacific side has started slow down.

Since 1995 eight ports started the international operation of container terminal. Adding to 28 existing ports, these ports could develop international transportation network directly from local areas. Including such local ports as Akita, Sakata, and Niigata, they gave some changes to the exiting transportation system in Japan which has been centralized to Yokohama and Kobe. The capacity and possibility of organizing international regional trading has increased.

It means at the same time, reducing dependence to Yokohama or Kobe, local transportation increased international trading, in some case using Pusan Port or other big ports as their hub. For example, the data of the international transportation of three prefectures in Hokuriku region, in the case of export shows that, dependence to Yokohama port or Kobe port was 64.5% in 10 years ago, but was

reduced to 61.1% in 5 years ago. In the case of import, ratio of dependence to the local ports, Toyama and Kanazawa, increased from 11.2% to 19.2% in this same term. Each local port still lacks the economic competitiveness including time frequency compared bigger ports. However, it became easier to conquer such weakness using Pusan Port so on as the hub port for transship cargo.

The case of Maizuru Port located in the north of Kyoto Prefecture, is also in similar condition.

Even though it increased its container cargo abroad recently, Maizuru amounts only 3,392 TEU (export 327 TEU, import 3,065 TEU) in 1997, largely deferent from that of Pusan Port which amounts 5,250,000 TEU. But this port has increased international container transportation using Pusan Port as a hub. Incidentally, the regular line between Pusan and Maizuru transported 3,316 TEU, and one third of them (1,173 TEU) were transship container via Pusan. By the way, the distance is 363 mile, and 23 hours in case of Kobe and Pusan, and that of Maizuru and Pusan is 331mile, and 21 hours. Maizuru is slightly predominant on Kobe in this sense. Besides, if regular line between Maizuru and Far-East Russia connecting with European countries using the SLB Transportation Route, will be opened again, transportation from the ports of Sea of Japan coastal area will be revitalized. The SLB Transportation Route has stopped services currently because of tight competitions with sea transportation via the Suez Canal, and because of disordered economic crisis and worse infrastructures in Russia,



The problem is inland transportation cost in Japan. For example, in the case of 40 ft container, one way charge to the center of Kyoto is 65,500 yen from Kobe against 68,500 yen from Maizuru. As a matter of course, to Osaka area, Kobe Port or Osaka Port are definitely predominant. But even so, the convenience or the frequency might be included into total cost of it, if Maizuru improve these conditions (only two weekly services between Maizuru and Pusan), the cost will be reduced. Recently, road conditions for inland transportation from/to Mizuru port already improved much better by the construction of the motor way. And finally

we have to look the location of Maizuru port which locates upon the strait line between Far-East Russia and the Kansai economic zone.

### 3.3. Theory and Reality of Mutual Complementarity

In 1991, UNDP launched the Tuman River Area Development Program for the purpose of the peaceful, sustainable social development in the Northeast Asia focusing on the delta of Tuman River shared by northeast China, North Korea and Far-East of Russia. It has been expected to be the pivot, investing 30 billion dollar as the initial explosive for this transnational cooperative development. This concept is

Table 7 The Mutual Complementary Conditions of Northeast Asian Aountries

Region	Advantages	Disadvantages
Northeast China	Favourable agricultural conditions, adequate and various agricultural products (such as corn, soybean, meat, fruit), some textile industrial products, oil, coal, building materials, medicinal herbs, and excess labour.	Lack of capital, advanced equipment, technology and management experience, comparative shortage of some mineral resources, conditioned infrastructure.
North Korea	Rich mineral resources, metal ore and simple processed products, aquatic products, some industrial commodities and plentiful labour.	Shortage of capital, insufficiency of farm, sideline and light industrial commodities, backward equipment and technology.
Russia Far East	Plenty of forest, non-ferrous metal ore, aquatic resources, oil, gas, coal and some products of heavy and chemical industries (such as steel, fertilizers, etc.)	Severe shortage of agricultural and light industrial goods, lack of labour and capital, backward industrial equipment and management experience.
Mongolia	Plentiful products of animal husbandry and of mineral ores, especially fluorspar.	No convenient way to communicate directly with other NE Asian nations, lack of capital technology, equipment, farm products and light industrial goods.
South Korea	Capital, advanced technology and equipment ready to move out, vanguard industrial products	Shortage of energy and industrial resources, lack of grains for stock raising, insufficiency of labour.
Japan	Surplus capital, advanced technology, plenty of superior equipment to move out, vanguard industrial products, management experiences.	Severe shortage of energy and industrial resources, insufficient grains for animal husbandry and some agricultural products, deficiency of labour.

(Source) UNDP, *UNDP Mission Report*, Oct. 1991.

based on the common understanding of the mutual complementarity of economic resources in this region and possibility of its vitalization as shown in Table 7.

Far-East Russia is endowed with abundant natural resources such as coal, natural gas, non-iron metals, wood and marine resources. Northeast China is rich in minerals, agricultural products, and cheap labor. North Korea also can offer low-cost labour. South Korea standing at a relatively advanced stage of development, is able to supply technology and intermediate goods as parts of its outward development strategies. Japan, endowed with capital and advanced technologies, requires large amount of natural resources and intermediate goods from outside. This region comprises an enormous market size. "The mutual complementarity among the Northeast Asian countries based on the various factor endowment, and different stages of industrial development creates large potential for intraregional economic cooperation. Intensive economic cooperation based on the mutual economic complementarity will transform

Northeast Asia into a new growth center of the world economy." (J.M.Kang & P.Jung op. cit.)

Current situation of the internal economic relations remains rather low stage. As shown in Table 8, the level of internal trade remains still a little more than 30%, compared 60% in EU or 40% in NAFTA and it differs by country. Japan and South Korea, especially the former, are characterized by the external trade dependence.

On the other hand, these countries such as China, now accelerating opening market and internationalization, North Korea, still keeping closed market, and Mongolia, small and underdeveloped, record considerably high internal dependency. And economic relations among Northeast Asian countries stand rather at individual, bilateral relations and not so much at multilateral level.

Consequently, though the historical environmental changes after the 1990s surely promised interdependence among these countries, it will not be enough to rely too much on the mutual complementarity theory in order to fully develop Northeast Asia Economic

Table 8 Trade Matrix for the North-East Asian Countries (1996)

(Unit: Million dollars)

Inporter Exporter	S.Korea	N.Korea	China	Taiwan	Hong Kong	Japan	Russia	Mongolia	NEA	NEA Shares/Total
S.Korea		--	11,486	4,010	11,191	16,002	1,875	--	44,568	34.1%
N.Korea	--		62	7	13	265	315	--	662	60.7%
China	7,527	497		2,800	32,904	30,888	1,693	72	76,385	50.6%
Taiwan	2,662	9	623		26,788	13,659	141	--	43,882	37.8%
Hong Kong	2,935	41	61,980	4,310		11,829	494	4	81,594	45.2%
Japan	29,369	226	21,827	25,986	25,364		1,022	60	103,854	25.2%
Russia	659	524	4,670	493	215	2,882		187	9,630	5.3%
Mongolia	--	--	115	--	--	81	76		272	72.1%
NEA	43,152	1,297	100,763	37,615	96,475	75,606	5,616	323	360,847	33.7%
Shares/Total	28.6%	58.0%	72.6%	37.1%	48.6%	21.6%	13.0%	59.3%	36.6%	

(Source) J.M.Kang & P.Jung, *Economic Interdependence and the Common Logistics System in Northeast Asia*, 1998

Region. The historical environment is one necessary condition for the realization of mutual complementarity, but it remains to be still an external condition. Without this regard, the mutual complementarity theory will remain as too much innocent economic theory.

How to organize the power of division of labor? What is the role of advanced economy like Japan and South Korea? How to write the logistics for the equivalent development of this international region? How and what kind of social infrastructure should be prepared by each country and mutually networked? Especially, the construction in information infrastructure and network should be more keen issue, since the conditions to share information were so delayed in this international region.

However, compared to the Southeast Asia, this region is favoured with rich academic infrastructure such as universities, research and higher education institutes. Academic infrastructure will be vitalized so as to enhance

mutual understanding and exchange in this region, acting the role of research and development for regional resources utilization, or the role of central functions for the intellectual exchange and technology transfer, in order to develop international programmes for skill training and so on. Supported by these arrangements and enhanced by development of the economic exchanges, the international transportation will vis-a-vis develop much faster.

As I already mentioned in the previous chapter, the characteristic situation of low interdependency and mutual isolation in this region, even though gradually changing toward the future, needs to keep external linkage or dependence. Internal market development should be open to external market as well. Pusan Port will develop more and duplicate the role not only as the biggest port in South Korea and the hub of internal ports in the Pan Sea of Japan International Region, but also that of opened to the world transportation.