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Industrial Complementation in Northeast Asia

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INTRODUCTION

International relations in Northeast Asia have been changing rapidly. As the former USSR was reorganized as the Commonwealth of Independent States (CIS hereafter), the Republic of Russia has been exploring its new relations with other East Asian nations, although its domestic political and economic system has yet to be established. The Democratic People's Republic of Korea (North Korea hereafter) and the Republic of Korea (South Korea hereafter) are actively seeking a new relationship, although they are not finding it difficult to come to agreements. North Korea and Japan have been continuing their efforts to normalize their relations, although the progress has been extremely slow. The People's Republic of Mongolia (Mongolia hereafter) has eagerly approached Japan and other market economies, and has accelerated its political and economic reforms. The People's Republic of China (PRC hereafter), having established closer economic relations with other market economies, has been exploring a new relationship with the Republic of China, Taiwan Province of China (Taiwan hereafter), switching from confrontations to friendly exchanges of people and goods.

South Korea has been most active in improving its relations with its "northern neighbors," including the PRC and Russia, since better relations with her northern neighbors favor her position in negotiations with North Korea. Similarly Taiwan has been active, as an improvement of international status is of vital importance for Taiwan which has been removed from the United Nations. Although Japan—PRC relations have been greatly intensified, Japan—Russia relations remain ambiguous because of unsettled "Northern Territory" issues. At local levels, however, steps have been taken to promote exchanges of people.

The present paper explores the possibility of industrial complementation in Northeast Asia. Naturally, the definition of Northeast Asia matters first. We define the region to include the Russian Far East, Mongolia, the two Koreas, the PRC, Japan, and Taiwan. The political relationship between the PRC and Taiwan is controversial. Since, however, the task of this paper is to investigate economic affairs, we will deal with them as independent units. Indeed, the economy of Taiwan significantly differs

from that of the PRC, and Taiwan's position in economic cooperation in the region is of substantial importance in terms of trade, financing, and direct investment.

Next, what is the definition of "industrial complementation?" Since the ASEAN (Association of Southeast Asian Nations) has been launched and has been promoting a program with the same title by which they meant that "the governments cooperate with each other to make an agreed division of labor at least in some specific industrial sectors," let us use this definition of an "institutionalized complementation." The program, however, has turned out to be difficult to promote, with many countries wanting to develop the same industries respectively.

Another way of defining industrial complementation is to leave the industrial development of each nation to the market forces, and to observe the evolution of complementarity of industries. This may sound much too negative, but it is not as strange as it may appear. First of all, the nations in the region are not restricted to trading only among themselves, but with the world market place that is open to them. There is no need to construct a region of self-sufficiency.

Second, if regional trade is restricted for political or other reasons, it makes little sense to promote industry complementation. Freer trade in the region will be the fastest way to promote division of labor. Third, if factor endowments are similar in the nations in the region, industrial complementation will be neither feasible nor desirable, as the region as a whole can be favorably specialized in a similar spectrum of industries vis-à-vis outside of the region.

Fourth, if transportation and communication are not adequately developed in the region, industrial complementation, and thus promoted regional trade, may not grow compared with that outside of the region. The Pacific Ocean is an apparent factor to separating the coasts of East and West. Trade between the PRC's coastal region and the economies across the Pacific Ocean is fast growing, but the development of trade between the coastal and inland provinces within the same country is much slower. This hints that infrastructure, institutional as well as physical, is essential in promoting trade.

As trading systems of the nations in the region vary, and information about institutions is extremely limited for some countries, it seems better for us to adopt a broader definition of industrial complementation under the present circumstances. This vagueness indicates that the promotion of regional trade may become more difficult relative to the developed and developing trade among market economies located long distances away.

One final introductory remark. If production factors move quickly among countries in the region, some of the differences in factor endowments may disappear as soon as the governments deregulate international and intraregional factor movement. Capital may move quickly across national borders if risks, both political and economic, are reduced. Labor migration may be restricted and slow, but illegal, migration can increase if the benefits to migrating workers are significant compared with the cost the governments must bear for restricting migration. Whether labor moves from the scarcely populated Russian Far East to other countries, or the other way around, is still unforeseeable. This influences the development of industries in Russian Far East. Reforms of systems and policy changes affect factor endowments of the economies in the region, which, in turn, change the trade pattern.

FACTOR ENDOWMENT IN THE COUNTRIES OF THE REGION

Because East Siberia in Russia is scarcely populated, with roughly 8 million people throughout the region, but only about three million in the Far East region, Russia definitely has a labor shortage, in spite of its vast land area. Although Russia's area is large, totaling 27 percent of the former USSR's land area, agriculture is not prosperous because most of the northern area is made up of frozen land. Infrastructure is poor in view of the vast land area, even if the second Siberian railway is constructed.¹ Fishery and mineral resources are rich, but information about minerals had been withheld from foreigners by the former Soviet government. Forestry resources, although generally overevaluated by many outsiders, are not as rich as might be imagined, again due to frozen land.

Although the Far East region grew rapidly during the 1960s, its development slowed in recent decades, as Moscow began investing more in European Russia. As the Far East was a less developed region, it depended on the transfer of resources from the rest of the former USSR through the central government. In the mid-1980s, the then secretary—general Gorbachev emphasized the importance of collaboration with the Asia—Pacific countries to develop the Russian Far East. The situation became increasingly unfavorable for this part because the Soviet economy fell into trouble, and Moscow was unable to invest in the Far East.

Mongolia, a nation with a population of 2 million and fairly large grassland areas, reportedly pursues brave reforms in both political and economic systems and introduces more market mechanisms. Wool and some mineral resources are their important exportables. Landlocked Mongolia previously depended on the former Soviet railway systems for access to the outside market, but the government approached the PRC to establish faster access to the Pacific Ocean. Beijing reportedly agreed to give Ulan—Bator the right to use Chinese railways and harbors. Although the market size is limited, the nation somehow adds a new market to Northeast Asia. Similar to the Russian Far East, Mongolia also faces a serious shortage of capital and infrastructure.

North Korea has been the least open to the market economies and the least transparent to outsiders. With relatively high per capita income, which is a very rough estimate, the country seems to face a capital shortage while remaining rich in some mineral resources. North Korean labor force is less abundant than in South Korea, if not short. As the nation has been closed to market economies, its domestic economic system has been the least accommodating to trade with and investment from the market economies. Self-help autonomy and tight ideological education appear to have differentiated the nation from other socialist countries in the region.

South Korea, roughly twice as large as North Korea in population yet less abundant in natural resources, has been successful in industrialization, first oriented to labor-intensive sectors, and has attained a high per capita GNP, reaching almost US \$5,000. Labor has become scarce and its labor-intensive industries are now being relocated into less developed countries (LDCs hereafter). Technology and capital have been actively imported, and its external accounts have almost reached a balance in the current account. As a capital exporter, the nation is still in an infant stage.

Surpluses in the current overseas account are less stable than they are in Taiwan, and consequently, South Korea imports foreign capital although it actively promotes direct foreign investment (DFI hereafter).

Japan, the only OECD (Organization for Economic Cooperation and Development) member country in the region, faces labor shortages in a normal situation, and the number of foreign workers, both legal and illegal, has rapidly increased in recent years. Facing tasks of industrial adjustment, to phase out declining industries, enterprises have already made extensive DFI in LDCs as well as in advanced market economies. Two-way technology trade has expanded rapidly between Japan and western industrialized countries on the one hand, and Japan has been one of the largest suppliers of technology in East Asia on the other. Both official development assistance (ODA hereafter) and private investment, as well as trade in goods, have been two important channels that have connected Japan and its Asian neighbors.

The PRC, with a huge population of 1.1 billion, is obviously the most labor abundant. This also applies to the Northeast provinces of the PRC. As Table 10.1 indicates, even the PRC's regional labor force is overwhelmingly larger than its neighbors'. The land area is also vast, with much more arable land than in Russian Far East. Technology, even though high in some military-related fields, has been low, and production equipment has often been obsolete. Due to inadequate infrastructure, natural resources, fuels, and minerals have not been fully exploited. Transportation networks are poorly developed, and artificial barriers due to sectionalism of provinces and administrations, have hindered the integration of domestic markets. The PRC has eagerly invited DFI as well as foreign technology. Thus, the PRC has taken a lead among the former and present socialist countries in the region in promoting economic exchanges with market economies. Whether in spite of, or because of, delicate political problems, the PRC has in fact actively received Taiwanese DFI.

Taiwan has been successful in achieving a balanced industrialization and has taken a lead over South Korea in per capita GNP. Although the population is only 20 million and the land area is as small as 36 square kilometers, the GNP is comparable to that of the entire Northeastern parts of the PRC. The economic success of Taiwan faces political difficulties. Beijing has proposed "one country and two systems" which implies that Taiwan be politically integrated into the PRC, maintaining a high autonomy in policymaking except in defense and diplomacy. Taipei, very skeptical about this compromise, has sought an improvement in its international status, actively developing its multidirectional diplomacy.²

Democratization has been promoted especially in recent years. In the meantime, various strategies have been advocated by various political parties—some argue for a more clearcut independence, while others seek a political compromise with Beijing. Apart from political games, businesses and exchanges of people between Taiwan and the PRC have expanded significantly. In comparison with South Korea, Taiwan can be characterized as a more stable capital exporter and less developed in so-called "heavy industries." In a sense, active capital exports have reflected the uncertainty of the political future of Taiwan. It has been recently recognized that Taiwan should promote infrastructure building to restructure domestic transportation and urban areas. If Taipei promotes this plan, the current account surplus in the balance of payments may significantly decrease.

Table 10.1 Major economic indicators of Northeast Asian countries

Country region	Population 1989 (mil)	Area 1000 km ²	GNO or GNP US\$ (bil)	GNP per capita US\$
Japan	123.0	360	2964.0	24097
S. Korea	42.8	99	238.0	5560
N. Korea	21.7	125	21.0	987
Mongolia	2.2	1565	1.7	776
Taiwan	20.2	36	161.7	8006
PRC		End 1989	1987 NI	NI/pop
Hebei province	58.0	190	8.48	149.8
Heilongjiang province	34.7	710	7.23	215.2
Jilin province	23.7	290	4.51	192.4
Liaoning province	38.2	230	10.72	286.0
Shan dong province	36.1	150	13.94	177.1
(Beijing)	10.8	18	4.47	457.0
(Tianjing)	8.4	11	3.52	428.8
(Neimenggu district)	20.9	400	2.73	132.8
(Shanghai)	12.6	6	8.98	722.7
Above total	243.40	2005	64.58	—
Russian Far East	2.95	6216	—	—
Khabarovsk	1.0	825	—	—
Primorye Krai	0.9	166	—	—
Amour province	0.2	364	—	—
Sakhalin province	0.2	87	—	—
Magadan province	0.2	1199	—	—
Kamchatka province	0.2	3103	—	—

Note: NI stands for national income. An exchange rate, RMB 5.28 per SDR for year average for 1987 was used to convert to dollar. Thus, the above national income and per capita income are nothing but proxy estimates.

Sources: Ogawa and Murakami (1991) and *RIM*, Vol. 1, no. 16, 1991 and Vol. 2, no. 17, 1992. *Statistical Yearbook of China, 1989*, for PRC's national income; Teikokushoin, *Chukajinmin Kyowakoku Chizusyu* (Map of PRC) (1979)

PATTERN OF INTERNATIONAL DIVISION OF LABOR

While the regional economies that have been defined above are geographically close in location, their economic contact had been limited until very recently. The market economies have developed very intensive trade among themselves, and South Korea and Taiwan pursued trade diversification to avoid concentration like that of Japan. Before the early 1970s the PRC had been relatively isolated, trading with

North Korea, Hong Kong, and Japan and thereby maintaining trade with market economies (Tables 10.2—10.5). Mongolia had kept closer economic and political ties with the former USSR. North Korea tried to balance its relations with the PRC and the former USSR, and its trade with market economies had been extremely limited.

Market economies in the region pursued global free trade. Their trade, thus, was not limited to the region. Although geographical proximity made the trade among themselves increasingly intensified. Nevertheless, North America and Western Europe have always been important trade partners. Japan developed its trade with the former and present socialist countries through the cyclical changes of entente and d*tente between two super powers, the trade volume being reduced when entente became heated. It is to be noted, however, that the majority of Japan's trade with the former USSR was controlled by central Moscow authority, and only a small portion was managed by the Russian Far East under the title of "Border Trade."

Since the trading system of Russia is still to be reformed, it is difficult to predict the future pattern of division of labor between Russia and others. We can project, however, a division of labor among market economies over that of Northeast Asia, assuming trade regulations will be substantially relaxed in the former and present socialist countries.

Japan already has lost its competitive advantage in labor-intensive industries, and many sectors based on standardized technology are following a similar course. Taiwan and South Korea have been catching up with Japan in standardized manufacturing sectors, and they, in turn, are losing competitiveness in labor-intensive sectors, as those are being taken over by the ASEAN countries, for instance. Among the so-called NIEs, South Korea has been oriented to heavy industries, with Taiwan to light industries. Such a development strategy affects the future demand for industrial raw materials, some of which may be supplied from neighboring countries. Demand for metal ores and mineral resources has been rapidly expanding in South Korea, whereas that in Japan is stagnant as processing industries have passed their peaks.

How will Mongolia, North Korea, the PRC's Northeast, and the Russian Far East provinces be incorporated into the market in the region? The case of Mongolia appears simple. It exports wool and some mineral resources. Because the labor supply is small, Mongolian exports can easily be absorbed by the neighbors. North Korea had been characterized as a heavy industry region, backed by its coal and metal ores, compared with South Korea at the end of World War II. Thus, it may follow the pattern of South Korea in its industrialization, namely heavy industry orientation.

The positions of the PRC and Russia appear more complicated as they have various provinces and districts in the region. As Table 10.1 shows, PRC is definitely endowed with abundant labor forces in all its provinces, yet lacking capital equipment. The Northeast provinces were formerly oriented to heavy industry, but this now applies to Liaoning and some part of Heilongjiang provinces. Except for large cities such as Beijing, Tianjing, and Dalian, most provinces are still based on agriculture. However, all neighbors except Taiwan are net importers of food stuff, agriculture in the PRC can enjoy a huge market in the region. As the PRC's exports concentrate on labor-intensive goods such as textiles, machine tools, and food stuff, the PRC will be

Table 10.2 Foreign trade of Hong Kong: by major partners in the region in US\$ billion

Exports of:	1983	1986	1989	Imports of:	1983	1986	1989
Japan	1.0	1.7	4.5	Japan	5.5	7.2	12.0
S. Korea	0.4	0.8	1.9	S. Korea	0.7	1.4	3.3
Hong Kong	—	—	—	Hong Kong	—	—	—
Taiwan	0.7	1.0	2.7	Taiwan	1.7	3.1	6.6
PRC	2.5	7.6	18.8	PRC	5.8	10.5	25.2
N. Korea	0.0	0.0	0.1	N. Korea	0.0	0.0	0.0
USSR	0.0	0.0	0.1	USSR	0.1	0.1	0.1
(U.S.	7.1	11.1	18.5	U.S.	2.6	3.0	5.9)
(Australia	0.5	0.7	1.3	Australia	0.4	0.5	0.7)

Source: IMF, Directions of Trade: 1990 issue for 1983—89. Part B. Country data of foreign trade; exports, f.o.b.; imports, c.i.f.

Table 10.3 Foreign trade of South Korea: by major partners in the region in US\$ billion

Exports of:	1983	1986	1989	Imports of:	1983	1986	1989
Japan	3.4	5.4	13.5	Japan	6.2	10.9	17.6
S. Korea	—	—	—	S. Korea	—	—	—
Hong Kong	0.8	1.7	3.5	Hong Kong	0.2	0.4	0.6
Taiwan	0.1	0.3	1.3	Taiwan	0.3	0.5	1.3
PRC	NR	NR	NR	PRC	NR	NR	NR
N. Korea	NR	NR	NR	N. Korea	NR	NR	NR
USSR	NR	NR	NR	USSR	NR	NR	NR
(U.S.)	8.3	13.9	21.0	U.S.	6.3	6.5	15.8)
(Australia)	0.3	0.5	1.0	Australia	1.0	1.1	2.3)

Notes: * Annual estimates based on first 6 months data. Note: NR—not reported.

Source: IMF, Directions of Trade: 1990 issue for 1983—89. Part B. Country data of foreign trade; exports, f.o.b.; imports, c.i.f

Table 10.4 Foreign trade of North Korea: by major partners in the region in US\$ billion

Exports of:	1983	1986	1989	Imports of:	1983	1986	1989
Japan	0.1	0.2	0.3	Japan	0.4	0.2	0.2
S. Korea	NR	NR	NR	S. Korea	NR	NR	NR
Hong Kong	0.0	0.0	0.0	Hong Kong	0.0	0.1	0.1
Taiwan	NR	NR	NR	Taiwan	NR	NR	NR
PRC	0.2	0.3	0.2	PRC	0.3	0.3	0.4
N. Korea	—	—	—	N. Korea	—	—	—
USSR	NR	NR	NR	USSR	NR	NR	NR
(U.S.)	0.0	0.0	0.0	U.S.	0.0	0.0	0.0
(Australia)	0.0	0.0	0.0	Australia	0.0	0.0	0.0

Notes: Most data are solely derived from trading partners' records. Note: NR—not reported.

Source: IMF, Directions of Trade: 1990 issue for 1983--89. Part B. Country data of foreign trade; exports, f.o.b.; imports, c.i.f.

Table 10.5 Foreign trade of former USSR: by major partners in the region in US\$ billion

Exports of:	Imports of:					
	1983	1986	1989	1983	1986	1989
Japan	1.3	1.8	2.7	3.1	3.5	3.4
S. Korea	NR	NR	NR	NR	NR	NR
Hong Kong	0.1	0.1	0.1	0.0	0.0	0.0
Taiwan	NR	NR	0.0	NR	NR	NR
PRC	0.4	1.3	1.8	0.4	1.4	1.9
N. Korea	NR	NR	NR	NR	NR	NR
USSR	—	—	—	NR	NR	NR
(U.S.)	0.3	0.6	0.7	2.2	1.4	4.7)
(Australia)	0.0	0.0	0.0	0.5	0.8	0.9)

Source: IMF, Directions of Trade: 1990 issue for 1983—89. Part B. Country data of foreign trade; exports, f.o.b.; imports, c.i.f.

Table 10.6 Foreign trade of PRC: by major partners in Northeast Asia in US\$ billion

Exports of:	1983	1986	1989	Imports of:	1983	1986	1989
Japan	4.5	5.1	8.2	Japan	5.5	12.5	11.1
S. Korea	NR	NR	NR	S. Korea	NR	NR	NR
Hong Kong	5.8	9.8	22.0	Hong Kong	1.7	5.6	13.8
Taiwan	NR	NR	NR	Taiwan	NR	NR	NR
PRC	—	—	—	PRC	—	—	—
N. Korea	0.3	0.3	0.4	N. Korea	0.3	0.3	0.2
USSR	0.3	1.2	1.7	USSR	0.4	1.5	1.9
(U.S.)	1.7	2.6	4.0	U.S.	2.8	4.7	6.9)
(Australia)	0.2	0.2	0.4	Australia	0.6	1.4	1.3)

Note: NR—not reported.

Source: IMF, Directions of Trade: 1990 issue for 1983—89. Part B. Country data of foreign trade; exports, f.o.b.; imports, c.i.f.

specialized in a similar line of products in the regional trade (see Table 10.6). To increase the production of their exportables, the PRC needs foreign capital and technology, but investment sources are limited. In reality, however, the PRC has siphoned off the surplus of Liaoning province, the PRC's largest heavy industry center, to transfer resources to less developed provinces.³

Trade between the PRC and the former USSR has been expanding since the time of the formal rapprochement of 1989, with the PRC exporting food and consumer goods and importing metal and machine products. The new trade and payment agreement, which was concluded in 1990, committed both countries to use hard currencies for the settlement of bilateral trade. Heilongjiang and Jilin provinces, on the other hand, have promoted "border trade" with the Far East Trade Authority of Russia.⁴ In order for the PRC to promote regional trade with more initiatives of the provinces, however, transportation and communication will have to be strengthened substantially.

The Russian Far East is scarcely populated and has always been less developed than other Russian provinces. Thus, the Far East has depended on resource transfer from Moscow to industrialize the region. The Russian Far East has a population only slightly larger than that of Mongolia. In contrast, in terms of area, the Russian Far East is larger than the PRC's Northeast region by 50 percent (see Table 10.1).

The natural resources endowed in the Russian Far East are: forests, fishery resources, and various mineral resources, including natural gas and oil. Infrastructure, however, is extremely poor. Thus, the former USSR had occasionally urged Japan invest in the region's lumber, oil, and natural gas. Japan, in fact, had invested in some projects, including the production of wood—pulp, coal, exploration of natural gas, and construction of a harbor. These undertakings were often suspended when the United States—USSR entente occasionally intensified. Although the Baikal—Amur railway started operations in 1989, infrastructure is still far short, and living conditions remain hard. Thus, it is essential for the Russian Far East to receive enormous investments from outside the region if it intends to pursue industrialization.

The present economic crisis of Russia as a whole has made the position of the Russian Far East more difficult since resource transfer from Moscow has become impossible. This is the reason for the Russian Far East must look for investment from Pacific countries. Vladivostok, was thus opened to foreign investment in January 1992. Uncertainty remains in respect to autonomy of provincial governments. Since labor is extremely scarce, the Russian Far East will have to specialize in resource development in a capital-intensive method, but capital must be imported.

To sum up, Russia will be able to export fishery, forestry, and mineral products and will have to import other consumer goods as well as capital equipment. Mongolia exports wool, wool products, and mineral resources and will import a line of products similar to Russian imports. North Korea may be able to grow in a more balanced manner as long as the public keep faithful to the present political leaders. North Korea has a locational advantage, although it is uncertain whether it will make full use of this advantage. The PRC has a variety of industries in the region. It can promote exports of agriculture goods, labor-intensive manufactures, and some natural resources.

South Korea can diversify its export markets, avoiding a concentration to Japan and the United States, and can import raw materials from neighboring countries. They have the skill to commercialize production, but a capital shortage may prevent full use of this skill. Taiwan has both capital and entrepreneurs to export, although political factors may work in its disfavor. Whether or not Taiwan can contribute significantly to the regional cooperation depends on the Taiwan—PRC relations and reactions of the neighbors to this complicated relation. Japan has capital, technology, and entrepreneurs to export, but “Northern Territory” issues hinder its active participation in cooperation toward Russia, especially if Moscow continues to keep its ambiguous stance.

Geographical proximity certainly favors the expansion of the regional trade, although the lack of infrastructure in the socialist and newly reformed market economies disfavors expansion. More important is institutional discrepancy between market and socialist economies. Construction of infrastructure requires enormous investment, whereas economic reforms cost less, although political cost for the decision makers may be enormous. This is a real challenge to the leaders of Russia, Mongolia, and North Korea. The PRC seems to have experimented with a more rapid economic reform than a political one in order to avoid chaos.

INDUSTRIAL COMPLEMENTATION AND FACTOR MOVEMENTS

If entrepreneurs can raise funds for investment which aims to serve the needs of neighboring countries, industrial complementation will proceed following the market forces. It is indispensable, however, that the regional trade is not disturbed by capricious regulations of the governments. The nations can potentially save significant transportation and communication costs by trading across the Sea of Japan (“Eastern Sea” in Korean), the Yellow Sea, and the East China Sea compared with trading across the Pacific Ocean and with Siberia. The reality frequently differs, however. Delays in delivery and communication, and sudden canceling often incur much greater cost than trading at a great geographical distance. This fact can never be over emphasized.⁵

On the premise that the governments prefer a favorable business climate, the regional cooperation to build transportation and communication facilities can be promoted as the first priority. As noted earlier, industrial infrastructure in the region is far from adequate, compared with the Pacific coastal areas. Therefore, it is essential to build harbors, railways and roads for the PRC, Russia, Mongolia, and North Korea to stimulate regional trade. It is in this context that the Tumen River development project has significance for regional cooperation. While three nations now seem to compete in making the project more favorable to their respective nations, the prospects of the project depend largely on the willingness of the nations to accommodate international business practices. Suppose the government of the host of such a project is reluctant to manage flexibly the industrial sites, then the advantage of the project will be at a minimum. This, in turn, will make potential investors hesitant to cooperate.

The central governments of socialist countries have often restricted exports of their products in the face of domestic shortage of supply at the time of a business boom. If such a case frequently happens, industrial complementation will be out of

the question, because importers will fall into a serious difficulty. In other words, a policy stance of "domestic supply first" and "export second," as a vent for the surplus, cannot be compatible with the industrial complementation concept. It is predicted that most socialist and new market economies will face a shortage of hard currencies in the foreseeable future, therefore, export promotion will be one of the most important strategies for these governments. It is not an exaggeration that a major aspect of the regional cooperation is for these countries to expand their exports.

In reality, however, the trade regimes of the former and present socialist countries have been less transparent. Enterprises have not been entitled to promote exports on their own accounts, although some reforms have been introduced in the PRC. In Russia, Moscow has directly controlled major trading items, leaving only a small portion to the regional trade organizations. North Korea has pursued almost an autarky strategy against market economies. Therefore, it will be indispensable for the countries in the region to promote consultations for facilitating the regional trade. In fact, the present conference seems one of such activities. It is recommended that the governments of the regional economies institutionalize a consultation machinery which consists of trade representatives of each nation. Let us call this the "Northeast Asian Council for Trade Promotion."

A problem arises in the cases of Russia and the PRC as to who will represent the country in the regional cooperation. Since Beijing is located in Northeast Asia, it may easily represent the PRC and the Northeast PRC, but Moscow is far away from this region. Since the governments of the Russian Far East provinces cannot undertake any significant jobs without the support of Moscow, the Council may have to receive two representatives from Russia, one from Moscow and the other from the Far East region, unless Moscow gives a considerably greater power to the provincial governments. As a large trading economy and capital supplier, a Taiwan representative is obviously needed, as it is a member of PECC, APEC and the Asian Development Bank.

A final remark on the regional trade. As the regional market is limited, it seems important not to build an exclusive scheme which discriminates against the outsiders. If producers wish to enjoy scale economy in production and development of any natural resources, it is reasonable for them to try to secure a stable and large market. The regional trade must compete with the global trade in order to improve efficiency. It should be emphasized that the regional trade can potentially enjoy a saving in transportation costs, which, in turn, will favor the regional trade, but this is potential, rather than actual, unless the regional governments make significant efforts to facilitate foreign trade.

Since some countries and provinces in the region lack capital, technology, and entrepreneurs, the regional trade will be limited if factor movements are restricted. Japan will be a large supplier of both capital and technology, and Taiwan follows with South Korea. Two large suppliers of capital face political problems: Northern Territory issues may prevent Japan from promoting large scale cooperation toward Russia, and the PRC—Taiwan relations may prevent for Taiwan from extending official assistance to the PRC. As a matter of fact, Taiwanese private investment in the PRC has grown so fast as to make Taipei feel uneasy (see Table 10.9). No doubt

South Korean investment (see Table 10.8) will increase. However, its current account surplus is still fragile, and its financial base for large-scale assistance is limited.

Suppose that barriers for goods, capital, and technology to move across national borders are removed. How significant are these effects? Capital will still be short to finance investment needs to expand production in the Russian Far East, Mongolia, and the PRC, even if technology is adequately supplied. This suggests that the region must be open to a wider region. On the side of demand for goods produced in these countries and regions, it will be desirable to have a larger market to secure a more stable demand. Thus, industrial complementarity, should not be considered in terms of a narrowly defined region.

A most important factor that changes the picture of the regional economies seems to be labor migration. Suppose Chinese workers, who are currently underemployed, emigrate either for short-term or long-term to the Russian Far East; then the population of the Russian Far East should reasonably increase so that industry development can be accelerated. Obviously freer exchanges of people, managers, and technicians can contribute to the transfer of knowhow and technology to activate industries of the former and present socialist economies. Labor migration in general, however, has a much greater impact on regional economies. What we explore is the possibility of acceptance and willingness for workers to move to the Russian Far East.⁶

One difficulty is that the Russian Far East reportedly provides poor housing even for the present residents and that natural conditions are extremely hard for people to accept.⁷ To some extent the living conditions in the Russian Far East of today reflect the past policy of the USSR which had allocated enormous resources to military equipments. Therefore, investment in the living environment lagged far behind. Economic difficulties of today's Russia, as a whole, certainly limit resource transfer from European Russia to Asian Russia. This is another unfavorable factor. If the Russian Far East obtains a high autonomy in policymaking, far greater than in the past, there is a possibility, however, that the region can develop much faster. At the least this possibility applies to the coastal sub-regions of the Southern regions.

Another alternative scenario is that workers move to market economies for better earning and living conditions, which actually takes place within the PRC, and between the PRC and Japan. Deregulation of labor migration in the PRC reportedly pulled workers from poor to wealthy regions, such as the Southern open provinces, coastal provinces, and Northeast industrial provinces. The number of illegal Chinese workers has increased drastically in Japan. An increasing number of Russian scholars, researchers, and other professionals has tended to migrate to Japan as well as to other Western industrial countries, running away from difficult living conditions in Moscow. All these phenomena may contribute to a better mutual understanding in the long run. Implications for industrial complementation with a more balanced regional development, however, are negative. Emigration of Russians of various professions with high skills will make it more difficult to reconstruct the home economy in the Russian Far East.

Therefore, a reasonable step for the Russian Far East would be to accept Chinese immigrants, either permanently or temporarily, to develop the region with importa-

Table 10.7 Japanese DFI by region and country; US\$ million and percent —
Value and percentage distribution in declared DFI —

Fiscal year	1987 flow	%	1988 flow	%	1989 flow	1951-89 Total		%
Oceania	1413	4.2	2669	5.7	4618	6.8	13933	5.5
(Australia)	1222	3.7	2413	5.1	4256	6.3	12394	4.9
ASEAN	1524	4.6	2713	5.8	4684	6.9	23356	9.2
Indonesian	545	1.6	586	1.2	631	0.9	10435	4.1
Singapore	494	1.5	747	1.6	1902	2.8	5715	2.3
Thailand	250	0.7	859	1.8	1276	1.9	3268	1.3
Malaysia	163	0.5	387	0.8	673	1.0	2507	1.0
Philippines	72	0.2	134	0.3	202	0.3	1322	0.5
Brunei	0	0.0	0	0.0	0	0.0	109	0.0
Asia NIEs	2086	6.3	2517	5.4	2998	2.8	8066	3.2
S. Korea	647	1.9	483	1.0	494	0.7	2285	0.9
China	1226	3.7	296	0.6	438	0.6	2474	1.0
India	21	0.1	24	0.1	18	0.0	166	0.1
Other Asia	11	0.0	19	0.0	100	0.1	264	0.1
Asia Total	4868	14.6	5569	11.8	8238	12.2	40465	15.9
North America	15357	46.0	22328	47.5	33902	50.2	108993	42.9
United States	14704	44.1	21701	46.2	32540	48.2	104400	41.1
Central and South America	4816	14.4	6427	13.7	5238	7.8	36855	14.5
Middle East	62	0.2	259	0.6	66	0.1	3404	1.3
Europe	6576	19.7	9116	19.4	14808	21.9	44972	17.7
(USSR)	1	0.0	9	0.0	19	0.0	223	0.1
Africa	272	0.8	653	1.4	671	1.0	5275	2.1
World Total	33364	100.0	47022	100.0	67540	100.0	253896	100.0

Source: Ministry of Finance, 1 June 1990.

tion of capital and technology from the market economies. Needless to say, exchanges of managers and technicians should be deregulated. The governments of regional countries should explore ways to assist such a movement, at the request of the governments that host labor immigration.

Another option for labor-scarce and resource-rich subregions may be to earn economic rent without pursuing industrialization. Resources in minerals, forestry, and fishery in the Russian Far East are the assets for which the subregion can enjoy rent revenues.

INDUSTRIAL COMPLEMENTATION AND ITS IMPACT ON INLAND AREAS

Suppose coastal subregions of each nation are more integrated into regional trade across the Sea of Japan, the Yellow Sea, and the East China Sea. Such a picture is not

Table 10.8 South Korean overseas investment by regions in US\$ million

	1968-84	1985	1986	1987	1988	1968-88	1989*
South East Asia	101.6	16.9	1.7	129.5	37.3	287.0	32.4
Middle East	32.0	9.4	72.7	68.8	7.2	190.1	21.1
North America	144.7	8.7	76.1	167.8	90.5	487.8	37.1
South America	56.2	2.8	2.3	44.9	9.6	115.8	17.3
Europe	10.3	0.7	5.5	6.7	18.5	41.7	6.2
Africa	18.7	6.6	0.7	0.2	1.2	27.4	5.2
Oceania	81.3	0.4	0.4	4.7	3.1	89.9	3.2
Total	444.7	31.5	157.2	332.7	153.1	1119.2	6.1

Source: Sung—Woong Hong & Chang—Ho Yim, "Foreign investment and economic development: The case of Korea," KRHS, Feb. 1991. Original source: Ministry of Finance, Korea.

Note: *For Jan.—April only.

Table 10.9 Taiwan and foreign investment in US\$ million, approval statistics

(i) Private foreign investment in Taiwan					
	Total	Overseas Chinese	Private foreign		
1952-1990	13251	1954	11298		
(ii) Overseas Chinese investment					
	Total	Hong Kong	Japan	Others	
1952-1990	1954	603	139	1211	
(iii) Private foreign investment					
	Total	U.S.A.	Japan	Europe	Others
1952-1990	11298	3292	3682	2011	2313

Note: (iii) gives country distribution of private foreign investment in Taiwan (i).

Source: Taiwan Statistical Data Book, 1991, Council for Economic Planning and Development, Republic of China.

rosy for all subregions in the participating countries. As happened in the PRC, more intensive links of foreign trade often caused conflicts of interests between coastal and inland regions. As external trade replaces internal trade in some cases, inland regions may be left to a stagnant situation. This depends on the cases, however. If an inland province produces raw materials which are manufactured in a coastal province, an expansion of external trade will spin off the trade benefits to the inland as well. If the coastal provinces switch their input goods to foreign ones however, the inland will be insulated from the developmental stimuli.

In fact, such a dilemma always exists for any country to develop the external trade of specific subregions. Even regional development within a country often incurs such an unbalanced growth. Therefore, the central government must prepare a land development design for achieving a geographically balanced development. In this context a subregional development plan is of essential importance. Since a budget constraint always exists, however, the government in question must place a priority on specific subregions in the regional development. The spillover of development should then be promoted through linking the subregional economies. Fortunately, development of natural resources and processing of them have positive impacts on the inland and coastal subregions.

Coastal development may be indispensable because most of the subregions in question are badly in need of foreign exchanges. If they lack so-called backward linkage, or an interconnection with upstream industries in the inland subregion, coastal subregions may become "enclaves." If the initial development of a coastal subregion links it with its inland subregions, a balanced development can start moving. Inland transportation which connects two subregions will be financed by the savings that coastal regions have accumulated at the early stages.

Naturally it takes time for a virtuous cycle to work. Tourism seems important for the new participants to regional trade to earn foreign exchange and should promote communication between domestic and foreign people which contributes to a better understanding. To be more modest, increasing the opportunities for people to meet, will hopefully, increase the confidence of people in starting bilateral businesses that can easily be expanded to multilateral ones. Interconnection of coastal and inland cities can be developed on such a modest scale at an early stage. Again, tourism helps to finance the construction of subregional transportation. In the meantime, entrepreneurs may find attractive areas where they expect to produce goods that are easily marketable in both neighboring countries and the world marketplace.

"Border trade" which has been developing among various countries in the region should not be neglected but stimulated. For Mongolia, trade with Russia and the PRC is of vital importance, although it may be less so to the latter two countries. The PRC—Russia border trade should be promoted by the two governments so that traders have more power to develop their trade on their own account. The same applies to the Japan—Russia border trade and the PRC—South Korea trade. So far, the present and former socialist countries have tended to limited the right of domestic producers to develop foreign trade on their own account. In some cases a socialist government has kept a specific bilateral trade at the lower level of "unofficial" trade for political reasons.⁸

One of the reasons that we emphasize the importance of "border trade" is that trade by small scale traders and manufacturers plays an important role in spinning off the development of regional interconnections of businesses. It is a mistake that government—to—government talks on industry cooperation often are limited to large scale-projects. This action may be more appealing politically, but it often ignores subregional linkages. Examples of failure are often found in big projects that ignore linkages with local economic environments and end up making enclaves of

OBA—memorial cooperation. While a “big push” is required in some cases, it is important to mobilize local resources as much as possible to turn an initial stimulus into sustained development thereafter.

Industrial complementation may be promoted by local governments. In fact, some prefectures in Japan such as Niigata, which has an advantage in having both an airport and a seaport to connect directly to the Russian Far East have already promoted exchanges of people. Small-scale investment has been promoted through such a channel. The Yellow Sea and Bohai Rim exchanges, which are now being explored by the governmental institutions of the PRC and South Korea, may also be more actively promoted by local governments, and the Chinese Provincial and Korean “Do” governments on respective sides. In this case, two central governments seem to have taken into account the positive effects on the development of the rim regions of respective countries.

Since those who benefit most are most eager to promote industrial cooperation, it is advantageous for the development of such a movement to give more power to local governments involved in the job. As a closer tie across national borders may replace or at least substitute that within a national subregion, a conflict of interest may occur between local and the central governments. Therefore, it is desirable for the central governments in the region to clarify what power they will delegate to the local governments, in order to avoid sudden changes in the national policy toward the specific region. This especially applies to Moscow, as it is remote from the Far Eastern parts of Russia.

All other central governments, including Ulan—Bator, Beijing, Pyongyang, Seoul, Tokyo, and Taipei, seem to easily take into consideration the regional reactions to specific changes of their own policies.

CONCLUDING REMARKS

If one tries to find a center of gravity of the Northeast Asian economies, by referring to Table 10.1, it may be found somewhere between South Korea, Japan, and Taiwan. Here we refer to the size of GNP or GDP and geographical distances to measure the center of the gravity. To be more specific, it will be found somewhere in the East China Sea, closer to the Kyushu region of Japan. In fact, both air and maritime traffic are heavy in this subregion, which reflect intensive economic activities among market economies. This suggests that a virtuous circle exists between trade and economic development. More trade implies better development of transportation and communication; faster development implies larger trade.⁹

Potentially, the center of gravity of the region may shift toward the West, depending on the economic development of the PRC, as its population is overwhelmingly large. For the next decade or so, however, the Northeast part of the PRC will still struggle with solving underemployment and the shortage of capital and infrastructure. Therefore, it appears that trade can develop more easily with the coastal regions, including the East China Sea, the Yellow Sea, and the Sea of Japan. To facilitate maritime communication would seem a most important cooperation for the regional economies, including not only construction of harbors and ships, but streamlining the administration of custom clearance.

Air routes are also important for faster communication and transportation of people in the region. As is well known, however, North—South confrontation in the Korean peninsula, though recently improved, still blocks the development of more efficient air routes. Because of this barrier, air transportation over Korean territory must take roundabout routes. Since the Korean peninsula is a key area for the region, becoming more so as the gravity center moves westward, it is imperative to establish friendly relations between North and South Korea. Otherwise, the concept of industrial complementation makes little sense.

Before one discusses industrial complementation, therefore, one must establish cooperative relations among the neighbors. Creating efficient and stable communication networks in the region is a test for the feasibility of industrial complementation. This would require more essential regional cooperation than does the Tumen River development project. If the Tumen River project is of some use, it seems that the North Korean government will hopefully realize the benefit of regional cooperation, in turn, will encourage Pyongyang to reduce the tension in the peninsula and to promote the exchange of people through a variety of communication channels. Creating efficient air routes is such an example, and facilitating maritime transportation is another.

As to specific forms of industrial cooperation, as this term fits better than industrial complementation at the present stage of regional relations, there are several forms: compensation trade through which investors purchase the products for repayment, OEM arrangements in which foreign producers and marketing agents provide capital and technology with specification of the products to be manufactured by the recipient country, joint-venture, 100 percent foreign-owned direct investment, etc. As the investment climate in newly reformed economies is as yet highly uncertain, it is too soon to expect to have significant foreign investment. Disorder in some regions must be overcome as quickly as possible and reliable business practices must be established. The lack of discipline and transparency will hinder any industrial cooperation.

NOTES

1. Kazuo Ogawa and Takashi Murakami in *Mezameru Soren Kyokuto (The Soviet Far East: Getting Up)* (Tokyo: Nihon Keizai Hyoronsha, 1991) provide detailed information about natural resources, population, and infrastructure of this region.
2. In late August 1992, Seoul and Beijing declared their normalization of diplomatic relations, with Beijing taking over Taipei's embassy in Seoul. Taipei promptly responded to Seoul by breaking all official relations. Taiwan's political status, thus, was forced to deteriorate.
3. In contrast, it is said that Heilongjiang provinces have been treated with special favor as a province of the northern frontier.
4. As the border trade reached 100 million rubles in 1988, exports plus imports, the scale is limited. Cf. Ogawa and Murakami, *op. cit.*
5. A survey of business complaints with respect to trade and investment between market and central planning economies shows that this is the most serious hindrance.
6. Mongolia seems to stand at a similar position, though less certain.
7. Cf., for instance, Ogawa and Murakami, *op. cit.*
8. This has been the case of the PRC—South Korea direct trade which has expanded rapidly. Since the bilateral relationship was established in August 1992, however, the situation has completely changed.
9. In fact, if one considers North American economies, the center of gravity may move to somewhere in the Eastern Pacific.