

The North Korean Economy at a Crossroads: Problems and Prospects

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Congressional Research Service, The Library of Congress

North Korea stands at a crossroads now that is every bit as momentous as its decision to invade South Korea in 1950. What Kim Jong-il does over the short- and medium-term will put his country either on a path leading to reconciliation with the world and economic and military security or a path leading to a nuclear standoff or military hostilities. As this drama plays out on the world stage, the economy of the Democratic People's Republic of Korea plays a critical role. Economic forces play a two-pronged role. Starvation and dismal economic conditions exert pressures on Pyongyang from inside the country, while the prospect of economic assistance and normalized trade and investment relations with other nations provide a powerful incentive for the North Korean leaders to undertake actions that otherwise would be difficult. North Korean is in transition. It can turn back state socialism, state control, and starvation, or it can take the road of China and the states of the Former Soviet Union and join the rest of the world.

From recent experience, the world can deduce a few basic postulates about Pyongyang's behavior with respect to its economy. First, regime survival remains its top priority, and it will direct economic resources to ensure that it stays in power. Second, Pyongyang is making what it considers to be major changes in economic policy in response to widespread starvation and a near collapse of its economy – augmented by pressure from China. Third, Pyongyang's ability to manage its economy is being pulled in two directions: first by a communist tendency toward central control and, second, by the centripetal forces of market globalization. Fourth, food shipments by South Korea, the United Nations, China, Europe, and other donors have offset periods of poor harvests, drought, and shortages of foreign exchange and have kept the country from total collapse. And, fifth, attempts to squeeze the DPRK through economic sanctions

seem only to strengthen Pyongyang's resistance to outside pressures.

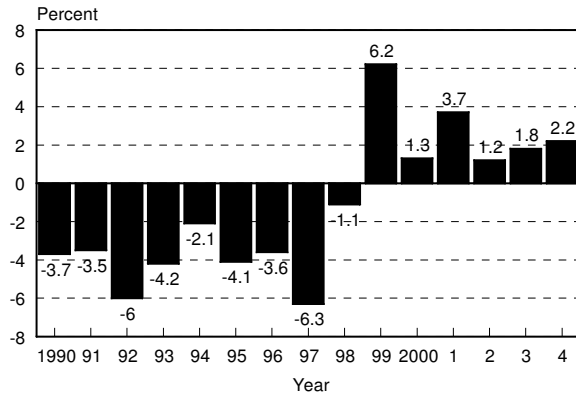
The economy has provided one tool for the participants in the newly restarted Six-Party Talks. For these nations, the question for both sides is to what extent the economy can be used for leverage and for attaining the ultimate goals of security and denuclearization. Any solution to the North Korean nuclear issue must include incentives, and many of these incentives are economic.

Macroeconomic Indicators

The economy of the DPRK is relatively small, and sectors of it still are in shambles. Its population of 22.7 million people in 2004 generated a gross domestic product of an estimated \$20.8 billion (23,767 billion won) in current values or about \$30 billion in purchasing power parity (PPP) exchange values – roughly as much as Azerbaijan or Paraguay. This amounts to national income of an estimated \$1,400 per capita in PPP values or roughly the same level as that of Bhutan, Rwanda, or Haiti and considerably lower than the per capita GDP values in PPP for China (\$5,600), Indonesia (\$3,500), or India (\$3,100), and dramatically lower than South Korea's \$19,200 in PPP values or \$12,600 at current market prices.²

During the 1990s, the economy nearly collapsed. A combination of a cutoff of subsidized imports from Russia, poor harvests, excessive military expenditures (as much as 30% of GDP), and reliance on a moribund, centrally planned economic system nearly brought the economy to a halt. Energy became scarce; factories shuttered, and hundreds of thousands of people turned to eating bark and leaves to supplement their meager food supply. Although the worst of the crisis has passed, the level of real GDP (measured in real won) is still 16% below the crisis level in 1990. According to the Bank of Korea, in 1990, the DPRK's real GDP was 2,098.1 billion won (expressed in 1995 prices). Thirteen years later, in 2003, real GDP had recovered to only 1,758.2 billion won (\$15.4 billion at 114 won per dollar). A

Figure 1. North Korea's GDP Growth Rates
 (% real change)



Source: Bank of Korea

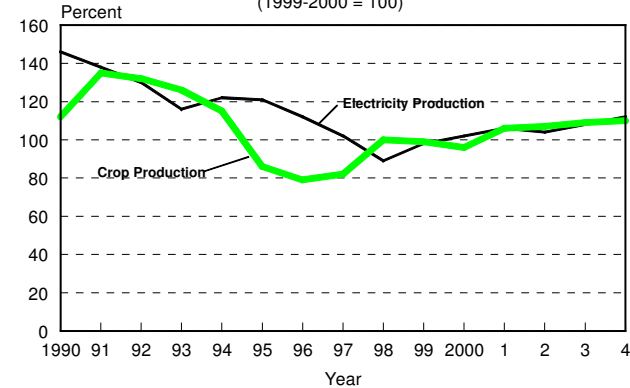
Remarkable fact is that in the mid-1970s, living standards were higher in North Korea than in China. Now, North Korea is far behind both China and South Korea.

The slow recovery from the disastrous 1990s is reflected in rates of growth. In 2004, real annual GDP growth was estimated to be 2.2%, up slightly from the 1.8% in 2003 and registering the sixth consecutive year of positive growth. (Figure 1) The economic reforms in July 2002 along with better weather and a somewhat improved energy supply seem to have fostered a gradual recovery, but absolute levels of production still lag behind those of a decade ago.

Figure 2 shows crop and electricity production for the DPRK according to World Bank data. Despite a half decade of steady growth, crop production in 2004 was still 19% below that in 1991. Cereal production dropped from 8.8 million metric tons in 1991 to 2.6 million metric tons in 1996, and it has gradually recovered to 4.5 million metric tons in 2004 – still only half the 1991 level. Clearly, food is still in short supply. Electricity production in 2004 similarly was 23% below its 1991 level. The shortage of electricity is one reason for the stagnation of North Korea's industrial sector and has been confirmed both in satellite

photos of the darkness of the country by night as compared to South Korea or neighboring areas in China by anecdotal evidence. Those who live in Pyongyang high rise buildings reportedly seek apartments on the first floor so they will not have to climb stairs when the electricity is out.¹

Figure 2. Crop and Electricity Production Indexes for the DPRK
 (1999-2000 = 100)



Source: World Bank, World Development Indicators. Electricity Production Index estimated by CRS to have grown by 4% per year in 2003 and 2004

Perhaps the most reliable estimate of food shortages in the DPRK comes from the UN World Food Program (WFP). The WFP's 2004 crop and food supply assessment (conducted jointly with the UN Food and Agriculture Organization) confirmed the existence of continued food insecurity among the WFP's target groups. It found that 70% of the poor households that depend on the government's public distribution system (PDS) are unable to meet their basic energy requirements. The urban population, in particular, relies heavily on the PDS, even though PDS rations have been reduced to an average of only 300 grams per person per day – about half the amount needed for survival. The WFP's goal for 2005 is to provide food assistance for 6.5 million people (mostly children, mothers, and elderly persons) out of North Korea's total 22.7 million population. Despite some improvement since 2002, in 2004, among children, 37% were

stunted, 23% were underweight, and 8% were wasted. Also, 30% of the women with young children remained malnourished and anemic.²

Industries, likewise, are operating at subpar levels. Production by light manufacturing industries declined slightly in 2004 and was still 15% below the 1990 level. Heavy industrial production in 2004 rose somewhat but also remained at less than half the 1990 level.³

Economic Reforms

In July 2002, Pyongyang announced a series of economic reforms that some surmise may mark the beginning of the end of the Stalinist controls over the economy and the onset of more market mechanisms to make economic decisions, particularly production and consumer purchases. Although the government has dubbed the initial 2002 reforms as "economic management improvement measures," the actions appear to be a desperate attempt to revive the stagnant economy, similar to what was done in China. The reforms also dovetail with North Korea's "military first" policy. As Kim Jong-il has given first priority to the military, the rest of the population has suffered. This, in turn, has raised pressures on Pyongyang to reform its economic system in order to raise the production of consumer goods.

The reforms span the major sectors of the economy with separate programs for agriculture and industry, the government and macroeconomy, and foreign economic relations. These reforms have been detailed elsewhere.⁴ Essentially, the reforms recognize the role of markets in providing production incentives, determining values, and in allocating scarce resources. While the DPRK's farms, factories, and labor still do not operate in anything close to a free market, they have been given greater autonomy and more decentralized decision making.

In agriculture, for example, responsibility and rewards are devolving from collectives to the subgroup level (2 to 5

families) with most now deciding what and how crops are to be grown instead of receiving instructions from authorities. Some private plots of land are being allowed. Pyongyang also has abolished the free food rations for urban dwellers and raised the price for rice it buys by 50-fold (to 42 won or 25 cents per kilogram) and the price charged to recipients by 550 times (to 46 won). The share of the crop taken by the state has dropped from 70-80% to 50-60%. The rest is allocated for home consumption.⁵ In June 2003, Pyongyang officially recognized farmers' markets where vegetables, potatoes, and maize from private gardens as well as a variety of consumer goods are sold.

Likewise for industry, the government reduced its management role while requiring enterprises to operate more on a practical⁶ (profitable) basis. Bank financing is replacing government subsidies, and responsibility for factory management is shifting from communist cadre to managers. Enterprises are becoming more independent and have more latitude to make decisions on production, labor, and pricing. Industries also are encouraged to increase productivity through the incorporation of information technology into their operations. Still, the basic industrial problem for Pyongyang is that it has relied on heavy industry that is uncompetitive, operating with aged equipment, lacking a reliable source of power, and oriented more toward producing quantities of products rather than creating value and profits. In a world of globalized competition, North Korea has been still trying to operate in the Stalinist age.

Light industry, the growth engine of most developing nations, also is foundering – not because it cannot generate output but because it has to rely on inputs that may not exist. The apparel industry, in particular, depends on the chemical industry which cannot produce enough synthetic fibers because of a lack of electricity and raw materials. The shortage of foreign exchange also precludes the extensive use of imported cloth and other foreign inputs (unless they are sent on consignment by South Korean or other companies to be assembled there).

Pyongyang's goal for now is to "normalize" industries – to

just get heavy industry operating again – and improve the people’s standard of living by expanding the production of consumer goods. The problem is that at the rate North Korea is recovering, it may take as much as a decade just to regain lost ground. Even though the DPRK fell into this deep economic predicament because of gross mismanagement, the country cannot climb out of this quandary by simply managing the economy better. Too much damage has been done to equipment, farm fields, and infrastructure for things just to “turn around.” They have to be rebuilt, and rebuilding takes an enormous amount of capital and expertise.

As was the case with China, North Korean industries are unlikely to improve much without a huge injection of capital and management skills. Pyongyang faces the choice of trying to generate this capital and management domestically or importing it from abroad.⁷ If the capital and management skills are to be generated domestically, the country will have to resign itself to a long and slow process. If it is to import the capital and management, it can do so only if it resolves its nuclear weapon crisis and creates an environment conducive to attracting capital from a wide variety of sources. Pyongyang is addressing this partly through the special economic zones, in particular the Gaesong Industrial Complex, but the scale and pace of this experiment makes it unlikely to have a significant contribution for years to come.

International Trade

North Korea’s foreign economic sector plays an important role for Pyongyang in that it allows the country to import food, technology, and other merchandise that it is unable to produce in sufficient quantities at home. The country, however, has few exportable products, particularly with Chinese and South Korean competitors right next door. North Korea runs a billion dollar trade deficit. Some of the unfunded imports originate from aid deliveries of food and other products. For the rest, Pyongyang must find sources of foreign exchange — other than from its overtly traded exports — to pay for the imports. Since few creditors are willing to provide loans to Pyongyang and few companies are investing there, experts surmise that the trade

deficit is financed by North Korea's involvement in illicit or illegal trade in drugs and military equipment as well as in counterfeiting.

Trade data for the DPRK is largely incomplete, since Pyongyang does not belong to the International Monetary Fund, World Bank, or World Trade Organization that requires member countries to submit statistical data. North Korean trade data, however, can be inferred from that submitted by trading partners. A trading partner’s imports from the DPRK can be assumed to be DPRK exports to that trading partner. South Korea, however, considers trade with the North as intra-Korean, not foreign, trade. It does not report North-South Korean trade to the IMF or World Bank. Such trade, therefore, must be added onto data from partner nations to approximate North Korea’s world trade total.

Table 1 shows North Korean trade by selected trading partner. Trade with the United States is virtually nil. North Korean exports (as measured by partner country imports) are gradually increasing with China, South Korea, and Japan being the major customers. In 2004, the DPRK exported an estimated \$1,598 million. These exports, however, fell far short of financing the \$2,829 million imported that year. In 2004, North Korea’s trade deficit rose to \$1,231 million, up from \$1,066 million in 2003.

A notable development is the contraction of trade with Japan. Imports from Japan which had been as high as \$1,065 million in 2001, had dwindled to \$89 million in 2004. Exports at \$164 million in 2004, likewise, were down from the \$234 million as recently as 2002. Much of this can be attributed to the tightening of bilateral trade by Japan in view of the Japanese citizens abducted by the DPRK, the suspected smuggling of high technology and illicit goods by North Koreans, and the drop in Japanese aid to the DPRK.

In recent years, Japan has donated 1.2 million metric tons of food aid to the DPRK. The peak was in 2001 when 500,000 tons were provided. Since then, relations between the two countries have soured, and Japan withheld further aid in 2002 and 2003. In 2004, Japan pledged 250,000 tons of food aid following the

May 2004 summit between Japanese Prime Minister Koizumi Junichiro and North Korean leader Kim Jong-il. However, only 80,000 of the pledge was actually delivered before bilateral relations again soured, and Tokyo halted food assistance. The major issue damping bilateral relations has been the lack of progress in resolving the abduction by North Korea of several Japanese citizens in the 1970s and 1980s.⁸

China has traditionally been North Korea's main trading partner, but South Korea is rising fast. In 2004, DPRK trade with China was \$1,376 million while that with South Korea was about half that level at \$697 million. China's exports to North Korea of \$794.5 million in 2004 included mineral fuels (\$204 million), meat (\$141 million), electrical machinery (\$46 million), iron and steel (\$39 million), and machinery (\$39 million). It is noteworthy that at a time of widespread food scarcity in North Korea, China exported \$15 million in cereals to the DPRK, but it also exported \$10 million worth of tobacco. China's imports of \$582 million from North Korea included fish and seafood (\$261million), iron and steel (\$75 million), ores (\$59 million), and mineral fuels (\$53 million).⁹

Table 1. North Korean Trade by Selected Trading Partner and Selected Years, 1994-2004 (\$ in millions)

North Korean Exports to Selected Countries									
	1994	1996	1998	1999	2000	2001	2002	2003	2004
World	1,039	1,201	965	892	995	1,047	1,274	1,289	1,598
China	181	69	51	42	37	167	271	395	582
Japan	328	291	219	203	257	226	234	174	164
S Korea	176	182	92	122	152	176	272	289	258
Russia	44	347	8	7	8	15	10	3	5
Germany	57	32	24	20	20	21	25	16	16

North Korean Imports from Selected Countries									
	1994	1996	1998	1999	2000	2001	2002	2003	2004
World	1,286	2,055	1,300	1,436	2,047	3,272	2,436	2,355	2,829
China	467	497	357	329	451	571	467	628	794
Japan	171	226	175	148	207	1,065	133	91	89
S. Korea	18	70	130	212	273	227	370	435	439
Russia	70	525	56	48	36	56	47	112	205
Germany	59	33	24	32	53	91	141	71	67
Balance of Trade	-247	-854	-335	-544	-1,052	-2,225	-1,162	-1,066	-1,231

Source: S. Korean data from Republic of Korea, KOTRA (Korea Trade-Investment Agency) Overseas Offices. World Trade data compiled from trade partner data from International Monetary Fund, *Direction of Trade Statistics*. Country data from World Trade Atlas. World sum is the total North Korean trade plus trade with South Korea.

The importance of trade with North Korea for China continues to decline as China becomes more and more integrated into the world economy. In 2004, China's top export markets were the United States, Japan, South Korea, and Germany. North Korea ranked 58th – about the same as the Sudan and Austria. As for China's imports, its top suppliers were Japan, Taiwan, South Korea, and the United States. North Korea ranked 55th – about the same as Turkey and Poland. Even though the Korean conflict still technically has not ended, it is ironic that South Korea has become China's third largest trading partner, and North Korea has almost dropped off the chart.

South Korea's rising interaction with the North is likewise quite remarkable. Seoul clearly has decided to use its economic resources to pass through the fortifications put up by the North. It has much to gain from a rapprochement and a lessening of tensions on the Korean peninsula. Seoul's strategy has been to

use its economic leverage to open channels with the North Korean people while maintaining a credible military deterrent to overt hostile action by Pyongyang. South Korea recognizes that essentially it has won the Cold War on the Korean peninsula, but does not relish the prospect of funding economic rehabilitation in the DPRK as was done in Germany.

In looking toward future reunification, perhaps Seoul is learning from the Chinese experience with Hong Kong. Under British rule before China's economy took off, Hong Kong was an island of prosperity connected to continental poverty. Armed guards were necessary to keep Chinese in Guangzhou from emigrating into Hong Kong. At the border crossing, Chinese guards lay on the sidewalk and peered into mirrors to check for illegal emigrants hiding under trucks bound for Hong Kong. Such a wide gap in income would be untenable after Hong Kong returned to Chinese control. Beijing decided, therefore, to try to equalize living standards by the time of the handover in 1997. It did so by liberalizing the economy, first in the area close to Hong Kong, and inviting foreign investment (including that from Hong Kong) to set up operations in free trade zones across the border. By the time of the handover, Hong Kong and Guangdong province were almost integrated into one economy. Living standards were still lower on the Chinese side, but some of the pressure to emigrate to Hong Kong had eased.

When the first special economic zones were opened in China, few people dreamed what would happen in the twenty-first century. Now, with the encouragement and financing of South Korea, North is taking similar halting first steps.

Seoul also recognizes that its economic ties are gradually shifting from reliance on the American market to greater integration with China and other countries of Asia. Its labor costs are rising, and many of its companies are remaining competitive only by manufacturing in China and other low-wage markets. For them, the prospect of abundant cheap labor just a short distance to the north is appealing and perhaps less of a potential siren song than the lure of cheap labor in China. The reality, of course, is that South Korean industries already are heavily invested in China, and economic relations with China are

likely to dwarf those with the DPRK for years to come.

In 2004, total merchandise trade between the two Koreas was \$697 million – down slightly from 2003 but still on the path of rapid growth. The largest increases have been in South Korean exports to the North (\$439 million in 2004), although imports also have risen (\$258 million in 2004). Much of the increase in exports has been in the form of food, fertilizer, and industrial goods.

The major items purchased by South Korea from the North include food/forestry products, textiles, steel/metal products, and electronics. The major South Korean exports to North Korea include chemicals, textiles, machinery, steel/metal products, and food/forestry products.

With Russia, North Korean exports to that country have nearly disappeared. DPRK imports from Russia, however, now eclipse those from Japan. At \$205 million in 2004, Russian exports to North Korea included \$171 million in mineral fuels, a sizable increase from the \$20 million in 2002. Russian fuel exports to North Korea now are roughly comparable to those from China.

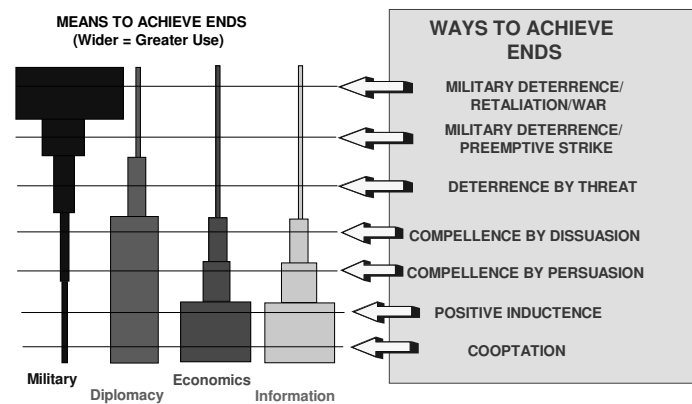
Economics and Interests, Ways, and Means

In this section, we turn to the general question of national interests and the role of economics and economic interaction in dealing with North Korea. The DPRK, United States, China, South Korea, and Japan share the same fundamental national interests of security, prosperity, and value preservation (regime preservation for North Korea). Each nation, however, defines and pursues these interests in different ways. Ultimately, each country seeks to attain internal and external stability, territorial integrity, healthy economic growth, and amicable and cooperative relations through diplomatic, military, economic, and humanitarian links with each other and the rest of the world. In North Korea, the ruling communist party has strong interests in continuing its hold on power, keeping society under control, maintaining sovereignty, and generating sufficient foreign exchange to trade for needed imports. Likewise in China, the ruling communist party has strong interests in continuing its hold

on power, keeping society stable, regaining sovereignty over what it considers to be its national territory, and promoting a nuclear free regional environment. The United States, Japan, and South Korea seek stability in the region, to defuse tensions, to reduce the threat of nuclear war, to roll back the North Korean nuclear program, and to control the proliferation of weapons of mass destruction. These nations also have an interest in strong economic growth and, in developing open trade and investment relations, as well as in maintaining their representative governments and systems of political pluralism. South Korea has additional interests in reunification with the North.

According to strategic theory, any nation protects and promotes its interests and attains goals by using a combination of its means and ways to influence the behavior of other nations. **Figure 1** illustrates various methods of accomplishing ends or goals in international affairs. The **means** are the resources available, while the **ways** are the methods by which the means are employed.

Figure 1



The means include military forces, diplomacy, economics, and information. (Here we ignore law enforcement.) Each of these means can be used in different ways to change the behavior or policies of a nation (or entity). Military forces include not

only those actually engaged in combat but the threat of their use in offensive, defensive, and retaliatory operations. Political forces include a nation's system of government, alliances, international relationships, and diplomacy. Economic resources include a nation's economic power, trade, foreign investments, financial position, preferential trading arrangements, and free-trade areas. Information resources include the media, culture, communications, and traditional propaganda. All of these come into play in dealing with the DPRK.

The **ways** are the methods by which means or resources are used. They form a hierarchy that begins with the least forceful – cooptation – and proceeds through increasingly forceful ways until countries reach open warfare. The focus of this figure is not on the state of relations among nations but methods by which a nation uses its means to influence other governments.

Starting from the bottom or least forceful way, **cooptation** relies heavily on the use of information, economics, and diplomacy, although military considerations are always in the background. It is the fundamental premise behind globalization and many of the world's alliances, the World Trade Organization, and other international institutions. Through trade and financial flows, countries become dependent upon each other. Through formal alliances and arrangements, countries attempt to neutralize the adverse policies of other nations by bringing them into the relevant international establishment in a way that aligns their policies with the establishment. After centuries of war on the continent, for example, Europeans point to the relatively peaceful relations that now exist among Germany, France, Great Britain, and Spain. All have been co-opted into the European Union.

During the Cold War, North Korea had been co-opted into the Communist world of the Soviet Union and China. As a small country, it became an outpost of communism but also a model of Soviet-style economics with its central planning and heavy industry. Cooptation plays an important role in the current debate over how to deal with the rapidly nuclearizing North. The Bush Administration seems to prefer to isolate the country with virtually no bilateral trade relations or even diplomatic

recognition. The United States also has blocked membership by the DPRK in international financial institutions, such as the World Bank, Asian Development Bank, and International Monetary Fund, although the DPRK is a member of the United Nations. The strategy seems partly to place a noose around the nation with the hope that it will someday either hang itself and overturn the Kim regime or place enough pressure on the regime to come to the bargaining table in good faith.

The United States also has led an effort to stop the DPRK (and other countries or groups) from either proliferating weapons of mass destruction or engaging in illicit activities. The Proliferation Security Initiative (PSI) is part of the larger counter proliferation effort worldwide and is aimed at more countries and groups than just North Korea – but the DPRK does receive a particular focus. The PSI activity has received support from more than 60 countries and more formal participation from 11 countries, particularly Japan, Australia, the United Kingdom, France, Germany, Italy, and Spain. Under the PSI, participating countries cooperate to prevent transfers of weapons of mass destruction-related items to or from nation states and non-state actors of proliferation concern. It does this through intelligence sharing, diplomatic efforts, law enforcement, and interdiction.¹⁰ In October 2004, Japan hosted a PSI maritime interdiction training exercise in which a ship carrying illicit cargo was interdicted in Japanese waters. Obviously aimed as a warning to North Korea, the exercise included direct participation by Japan, the United States, France, and Australia and eighteen observer countries.¹¹ Less well known is the Illicit Activities Initiative led by the U.S. Department of State. This is intended to curb North Korea's attempts to generate foreign exchange through trade in drugs, counterfeit currency, certain conventional weapons sales, and other illicit activities.

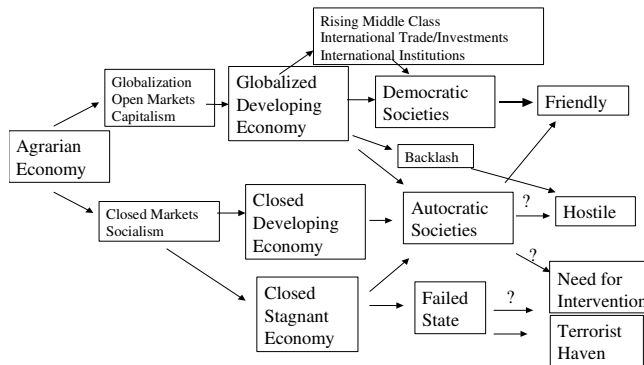
South Korea and the European Union, however, seem to be taking the opposite approach from that of the United States. They are seeking more normalized relations with Pyongyang with the hope that a gradual opening of the country to the world and more economic interaction might also provide the population with a more realistic view of things and moderate the worst

excesses emanating from Pyongyang.

Cooptation also works at corporate and individual levels. Corporations engage in international trade and investment, and individuals work in businesses owned by foreign companies. In these cases, corporate and worker interests on particular issues can align more with foreign than domestic interest groups. In China, for example, disputes between Beijing and Tokyo can threaten corporate profitability, so the affected Japanese businesses have pressured Tokyo's politicians to stop ruffling feathers in Beijing by taking actions offensive to Chinese nationalists. Some South Korean firms clearly have pressed the Blue House to pursue warmer relations with the North. Right now it is a stretch, but in the future as more and more North Koreans find employment in South Korean and other foreign firms, perhaps their voices will reach the inner circle of policy makers surrounding Kim Jong-il.

In a sense, cooptation also parallels the globalization-peace hypothesis. This posits that globalization brings democracy which eventually brings peace because democratic nations do not fight each other. For a nation, according to this hypothesis, the degree of openness of markets is the first stage in a chain of causality that directly influences national security. Market liberalization, particularly opening domestic markets to international trade and financial flows, is an important component of globalization and is a method by which an economy can increase its rate of economic growth. As incomes grow and a middle class develops, societies tend to demand more freedom, self-determination, and democracy. Such societies also tend to become more interdependent internationally with deepening economic and security ties to other like-minded nations. This core of democratic, relatively wealthy nations tends to have peaceful relations with each other. Globalization, therefore, can lead to peace. It also, unfortunately, can lead to hostilities. The figure below provides a rough schematic of this process.

Figure 2: The Globalized-Peace Process – A Stylized Model



An agrarian, traditional economy can take one of two major paths—opening markets, market capitalism, and globalization or it can keep its markets closed and turn either toward socialism and central control or general government neglect.¹² This is the path North Korea has taken. Nations with open, market economies tend to grow faster than those with closed, non-market economies (if they follow appropriate, good practice, policies), although not all statistical results are conclusive.¹³ What can be said for certain is that countries such as North Korea that trade little also grow little. Indeed, the high rates of growth of the Asian tiger economies of Singapore, Hong Kong, Taiwan, South Korea, and Thailand could not have occurred without international trade and investment—particularly open export markets. Even command economies, such as Stalinist Russia, had fairly extensive trading relationships when they were industrializing.

The hypothesis is, therefore, that globalization generates higher rates of growth which then facilitates a country's transition to democracy¹⁴ (although it does not assure it). As income rises in a market economy, individuals gain economic power, expand their consumption and communication horizons, develop interdependence and mutual trust, and eventually demand more freedom and a greater voice in government through democratic institutions. Some governments (e.g. China

and Saudi Arabia), however, ignore or suppress these demands, but they cannot completely control access to information and knowledge of the outside world – particularly when citizens become wealthy enough to travel abroad.

For the DPRK, the question is whether it is capable of switching paths from isolation, central planning, and stagnation to globalization, democracy, and markets. For this South Korea and China are showing North Korea the way. Only time will tell whether the DPRK will successfully make this transition or not.

At the next higher level of force is the process of positive inducement – or what could be called “**inductance**” – a process by which an entity is induced to behave in a particular way primarily because of changes in its own interests or because of specific inducements offered by other nations. A country may be induced by diplomatic enticements, changes in economic interests, flows of information, or internal political pressures to behave in a more positive way without an overt external threat of use of military force. South Korea, Japan, and the United States have all offered inducements to North Korea in an attempt to get Pyongyang to curtail its nuclear program.

In the South Korean case, it not only has offered enticements to the North, but it has already spent over \$3 billion in engaging North Korea. Table 2 shows the various programs under which Seoul has provided funds or resources to the DPRK over the past ten years.

In the current Six-Party Talks, the South has reportedly offered 2,000 megawatts of power costing about \$1 billion per year starting in 2008 plus at least \$1.4 billion in new infrastructure to deliver it.¹⁵ Russia also has suggested that it would supply natural gas and electricity and help in reconstructing thermal power plants built with Soviet assistance in exchange for North Korea's termination of its military nuclear programs.¹⁶

Program	Value	Metric Tons
KEDO ^a	1,365.2	
Food Aid ^b	794.9	2,362,934
Fertilizer ^b	387.9	1,550,000
Road & Rail Links ^c	322.7	
2000 Summit Payment ^d	200.0	
Mt. Kumgang Tours ^c	90.6	
Aid to ROK Business	26.1	
Gaesong Industrial Complex ^c	21.8	
Family Reunions	10.7	
Other ^e	59.8	
Total	3,279.7	

Source: Compiled by the Congressional Research Service. See CRS Report RL31785, *Foreign Assistance to North Korea*, by Mark E. Manyin. Updated May 26, 2005. P. 38.

^aFigures from KEDO Annual Reports.

^bROK Ministry of Unification. Tonnage figures are pledges, not necessarily deliveries.

^cROK Export-Import Bank's "DPRK Support Fund."

^dHyundai payment before the summit.

^eIncludes cultural exchanges and aid to NGOs.

Other inducements include additional food and fertilizer, diplomatic recognition, membership in international financial organizations, most favored nation status (normal trade relations status), and a payment by Japan for its occupation of the Korean peninsula. Such inducements usually are made through diplomatic channels – in this case, the Six-Party Talks. Diplomacy and inducements, therefore, go hand-in-hand.

If cooptation and inductance do not work, a nation can

turn to **compellence**. A nation compels another to behave in a certain way by changing the target nation's perception of the costs and benefits of taking certain actions. Under compellence, a nation takes a certain action – in contrast to deterrence under which a nation decides not to take a certain action. A nation becomes compelled to behave in a certain way first through persuasion and, if that does not work, by dissuasion. In compellence, the nation compelled takes a certain policy path because of specific actions or the threat of specific actions by other countries. With compellence, the implied military and other threats are more prominent. Under the 1994 Framework Agreement, North Korea was compelled (induced?) to stop work on its Yongban nuclear plant under an implied military threat by the United States and with inducements of economic and other assistance. The Six-Party Talks are now at a similar juncture. In the Six-Party Talks, however, rather than an implied military threat by the United States, Pyongyang seeks a security assurance—a promise that the United States or its allies will not attack the North. Clearly though, a security assurance would be unnecessary unless there were a credible military threat.

In the DPRK case, compellence also works both ways. By proceeding with its nuclear program and claiming that it already has produced a nuclear weapon, Pyongyang has compelled the United States, Japan, and South Korea to come to the bargaining table with offers of much needed fuel, technology, and food. Pyongyang also has compelled the world to pay it some heed and acknowledge that it should not be insulted by categorizing it as a member of some "axis of evil."

If compellence is unsuccessful, the level of forcefulness rises to **deterrence**. In many cases, the line between compellence and deterrence is blurry. Under deterrence, while not yet resorting to open hostility, attempts are first made to deter a nation from taking a specific negative course of action by making particular threats – military, diplomatic, or economic. So far, North Korea has been deterred from

testing any nuclear weapon. If it has one, it also has been deterred from using it.

If deterrence by threat fails, overt military action can be employed either to **preempt** or deny. If that also fails, war may ensue, and the military may be used to retaliate – in order to deter any similar adverse actions in the future. This is the position of the most hawkish advocates, who feel the best solution would be to bomb or sabotage Pyongyang's nuclear weapons facility or attempt to depose Kim Jong-il and have a regime change.

Policymaking at each level of forcefulness involves an underlying calculation of costs and benefits (including domestic political gains). A nation activates its ways and means to increase or decrease potential costs and benefits of a particular policy for the other decision makers in question. These costs and benefits can be physical, political, economic, military, or psychic. Combined with leadership, religious ethos, and historical memory, these forces both within and without a nation go far in determining how that country interacts with other nations. They are the primary underlying influences that push or pull countries down one policy path or another.

In the case of North Korea, it is apparent that the world cannot wait for the globalization-peace hypothesis to take hold. By the time the DPRK develops a middle class with enough political power to counter the worst excesses of Kim Jong-il and his successors, North Korea could already both have deployed and sold components of a nuclear weapon. Attempts at cooptation certainly can go forward – particularly since economic interchange can occur independently of political and security considerations.

We return now to the basic postulates about Pyongyang's behavior with respect to the economy laid out at the beginning of this article. Since Pyongyang will direct whatever economic resources are necessary toward regime survival – regardless of whether or not the rest of the population starves,

it is not clear that tightening economic sanctions will have much effect on the Kim regime. Indeed, sanctions only seem to steel its resolve. Also, since it seems that since humanitarian aid will continue in spite of all sorts of bad behavior by Pyongyang, the strangle hold *cum* regime change strategy seems hopeless. As in the case of Cuba, such a strategy seems to only make life miserable for the people rather than engender revolution. The strangle hold *cum* concessions at the bargaining table strategy, however, still holds some promise.

Pyongyang, however, appears to be embarking on a reform path toward “practical socialism” that resembles what happened in China – only writ small. The DPRK apparently was induced to do so, partly by the dismal economic conditions but also by the realization that the collapse of heavy industries was endangering the effectiveness of the military. When North Korean pilots have insufficient fuel to fly practice missions, the state of the economy is affecting national security. Left alone, however, these first steps at reform are not likely to lead to an end to the DPRK's nuclear program. China, for example, is using its economic strength to finance a military build up that includes missiles that could be used to deliver nuclear weapons. Economic development has not dissuaded democratic India from keeping its nuclear weapons. The globalization-peace hypothesis posits that democracies do not fight each other – not that their military industrial complexes will not produce the weapons for any potential fight. Can the world risk a nuclear armed North Korea, even if it is developing a democratic middle class? Currently, the answer is no. If the Six-Party Talks fail and Pyongyang tests a nuclear weapon, other nations in the region are likely to take countermeasures rather than wait for market capitalism to usher the country into the globalized world of democracy.

The choice for policy makers, therefore, is how to induce or compel Pyongyang to give up its nuclear program or how to reduce tensions sufficiently with North Korea (which may

include changing the regime) to trust them with the bomb. In either case, economic incentives will play an important role. Meanwhile, Pyongyang stands at a crossroad. It has embarked rather timidly on the road toward globalization and a market economy, but the legacy of central planning and the power that it gives to the ruling communist party — despite its obvious failings — weighs heavily on the power elite. The country can turn back to state socialism, state control, and starvation, or it can follow the road of China and join the rest of the global economic community. The DPRK can pursue a path leading to reconciliation accompanied by economic and military security, or it can continue its pursuit of nuclear weapons and face an arms race in northeast Asia with increasing hostility by other nations.

Endnotes

- ¹Chao, Julie. “Despite Oppression, Cracks Appear in N. Korea Society. There's a Great Divide Between Regular and Elite Koreans in the 'Egalitarian' System.” *The Austin American Statesman*, May 3, 2003. p. A18.
- ²United Nations. World Food Program. *Overview of Selected Operations: Democratic People's Republic of Korea*. p. 42. *Project No. 10141.3, Emergency Food Assistance to Vulnerable Groups in DPR Korea*. <<http://www.wfp.org>>. Accessed July 18, 2005. The WFP data reflects conditions only in the 154 of 203 counties and districts in the DPRK for which access has been allowed. The WFP has no information about the food situation of the people living in non-accessible counties.
- ³Bank of Korea. *North Korea's Population, Nominal GNI, Per Capita GNI, GDP Growth Rate*. Accessed by Internet July 2005. http://www.bok.or.kr/contents_admin/info_admin/eng/home/press/pres_sre/info/timeseriesnk1.xls
- ⁴Kim, Young-yoon and Soo-young Choi. *Understanding North Korea's Economic Reforms*, (Korea Institute for National Unification: Center for the North Korean Economy, April 2005).
- ⁵Ibid. pp. 25-26.

- ⁶In the DPRK, practical socialism refers to “implementing economic management measures that could obtain the most actual profits, while firmly sustaining the principle of socialism.” It resembles the “market socialism with Chinese characteristics” pursued by China.
- ⁷See Korea Institute for International Economic Policy. *North Korea Development Report, 2003/04*. Seoul, KIEP, 2004. pp. 99-101.
- ⁸Manyin, Mark. *Foreign Assistance to North Korea*, Congressional Research Service Report RL31785, Updated May 26, 2005. p. 26.
- ⁹Source of data: *World Trade Atlas*.
- ¹⁰U.S. Department of State. Bureau of Nonproliferation. *The Proliferation Security Initiative (PSI)* (Fact Sheet). May 26, 2005.
- ¹¹U.S. Department of State. Bureau of Nonproliferation. *Japanese Regional Proliferation Security Initiative (PSI) Maritime Interdiction Exercise (Team Samurai '04)*. (Fact Sheet), October 22, 2004.
- ¹²These represent two extremes. In real life, economies combine these options.
- ¹³A World Bank study concluded that 24 developing countries (home to some three billion people) that increased their integration into the world economy over two decades ending in the late 1990s achieved higher economic growth, while those (mostly in sub-Saharan Africa, the Middle East, and former Soviet Union) countries unable to increase their integration into the world economy (home to some two billion people) had economies that contracted. See Paul Collier and David Dollar. *Globalization, Growth, and Poverty: Building and Inclusive World Economy* (New York, Oxford University Press, 2002).
- ¹⁴High income levels are neither a necessary nor sufficient condition for democracy (representative government). Except for resource-rich kingdoms, however, almost all high-income countries are democratic. Poor countries with liberal traditions (such as India) also can be democratic.
- ¹⁵Faiola, Anthony. “South Koreans Weigh Burden of Massive Assistance for North; Electricity Project Seen as Payment Toward Unification.” *The Washington Post*, July 25, 2005, p. A.12.
- ¹⁶“Russia Offers Electricity, Gas if N. Korea Ends Nuke Program.” *Daily News Bulletin (English wire feed)*, Moscow, August 1, 2005. p. 1.

