

NORTHEAST ASIAN ENERGY COOPERATION :
THE IRKUTSK PIPELINE PROJECT

Oct. 2004

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<ABSTRACT>

Northeast Asia is a cluster of countries with wide differences in political systems, stages of economic development, levels of technology, and natural resource endowments. In addition, infrastructures of national economies are mutually complementary: Japan and Korea have capital and technology on the one hand and Russia and China enjoy abundant resources and cheap labor. Yet many socio-political elements have so far barred active economic cooperation among Northeast Asian national economies from becoming a reality, such as, North Korean nuclear issues, different ideologies, unstable political systems, and anti-Japanese sentiments.

The Irkutsk Pipeline Projects can be a litmus test for the future economic cooperation in the region. Market forces in Russia, Japan, South Korea and China increasingly tend to jump national boundaries and to escape political control, seeking for economic profits, whereas socio-political factors have tendency to restrict and channel the economic activities. Thus, problems of the Irkutsk Pipeline Projects lie in how and where those positive and negative factors are reconciled.

<KEY WORDS>

political forces, market forces, securing energy sources, the Tumen River Development Project, UNDP, the Irkutsk Pipeline Projects, the China Line, the Far Eastern Line

I. ECONOMIC VITALITY OF THE REGION

The growth of the Asia-Pacific economies since the mid-1960's has rapidly elevated the significance of the region, particularly East Asia or the Western Pacific, as a center of world trade and economic activity. Japan's GNP at the beginning of the 1960's was less than 10 percent of the United States GNP; by the early 2000's it has risen to about 70 percent of that of the United States. In the early 1960's East Asia accounted for about 10 percent of world GNP, North America for 30 percent, and Western Europe for 31 percent.¹ About twenty years later, East Asian share had climbed to more than 15 percent, while North America's had fallen to 28 percent and Europe's to 27 percent. By the year 2000 East Asia accounts for about thirty percent of world GNP, with the whole Asian-Pacific region increasing its share to more than half of world GNP. Table 1 shows the economic vitality

Table 1: The Average Growth Rates (%)

of the selected national economies in the region.

In addition to these quantitative changes, there have been important

	1970-1979	1980-1989	1990-1999
China	5.6	10.0	10.2
Korea	8.8	9.0	5.4
Japan	4.6	3.9	1.0
Taiwan	10.0	8.2	2.3
Hongkong	9.0	6.8	3.1
World	3.9	3.0	2.3

alterations in the terms of trade (the balance of payments in foreign trade)

¹East Asia in general refers to nations like Japan, China, four NICs, and five ASEANs, while the Asian-Pacific region to those countries plus North America, Australia and New Zealand.

as well as the composition of trade (the nature of the exports and imports:

	Market	Resources	Capital	Capital goods	Tech.	Labor
USA	4	3	4	3	4	1
Japan	3	1	4	4	4	1
AUS, NZ	2	3	1	1	2	1
Korea	2	1	3	2	3	2
ASEAN	2	4	1	1	1	3
China	2	2	2	2	2	4
Russia	2	4	1	1	3	3

agricultural, mineral, manufactured, or industrial) in this region. The East Asian nations, particularly Japan, Taiwan, Korea and China have been very successful in penetrating the consumer markets of North America, with large surpluses in trading. And that consequently has aroused the economic frictions with the latter.

Steel	2	4	4	1	1	2	3
Machinery	3	4	2	1	1	2	3
Electronics	4	4	3	2	1	2	1
Services	4	3	2	1	1	1	1

Also, there emerged a new division of economic labor in this region. The English-speaking countries in the region, notably the U.S., Canada, Australia and New Zealand, have become suppliers of agricultural and

mineral products (wheat, soybeans, beef, lumber, tobacco, petroleum, iron ore, etc.), and the East Asian economies have come to act as providers of manufactured goods.² Table 2 and 3 show the current international division of the factors and sectors of production among the East Asian economies.

In short, the Asia-Pacific is rich in diversity. It is a collection of countries with wide differences in ethnic background, linguistic heritages, political systems, stages of development, levels of technology, and natural-resource endowments. Hence these countries could take advantages of this diversity to enhance cooperation, economic cooperation in particular, in developing the region.

	USA	Japan	Korea	ASEAN	CA,AUS & NZ	China	Russia
Agriculture	4	1	1	2	4	2	1
Resources	4	1	1	3	4	3	4
Textile	1	1	3	4	1	4	1
Intermediates							

Table 2: Division of the Factors of Production

* Numbers indicate degree of importance, from least 1 to most 4

²Steve Chan, *East Asian Dynamism: Growth, Order, and Security in the Pacific region* (Boulder: Westview Press, 1990), p.6.

Table 3: Sectoral Ranking of Comparative Advantages

Glass & Aluminum	4	1	2	2	3	1	2

* Numbers indicate degree of strength, from least 1 to most 4.

II. THE TUMEN RIVER BASIN DEVELOPMENT PROGRAM

There have been some thoughts for East Asian economic cooperation since the early 1980's; among others, Japan's idea of the "Pacific Commonwealth" and America's "Pacific Community." These initiatives, however, were unsuccessful mainly because of the lack of support from neighboring countries. It was largely due to the uncertain intentions of Japan and the U.S., and to the question of who should qualify for membership.³ Also, the international circumstances of the early 1980's were quite different from those of the 2000's.

The Korean initiative of the Asia-Pacific Economic Cooperation (APEC) has been active since the early 1990's, and many neighbors are paying attention to it.⁴ Yet one question still remains: to what extent can Korean political and economic capabilities make this initiative a reality? The United Nations Development Programme (UNDP) in the Tumen River basin provides an insightful lesson for the future regional economic development.

The possibility of developing the Tumen River basin was raised for the first time in July 1990 at the Changchun International Conference, which was co-hosted by the Asia-Pacific Research Institute of the Jilin Province of

³)Suzuki's Pacific Commonwealth excluded S. Korea and Taiwan in 1980 in order to draw Chinese participation. For details, see Euikon Kim, *Explaining Soviet-Japanese Relations, 1972-1985: the Global Superpower Rivalry vs. Domestic Politics* (Ph.d Dissertation, State Univ. of New York at Albany, 1988)

⁴)For details, see "Asia-Pacific Economic Cooperation Ministerial Meeting," Joint Statement, (Seoul, Ministry of Foreign Affairs) 12-14, November 1991.

China and the East-West Center of Hawaii. One year later, the UNDP Regional Bureau for Asia and the Pacific held a conference on Northeast Asian Regional Cooperation at Ulaanbaatar, Mongolia, and allowed priority to the development of the Tumen River delta area. An investigation team was formed, headed by Morris Miller, and was sent to North Korea, China and Russia for the local investigation.⁵

In October 1991 Meeting of Government Aid Coordinators (MAC) was held in Pyongyang. The UNDP distributed a mission report about the project to the representatives of South and North Korea, China, and Mongolia. The mission report suggested two alternatives. The first is to develop a "small delta zone," which connects Najin, Hunchun, and Posiet (about 1,000 Km²), and the second is a "large delta zone," including Chongjin, Yenchu, and Vladivostok (about 10,000 Km²).⁶

The MAC called for a Pre-investment Phase, from January 1992 to June 1993, to prepare details as well as research basis of the project. Also the MAC suggested the formation of national working groups and Programme Management Committee (PMC). Two months later, the UNDP allowed US\$825,000 for the promotion and further investigation of the project.⁷

Then, the first PMC meeting was held in February 1992 in Seoul. The PMC discussed some legal, financial and technical problems involved in the programme, and three working groups were organized. Each Working Group is responsible for programme activities in its area of expertise:⁸

WG 1 : Legal, Institutional, and Financial Matters

WG 2 : Macro-Economics and Trade

WG 3 : Infrastructure and Technical Feasibility

Official members of the first PMC meeting were South and North Korea, China, Mongolia, and Japan. Also Asian Development Bank participated as an observer.

⁵*South-North Exchange and Cooperation*, No.3 , Sept. 1-30, 1991, (Seoul, Ministry of Unification), p.23.

⁶*Tumen River Area Development Programme*, (Analysis for Unification 92-02), (Seoul, the Research Institute for National Unification), March 20, 1992, p.10.

⁷Kyu-Yoon Kim, "North Korean Economy and Development of the Tumen River Basin," *Journal of International Affairs*, July 1992, pp.41-42.

⁸UNDP, *Tumen River Area Programme*, PMC First Meeting, Agenda Item 2, Feb. 27-28, 1992, (Seoul, Ministry of Foreign Affairs), p.40.

The Second PMC meeting was held in April 1992 at Peking. The three WGs and UNDP advisers discussed more details of financial and operational strategies during the Pre-investment Phase. Strategies between March 1992 and September 1993 included feasibility studies, cooperative mechanism, environmental soundness, facilities and infrastructure, and financing and promotion.⁹

However, the North Korean clandestine efforts to develop nuclear weapons and her acrobatic maneuver vis-a-vis the IAEA and the World audience in 1992-1994 have virtually stopped further meetings and discussions about the Tumen River Basin Development Project. Since then, several PMC meetings were held only in vain. At present the Najin-Sunbong Area is a Free Trade Zone with a few of South Korean and Japanese companies.¹⁰

III. PROBLEMS OF THE TUMEN RIVER BASIN PROJECT

There were three fundamental problems embedded in the projects. The first is painfully obvious; North Korean stubbornness to develop the Weapons of Massive Destruction(WMD) including nuclear and bio-chemical weapons and intermediate- and long-range missiles. In February 25 1993 the IAEA took a resolution requiring a special inspection to nuclear-related facilities in North Korea and next month the Pyongyang government declared the withdrawal from the NPT. After the series of meetings and discussions between the U.S. and North Korea, the two countries signed the Geneva Agreement in 1994.

The second major problem involved in the projects was due to the fact that there had been no widely accepted plan for the project. Each country has its own strategies and outlines for the sake of its own interests. In the

⁹)Ibid, Second Working Group Meeting, April 28-30, 1992, Peking, Draft Agenda, pp.6-8.

¹⁰) It is known that currently there are about 30 S. Korean and Japanese companies operating in Najin-Sunbong Free Trade Area.

first place, China had been the most active for the project. She had set as the target, for the development of the three Northeastern Provinces of China, which would eventually play an important role for the vitalization of its economy. The Jilin government, among others, wanted to develop the Hunchun-Fengtian region through the construction of a port, enabling cargo ships to sail to the East Sea (Japan Sea). (To do so, the river bed should be deepened and the river bank widened.) Then she expected to export abundant agricultural products and natural resources to Japan and the U.S., and to attract Japanese and South Korean investments.¹¹ It was estimated that US\$1.6 billion would be needed for the project.)

Second, unlike the Chinese plan, the North Korean plan for the project was not fully elaborated upon and was short of detailed investigations.¹² The North Koreans stressed the significance of cooperation among neighboring countries and point that the Chinese plan was uneconomic and too expensive. Instead, they had a plan for the establishment of a Free Economic Trade Area (FETA) in Sunbong or Najin. The Pyongyang government stressed the reconstruction of the already-existing Sunbong port, and its expansion if necessary, and the building railroads and highways to Chungjin.

Further, North Korea emphasized the advantages of its plan over the Tumen River basin plan; (1)Sunbong and Chungjin ports remain unfrozen in winter, (2)there are no sand deposits, and (3)there is no flooding in summer.¹³

Thirdly, Mongolia basically welcomed the project and yet her position was rather passive. Although Mongolia was positive about the development of the Tumen River basin, she favored the Ulanbaatar-Port Arthur line development project. It was largely because Ulaanbaatar is about 800 Kilometers (500 miles) away from Port Arthur in the Yellow Sea whereas it is 950 Kilometers away from Hunchun. Further, if the existing transportation *Democratic People's Republic of Korea*, (Pyongyang, Committee for External Economic Cooperation), April, 1992.

¹³Ibid., and *South-North Economic Exchange and Cooperation*, op. cit., pp.19-20.

system (mainly railroad) is used, it takes twice as much time as to go to

Country	Policy goals
Japan	Eurasia Land-bridge Provide a momentum for its sluggish economy Expand its influence on the region
Korea	Solve N. Korean nuclear issues Open and develop N. Korean society Reunification
China	Attract foreign and capital technology Export agricultural products Gain access to East Sea
North Korea	Short-term economic interests Attract foreign capital and technology Vitalize its economy
Russia	Convert heavy industry to consumer industry Vitalize the Far Eastern District's economy Develop and modernize its freezing ports
Mongolia	Export natural resources Attract foreign capital and technology Gain access to East Sea (or Yellow Sea)

Hunchun than to go to Port Arthur.

The Ulaanbaatar government would like to exploit and sell its rich natural resources. It is estimated that in Tavantolgoi area alone, almost 5 billion tons of coal are on reserve.¹⁴ Also, other materials and minerals are there, awaiting development and foreign purchasers.

Fourth, Russia like the other countries realized the necessity of regional cooperation and assistance for the development of its Far Eastern District. Most of the factories in this district are military- related, and less than half of them at present were known to be in operation due to the curtailment of defense expenditure in 1991. Therefore, Russia was eager to transform its military-related heavy industries into consumer-oriented light

¹⁴)Ibid., pp.22-23.

industries. In this sense, the Russian Federation favored the projects of individual development of each country rather than that of cooperative development in a jointly designated area.¹⁵

Fifth, Japan certainly agreed with the basic principles and necessity of the projects. Among other things, by participating in the development projects of the region, she expected to accomplish her long-desired "Eurasia Land-bridge Project," which would connect Japan to the Asian mainland and Europe with land roads. This Eurasia Land-bridge makes possible a trip from Niigata to Hamburg, Germany, through Chungjin, North Korea, in two weeks, which is half of the time made by sea roads through the Suez Canal.¹⁶ Besides, her participation into the projects would provide a momentum to cure her sluggish economy.

Also Japanese participation in the project would create other positive externalities, particularly the expansion of her political as well as economic leadership in this region. Once major investment and a certain amount of technological transfer is made, Japan stands to exert a considerable degree of leverage on the respective national economies as well as in regional politics. This obviously would furnish Tokyo with political and economic

leadership in Northeast Asia.

However, Japan's participation to the project was not without its problems. Among others, the North Korean nuclear issue as well as bio-chemical weapons and the amount of Japanese compensation to Pyongyang had not been settled. The linkage of these two issues simply compounded the problems. Thus, as long as North Korea did not give up its nuclear plan, it

¹⁵Ibid., p.22.

¹⁶Watanabe Toshio, "North Korean Development of the Tumen River Basin," a paper presented in the "International Conference on the Tumen River Basin" between May 2 and 3, 1992 at Pyongyang. Cited from *Choongang Ilbo*, May 23, 1992.

was unlikely that Japan would actively participate the Tumen river basin development in the near future.¹⁷

Finally, the South Korean position on the project was needless to say. She welcomed the idea not only because it would ripen the circumstance, and provide opportunities, for the solution of the Nuclear stalemate and for economic cooperation with the North, which would eventually open North Korean society and promote reunification. Seoul was very positive about the project also because it could help expand its export and import market, and revitalize its staggering economy. Thus, South Korea would be a primary actor initiating the regional economic cooperation, particularly with North Korea. In other words, Seoul's interests in the Tumen River basin development seemed to be mobilized in multilateral as well as bilateral contexts.

The last, but not the least problem, was how to finance the projects. The flow of international finance has not been smooth for the past decade, largely because of the collapse of the USSR, the reunification of Germany and Japan's staggering economy. The key financial source for the projects would be Japan and Korea, but Japan has dramatically increased her investments to China which has provided favorable conditions for foreign investments in various free trade areas. Also, Japan has been extremely

Table 4: Each Country's Goals in the Project

concerned about North Korean nuclearization. Thus, it was very doubtful that Japan would actively initiate the projects in the future.

The Korean government certainly had the will and capability to finance the projects until the mid 1990's. But the financial crisis of 1997 and social disharmony out of the restructuring processes afterwards put the Tumen projects in a low rank of priority for Seoul government.

¹⁷)Ibid.

IV. THE IRKUTSK PIPELINE PROJECTS

The rapid development of national economies of the region from the 1990's, dramatically increased their energy consumption and, thus energy demand, at the same time. Among World primary energy demand in 1971 the developing countries' share was 13 % (69 % in OECD) and it's share went up sharply to 30 % (58 % in OECD) in 2000. And it is estimated to go up to 43 % (37 % in OECD) in 2030. 62 % of the increase in world demand between 2000 and 2030 comes from developing countries, especially in Asia.¹⁸ According to *History: International Energy Agency 2001*, the demand of oil and natural gas in the APEC region between 1999 and 2010 will increase at the rate of 124.7 % and 135.4 % respectively. Also they will be 123.2 % and 126.9 % between 2010 and 2020.¹⁹

Table 5. Primary Energy Demand in the APEC(1999-2020)(Mton)

Year (%)	Coal	Oil	Natural Gas	Total
1999	1,540	2,023	1,135	5,659
2010	1,905 (23.7)	2,522 (24.7)	1,537 (35.4)	7,074 (25.0)
2020	2,402 (26.1)	3,106 (23.2)	1,951 (26.9)	8,777 (24.1)

)

Source: *History: International Energy Agency* (2001)

In the period of 1990 to 1997, the increasing amount of oil consumption of the World was 700 million barrels a day, 83 percent of which was the Northeast Asian share. Especially the oil consumption of China,

¹⁸) *World Energy Outlook 2002* (IMF)

¹⁹) *History: International Energy Agency* (2001)

Korea, Thailand and India multiplied and they consumed almost 70 % of the total oil used in the region in the year of 2000.²⁰ The Northeast asian dependence of its oil import upon the Middle East rose up to 10.6 million barrels a day in 2001 and it was 76 percent of its total import. Table 6 illustrates the amounts of energy resources awaiting to be exploited in Northeast Asian countries.

Especially for China among many of the petroleum-producing countries there is an increasing need of securing the sources and amount of energy import as its economy keeps developing to the extent to which has turned China into an oil-importing country from an oil-exporting country. China is at present the fifth largest petroleum-producing country and the 20th largest natural gas-producing country in the World.²¹

Table 6. Energy Resources Conserved in Northeast Asia

	Coal (mil. ton)	Oil (mil. ton)	Natural Gas (10m ³)

Source: *Northeast Asian Energy Cooperation* (Seoul: Korea Energy Economics Institute, KEEI, 2002), p.95

²⁰) Joon-bum Lee, "The Recent Oil Supply of the Asian-Pacific Region," *Weekly Oil News* (the Korean Petroleum Corporation), May 25, 2001, pp. 2-3.

²¹) The current Chinese consumption of natural gas out of the total energy consumption amounts only 2.5% in 2002, but it is estimated to rise 11-12% in 2020. "Analysis of Major International Problems," (Seoul, Institute of Foreign Affairs and Security), April 2, 2003, p. 3.

On the other hand, Russia, the largest oil exporting country in the world, also needs increase the amount of its oil exportation particularly to Northeast Asia for the hard currency earning. Out of the total energy production of Russia 78% of petroleum and 87% of gas are exploited in the west Siberia. Therefore Russian energy producers such as Ukos and Gazprom as well as Russian politicians eager to exploit the energy resources in the east Siberia, expanding their markets to Japan, China and Korea and to develop the east Siberia and the Far Eastern District.²²

In 1999 the Primers of both China and Russia signed a contract on the construction of pipeline from Angarsk, Russia to Daqing, China. It is estimated about 2.9 billion US Dollars to build a 2,400 km long (1,500 miles) pipeline. Since then, the Chinese National Petroleum Corporation (CNPC) and Ukos from Russia have been discussing the details of the project. The CNPC expects to complete the construction of the pipe line in 2005 and to receive 400,000 to 500,000 barrels of oil a day from Russia.²³

The Tokyo government, the world second largest oil consuming country relying its 97 % of oil import on the Middle East, wants badly to multiply the sources of origin of its oil importation, thus wanting her own pipe line directly from Angarsk. She suggested in January 2003 that if Moscow would build a pipeline from Angarsk to Nahodka, which is about 4,000km (2,500 mile) long, she would fund the total cost of 5.8 billion US Dollars. If this project is successfully carried out, Japan could receive about 1 million barrels of oil a day from Russia from the year of 2009.²⁴

Both China and Japan, along with Russian oil companies like Rucoil and Yucoz and Trans-Neft (a pipe-producing company of Russia), inserted a great amount of pressure and carried strong lobbies into the top Russian decision makers in order to make their project be materialized. The Russian government fell into a dilemma; she simply could not make a decision between the China Line (to Daqing) or the Far Eastern Line (to Nahodka). Finally Mikhail Kasiyanov, Russian Primer announced in April 14, 2003 that

²²) Ibid., p. 2.

²³) *Chosun Ilbo*, March 14, 2003.

²⁴) Ibid.

Russia would build both of the China Line and the Far Eastern Line.²⁵ The, so-called, Y shape pipe lines set out from Angarsk and reaches either Chito or Zabaikalsk and then, from there the pipe line splits to Daqing and Nahodka. With this decision Russia could catch two birds with one stone throwing. She could obviously satisfy both Beijing and Tokyo and at the same time increase the amount of its exportation of oil. Particularly with the Far Eastern Line Russia could be able to multiply its oil exportation destination to Korea and possibly the United States in addition to Japan.

However, Russian Primer Kasyanov denied his earlier decision on the 30th of May, 2003. He declared the final decision that Russia would build the so-called the China line, from Angarsk to Daqing and that unlike the initial plan the pipeline would detour through north of the Baikal Lake for the future construction of the Far Eastern Line.²⁶

Korea seems to be invited to participate to either both or one of the two pipeline projects. It is largely because of the tremendous costs of construction required for China and Japan. With the completion of the pipeline projects, South Korea can not only secure a stable oil supply from Siberia but also enhance the regional energy cooperation with Russia, China and Japan.

Nonetheless, the top decision makers in Seoul seem to be more interested in the exploitation of natural gas in Irkutsk and construction of a gas line to South Korea via North Korea. It would certainly meet the growing demand of natural gas within South Korea and at the same time help the energy shortage in North Korea. This also will eventually help ease the tension between the two Koreas.

In the year of 2001 the Korean consumption of natural gas reached 11.7 % out of its total energy usage and it is expected to rise to 13.5 % in 2020. The Korean demand of natural gas in 2001 was 15,587,000 ton and is estimated to increase 4.3 % average every year reaching 28,240,000 ton in 2015. Experts predict that the shortage of natural gas supply in 2015 would be 17,050,000 ton.²⁷

²⁵) Ibid, March 15, 2003.

²⁶) Ibid, May 31, 2003.

²⁷) "Analysis of Major International Problems," op. cit., p. 4.

The Korean Organization of Gas Agency(KOGA) and 8 other Korean companies set out the research and validity of the Irkutsk gas development project from 1995 with the Chinese and Russian Governments. The so-called Irkutsk Gas-line Project was originally planned to construct a pipe line starting from Irkutsk, Russia, to South Korea through Mongolia and North Korea. However, it is known that with the strong Chinese opposition the plan was changed: Irkutsk - Harbin - Shenyang - Dandong - Pyongyang - South Korea.²⁸ The total length of the gas line would be ranged between 4,000 to 4,800 km (2,500 to 3,000 miles) and it would cost about 6 to 9 billion US Dollars. If the projects be completed in 2008 - 2010, South Korea would receive 7 million ton of gas every year for 30 years to come.

V. FUTURE PROBLEMS OF THE IRKUTSK PIPELINE PROJECTS

As clearly shown from the experience of the Tumen River Basin Project, in the realm of political economy the political forces tend to regulate and channel and sometimes limit the activities of the economic forces, trying to secure the vested interests of the privileged classes. On the contrary the economic forces always try to expand markets regardless different ideologies and political systems, and increasingly ignore the national boundaries seeking for economic profits. However it is a painful truth that the political forces in most cases outweigh the economic forces.

The Irkutsk Pipe-line Projects are obviously not immune to this theory. In this sense there seem to be three major tasks for the decision makers in Northeast Asian economies in order to make the Projects be materialized. The first and most fundamental problem to be solved is how to link the issue of energy cooperation with the whole Northeast Asian peace structure. One has to answer to the question whether the Irkutsk Projects would increase the sensitivity of bilateral as well as multilateral cooperation within the region

²⁸) Ibid.

or not. In other words, does the energy cooperation enhance the feasibility of building a peace structure within Northeast Asia? Or without any peace structure in the region (or without at least certain measure of confidence-building) is energy cooperation possible? To begin with, leaders of the region should provide an institutional framework in order to cope with, among other things, Japanese ambition to be a regional military champion and North Korean acrobatic maneuver with the WMD.

The second task is how to institutionalize the regional cooperation in multi-lateral level. There are four levels to be considered; Linkage strategy with the Trans-Siberian Railroad, Trans-Korean Railroad and Trans-Chinese Railroad, Institutionalization of the energy cooperation, Bilateral and multilateral cooperation in other fields among the regional economies, and Compliance with universal principles and International laws.

The last but not least task to be dealt with is to strengthen the linkage with International Financial Organizations. Since the Irkutsk Pipe-line Projects require the extremely high amount of money, they need help from the IMF, World Bank, and ADB. Perhaps it is time to discuss the establishment of Northeast Asian Development Bank with the U.S. and EU.

VI. IN LIEU OF CONCLUSION

The development projects of the Tumen river basin as well as the Irkutsk pipe-line projects for East Asian economies are economically very attractive and yet politically complicated. On the one hand are positive factors promoting regional economic cooperation (e.g., mutual benefits, securing the energy sources, and political detente), and on the other are negative factors restricting and controlling the projects (e.g., North Korean nuclear issues and different ideologies).

Practically, in this region there are dynamic economies with capital and technology, seeking for rich natural resources and abundant cheap labor. Without any restraints, these market forces would expand and flourish.

However, there are political forces restricting regional economic cooperation; different polities, instability of political systems, anti-Japanese sentiments, etc.

In conclusion, the Irkutsk Pipeline Projects can be a litmus test for the future economic cooperation in the region. Market forces in Russia, Japan, South Korea and China increasingly tend to jump national boundaries and to escape political control, seeking for economic benefits, whereas socio-political factors have tendency to restrict and channel the economic activities. Thus, problems of the Irkutsk Pipe-line Projects lie in how and where those positive and negative factors are reconciled. In other words the economic cooperation in the region can be possible insofar as the economic forces are strong enough to the extent to which the political forces no more undermine the projects. To do so, some creative roles of the political elites are required at the same time when the economic elites start discussions for the projects.