

Political Economy Of De-Nuclearizing North Korea

Yoon-Shik Park, Ph.D.
George Washington University

Introduction

In July 2005, the 4th round of the Six-party talks on the North Korean nuclear weapons program finally resumed in Beijing, China, but no one can tell the outcome of the talks that are intended to verifiably dismantle the nuclear weapons program of North Korea. It is difficult at this stage for outsiders to know why the North Korean regime reversed its previous insistence that it had chosen to become a nuclear power and would no longer bargain over it. However, it is clear that any breakthrough at the talks will be critically connected to both massive economic aid and security guarantees from the West. Without outside assistance, North Korea has no hope of achieving economic development and overcoming widespread economic hardship. Furthermore, North Korean de-nuclearization is important to the South Korean economy as well. Many foreign investors are understandably reluctant to commit their funds in South Korea as long as there is the specter of a North Korean nuclear threat. In late July 2005, for example, Fitch rating service pointed out the North Korean security issue as the most important reason not to upgrade South Korea's credit rating. Around the same time, Standard & Poor's decided to upgrade South Korean credit rating by a notch due to the resumption of the long-stalemated Six-party talks.

The desperate state of the North Korean economy has been well documented and widely reported.¹ In rebuilding its economy, the country faces perhaps one of the biggest challenges in securing a vast amount of needed investment capital from abroad, especially in the critical area of infrastructure development and modernization. For example, poor infrastructure accounts for the unusually high transport costs in North Korea, where the cost of transporting a 20-foot container from Incheon in South Korea to Nampo in North Korea is four

times higher than the cost of shipping the same container to China. Any meaningful economic development of North Korea requires huge sums of investment capital, especially the external capital in convertible foreign currencies in order to procure essential capital equipment and modern technology.

However, infrastructure development of North Korea can also contribute to closer economic cooperation among all Northeast Asian countries and more strengthened competitiveness of these countries in the world economy. For example, if the railway link between South and North Korea is successfully established to resurrect the Trans-Korean Railway (TKR), the two-way freight traffic between Japan and China can benefit from much lower transport costs than the existing sea or air transport modes. Similarly, if the TKR is connected to the Trans-Siberian Railway (TSR), both Korean and Japanese exporters to Europe will be able to reduce their transportation costs significantly, thereby enhancing their European trade competitiveness. At the same time, North Korea can earn substantial foreign exchanges from charging the user fees on both Japanese and South Korean shippers for using its own railways in the TKR grid.

Macro-economic Conditions of North Korea

The Bank of Korea estimates that the North Korean economy achieved a real growth rate of 2.2% in 2004 with its GDP at \$20.8 billion, compared to 1.8% in 2003.² The North Korean GDP in 2004 was equivalent to about 3% that of South Korea, while its per capita income at \$914 was about 1/16th that of South Korea in 2004. After experiencing a negative growth rate from 1990 through 1998, the North Korean economy achieved a real growth rate of 6.2% in 1999 and since then it has experienced a modest growth rate of 1.3% in 2000, 3.7% in 2001 and 1.2% in 2002.³ The foreign trade volume of South Korea in 2004, which amounted to \$478.3 billion, was 167 times that of North Korea, estimated at \$2.86 billion. In 2003, the comparable figure for South Korea was 156 times that of North Korea.

In recent years, the widespread shortage of energy and raw materials in North Korea has hampered the growth of the manufacturing, mining, electricity, gas, water, and government service sectors, which make up a large portion of the North

Korean economy. Especially since the Korean Peninsula Energy Development Organization (KEDO) cut off its crude oil supply over North Korea's highly enriched uranium nuclear weapons program, the decline in industrial and other economic activities has been pronounced due to severe energy shortages. In the meantime, North Korea's Economic Reform, launched on July 1, 2002, has largely failed to achieve the desired increase in the economic efficiency because of chronic shortages of materials and the deterioration of the conditions for foreign economic cooperation due to the North Korean nuclear crisis. If anything, the July 2000 reform measure led to hyper price inflation in many consumer goods. For example, the average price of rice in North Korea is estimated to have skyrocketed by 17 times since the introduction of the reform measures. However, the measures have served to raise the level of motivation in North Korean firms, workers, and citizens, invigorating the labor-intensive light industry and commercial distribution sectors.

The July 2002 economic policy change was touted by a major North Korean official newspaper as "the biggest reform measures taken by the government since the land reform of 1946."⁴ However, there are conflicting views and speculations among North Korean experts in the West over its true nature. First of all, there is controversy as to whether the reform measures have enough substance to bring fundamental changes to North Korea's rigid economic system. Some observers believe that the economic policy changes are substantial enough to signify the beginning of reform toward a market-oriented economy similar to that of China. Others view the reform measures not as replacement for the previous system but merely as a means for North Korea to strengthen its existing socialist economic system. North Korea's decision to introduce the incentive system, which is aimed at increasing economic productivity and output, raises some hope that its leadership may try to emulate China's successful socialist market economy. Whether the reform measures could lead to an investment-friendly environment that can, like China, attract foreign direct investments from South Korea and other countries depends ultimately upon the resolution of the North Korean nuclear issue. Once the North Korean nuclear issue is successfully resolved, the most important next

step for its economy is to strengthen the critically weak infrastructure. Here, the role of international capital is paramount given the scarcity of both capital and technical expertise in North Korea.

Potential Sources of International Investment Capital

Successful infrastructure development requires enormous sums of capital, especially foreign capital. There is a general agreement among experts that North Korea needs a large sum of investment capital to resurrect its battered economy. While the precise number is extremely difficult to project by its very nature, experts have come up with the estimates ranging anywhere from \$50 billion to \$670 billion as the potential total cost for the North-South unification, based upon the German unification experience where the new unified German government expended annually a sum equivalent to about 5-6 percent of the German GDP.⁵

Broadly, we can think of five potential sources of external capital for infrastructure development in North Korea: international financial institutions (IFIs), bilateral donor agencies, private international capital markets, international bank loans, and foreign direct investments (FDIs). These sources of funds can act singly or collaboratively in providing funds for infrastructure development in North Korea. For example, both IFIs and bilateral donor sources can work together through international trust funds, as in the case of the Trust Fund for Gaza and West Bank to support Palestine, where the funds came from IFIs such as the World Bank as well as from other donor countries directly. Similar arrangements have been made for financial assistance to Kosovo, East Timor, and Bosnia.

External development financing sources can vary among countries depending upon a country's development stage, its external credit rating, and its degree of access to international financing sources. Among the four countries of Northeast Asia, Japan has been generally a capital export country during the past several decades due to its huge current account surpluses accumulated over the years, resulting in the largest foreign exchange reserve holder in the world. China has enjoyed in recent years its status as the largest recipient of foreign direct

investments among all the developing countries of the world, and it also has been highly active in tapping both international capital markets and IFIs for long-term development financing. South Korea has mainly relied upon international capital markets for long-term financing, even though foreign direct investments have also played an increasingly important role in recent several years after the 1997 financial crisis. Like Japan, South Korea has graduated from the IFI financing due to its high per capita income, except for the temporary reliance on IFIs in the immediate aftermath of the 1997 financial crisis, but such financing was more for macroeconomic objectives rather than for financing development projects. North Korea, on the other hand, has been relatively isolated from international financing sources up until now due to its deliberate *juche* (self reliance) policy.

International Economic Relations

After the division of the Korean peninsula in 1945, North Korea implemented a Stalinist model of centralized economic management. The regime also adopted *juche* to justify non-alignment with either China or Soviet Union, and the economic application of the *juche* policy meant the emphasis on economic self sufficiency and independence, even though *juche* never precluded foreign trade and foreign procurement of essential food, fuel and technology that could not be produced domestically. Before 1991, North Korea's foreign trade was almost exclusively with China and within the Socialist trade grouping, the Council for Mutual Economic Assistance (COMECON), although it was not officially a member. Both were subsidized barter networks, to which North Korea's main exports were coal, minerals and low-quality semi-processed good. In exchange, it received higher-quality consumer products, energy and food.

COMECON was dissolved in 1991 after the breakup of the Soviet Union, which also meant the end of Soviet subsidies. China ended subsidized and barter trade in 1993 and started demanding hard currency. Consequently, North Korea's foreign trade volume fell from \$4.7 billion in 1990 to \$1.4 billion in 1998. In 1998, North Korea started to explore new markets and new trading relationships. It started diplomatic relations with several European nations and improved its relationships with China,

Russia and South Korea. By 2003, it had successfully increased total trade volume to \$2.3 billion, with China, South Korea and Japan together accounting for almost two-thirds of the volume, and Thailand, India and Russia most of the remainder.

Table 1: Trends in North Korea's Trade
 (in \$100 million)

	1980	1990	1995	1998	2000	2001	2002	2003
Export	15.7	19.6	7.4	5.6	5.6	6.5	7.3	9.1
Import	18.8	27.6	13.1	8.8	14.1	16.2	15.3	14.3
Total	34.5	47.2	20.5	14.4	19.7	22.7	22.6	23.4

Source: KIEP, *North Korea Development Report 2003/4*, Seoul, Korea, 2004.

North Korea has also been accused of widespread illicit trade in the West. A number of North Koreans have been apprehended abroad trafficking narcotics, arms and missiles, counterfeit U.S. currency, and fencing duty free cigarettes, cars, perfume and liquor imported through their embassies. The U.S. government claimed that "it is likely, though not certain, that the North Korean government sponsors such illegal behavior as a way to earn foreign currency for the state and for its leaders."⁶ Experts estimate that weapons sales alone might bring in between \$100 million and \$500 million per year and that much of the proceeds from illicit weapons and drug trade goes directly to the military, not the government.

Since the introduction of economic reform measures in 2002, North Korean enterprises have been actively seeking foreign investments. The country offers some attractive opportunities in the mining and mineral sectors and processing-on-commission trade. Once the nuclear issue is resolved satisfactorily, foreign investors are likely to be attracted by a low-wage, highly educated and motivated workforce, an improving legal environment, attractive tax breaks and business counterparts eager to do business. At first, the most likely foreign investors are Chinese businesses, as they benefit from the close political relations between the two countries. The next group of foreign investors would be South Korean businesses, although any large

inflows of investment capital from South Korea may have to wait for the resolution of the North Korean nuclear crisis.

Inter-Korean Economic Cooperation

Until the North Korean nuclear issue is fully resolved, it is difficult to envision a large-scale international economic cooperation and assistance that will be crucial to the take-off of the moribund North Korean economy. If the nuclear crisis grows worse, it may well become necessary for the international community to move in the opposite direction of economic sanctions as the only measure short of the use of force in order to persuade North Korea to reverse its course. While the process of resolving the North Korean nuclear crisis is moving along through the rejuvenated Six-party talks being held in Beijing, there has been a consistent and substantive dialogue and cooperation between North and South Korea as part of the deliberate South Korean attempts to encourage North Korea to resolve the crisis through multilateral dialogues instead of confrontations.

Inter-Korean economic cooperation was officially launched in 1988. Such cooperation was intensified since 1998 under the Sunshine Policy adopted by the Kim Dae-jung administration, which was able to stage a historic summit meeting in June 2000 between the two Koreas. Trade volume between South and North Korea has shown remarkable growth in the past 17 years. The total trade volume has increased by 36 times from \$19 million in 1989 to \$697 million in 2004. South Korea is now the North's second-largest trading partner following China, and North Korea enjoys a large trade surplus vis-à-vis South Korea. Since 2000, South Korea has also provided North Korea with 500,000 tons of food and 300,000 tons of fertilizer annually, which have helped relieve food shortages in North Korea.

After a year's stalemate since July 2004, inter-Korean relations have been restored following the June 2005 meeting between North Korean leader Kim Jong-il and South Korean unification minister Chung Dong-young in Pyongyang. At the 10th Meeting of the Inter-Korean Economic Cooperation Promotion Committee, held in early July 2005 in Seoul, the two Koreas agreed to combine their economic resources such as raw

materials, capital and technology in pursuing mutually beneficial economic cooperation.

Table 2: Inter-Korean Economic Cooperation
(\$ million)

	2000	2001	2002	2003	2004
Inter-Korean trade volume	425	403	642	724	697
Government aid to North	79	70	84	87	115
Civilian aid to North	35	65	51	71	141
Number of visitors to North	7,280	8,551	12,825	15,280	26,213

*Excluding tourists to Geumgangsan Mountain in North Korea.

Source: Rhee Bong-jo, "Inter-Korean Economic Cooperation: Current Status and Future Tasks," *Korea Policy Review*, August 2005.

The investment in North Korea by South Korean businesses has been relatively modest, however, with the total outstanding investment at only \$50 million, excluding the investment by Hyundai Asan in the Geumgangsan tourism project. In contrast, several major inter-Korean economic cooperation projects promoted by the South Korean government are being carried out smoothly since the inter-Korean summit meeting in 2000. The project connecting inter-Korean railroads and highways on the Gyeongui and Donghae Lines was completed in 2004. South Koreans now use the highways to visit North Korea, while inter-Korean railroads would open at the end of 2005. In the Gaeseong Industrial Complex project, operation of manufacturing factories has started on the pilot site.

Nevertheless, trade and investment projects in the private sector are still in the initial stage and have yet to meet expectations. Inter-Korean businesses are highly affected by the fundamental relationship between North and South Korea. It is difficult for South Korean businesses to expand investment in North Korea because they would have to wholly take on risks. Still delicate political environment, especially over the North Korean nuclear issue, has been a serious barrier to any large-scale investment in North Korea by South Korean businesses. Also

important is the precarious relationship between North Korea and the United States. There are various issues concerning multilateral exports control and restriction over strategic goods governed by the U.S. Export Administration Regulations and exports of goods made in North Korea to the United States. Only with a satisfactory resolution of the North Korean nuclear issue and a subsequent normalization of diplomatic relations between North Korea and the United States, inter-Korean economic cooperation can flourish.

Improving Infrastructure in North Korea

Infrastructure is an umbrella term for many activities sometimes referred to as “social overhead capital,” and it may be classified into three broad categories. First, public utilities include power, telecommunications, piped water supply, sanitation and sewerage, and piped gas. Second, public works include roads and major dam and canal works for irrigation and drainage. Finally, other transport sectors include railways, urban transport, ports, waterways, and airports. Infrastructure represents, if not the engine, then the wheels of economic activity. Good infrastructure raises productivity and lowers production costs, and it has to expand fast enough to accommodate economic and population growth. The adequacy of infrastructure helps determine one country’s success and another’s failure in enhancing production, expanding trade, coping with population growth, reducing poverty and improving environment conditions. Currently, one of the greatest weaknesses of the North Korean economy is the extremely poor status of its infrastructure, especially in the critical shortage of electricity among others. The recent offer by South Korea to provide 200 million KW of electricity per year to North Korea is an attempt to ameliorate North’s energy problem. However, a fundamental improvement of North Korea’s infrastructure is essential to economic revitalization in North Korea.

A World Bank study finds that infrastructure capacity grows step by step with economic output – a 1 percent increase in the stock of infrastructure is associated with a 1 percent increase in GDP in all countries.⁷ For these reasons, each year developing countries invest about 4 percent of their national output and a

fifth of their total investment into infrastructure. While most of infrastructure services are provided by the private sector in industrialized countries, the exact opposite has been the case in developing countries, where governments own, operate and finance nearly all infrastructure. Thus, the record of success and failure in infrastructure in developing countries is largely a story of government’s performance. Infrastructure can deliver major benefits in economic growth but only when it provides services that respond to effective demand and does so efficiently. While major investments have been made in infrastructure stocks, in many developing countries these assets are not generating the quantity and quality of services demanded. The costs of this waste are high in terms of foregone economic growth and lost opportunities for poverty reduction and environmental improvement.

To ensure efficient, responsive delivery of infrastructure services, a number of developing countries in recent years have attempted to improve the service delivery through commercial management, competition, and stakeholder involvement. Such a new focus includes managing infrastructure like a business, not a bureaucracy, as it has so often happened to be the case in many developing countries. Infrastructure can be viewed as a service industry that responds efficiently to customer demand, and private sector involvement in management, financing, or ownership is often needed to ensure a commercial orientation in infrastructure. Private sector involvement in infrastructure has been a growing phenomenon even in developing countries. Such a development has been most noticeable in the area of financing infrastructure with the use of private capital instead of public funds.

Traditionally, new infrastructure projects in developing countries have been predominantly financed with official funds. Even now, about 90 percent of financial flows for infrastructure are channeled through a government sponsor, which bears almost all project risks. Tax revenues and government borrowings are the predominant source of infrastructure finance. Borrowing, whether from official or private sources, is backed by a government’s full faith and credit, and thus by its tax powers. Under this system, governments bear virtually all risks associated

with infrastructure financing. In recent years, however, innovative and diverse financing techniques are being employed to support an accelerating transition from public to private sector risk bearing in infrastructure projects. Private sponsorship and financing offer the twin benefits of additional funds and more efficient provision – especially valuable because substantial new investments are needed to meet the growing demand for modern infrastructure services in Northeast Asia. Mechanisms for financing specific stand-alone projects are contributing to the learning process as governments shift from being infrastructure providers to becoming facilitators, and as private companies and lenders take a more direct role. Private financing is needed to ease the burden on government finances, but, more importantly, it will encourage better risk sharing, accountability, monitoring, and management in infrastructure provisions.

Since the late 1980s, private participation in infrastructure exploded in both size and scope principally in two ways: through the privatization of state-owned utilities and through policy reform that made possible the private construction of new facilities in competition with, or as a complement to, existing infrastructure entities. The principal new infrastructure entrepreneurs are international firms seeking business in developing countries. These multinational firms bring to bear not only their management expertise and technical skills, but also their credit standing and ability to finance investments in developing countries. Major electric, telecommunications, and water utilities in industrial countries face slowly growing demand and increased competition due to deregulation in their home markets. As a result, these private firms are vigorously seeking high-yielding investments in developing countries. Construction conglomerates are active in toll-road construction and in power projects, where they sometimes take an equity interest. Some companies also specialize in stand-alone infrastructure projects, putting together financing packages and overseeing project development and operation.

Many new infrastructure projects in the private sector are built by “special-purpose corporations” which bring together private sponsors and other equity holders. Project financing, which permits sponsors to raise funds secured by the revenues

and assets of a particular project, is often used in new ventures that have no track records. New companies, as in electric power generation, toll roads, or environmental infrastructure, have only the prospect of a future earnings stream to support borrowings. For them, a key issue is what recourse lenders have if investments fail to produce the expected returns. The use of non-recourse or limited-recourse financing, also known as project financing, is a market response to the growing need for private sector involvement in infrastructure projects. Such financing takes some of the sophisticated new techniques such as BOT (build, operate and transfer), BOO (build, own and operate), BTO (build, transfer and operate), etc. Northeast Asian countries, especially North Korea, can benefit from using both traditional and new financing techniques in their infrastructure development.

International Financial Institutions as Potential Sources of Funds

Since the end of World War II, a number of IFIs have been established for the express purpose of providing external finance and technical assistance to developing countries. The oldest and the most well known among them is the World Bank Group, which is composed of three operational agencies of the International Bank for Reconstruction and Development (IBRD), International Development Association (IDA) and International Finance Corporation (IFC). Along with the World Bank, the other twin IFI born in the 1944 Bretton Woods Conference is the International Monetary Fund (IMF). IBRD loans have maturities of 15 to 20 years in general at an interest rate of 6 to 7 percent, calculated on the basis of annual weighted long-term borrowing costs of the World Bank’s international bond issues plus a 0.5 percent margin. IDA credits have much longer maturities of 35 to 40 years and carry no interest except for annual service charges of 0.5 to 1 percent, and they are available to poorer developing countries that include North Korea. Both IBRD and IDA make about quarter of their new commitments in infrastructure projects including electricity and oil and gas, and about a fifth for human development projects such as education, which is sort of soft infrastructure compared to the hard infrastructure projects such as transportation and power projects.

The IFC is the private sector assistance arm of the World Bank Group. While IBRD and IDA loans are extended to governments and government agencies of developing countries, the IFC makes loans as well as equity investments exclusively for the private sector firms in developing countries without any government guarantees. Since private firms in North Korea are almost non-existent at present, IFC might be less relevant at this stage but it can play a useful role later when foreign direct investments lead to establishments of private business entities either as stand-alone companies or as joint venture firms in partnership with North Korean host organizations. The IMF has many lending facilities ranging from five-year credit tranche loans to 10-year extended fund facilities and others. The IMF equivalent to IDA credits is the Poverty Reduction and Growth Facility (PRGF) available only to poorest developing countries as in the case of IDA credits.

The real problem, though, is that the normal financial assistance from the IMF and the World Bank Group is available only to their member countries. The same is true of other regional IFIs such as the Asian Development Bank, Inter-American Development Bank, African Development Bank, and the European Bank for Reconstruction and Development. Unfortunately, North Korea is not a member of any IFI. In April 1997, North Korea made its first formal attempt to join an IFI by officially applying for a membership in the Asian Development Bank (ADB). The ADB, headquartered in Manila, the Philippines, has the IDA credit equivalents known as the Asian Development Fund (ADF) credits. ADF credits have a maturity of 35 to 40 years and carry no interest rates except for annual service charge of 1 percent. Despite strong support for the North Korean membership application from China, South Korea and several other Asian developing countries, the two largest ADB shareholders, the United States and Japan, have been against admitting North Korea into ADB and their vetoes effectively have stalled the North Korean application. North Korea has continued to show its interest in the ADB membership, by writing a formal letter again in the summer of 2000 reminding the ADB board of its 1997 application.

Admission of North Korea into such IFIs as ADB, World

Bank and IMF is contingent in practical terms upon the agreement of both Japan and the United States. The U.S. government withholds its agreement primarily due to the fact that since 1988 North Korea has been on the U.S. government's list as one of the seven countries supporting international terrorism. The other six countries on the list are Cuba, Iran, Iraq, Libya, Sudan and Syria. Furthermore, North Korea is considered a violator of the missile technology control regime. U.S. government officials have hinted on various occasions that North Korea has to satisfy the United States in the terrorism issue, ballistic missile-related matters, and transparency in its nuclear program before they can support the North Korean membership into IFIs. Japan on the other hand wants a satisfactory conclusion of the case of alleged North Korean kidnapping of Japanese citizens before it can consider supporting North Korean membership. Any membership into the World Bank has to be preceded by North Korea being admitted into the IMF first. It is generally understood that a North Korean membership into the IMF would be similarly opposed by the United States and Japan, thus effectively precluding North Korea from becoming a member of both the IMF and the World Bank.

Since it will take some time for North Korea to be admitted into IFIs, North Korea might explore the avenue of international trust funds administered by IFIs even for their non-members. As mentioned previously, in 1993 the World Bank participated in establishing the Trust Fund for Gaza and West Bank for the express purpose of assisting Palestine that is still not a member of the World Bank. This trust fund raised over \$400 million through June 2000, including almost \$300 million from the World Bank out of its accumulated net profits and the rest from other donor countries, and these funds have been disbursed for various development projects in Palestine. In 1999, the World Bank and the Asian Development Bank collaborated to establish the Trust Fund for East Timor, which received funds from the World Bank Group as well as many individual donor countries such as Japan, Portugal and Australia. These funds have been used to finance many development projects in East Timor, which was not yet a member of the World Bank and the ADB. Similar trust funds were also established to assist Bosnia in 1996 and

Kosovo in 1999, both of which were not members of any IFI at that time. North Korea should explore a similar approach until its formal membership into the ADB and the World Bank.

Some prominent experts in the United States and South Korea have proposed establishment of a new Northeast Asian Development Bank (NEADB) as a separate IFI with the implicit purpose of assisting North Korea. This proposal has been officially supported by the South Korean government. NEADB would be engaged in development financing in northeast China, Siberia and Mongolia along with North Korea. At this point, however, it is not clear whether potential donor countries such as the United States and Japan are likely to participate in such a bank. Both the United States and Japanese governments might feel that it would overlap similar functions already being performed by the World Bank and ADB, except for assistance to North Korea. However, it is critical to persuade these two countries as well as Western European countries to join in the new NEADB.

Without the active support of these major donor countries, the new bank is not likely to collect enough capital to become a viable IFI with the requisite triple-A credit rating, which is essential for NEADB to carry in order for it to tap international capital markets to raise funds successfully. All IFIs fund their operations mainly by issuing bonds in international capital markets and thus high credit ratings are essential for successful bond issues. Both ADB and the World Bank carry the highest credit ratings of triple-A's due to the strong financial backing from major industrialized member countries such as the United States, Japan, the United Kingdom and Germany. Without their active support, the new NEADB is not likely to receive a high credit rating and thus its ability to issue bonds successfully at reasonable interest rates in international capital markets would be severely handicapped.

Private Foreign Direct Investments

If North Korea provides a favorable environment for foreign direct investments (FDIs) by enacting the necessary laws and regulations regarding the property rights, profit remittances, accounting and taxes, labor standards, etc., it could attract FDIs as in the cases of China and Vietnam. The country possesses potential attractions for certain projects with labor-intensive assembly and manufacturing components, given the low cost but highly adaptable labor forces there. North Korea first developed a special economic zone (SEZ) in the Rajin-Sonbong area but without any noticeable success, because it has suffered from its remoteness to potential market places and poor infrastructure there. Fortunately, there are plans to develop other SEZs in places such as the Haeju District on the western coast just north of Incheon which is a major South Korean port and next to the main airport for the Seoul metropolitan area as well as in the Gaeseong Industrial Complex just north of the demilitarized zone with an easy access from South Korea. Hyundai Asan would develop the necessary infrastructure and then lease the sites to Korean and other foreign investors. Most initial FDIs would be export oriented, given the negligible local market in North Korea. Furthermore, most FDIs might employ modern project finance methods that are not dependent upon the host entity's credit standing or balance sheet but rather upon the potential cash flows of the project itself. In such cases, some of the modern innovative project financing techniques such as build-operate-transfer (BOT) or build-own-operate (BOO) can be very useful in order to minimize the project risk on the part of foreign investors.

In recent years, many countries have been moving towards the use of limited-recourse financing techniques as a way to avoid the risks involved in major new project developments. The popularity of the techniques lies in the belief that they might prevent losses and reduce the danger of piling up large debts. The trend marks a definite move away from recourse deals financed mainly by conventional credits carrying full sovereign guarantees. Limited recourse financing techniques are part of off-balance-sheet project financing, which also includes various forms of lease as well as the take-or-pay contracts.

In an operating lease the lessor not only keeps the title but

also carries out routine upkeeps such as maintenance and repairs of the leased property. In a financial lease, however, the lessee, who also pays the property tax and insurance premium to protect the leased property, performs these tasks. If the lessee has the right to purchase the leased property at the end of the lease period, such a financial lease is also called a hire purchase. However, some countries do not permit the lease of a hire purchase type. Another type of financial lease is project lease, in which the facility to be leased is financed by conventional bridge financing during its construction period. Only when the construction process is complete, the project lease comes into effect. Similar to the project lease is a sale-and-lease-back, under which a facility that has been in operation is sold to the lessor and leased back.

The take-or-pay contract, typical in a large pipeline construction project, is signed for example between a pipeline company (the project entity) and a group of oil or gas companies that will actually utilize the pipeline. Under the contract, the users agree to pay the project entity a fixed sum per annum for an extended period of time regardless of whether the full pipeline capacity is utilized or not. The fixed payment is set at such a level as to be sufficient to service the long-term debt incurred to finance the pipeline construction as well as an adequate return on equity for the project sponsors. The debt financing is on a non-recourse basis, collateralized by the long-term take-or-pay contract.

The limited-recourse financing was first pioneered in the early 1970s for developing the North Sea oil fields. It took some elements of risk off the balance sheets of the oil companies and handed them to the creditor banks. For a number of smaller companies, without the assets to back conventional loans, financing off the back of the future proceeds of their oil was the only way of raising the necessary capital. The concept of limited recourse financing, which relies more on the project's future cash flows than on the creditworthiness of a project entity, has since been applied to other revenue-generating projects, including certain infrastructure projects. As the trend toward privatization has become more fashionable, limited-recourse infrastructure projects have also gained popularity. There are two main

categories of limited recourse financing: BOT and BOO.

There are a number of debt financing sources available for project financing. Some of these instruments have equity features such as convertible bonds and bonds with warrants. Others are purely debt financing instruments. For example, Euronotes are short-term Euro commercial paper (ECP) backed by long-term Euronote guarantee facilities such as NIF (note issuance facility), RUF (revolving underwriting facility), etc. Suppose North Korea wants to borrow \$50 million at a floating interest rate for 7 years to build a cement plant. The country usually has two alternatives: 7-year Eurocredit from an international syndicate of banks at, say, 6-month LIBOR (London inter-bank offered rate for Eurocurrency funds) plus a spread of 3%; and 7-year floating-rate notes (FRNs) at 6-month LIBOR plus a spread of 2-15/16%. FRNs are likely to cost slightly less (in this example, 1/16%) due to the liquidity of FRNs as compared to generally illiquid Eurocredit. However, the borrower has a third alternative: issuing 6-month Euronotes at 6-month LIBOR plus a spread of only 2% backed by 7-year NIF. The spread over LIBOR in this case is 2% because Euronotes are short-term with only a 6-month maturity. Since the borrower needs the money for 7 years, not six months, the 7-year NIF takes care of the maturity mismatch.

In this case, NIF is a guarantee provided by a group of banks to the borrower that, if the borrower cannot sell \$50 million 6-month Euronotes at the maximum rate of LIBOR plus 2% during any of the fourteen times that Euronotes are issued, the guarantee banks would purchase any unsold portion of the Euronotes. In this sense, NIF or RUF is a purchase guarantee or back-up credit availability guarantee provided by a group of banks to the borrower. Therefore, even though the Euronotes are short term in a strict legal sense, in fact they are equivalent to long-term borrowings. Unlike a normal revolving credit line, a short-term Euronote issue backed by a long-term guarantee facility should be considered a long-term borrowing due to the iron-clad guarantee facilities such as NIF or RUF. Any saving in the spread over LIBOR due to a positive yield curve between short-term and long-term rates, in the above example the difference between 2% and 3%, would be divided between the borrower and the guarantor banks, which are compensated for their backup

guarantee facilities in the form of management fee, facility fee, utilization fee, etc.

Conclusion

South Korea achieved the Miracle of Han River over the past three decades through aggressive industrialization and export-led economic growth strategy. North Koreans are equally energetic and hardworking as South Koreans. Many successful South Korean businessmen were originally from North Korea, testifying to the entrepreneurial spirit of many North Koreans. Once the North Korean nuclear issue is satisfactorily resolved and full diplomatic relationships are established between North Korea and the United States as well as with Japan, North Korea can join IFIs such as the World Bank and the Asian Development Bank, thus benefiting from the enormous capital and technical expertise of these IFIs. When North Korea starts to receive the financial assistance from IFIs, multinational firms from South Korea and other Northeast Asian countries will not be far behind in committing massive capital into North Korean investments. It would not be difficult to envision another economic miracle on the Korean peninsula, the Miracle of Daedong River flowing through North Korean capital city of Pyongyang similar to the Miracle of Han River in South Korea.

One of the main problems in realizing the full potential of North-South Korean economic cooperation is the lack of modern infrastructure in North Korea. Infrastructure development is an essential first step toward a new economic development paradigm on the Korean peninsula. Infrastructure services, including power, transport, telecommunications, provision of water and sanitation, and safe disposal of wastes, are central to economic development and environmental health for both Koreas. One of the priority areas for closer inter-Korea economic cooperation is to upgrade North Korea's infrastructure, which can in turn contribute to enhanced competitiveness of both Koreas.

There are a number of potential international financing sources for North Korea's infrastructure development. They range from various lending instruments available from IFIs to international trust funds, innovative project financing techniques for promising FDIs, a number of fixed income securities that can

be issued in international capital markets, and international bank loans. In recent years, there has been a significant increase in private sector participation in infrastructure projects both as their financiers and their operators. Such participation has been based on creative financing techniques such as BOT, BOO and others. These techniques require active public-private partnership in the financing of new infrastructure projects.

Access to all these financing sources requires a careful strategy on the part of policymakers of both North and South Korea in terms of proper sequencing and preparation. Such international financing skills are woefully inadequate or almost non-existent in North Korea. Perhaps one of the first technical assistance programs that the IMF and the World Bank can embark upon could be to provide such expertise to the relevant North Korean authorities so that they can develop a systemic approach to accessing international funding sources for their infrastructure projects.

Endnotes

¹For example, Marcus Noland, *Avoiding the Apocalypse: The Future of the Two Koreas*, Institute for International Economics, Washington, 2000.

²Bank of Korea, June 2005.

³Korea Institute for International Economic Policy, *North Korea Development Report 2003/4*, Seoul, Korea, July 2004.

⁴*Chosun Sinbo*, July 20, 2002.

⁵Rand Corporation, *North Korean Paradoxes: Circumstances, Costs, and Consequences of Korean Unification*, 2005.

⁶U.S. State Department, "International Narcotics Control Strategy Report 2005," March 2005.

⁷World Bank, *World Development Report*, 1994.