



North Korea: Economic Leverage and Policy Analysis

Dick K. Nanto

Specialist in Industry and Trade

Emma Chanlett-Avery

Specialist in Asian Affairs

June 4, 2009

Congressional Research Service

7-5700

www.crs.gov

RL32493

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 04 JUN 2009	2. REPORT TYPE	3. DATES COVERED 00-00-2009 to 00-00-2009			
4. TITLE AND SUBTITLE North Korea: Economic Leverage and Policy Analysis		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S)		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Congressional Research Service, Library of Congress, 101 Independence Ave., SE, Washington, DC, 20540-7500		8. PERFORMING ORGANIZATION REPORT NUMBER			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)			
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 65	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Summary

In 2009, the Democratic Peoples Republic of Korea (DPRK or North Korea) embarked on a course that includes a series of extremely provocative military actions, a shift in power toward the military, emphasis on ideological purity, rising criticism of the United States, and going forward with its nuclear and missile program in spite of sanctions and objections from much of the rest of the world. Two factors that seem to be operating to compel this more “aggressive” behavior by Pyongyang. The first is the apparent stroke by North Korea’s leader, Kim Jong-il, in August 2008. The country appears to be preparing for succession, and in jockeying for position, the military seems to be gaining in policy precedence over the civilian side of government, and the military-first doctrine is prevailing over economic reform. The second factor has been the preparations for the 100th anniversary of the birth of Kim Il Sung, the founder of the DPRK, in 2012. By then the country wants to join the club of nuclear and space powers and to be an Asian tiger economy.

North Korea’s dire economic straits provide one of the few levers to move the country to cooperate in attempts by the United States, China, South Korea, Japan, and Russia to halt and dismantle its nuclear program. These five countries plus North Korea comprise the “six parties” who are engaged in talks to resolve issues raised by the DPRK’s development of a nuclear weapon. The Six-Party Talks are now stalled. Western leverage over the DPRK remains limited, but China, and to some extent Russia, are in a position to exert pressure on Pyongyang.

The economy of North Korea is of interest to Congress because it provides the financial and industrial resources for the Kim Jong-il regime to develop its military and to remain in power, constitutes an important “push factor” for potential refugees seeking to flee the country, creates pressures for the country to trade in arms or engage in illicit economic activity, is a rationale for humanitarian assistance, and creates instability that affects South Korea and China in particular. The dismal economic conditions also foster forces of discontent that potentially could turn against the Kim regime—especially if knowledge of the luxurious lifestyle of communist party leaders becomes better known or as poor economic performance hurts even the elite.

North Korea has extensive trading relationships with China and Russia and, until recently, with South Korea. U.S. and Japanese trade with North Korea since 2006 has been virtually nil except for U.S. aid deliveries. The DPRK has been running an estimated \$1.5 billion deficit per year in its international trade accounts that it funds primarily through receipts of foreign assistance and foreign investment as well as through various questionable activities.

Following the DPRK’s second nuclear test and subsequent actions, the focus in mid-2009 has been on negative incentives and increasing sanctions. The larger question, however, is how to move beyond tit-for-tat actions to a three-fold transformation of the DPRK: a transformation in its international relations, in the Stalinist methods by which Communist regime maintains its support, and in its moribund economy that cannot feed its own population. This report will be updated as conditions warrant.

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Major Points and Recent Developments

- The DPRK or North Korea has embarked on a course that includes a major tightening of policies, a shift in power toward the military, emphasis on ideological purity, rising criticism of the United States, and going forward with its nuclear and missile program in spite of sanctions and objections from much of the rest of the world. On May 25, 2009, North Korea conducted its second test of a nuclear bomb and continues to test its arsenal of missiles. This holds significant implications for U.S. interests and goals in Asia. There are two factors that seem to be operating to compel this more “aggressive” behavior by Pyongyang. The first is the apparent stroke by North Korea’s leader, Kim Jong-il, in August 2008. The country appears to be preparing for succession, and in jockeying for position, the military seems to be gaining in policy precedence over the civilian side of government, and the military-first doctrine is prevailing over economic reform. Leaders are leaning more toward nationalism, purity of thought, and loyalty both to the Communist party and to the party’s ideals. South Korean intelligence reports that Kim Jong-il has designated his youngest son, Kim Jong-un, as his heir apparent (South Korea’s Unification Ministry and the U.S. State Department, however, consider this report as “speculative.”). Kim Jong-il may be allowing the provocative moves by the military to ensure their support of one of his young sons to succeed him, or the military may be preparing to install a new leader of their choice.
- The second factor in the aggressive military actions has been the preparations for the 100th anniversary of the birth of Kim Il Sung, the founder of the DPRK, in 2012. By then the country intends to become a recognized military and economic power. Pyongyang apparently feels it has already attained the status of a politically, ideologically, and militarily powerful state, but it is not recognized by the world as a nuclear weapon state, and its missile delivery system is still under development. The military recognizes, however, that it needs the backing of an “economically powerful state” both to supply the army and to fulfill a lifelong “cherished desire” of Kim Il Sung. As a step in this process, in May 2009, the DPRK embarked on a 150-day campaign, a new “all-out assault for opening a great turnabout phase in the construction of an economically powerful state.” The campaign calls for the people to rise up in unity, for socialist ideological purity, and to work harder to accomplish an upsurge in production.¹ The result of these two factors has been a series of policy pronouncements and military actions that have tightened the domestic orientation of the country and increasingly is isolating it from the rest of the world. North Korea also is threatening military action should its ships be searched under the Proliferation Security Initiative.
- **Recent Developments:** On **March 17**, North Korea detained American reporters, Laura Ling and Euna Lee, who are accused of “illegally” entering the country. On **April 5**, the DPRK tested a long-range missile (ostensibly to launch a

¹ “Magnificent Gunshots of 150-Day Battle Have Sounded—All Forward in an All-Out Assault,” *Minju Joson*, May 5, 2009, Electronic edition (in Korean). Translated by Open Source Digest, Document KPP20090505051002. DPRK Cabinet Paper Editoriales on Commencement of ‘150-Day Battle.’

satellite). On **April 24**, the United Nations tightened sanctions, and Pyongyang responded by expelling nuclear inspectors and effectively quitting the Six Party Talks on the DPRK's nuclear program. On **May 8**, a DPRK spokesman escalated its criticism of the United States by referring directly to the Obama Administration and U.S. "hostile policy toward the DPRK." At around that time, Ambassador Stephen Bosworth (the special envoy for North Korea) was leading an interagency delegation to Beijing, Seoul, Tokyo, and Moscow for consultations on North Korea issues. On **May 14**, Pyongyang announced it was nullifying contracts with South Korean companies in the Kaesong Industrial Complex. North Korea also has detained a Kaesong South Korean worker. On **May 25**, the DPRK tested a second nuclear weapon, and on **May 25-26**, tested five short-range missiles. On **May 25**, the United Nations Security Council unanimously condemned North Korea's nuclear test as a clear violation of Security Council resolutions, and said it would begin work immediately on a new, legally binding resolution addressing the violations. On **May 26**, South Korea joined the U.S.-led Proliferation Security Initiative, and the DPRK responded by stating that it considered the action by South Korea a declaration of war and that it would respond with a military strike if any search and seizure of their vessels occurred. The DPRK subsequently indicated that it no longer is obligated to abide by provisions of the 1956 armistice following the Korean War barring either side from imposing a naval blockade, would not honor a North-South border in the Yellow Sea of its coast, nor would it respect the legal status of five islands on the South's side of the line. On **June 2**, South Korea's intelligence agency told lawmakers that Kim, Jong-un had been chosen as the successor to the ailing Kim Jong-il. On **June 4**, the two American reporters were put on trial.

- It is clear that the resurgence of the DPRK military in policymaking has nullified progress made under the Six-Party Talks and diminished the effectiveness of economic and diplomatic incentives and sanctions. These have been one of the few policy levers that countries could use to induce Pyongyang to abandon its nuclear program. The basic contradiction in North Korea's current policy seems to be that it is unlikely to build a strong economy without access to capital, expertise, and imports of technology and certain raw materials from abroad, yet its military actions elicit condemnations and economic sanctions by other nations that only work to thwart its economic goals. Two keys in this process are actions by China and Russia, countries friendly to North Korea who joined in condemning the DPRK's May 25 nuclear test. Other than financial sanctions, economic sanctions appear to have had little effect on the Pyongyang regime because China, Russia, and other nations have traded with and provided assistance to the DPRK, and the Kim Jong-il regime seems willing to allow starvation rather than open the country to outsiders.
- The immediate response to North Korea's second nuclear test is centered on the United Nations. It appears that China and Russia may be willing to support stronger sanctions on the DPRK, since Pyongyang's actions are increasingly being perceived as being inimical to certain Chinese and Russian interests. The focus of U.N. action is likely to be on nonproliferation, the stopping of exports of nuclear and missile material, in tightening enforcement of previously announced sanctions, and measures to punish North Korea's elite. In addition to U.N. action, the United States may separately impose additional sanctions on the DPRK for

U.S. currency counterfeiting operations run by the North Korean Government. The United States also could return the DPRK to the list of states that sponsor terrorism, although certain legal conditions would have to be met.

- The economy of the DPRK is in dire straits with a considerable share of its population on the edge of starvation and in need of outside food aid. In 2008, Pyongyang placed more emphasis on feeding its people, although it did without food aid and fertilizer from South Korea because Pyongyang would not request it, and South Korea placed conditions on providing the assistance.²
- Chinese investments and trade with the DPRK are helping the country to secure needed imports of energy, food, and machinery for factories. North Korea's trade deficit is being financed primarily through foreign aid, investments, and remittances from overseas workers, as well as through various illicit activities.
- Economic reforms ("adjustments") in the DPRK were gradually being implemented, but in 2009 were being reversed where possible. Without markets, however, there would be no means for North Koreans not receiving government food distributions to survive.
- A February 2007 Six-Party Agreement called for providing fuel and eventual normalizing of relations with the DPRK in response to specific actions by Pyongyang in regard to its nuclear program.³

North Korea's "Plan A" and "Plan B"

A source with close ties to the North Korean government has written that in 2009 Pyongyang has abandoned **Plan A** and turned to Plan B. Plan A called for the DPRK to consider exploring a shortcut to enhanced independence, peace and prosperity through rapprochement with the United States. This strategy obliged the Kim Jong-il administration to negotiate away its nuclear weapons program as part of a verified denuclearization of the Korean Peninsula in return for Washington's strategic decision to co-exist peacefully with Pyongyang. Plan A assumed the United States would cease its hostility toward the DPRK, conclude a peace treaty, and pledge in a verifiable way that it would not attack the DPRK with nuclear and conventional arms. It also assumed the United States would establish full relations with the DPRK, uphold its sovereignty and independence, lift sanctions, and provide it with fuel oil and light-water reactors.

Pyongyang apparently now has shifted to **Plan B**. This envisages the DPRK going it alone as a fully fledged nuclear weapon-armed state, with a military-first policy, and then growing into a mighty and prosperous country. It puts the policy of seeking reconciliation with the United States on the back burner and involves quitting the six-party talks, restarting nuclear facilities, and conducting additional nuclear and intercontinental ballistic missile tests. Under Plan B, the DPRK hopes to join all three elite clubs of the world by 2012 (centenary of the birth of Kim Il-sung, the nation's founder)—nuclear, space, and that of economic tigers—without seeking improved ties or a peace treaty with the United States.

Source: Kim Myong Chol, "Kim Jong-il shifts to plan B," *Asia Times*, May 21, 2009, Online edition.

² The extent that Pyongyang has reversed policies of allowing economic interaction with the South was indicated by the reported execution in late 2008 of Choe Sung-chol, a party official who played a key role in North-South relations. When South Korea cut off deliveries of food and fertilizer to the North, Pyongyang held him accountable for the unwanted impact from the country's dependence on the capitalist South. He was punished for "planting fantasies about South Korea in North Korean society."

³ For details on the Six-Party Talks, see CRS Report RL33590, *North Korea's Nuclear Weapons Development and Diplomacy*, and CRS Report RL33567, *Korea-U.S. Relations: Issues for Congress*, both by Larry A. Niksch.

The Issue, Interests, and Policy

This report examines the economic side of U.S. leverage with North Korea. The security side is addressed in other CRS reports.⁴ Here we examine the economy of North Korea⁵ in the context of U.S. confrontation with that country over its nuclear weapon and missile programs. This report provides an overview of the North Korean economy, surveys its economic relationships with major trading partners, and examines various U.S. policy options.

The issue with respect to the economy of the Democratic People's Republic of Korea and its economic relations deals with what actions the United States could take that would lead to a verifiable halt to the DPRK's nuclear weapons program; the lessening of tensions between the DPRK and South Korea, Japan, and the United States; the prevention of proliferation nuclear weapons and missile material by North Korea; and the betterment of human rights and the standard of living of North Korean non-elites.

The year 2009 may turn out to be the tipping point in the quest by the DPRK to become a *de facto* nuclear-armed state, although its ability to deliver a nuclear weapon remains problematic. The DPRK has embarked on a course that includes a major shift in power toward the military, emphasis on ideological purity, rising criticism of the United States, a restart of its nuclear plant at Yongbyon, the test of a potential long-range ballistic missile in spite of sanctions and objections from much of the rest of the world, the capture of two American news reporters (trial set for June 4) and a South Korean worker from the joint Kaesong Industrial Complex,⁶ and the test of its second nuclear weapon as well as short-range missiles. North Korea also has indicated that it would not return to the Six-Party Talks on denuclearization.

Following an apparent stroke by North Korea's leader, Kim Jong-il, in August 2008, the country appears to be preparing for succession and for the 100th anniversary in 2012 of the birth of Kim Il-sung, the nation's founder. In jockeying for position, the military and issues related to national security have taken policy priority over the civilian side of government and issues related to economics, international trade, and society at large. In addition, Pyongyang's leaders seem to be leaning more toward nationalism, purity of thought, and loyalty both to the Communist party and to the party's ideals. The result has been a policy shift that implies that the domestic issues are taking priority over foreign considerations leading to increased isolation from the rest of the world. Kim Jong-il reportedly has designated either his youngest son, Kim Jong-un, as his heir apparent.⁷ Both South Korea's Unification Ministry and the U.S. State Department, however, consider the reported designation as "speculative."⁸ As Kim Jong-il faces possible death, one

⁴ See CRS Report RL34256, *North Korea's Nuclear Weapons: Technical Issues*, by Mary Beth Nikitin, CRS Report RL33590, *North Korea's Nuclear Weapons Development and Diplomacy*, by Larry A. Niksch, and .CRS Report RS21473, *North Korean Ballistic Missile Threat to the United States*, by Steven A. Hildreth.

⁵ Information on the DPRK's economy is scanty and suspect. The closed nature of the country and the lack both of a comprehensive data-gathering structure and a systematic reporting mechanism make quantitative assessments difficult. Still, sufficient information is available to provide a sketch of the North Korean economy that has enough details to address different policy paths.

⁶ Choe, Sang-hun, "North Korea says it will try 2 Americans," *International Herald Tribune*, May 15, 2009. Note: The United States is working through the Swedish embassy in Pyongyang for release of the two reporters. Sweden , represents U.S. interest in North Korea.

⁷ Kim Hyun, "Spy Agency Confirms N.K. Leader's Third Son as Successor: Lawmakers," *Yonhap (Seoul)*, June 2, 2009, p. Reprinted in Open Source Center #FEA20090603861068.

⁸ Kim Hyun, "Kim's failing health prompting N. Korean power transfer to son," *Yonhap*, June 4, 2009.

prominent theory is that he is indulging hard-line elements in the armed forces in order to secure military backing for his chosen successor.⁹ Another possibility is that the military is preparing to name its own leader to succeed Kim Jong-il.

Since Kim Jong-un in his mid-20s¹⁰, if he becomes the successor to Kim Jong-il, he likely will undergo a period of grooming before actually assuming power. According to news reports, Kim Jong-il's brother-in-law, Jang Seong-taek, currently is running many of the day-to-day affairs of the DPRK on behalf of the ailing Kim Jong-il.¹¹ He may continue to do so through his membership on the National Defense Commission until Kim Jong-un is properly trained to take over leadership. The Commission currently is headed by Kim Jong-il, and Kim Jong-un reportedly has been appointed to this Commission. It is not clear whether the DPRK military and society will accept this "three generation succession," but North Korean diplomats reportedly have been told to "pay homage to Kim Jong-un," and some schoolchildren have been including his name in their songs.¹²

Little is known about Kim Jong-un except that he apparently attended the International School of Berne (Switzerland) under an alias during which time he learned English and associated with the children of U.S. diplomats. At the boarding school, he learned to play basketball and reportedly was a fan of the NBA and Michael Jordan. He returned to Pyongyang in his late teens.

North Korea at a Glance

Land Area: 120,540 sq km, slightly smaller than Mississippi

Population: 22.7 million (2009 est.)

Head of State: Kim Jong-il

Capital: Pyongyang

Life expectancy: 63.8 years

GDP: CIA estimated \$40 billion at purchasing power parity in 2008 or \$26.2 billion at official exchange rate. Global Insight estimated \$54.2 billion and \$28.5 billion, respectively

GDP Per Capita: \$1,700 (CIA) to \$2,248 (Global Insight) at PPP in 2008

GDP Composition: agriculture: 30% industry: 39%, services: 31%

Exports: \$1.9 billion (2007)

Export Commodities: minerals, metallurgical products, manufactures (including armaments), textiles, and fishery products

Imports: \$3.2 billion c.i.f. (2007)

Import Commodities: petroleum, coking coal, machinery and equipment; textiles, grain

Sources: CIA, World Factbook; Global Insight. CRS calculations for trade.

Goals and Means

These developments hold significant implications for U.S. interests and goals in Asia. U.S. goals with respect to the DPRK have included (1) verifiable elimination of North Korea's nuclear weapons program; (2) the halt to DPRK nuclear or ballistic missile proliferation activities

⁹ Economist Intelligence Unit ViewsWire, *North Korea politics: Nuclear threat*, May 27, 2009.

¹⁰ Some in the North Korean military have begun to refer to Kim Jong-un as the "36 year-old young General," an apparent attempt to add 10 years to his age. Moon Sung Hwee, "Kim Jong Woon Mentioned By Name," *Daily NK*, June 4, 2009.

¹¹ David E. Sanger, Mark Mazzetti and Choe Sang-hun, "North Korean Leader Is Said to Pick a Son as Heir," *New York Times*, June 2, 2009, Internet edition.

¹² Kim Hyun, "Spy Agency Confirms N.K. Leader's Third Son as Successor: Lawmakers," *Yonhap (Seoul)*, June 2, 2009, p. Reprinted in Open Source Center #FEA20090603861068.

(particularly with Syria and Iran); (3) the reduction of tensions on the Korean Peninsula and between the DPRK and Japan, (4) the halt to DPRK-sponsored illicit activities (including counterfeiting of dollars and of products such as American cigarettes), and (5) better human rights and treatment of returned refugees in North Korea.

The Six-Party Agreement (United States, China, Russia, Japan, South Korea, and the DPRK) of February 13, 2007, included an economic incentive of heavy fuel oil and humanitarian food aid, as well as the prospect of the normalization of diplomatic relations between the DPRK and the United States and Japan in exchange for North Korea's freezing and allowing inspections of the activity at its Yongbyon nuclear reactor. By early 2009, the Yongbyon plutonium nuclear installation was about 80% dismantled. On June 26, 2008, President Bush had lifted the application of the Trading with the Enemy Act with respect to the DPRK¹³ and in October 2008 had removed North Korea from its list of state sponsors of terrorism.¹⁴ The progress being made under the Six Party Talks also enabled the United States to resume shipments of humanitarian aid to North Korea. A shipload of food and another of heavy fuel oil arrived in North Korea shortly after the announcement by President Bush of the above actions. These activities, as negotiated under the Six-Party Talks, have been halted since December 2008.

For the DPRK economy, the worst of the crisis reached in the mid-1990s seems to have passed, but the economy is still struggling and heavily dependent on foreign assistance to stave off starvation among a sizable proportion of its people. In a December 2008 report, the U.N. World Food Program (WFP) estimated total food production to be 4.21 million tons for the 2008/2009 marketing year (November 2008-October 2009), leaving the DPRK to face a cereal deficit of 836,000 tons, even with commercial imports (around 500,000 tons). This would leave insufficient food to feed almost 9 million people until the harvest in October 2009.¹⁵ The potential starvation of a sizable part of North Korea's population provides some, but limited, leverage for the United States.

The only countries considered to have major influence in North Korea are China and Russia. Both issued strong statements condemning Pyongyang's second nuclear test. China arguably has the most influence, but even though China has not approved of many of North Korea's actions, it fears that instability in the DPRK will create a flood of refugees into its northern provinces. China's fear of a collapse of the regime is an incentive for it to ensure that the DPRK has sufficient energy and food for some minimal level of existence. Beijing is the host for the Six-Party Talks but faces conflicting goals. China needs stability in East Asia to continue its economic development and views the DPRK as a fellow communist state. Strategically, China would like to avoid an arms race in Northeast Asia and is leery of a reunified North and South Korea. The last thing China needs is for the alliance relationship between the United States and South Korea to be extended to the Yalu River bordering China. Beijing seems to be more comfortable with an economically poor state with nuclear aspirations as a neighbor than a more independent, unified Korean state (possibly with nuclear weapons) that could go the way of the unified Germany and support the Western alliance. The North Korean nuclear problem, however, works against a major

¹³ U.S. Department of State. "North Korea: Presidential Action on State Sponsor of Terrorism (SST) and the Trading with the Enemy Act (TWEA)." Fact Sheet, June 26, 2008. This began the clock on a 45-day period of prior notification of Congress (ending August 11) for delisting North Korea as a state sponsor of terrorism.

¹⁴ Merle D. Kellerhals Jr., *U.S. Removes North Korea from State Sponsors of Terrorism List; North Korea agrees to comply with nuclear verification requirements*, America.gov, October 14, 2008.

¹⁵ U.N. World Food Program. 8.7 Million North Koreans Need Food Assistance, December 10, 2008.

Chinese interest. It ensures that the United States will remain committed to its alliance relationships with Japan and South Korea and provides a rationale for a stronger U.S.-led anti-ballistic missile effort in East Asia. China's strategy also could backfire if a nuclear-armed DPRK compelled Japan¹⁶ or South Korea to develop nuclear weapons of their own. The Economist Intelligence Unit sums up the situation as follows:

North Korea's behavior is deeply embarrassing to the Chinese government. That China continues to extend vital diplomatic and material support to its unhinged neighbor—including by repatriating those refugees who manage to escape across the border—is hardly consonant with China's ambitions to be seen as a responsible global power. Moreover, North Korea's belligerence is having ripple effects that are profoundly contrary to China's strategic interests. The threat from North Korea could strengthen conservative governments in both Japan and South Korea, as well as reinforce both countries' alliances with the US. Lastly, if the threat from North Korea spurs Japan to abandon aspects of its pacifist constitution—or even to develop nuclear weapons—this would be a steep price to pay for preserving Chinese influence over half of the Korean peninsula.¹⁷

Pyongyang perceives its nuclear weapon and potential ballistic missile programs as a means to achieve two national goals: to gain stature in the world and to develop a credible deterrent against hostile military action. Without the DPRK nuclear program, North Korea would be a humanitarian aid “basket case” and a reclusive society that would be hard pressed to draw more world notice than countries such as Laos or Mongolia. Instead, North Korea is high on the world's security agenda, Pyongyang has become adept at using this attention to extract economic assistance and has used actions by other countries (such as sanctions or U.S. military exercises in the region) as propaganda tools to fuel nationalism and strengthen its regime. North Korea's leaders seem to be in a policy dilemma. They have pushed to become a nuclear power despite warnings not to do so even from China, their major ally. Yet North Korea's nuclear weapon development has become a rallying point for national pride and what they see as a military deterrent. Yet a January 2008 joint newspaper editorial by the Communist Party, military, and youth militia stated that “at present, no other task is more urgent or more important than solving the people's food problem and eating problem.”¹⁸ Pyongyang currently faces the archetypical economic trade-off between “guns and butter,” but in their case the question is whether to retain the “guns” (nuclear weapons) or give them up in order to obtain “butter” (food imports). Apparently Pyongyang feels it can accomplish both goals, since it has designated 2012 to both become a nuclear and space power and to join the club of economic tigers of Asia.

As the DPRK goes through preparations for succession and the centennial year of 2012, the confluence of several forces is complicating matters. These include (1) the global financial crisis having reduced the ability of other nations to respond favorably to “extortion” by Pyongyang; (2) the grim economic situation faced by the North Korean people, although food prices are down from 2008 and scarcity does not impose hardship on the elites and Kim Jong-il's inner circle; (3) the deterioration in relations between South and North Korea and the hardening of policies by both sides having put the brakes on economic cooperation and raising the possibility of some limited military action by North Korea against the South (with retaliatory actions by the South);

¹⁶ CRS Report RL34487, *Japan's Nuclear Future: Policy Debate, Prospects, and U.S. Interests*, by Emma Chanlett-Avery and Mary Beth Nikitin.

¹⁷ Economist Intelligence Unit ViewsWire, *North Korea politics: Nuclear threat*, May 27, 2009.

¹⁸ Full text of North Korea's 2008 New Year's joint editorial, BBC Monitoring Asia Pacific. London. January 2, 2008. p. 1.

(4) an increase in China's exports to North Korea in 2008¹⁹ despite the shrinkage in trade elsewhere in the world; (5) a tendency among the U.S. media to interpret North Korean actions as being primarily a test of the Obama Administration rather than considering the domestic North Korean factors driving the policies; and (6) the effect of actions in response to the DPRK's nuclear and missile tests on Iran in its nuclear program (Will such actions encourage or discourage Iran?).

U.S. interest in the moribund North Korea economy goes beyond the leverage that economic assistance provides in negotiations over Pyongyang's nuclear weapons. The economy provides the financial and industrial resources for Pyongyang to support its military and nuclear weapons program. It constitutes an important "push factor" for refugees seeking to flee the country. It creates pressure for the country to engage in illicit trade. When the economy is performing poorly, it diverts international food aid that could be used elsewhere and creates instability that raises the risk of desperate action by Pyongyang. Dismal economic conditions may foster forces of discontent in the DPRK that potentially could turn against the ruling regime of Kim Jong-il—especially if knowledge of the luxurious lifestyle of regime leaders and the higher standard of living in South Korea spreads or if the poor economic performance hurts even Pyongyang's elite. Despite over a decade of hardship, however, most dissatisfaction or opposition to the regime seems to be muted.

Conventional Wisdom and Considerations

Conventional wisdom with respect to North Korea includes the following considerations: (1) without stringent monitoring mechanisms, Pyongyang probably will cheat on any agreement; (2) the DPRK will renege on agreements for what seem to be superficial reasons, (3) Pyongyang's first priority seems to be regime survival; (4) North Korea regularly engages in illicit activity and may take actions opposed to normally accepted international law or standards of national behavior; (5) the DPRK likely will sell nuclear technology and missiles to countries not able to obtain them through other channels; (6) economic privation in North Korea mainly affects the population outside of the political and military elite, particularly in the countryside; (7) popular sentiment opposing the current regime, although reportedly on the rise, appears weak or suppressed sufficiently for Kim Jong-il or his successor to remain in power for an indefinite period of time; and (8) Pyongyang feels justified in its actions given what it perceives as "hostility" by the United States and South Korea and "broken promises" to build a light-water nuclear plant for the DPRK and to deliver energy and food aid.

Other factors to be considered include the following: (1) Japan would likely provide a large monetary settlement to Pyongyang in return for its years of occupation should a peace settlement be reached; (2) the border between China and North Korea is porous, particularly in the winter when the rivers are frozen and electricity so scarce that few lights operate at night; (3) centrally planned, communist economies that have been operating for several decades create distortions and consumer dissatisfaction that enable rapid transition to a market economy once those economies are liberalized; (4) economic reform and the opening of trade and investment in North Korea would likely induce large increases in production and economic well-being, but most DPRK production facilities are so lacking in new machinery and equipment that major

¹⁹ In 2008, China's exports to the DPRK increased by 46% from \$1,392 million to \$2,033 million.

investments would be needed to raise them to world standards; and (5) the level of distrust between the United States and the DPRK is deep and long-standing.

Strategy and Tools

The three legs of any grand strategy toward the DPRK include economic, diplomatic, and military means to accomplish U.S. goals and protect U.S. national interests. U.S. strategy may take both short- and long-term paths. A short-term strategy includes some tit-tor-tat—an immediate response to provocations by the DPRK—in order to affect the cost-benefit calculations by leaders in Pyongyang. Such responses would either increase the costs or decrease the benefits to the ruling regime stemming from the action in question, and arguably deter Pyongyang from similar actions in the future. Such sanctions have targeted the North Korean elite (as was done in freezing their bank accounts in Macao’s Banco Delta Asia and restricting exports to North Korea of luxury goods) or North Korean companies (those involved in weapons sales, including small arms), and they have attempted to deprive the central government of revenues from illicit activities (particularly the sales of nuclear or missile-related items and from counterfeiting currency, drugs, and cigarettes). As of early June 2009, the United Nations was considering its immediate response to North Korea’s second nuclear test. In the deliberations, it appears that China and Russia may be willing to support stronger sanctions on the DPRK, since Pyongyang’s actions are increasingly being perceived as being inimical to certain Chinese and Russian interests.

A long-term strategy would be aimed at accomplishing a three-fold transformation in the DPRK: (1) a transformation in its relations with Western nations (to include the DPRK’s perceived need for nuclear weapons to protect itself from hostile action by the United States), (2) a transformation in the basis of legitimacy of the ruling regime (to reduce the need to garner support through Stalinist tactics and by grandiose goals such as becoming a nuclear and space power), and (3) a transformation in the DPRK economy so that it no longer has to “extort” food and energy assistance in order to reduce starvation among its people.

In formulating U.S. policy,²⁰ what is not clear is whether current adverse North Korean policies will moderate after the succession crisis has passed. Will a new North Korean leader allow a return to the Six-Party Talks and release more market forces in the DPRK economy, or will the military-first campaign continue with even greater intensity under a new leader who likely will be under heavy influence by the military? Given the weaker power base of a young Kim successor to Kim Jong-il, it is possible that it will be easier for negotiators to deal with the father, Kim Jong-il, than with his son.²¹ The 150-day campaign that began in May 2009 seems to be a somewhat desperate policy to increase production in view of the expected economic sanctions following the second nuclear test. The campaign is not likely to have a lasting impact on North Korean output, since the campaign relies primarily on more human effort. More work does not solve problems of antiquated machinery, insufficient supplies of electricity and raw materials, the lack of market incentives and market-based decision making, hunger among workers, and general inefficiencies

²⁰ In June 2009, Deputy Secretary of State Steinberg led a delegation visiting Japan, South Korea, and China to consult with governments there on the challenges faced in dealing with North Korea’s missile and nuclear program. The delegation included Special Envoy for North Korea Stephen Bosworth, Under Secretary of the Treasury for Terrorism and Financial Intelligence Stuart Levey, Assistant Secretary of Defense for Asia and Pacific Security Affairs Wallace Gregson, and Senior director for Asian Affairs on the National Security Council Jeffrey Bader.

²¹ Kang Hyun-kyung, “N. Korea’s Next Leader Is Eager English Learner,” *Korea Times*, June 3, 2009.

caused by centralized planning. Still, the DPRK is likely to continue pushing toward its stated goal of becoming a newly industrialized country by 2012.

A problem in relations with the DPRK is that the arsenal of diplomatic weapons and incentives has diminished considerably. The United States and Japan have virtually no trade with North Korea, and Pyongyang is threatening to cut off more of South Korea's economic investments in the North. Humanitarian and economic assistance often do not reach the people most in need and reportedly are diverted to the military and party elites. The United States, however, does have financial clout in the world and no country, financial institution, or exporter would like to have to choose between its ties with the United States and those with the DPRK.

The tools that can be implemented to influence decision making in Pyongyang include positive and negative inducements, neither of which seem to work very well. Positive inducements consist primarily of economic and humanitarian assistance, diplomatic recognition, and increased economic and trade ties. North Korea also has been pressing for direct bilateral negotiations with the United States. Negative inducements toward North Korea include general economic sanctions, sanctions on particular companies, financial sanctions,²² diplomatic isolation, actions to prevent sales of nuclear and missile technology and materials abroad, and the threat of military action.

The Six-Party Talks

Engagement with North Korea has been conducted under the Six-Party Talks plus bilateral discussions between Pyongyang and other nations. The talks (now suspended) include the United States, DPRK, China, Japan, South Korea, and Russia. This brings all major players to the table, exposes China and Russia to North Korean obstinacy, enables China and Russia to exert pressure on Pyongyang, and includes Japan and South Korea who have direct interests in a peaceful resolution of the problem and are likely to be the major providers of aid to the DPRK. The talks, however, rely heavily on China, and China has conflicting interests in the actual resolution of DPRK nuclear issue. (For discussion of the talks, see CRS Report RL33590, *North Korea's Nuclear Weapons Development and Diplomacy*, and CRS Report RL33567, *Korea-U.S. Relations: Issues for Congress*, both by Larry Niksch.)

Table 1 summarizes the major negotiating priorities and bargaining chips for each side in the Six-Party Talks. Any policy package would have to address at least some of the priorities of each nation.

The highest priority for the United States, Japan, and Russia reportedly is for North Korea to scrap its nuclear weapons program in a manner that is verifiable. Japan also is concerned about North Korean missiles (which have been fired over Japan) and a full accounting for the abduction of its citizens. In addition, the United States, China, Russia, and Japan seek a stop to weapons proliferation, while Japan also seeks normalization of relations with the DPRK, and South Korea seeks a framework for rapprochement, possible reunification with the North, less military tension along the demilitarized zone (DMZ), and access to cheap labor and markets in the North.

²² U.S. sanctions are designed to negatively affect the Pyongyang leadership and not cause additional hardship for the common people. For a review of sanctions, see Karin Lee and Julia Choi, *North Korea: Unilateral and Multilateral Economic Sanctions and U.S. Department of Treasury Actions, 1955-April 2009*, National Committee on North Korea, Updated April 28, 2009. 89 pp.

Table I. Major Priorities and Bargaining Chips by Country in the Six-Party Talks with North Korea

Country	Priority	Bargaining Chips
United States	Complete, verifiable, and irrevocable scrapping of nuclear weapons; non-proliferation; human rights; peace treaty	Guarantee security and regime, economic aid, normalized diplomatic and trade relations
North Korea	Guarantee security and regime survival; establish diplomatic relations with the U.S. and Japan; reunification with South Korea on own terms; peace treaty; obtain food aid	Scrap nuclear weapons and missiles, reduce tensions along DMZ, allow economic cooperation
South Korea	Set framework for peaceful resolution and prosperity on the peninsula; reunification; access to North Korean labor and markets, non-nuclear Korean peninsula; human rights; peace treaty	Economic support, energy, business investment and technology
Japan	Scrap nuclear weapons program and missiles; resolve abductions of Japanese citizens	Normalized diplomatic relations, economic support
China	Non-nuclear Korean peninsula, non-proliferation; continued influence on peninsula, weakening U.S. alliance with Japan and with South Korea; peace treaty	Economic support, alliance support
Russia	Scrap N. Korean nuclear weapons; non-proliferation; promote stability in N.E. Asia	Buffer diplomacy, energy assistance, business investment

Source: Adapted from: *The Seoul Economic Daily*, 22 August 2003, cited in Hong Soon-Jick, "North Korean Nuclear Crisis: Prospects and Policy Directions," *East Asian Review*, Vol. 15, No. 3, Autumn 2003, p. 31.

Pyongyang's primary goals appear to include (1) preservation of communist rule under Kim Jong-il and his successor, (2) obtaining a security guarantee that would preclude a possible preemptive attack by the United States or its allies or attempt at regime change, (4) maintaining key elements of its nuclear weapons programs, (3) establishing diplomatic relations with the United States and Japan, (4) reunification with the South on its own terms, and (5) obtaining economic assistance for its ailing economy while maintaining its *juche* philosophy.

North Korea claims that the reasons for its nuclear program are to deter an attack by the United States and to use the bombs if South Korea starts a war or to devastate Japan in order to prevent the United States from participating in such a war.²³ The nuclear program also enables it to gain international prestige, to exercise a degree of hegemony over South Korea, and to extract economic assistance from other countries. Pyongyang is unlikely to abandon this nuclear program without significant changes to the underlying reasons for the program's existence. Its fear of being attacked had been exacerbated by its inclusion in the "axis of evil," the Bush doctrine of preemptive strikes, the U.S.-led invasion of Iraq,²⁴ and the death of Saddam Hussein. They apparently see nuclear weapons as an insurance policy against attempts at regime change by the West. Also, Pyongyang apparently has observed that once a country becomes a recognized nuclear power, the United States becomes more friendly with it. Pakistan, India, and China are cases in point.

²³ Jane's Information Group. Armed Forces, Korea, North. Jane's Sentinel Security Assessment, March 4, 2003.

²⁴ Laney, James T. and Jason T. Shaplen. "How to Deal With North Korea," *Foreign Affairs*, March/April 2003. p. 20-21.

Policy Options

Major U.S. policy options, given the above interests, goals, assumptions, and strategies with respect to the DPRK, include the following.

- Continue current policies with respect to the DPRK. These include (1) targeted economic sanctions and diplomatic isolation both bilaterally and through the United Nations; (2) diplomatic engagement through bilateral and plurilateral meetings under the aegis of the Six-Party Talks and related meetings; (3) keeping North Korea from joining international financial institutions; (4) international efforts to counter trafficking by North Korea in illegal drugs, counterfeit currency, or other contraband; (5) non-proliferation efforts, including the Proliferation Security Initiative; and (6) maintenance of U.S. military forces in South Korea and Japan and continued development of a missile defense system for East Asia.
- Intensify negative pressures on the DPRK: tighten and provide for closer monitoring of U.N. and U.S. sanctions; (e.g., freeze assets of and sanction certain North Korean companies and individuals; ban certain North Koreans from traveling abroad; tighten a ban on imports of luxury goods into the DPRK); impose sanctions on the DPRK for counterfeiting U.S. currency; return the DPRK to the list of sponsors of terrorism (although certain legal conditions would need to be met)²⁵ induce China to use its extensive influence with and exports to North Korea to punish it for its nuclear test and to bring Pyongyang back to the Six-Party Talks; stop providing protection for North Korean ships from Somali pirates; invoke provisions of U.N. Security Council resolution 1718 passed after the 2006 test that authorizes the United States and other nations to halt and inspect shipping into and out of North Korea for contraband missile parts or nuclear materials. (This sanction has not been enforced, partly because of concerns that it could escalate hostilities with North Korea.)
- Negative pressures also may include weakening the hold by Pyongyang on the daily lives of its citizens and support of Kim Jong-il by fostering alternative centers of power, facilitating the transition to a market economy, and increasing information flows into the country. Negative pressure may include a major campaign of soft power to include admittance of more North Korean refugees into the United States, funding exchanges and visits by North Korean cultural shows and dance groups to the United States, and having the World Food Program provide North Koreans with food that is more identifiable as originating abroad. (South Korea has found a secret weapon that has been a hit with North Koreans: South Korean “Choco Pies,” a snack consisting of two large round cookies covered with chocolate with a filling of marshmallow in between (much like an Oreo cookie). They were so popular in the lunches provided to Kaesong Industrial Complex workers in North Korea that they were making their way into black markets in the surrounding area and causing alarm among North Korean authorities.²⁶)

²⁵ Jon Herskovitz, “U.S. Might Impose Counterfeiting Sanctions on North Korea,” *Reuters*, June 4, 2009.

²⁶ “N.Koreans Love Choco Pie,” *Chosen Ilbo*, May 23, 2009, English Internet edition.

- Wait and see if Pyongyang is serious about not participating in the Six-Party Talks and trying to join the nuclear, space, and economic tiger club by 2012, but continue to monitor the situation and quietly take prudent countermeasures through the United Nations and with China until the DPRK's succession question is settled. Not give Pyongyang one thing that it desires—world attention and over-reacting by governments thereby providing propaganda material and support for the ruling regime. Coordinate policy thrusts with South Korea and Japan (who are pressing for stronger sanctions), then with China, Russia, and others. Under specific conditions, offer to hold bilateral talks in the context of the Six-Party Talks and reaffirm the position that the United States is willing to normalize relations; sign a peace treaty; give some energy, food, and technical assistance for complete abandonment of nuclear weapons, and eventually to allow the DPRK to join the International Monetary Fund and Asian Development Bank.

Legislation

The 111th Congress, is considering the following legislation:²⁷

- S. 6 (Reid). Restoring America's Power Act of 2009. Sense of Congress that Congress should enact, and the President should sign, legislation to restore and enhance the national security of the United States by (among others) reducing the threat posed by unsecured nuclear materials and other weapons of mass destruction and effectively addressing the security challenges posed by Iran and North Korea.
- S. 837 (Brownback). North Korea Sanctions Act of 2009. A bill to require that North Korea be listed as a state sponsor of terrorism, to ensure that human rights is a prominent issue in negotiations between the United States and North Korea, and for other purposes.
- H.Res. 309 (Peter King). Expressing the sense of the House of Representatives that North Korea should immediately stop any hostile rhetoric and activity towards the Republic of Korea and engage in mutual dialogue.
- H.R. 485 (Ros-Lehtinen). Security through Termination of Proliferation Act of 2009. States that specified U.S. sanctions with respect to Iran, North Korea, or Syria shall remain in effect until the President certifies to the appropriate congressional committees that such country has verifiably dismantled its weapons of mass destruction programs.
- H.R. 1980 (Ros-Lehtinen). North Korea Sanctions and Diplomatic Nonrecognition Act of 2009. To continue restrictions against and prohibit diplomatic recognition of the Government of North Korea, and for other purposes.

²⁷ Major congressional actions with respect to security and human rights aspects of U.S.-DPRK relations are included in CRS Report RL33567, *Korea-U.S. Relations: Issues for Congress*, by Larry A. Niksch; CRS Report RL34256, *North Korea's Nuclear Weapons: Technical Issues*, by Mary Beth Nikitin; and CRS Report RL30613, *North Korea: Terrorism List Removal*, by Larry A. Niksch.

- H.R. 2290 (Sherman). International Uranium Extraction and Milling Control Act of 2009. To provide for the application of measures to foreign persons who transfer to Iran, Syria, or North Korea certain goods, services, or technology that could assist Iran, Syria, or North Korea to extract or mill their domestic sources of uranium ore.
- H.R. 2346 (Obey). Supplemental Appropriations Act, 2009.²⁸ Among its provisions, it rejects a request for \$34.5 million in Department of Energy non-proliferation funds to dismantle nuclear facilities in North Korea and rejects \$95 million requested for energy assistance to North Korea in the foreign assistance accounts. House bill provides \$18 million for development assistance to North Korea in the Economic Support Fund. Passed House and Senate and on May 21, 2009, went to conference.

The Development of U.S. Policy

The White House, State Department, Defense Department, Treasury, the Special Envoy for North Korea, and others are formulating the Obama Administration's policy toward the DPRK. It is clear, however, that in early 2009 relations with the DPRK have deteriorated, primarily because of North Korea's succession crisis and second nuclear test but also because the push has ended for some success at the end of the Bush Administration. Pyongyang also seems to have escalated its negative actions because it perceived that neither the Obama Administration nor the new South Korean President seemed to be "taking the bait" and reacting to the increasingly confrontational actions by Pyongyang.

As the George W. Bush Administration drew to a close, it showed a new willingness to negotiate directly with the DPRK, although it maintained the umbrella of the Six-Party Talks. The February 13, 2007 Six-Party Agreement included a provision that North Korea freeze its nuclear installations at Yongbyon and invite back the International Atomic Energy Agency to monitor the freeze. North Korea also was to discuss with the other six parties "a list of all its nuclear programs, including plutonium extracted from used fuel rods" from the five megawatt reactor (which North Korea claims to have reprocessed into nuclear weapons-grade plutonium). In exchange, South Korea was to provide financing for 50,000 tons of heavy oil to be shipped to the North. The DPRK and the United States also were to start talks "aimed at resolving bilateral issues and moving toward full diplomatic relations" and the United States was to settle the Banco Delta Asia issue.²⁹ Under the Agreement, North Korea and Japan also were to "start bilateral talks" toward normalization of relations on the basis of settlement of "outstanding issues of concern" (which Japan interprets as requiring a settlement of the issue of North Korea's kidnapping of Japanese citizens).

²⁸ For information on North Korea in the FY2009 Spring Supplemental Appropriations for Overseas Contingency Operations (H.R. 2346), see CRS Report R40531, *FY2009 Spring Supplemental Appropriations for Overseas Contingency Operations*, coordinated by Stephen Daggett and Susan B. Epstein.

²⁹ On September 15, 2005, the U.S. Treasury designated Banco Delta Asia SARL as a "primary money laundering concern" under Section 311 of the Patriot Act because it represented an unacceptable risk of money laundering and other financial crimes. Treasury stated that "Banco Delta Asia has been a willing pawn for the North Korean government to engage in corrupt financial activities through Macau...." On March 14, 2007, the Treasury finalized its rule against Banco Delta Asia, barring the bank from accessing the U.S. financial system, but allowing the \$25 million in North Korean funds held to be released.

The February 2007 Agreement represented a clear change in strategy by the United States and other parties to the talks. For the first time, the Banco Delta Asia action was linked by the United States to the Six-Party Talks and nuclear issues. In essence, the United States agreed to see that the Banco Delta issue was settled before Pyongyang would have to take action to invite International Atomic Energy Agency inspectors back into the country and to shut down its nuclear plant. For the DPRK, this meant that the \$25 million in frozen funds from Banco Delta accounts would be released first. This was done. The Agreement also implied that a strategy of regime change appeared to be off the table. The question now is whether the DPRK will live up to its commitments under the Agreement and what leverage the United States, China, and other participants have to ensure Pyongyang's compliance.

As a result of the February 2007 Six-Party Agreement, the United States began to provide fuel and food aid and held out the prospect of eventual normalization of relations with the DPRK in response to specific disclosure and other actions by Pyongyang in regard to its nuclear program.³⁰ On June 26, 2008, President Bush announced the lifting of the application of the Trading with the Enemy Act (TWEA) with respect to the DPRK and notified Congress of his intent to rescind North Korea's designation as a State Sponsor of Terrorism.³¹

What is evident from the experience of the past seven years is that Pyongyang's stalling and the United States' refusal to negotiate bilaterally (even under the umbrella of the Six-Party Talks) provided time for Pyongyang to continue to develop nuclear bombs.³² Pyongyang's tactics seem to have been to continue to escalate its nuclear program and then to pause and let the world grow accustomed to this new level before moving to a new level. Currently, however, it appears that the Pyongyang has given the military the green light to attain recognized nuclear power status by the year 2012 even in the face of economic and diplomatic sanctions and the possibility of triggering military action by other countries.

After North Korea's 2006 nuclear test, it became evident that even China opposed the path Pyongyang was taking. Following the nuclear test, the United States took the issue to the United Nations. The resulting U.N. Security Council Resolution 1718 (October 14, 2006) called on North Korea to abandon its nuclear and missile programs and imposed several sanctions. The resolution imposed an arms embargo on North Korea, banned trade in materials related to ballistic missiles or weapons of mass destruction, and barred exports of luxury goods to the DPRK. It also froze funds and other financial assets owned by people connected with North Korea's unconventional weapons program and banned travel by such people. China and Russia supported this resolution. Japan responded by curtailing imports from and travel to North Korea, banned North Korean ships from entering its ports, and prohibited exports of 24 luxury products to the DPRK. In tightening sanctions following the April 5, 2009, long-range missile test, China also cooperated to a certain extent.

It appears, however, that despite deep privation and negative growth during the mid-1990s, economic sanctions have had little effect on Pyongyang's behavior in ways that would achieve

³⁰ For details on the Six-Party Talks, see CRS Report RL33590, *North Korea's Nuclear Weapons Development and Diplomacy*, and CRS Report RL33567, *Korea-U.S. Relations: Issues for Congress*, both by Larry A. Niksch.

³¹ U.S. Department of State. "North Korea: Presidential Action on State Sponsor of Terrorism (SST) and the Trading with the Enemy Act (TWEA)." Fact Sheet, June 26, 2008. This began the clock on a 45-day period of prior notification of Congress (ending August 11) for delisting North Korea as a state sponsor of terrorism.

³² For details, see CRS Report RL34256, *North Korea's Nuclear Weapons: Technical Issues*, by Mary Beth Nikitin.

U.S. ends. The ruling elite and military have first priority on scarce food and other supplies. The Kim regime allots economic privileges to its insiders. Peasants may starve, but ranking communist party members live in a separate world of relative luxury.³³ The poor economic conditions also do not appear to have materially undermined the Kim regime. Experts consider internal dissident forces too weak and Kim's control over his military too strong for a domestic *coup* to occur.³⁴ Pyongyang has taken halting steps toward opening its economy to international investment and has allowed more private markets, but these are similar to policies nearly all centrally planned economies are taking, and China and Russia have been recommending that North Korea adopt them also. As part of the tightening of policy in 2009, Pyongyang is clamping down on many of the private markets, although the "cat has already been let out of the bag." As long as the central government is unable to provide food and necessities through its ration system, non-elites in North Korea have no choice but to engage in private market activity. The alternative is starvation.

Irrespective of whether the U.S. economic sanctions worsened North Korea's economy, the poor state of the North Korea's agriculture and industries has indirectly affected U.S. national interests. It has necessitated humanitarian aid and has generated a deficit in trade that Pyongyang has attempted to fill by dealing in illegal drugs and missiles. Food scarcity also has pushed numerous refugees into China and South Korea.

Overview of the DPRK Economy

The North Korean economy is one of the world's most isolated and bleak.³⁵ It was completely bypassed by the Asian "economic miracles" of the past three decades that brought modern economic growth and industrialization to South Korea, Taiwan, Singapore, and Hong Kong, as well as rapid growth and trade liberalization to China, Thailand, Malaysia and other Asian nations. The "Stalinist" North Korean economy can be characterized by state ownership of means of production; centralized economic planning, the lack of basic freedoms necessary for a market economy (such as freedom of movement and of commerce), political repression; and an emphasis on military development (military first policy). The economic system is designed to be self-reliant and closed. The irony of the situation is that the longer the economy tries to remain self-sufficient, the poorer its performance and the more dependent the country becomes on the outside world just to survive.

During the 1990s, as many as two million people starved to death. Major portions of the North Korean population survived primarily through transfers of food and other economic assistance from abroad. The worst of the food crisis has passed, but shortages still exist, and the country depends on staples from China, and, when allowed, from the U.N. World Food Program³⁶ as well as fertilizer from South Korea (when it was being delivered).

³³ BBC Monitoring, Asia Pacific. Former Bodyguard of North Korean Leader Interviewed, October 13, 2003, p. 1.

³⁴ The only significant power base that might challenge the regime is the military. Since Kim Jong-il became Chairman of the National Defence Commission, however, he has promoted 230 generals. Most of the army's 1,200-strong general officer corps owe their allegiance to him. Jane's Information Group, "Internal Affairs, Korea, North," *Jane's Sentinel Security Assessment*. June 10, 2003.

³⁵ For an in-depth study of the North Korean economy, see Marcus C. Noland, *Avoiding the Apocalypse: The Future of the Two Koreas*, Institute for International Economics, 2000.

³⁶ In January 2008, a program for recovery assistance for vulnerable groups in the DPRK lasting from April 2006 to (continued...)

During the 1990s, the inefficiencies of North Korea's centrally planned economy, especially its promotion of state-owned heavy industries, along with high military spending—about 15-25% of GDP—joined with drought and floods to push the economy into crisis.³⁷ In addition, the collapse of the Soviet bloc meant the loss of Russian aid, export markets, and cheap oil. Trade with the former Soviet Union dropped from as much as \$3.58 billion in 1999 and has recovered to only \$230 million (mostly petroleum) by 2005.³⁸ This added to disastrous domestic economic conditions in North Korea.³⁹ Food has been so scarce that North Korean youth are shorter than those in other East Asian nations.⁴⁰ Since 1998, the military reportedly has had to lower its minimum height requirement in order to garner sufficient new recruits. Life expectancy has been contracting. With the help of the WFP, which had been feeding more than a quarter of North Korea's 23 million people, chronic malnourishment among children reportedly fell from 62% in 1998 to about 37% in 2004. About one-third of mothers were considered to be both malnourished and anemic.⁴¹ The Food and Agriculture Organization of the United Nations estimated that 7.6 million North Koreans were undernourished in the 2002-2004 period.⁴² North Korea refers to this period of hardship as the “arduous march,” an apparent comparison to the “long march” in Chinese revolutionary history. In January 2006, Pyongyang ordered the WFP to stop food deliveries to the DPRK, but limited food assistance (about 75,000 tons annually) was resumed after an agreement in May 2006.⁴³ Over the winter of 2007-2008, the abnormally dry and cold weather reportedly combined with severe flooding during the summer of 2007 seriously affected the crop growth.⁴⁴ In a December 2008 report, the WFP estimated total food production to be 4.21 million tons for the 2008/2009 marketing year (November 2008-October 2009), leaving the DPRK to face a cereal deficit of 836,000 tons, even with commercial imports (around 500,000 tons). Food assistance requirements to feed almost 9 million people were estimated at 800,000 tons until the next harvest in October 2009.⁴⁵

An extensive analysis of the famine in the 1990s concludes that the “ultimate and deepest roots of North Korea's food problems must be found in the very nature of the North Korean economic and political system.”⁴⁶ Since 2002, Pyongyang has allowed some reforms that may ease the

(...continued)

May 2008 had appealed for \$102,234,076 and had received 56% of the income against that appeal. The largest donors were South Korea, Russia, Switzerland, Germany, and Australia. World Food Program. Resourcing Update, Project No. 10488.0, January 15, 2008.

³⁷ Officially, in 2009, 15.8% of the DPRK's \$3.7 billion budget was allocated for national defense. Some South Korean analysts argue that the actual figure is higher. U.S. Embassy, Seoul, Economic Section, “DPRK Finance Minister Kim Announces National Budget to Increase 7 Percent in 2009,” *North Korea Economic Briefing*, May 21, 2009.

³⁸ Data from Global Insight. Subscription database.

³⁹ Global Insight. Korea, North: Economic Trends: Economic Growth: Background. March 4, 2003.

⁴⁰ Chao, Julie. Economic Devastation Visible in Pyongyang. Korea Is like a Land Time Forgot, and Crisis with U.S. Isn't Helping. *The Austin American Statesman*, May 3, 2003. P. A17.

⁴¹ Watts, Jonathan. Where Are You, Beloved General? In a Land Where Paranoia, Propaganda, and Poverty Are the Norm, an Albino Raccoon Reassures North Koreans That Good Times Are Ahead. *Mother Jones*, Vol. 28, No. 3, May 1, 2003. p. 52.

⁴² Food and Agriculture Organization. Food Security Statistics. Online at http://www.fao.org/statistics/faostat/foodsecurity/Files/NumberUndernourishment_en.xls.

⁴³ U.N. World Food Programme. WFP Set to Resume Operations in North Korea, Press Release, May 10, 2006.

⁴⁴ Kim, Hyung-jin. North Korea Winter Threatens Food Supply, Associated Press, Seoul, March 3, 2008.

⁴⁵ U.N. World Food Program. 8.7 Million North Koreans Need Food Assistance, December 10, 2008.

⁴⁶ Stephan Haggard and Marcus Noland. *Famine in North Korea, Markets, Aid, and Reform* (New York: Columbia University Press, 2007). P. 3.

economic pressures over the long term. In a sense, these reforms legitimized what was already occurring following the collapse of the centrally planned economy.⁴⁷ The Kim regime refuses to call the economic measures “reforms,” but as will be discussed later in this report, that in essence is what they are. North Korea prefers to characterize the reforms as “utilitarian socialism.” This includes the introduction domestically of market economy elements (called the July 1, 2001 measures) and in the international arena, the pursuit of normalization of relations with countries that have traditionally been hostile toward their country.

The DPRK’s gross national product in 2008 in purchasing power parity prices (PPP)—prices adjusted to international levels—has been estimated at \$40 billion (CIA estimate) to \$54 billion (Global Insight estimate). This amounts to national income of about \$1,700 to \$2,248 per capita in PPP values or roughly in the range of that of Zimbabwe, Uzbekistan, Bangladesh, or the Sudan. This is considerably lower than that of China (\$6,000),⁴⁸ Indonesia (\$3,900), or Japan (\$38,455). It is also dramatically lower than South Korea’s \$26,000 in PPP values or \$18,933 at market prices.⁴⁹ According to the Bank of Korea, in market prices, North Korea’s GDP in 2007 was an estimated \$25.6 billion compared with \$888 billion for South Korea. Global Insight, an econometric consulting firm, estimated North Korea’s GDP in 2006 at \$22.9 billion (\$23.9 billion in 2007).⁵⁰ A remarkable fact is that in the post-Korean War and into the mid-1970s, living standards were higher in North Korea than in either South Korea or China. Now, North Korea is far behind its rapidly growing neighbors.

As shown in **Figure 1**, growth in estimated real gross domestic product (GDP) in the DPRK was dropped into the negative for most of the 1990s before beginning to recover in 1999. In 2004 to 2006, growth has been continuing at about 2%, up slightly from earlier years. In 2006, the economy shrank by 1.3% and continued to decline in 2007 by an estimated 2.9%. In essence, the economy appears to have recovered moderately after the 1990s but has contracted again over 2006-2007. In 2008, the economy seems to have weathered the global financial crisis with positive growth that is expected by Global Insight (an economic consulting firm) to continue at about 2% per year to 2011.

It should be noted that various scholars and government officials produce a variety of estimates of North Korean growth rates and GDP. Some estimates show gradual recovery, but others argue that real per capita GDP has been stagnant or even declining over the past decade. One problem is that estimates of inflation are difficult to obtain and are inherently unreliable. The reason is that there is no systematic method of collecting data, and even if there were, households in different sectors of the economy often pay different prices for the same commodities—particularly staples that have been distributed through official channels to some but must be purchased in markets by others. Rice, for example, may be sold in an official market for one price, sold in an irregular market for another, or distributed as a ration to certain households basically for free. Another problem is that officials who report data often are under pressure to meet certain targets. Unlike in the West where data may be “sugar coated” to make them more palatable, in the DPRK, the

⁴⁷ Georgy Toloraya. *The Economic Future of North Korea: Will the Market Rule?* Korea Economic Institute, Academic Paper Series, Volume 2. No 10, December 2007.

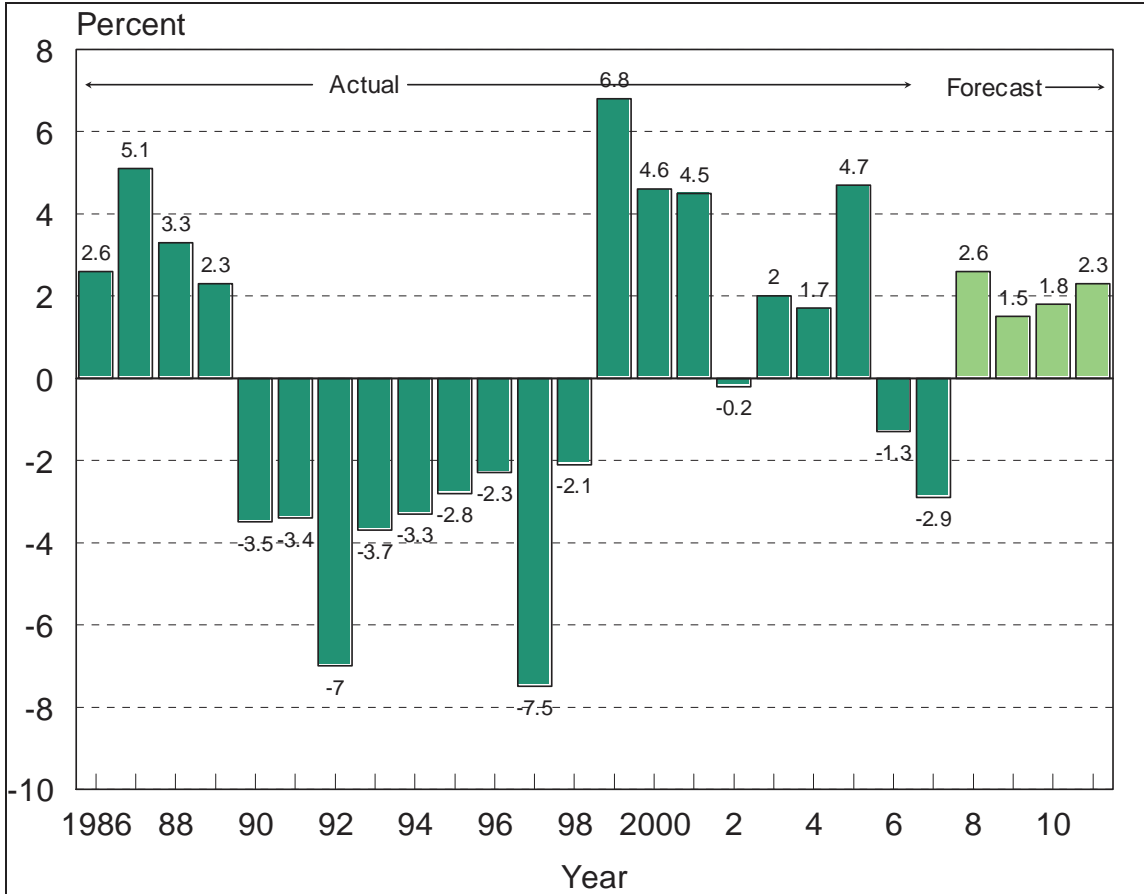
⁴⁸ A recent World Bank Study indicates that China’s PPP values should be reduced by about 40% for 2005 and subsequent years. World Bank. *2005 International Comparison Program, Preliminary Results*, December 17, 2007.

⁴⁹ PPI figures are from the World Bank. *World Development Indicators*.

⁵⁰ Global Insight (subscription service), “North Korea, Economic Growth: Outlook,” updated July 23, 2008.

underlying statistics often are “rubberized.” They may be stretched or compressed according to official expectations.

Figure I. Estimated Real Annual Growth in North Korea’s GDP, 1986-2011



Source: Congressional Research Service with data from Global Insight (based on Bank of Korea data).

Another problem with North Korean data is that there is a huge difference between the official exchange rate and the free market rate. This problem is avoided in PPP estimates that compare purchasing power and adjust for exchange rate differences. In estimates of GDP expressed in dollars, however, the exchange rate is used to convert North Korean won to U.S. dollars. Tourists can exchange dollars to won at about 140 won per dollar, but the black market rate is about 4,300 won per dollar.⁵¹

What can be said for certain is that a sizable part of the DPRK population lives on the edge of existence. In few countries today does a small decline in GDP or summer flooding cause massive starvation and growth stunting as it does in the DPRK. Also, despite the threat of imprisonment for crossing the border into China and being repatriated to North Korea, a large number of refugees still attempt to flee the economic and political conditions in the country.

⁵¹ Global Insight (subscription econometric forecasting service), “North Korea.” (Updated February 2009).

In this land of scarcity, consumer necessities have been rationed and used to reward party loyalists. Under Pyongyang's economic reforms, this system appears to be phasing out, but beginning in the fall of 2005, North Korea has backtracked on many of its economic reforms by forbidding private sales of grains and reinstating a centralized food rationing system. Pyongyang also reportedly closed its food markets but then opened consolidated markets that carried food and other items.

The combination of a weak economy unable to provide basic food and necessities and a ruling regime intent on maintaining its power has created economic divisions within society. North Korea reportedly officially classifies its citizens into three ranks and fifty-one categories based on their ideological orientation. However, in actuality, the economy has created five classes of people. The official categories are used to allocate rations for daily necessities, jobs, and housing.⁵² The *de facto* categories have resulted from the intrusion of market forces and trading on the official class divisions.

The top class consists of the elite who claim the first rewards from society. They are the party cadres who are leaders in the military and bureaucracy and who enjoy privileges far above the reach of the average household. While starvation haunts the provinces, many of the privileged class live in Pyongyang (where provincial North Koreans cannot enter without special permission); some drive foreign cars, acquire imported home appliances, reside in apartments on a lower floor (so they do not have to climb too many stairs when the electricity is out), and buy imported food, medicines, and toiletries at special hard currency stores.⁵³ The elite have a strong vested interest in maintaining the current economic system, despite its problems. Their incomes originate from the treasury, from foreign investors (mostly South Korean), remittances from ethnic Koreans in Japan (although these have been curtailed), and the country's shadowy trade in everything from missile technology to fake banknotes and narcotics.⁵⁴

After the elites surrounding Kim Jong-il, the second group comprises business traders with access to foreign capital and international transactions; the third consists of "organized thugs" who make their money through public trading and markets. The fourth class is composed of urbanites and others who scrape by on government rations, while the fifth class is farmers who support their way of life through farming private plots and selling goods in markets.⁵⁵

Despite hushed grumbling about economic deprivation, forced food deliveries to the central government, a rationing system with insufficient stocks to deliver, and new prohibitions on markets that are difficult to understand and rationalize, dissent in North Korea remains stifled. Support for the ruling regime appears sufficiently strong—even among the lower classes of people—although this support is often enforced by severe squashing of even the slightest hint of dissent. Even suspicious comments in casual conversations may be reported to the authorities. The country is far from developing a middle class with independent economic means, personal sources of information, and a thirst for more democratic institutions.

⁵² South Korea. Ministry of Unification. *North Korea Today*, August 14, 2001 (Internet edition).

⁵³ UN World Food Programme. World Hunger—Korea (DPR). Available at http://www.wfp.org/country_brief/indexcountry.asp?country=408.

⁵⁴ Desperate Straits, Special Report (1). *The Economist*, May 3, 2003 (U.S. Edition).

⁵⁵ Class Divergence on the Rise as Market Economics Spread in DPRK, Institute for Far Eastern Studies, North Korea Brief. September 21, 2007. Cited in NAPSNet, September 21, 2007.

In 2007, South Korea's new President Lee Myung-bak stated in his plan, "Vision 3000: Denuclearization and Openness," that if North Korea denuclearizes and opens, his administration will help to make North Korea's national income \$3,000 per person within ten years. The plan, however, does not provide an alternative if North Korea does not denuclearize⁵⁶ and has been shelved for now.

Juche Philosophy and the Military

The Pyongyang regime has pursued a policy of self-sufficiency and isolation from the world economy that they call *juche* or self-reliance. *Juche* goes beyond economics as it has been used since the 1950s to perpetuate power by the central government and to build an aura of the supernatural around their supreme leaders Kim—both father and son.⁵⁷ Although the regime does not emphasize the connection, the current system of dynastic succession with a paramount father figure also harkens back to Confucianism and the powerful dynastic tradition that united the Korean peninsula for hundreds of years.

The economic practice of *juche* has minimized international trade relations, discouraged foreign direct investment, and fostered what it considers to be core industries—mostly heavy manufacturing. While promoting such heavy industry, for most of the post-Korean War period, Pyongyang has emphasized the parallel development of military strength.

Current head of state, Kim Jong-il (often referred to as "Dear Leader"), has given highest priority to the military. This military-first policy places the army ahead of the working class for the first time in the history of North Korea's so-called revolutionary movement.⁵⁸ Under Kim Il-sung (Kim Jong-il's father), the *juche* ideology placed equal emphasis on political independence, self-defense, and economic self-support capabilities. Kim Jong-il, however, insists that North Korea can be a "country strong in ideology and economy" only when its military is strong.⁵⁹ The country, therefore, has been developing its industries within the context of a military-industrial complex with strong links between heavy industry and munitions production. Some of North Korea's munitions industries (manufacturing dual use products) are virtually indistinguishable from those supplying civilians.⁶⁰

In 1998 at the 10th Supreme People's Assembly, the military's National Defense Commission arguably eclipsed the Politburo as the supreme national decision making body in North Korea. In the years since, the term "military-first politics" has been used to signify the privileged status the Korean People's Army holds and to stress the ascendant position of the military relative to the power of the Korean Workers' Party, the traditional center of the DPRK's decision making.⁶¹ Of

⁵⁶ Analysis team of the Daily NK. Lee Myung-Bak's Administration: A Breakthrough in North Korea's Opening. *The Daily NK* (Internet edition), December 12, 2007.

⁵⁷ See, for example: Natural Wonders Prove Kim Jong-il's Divinity: North Korean Media, Agence France Presse. May 3, 2003.

⁵⁸ British Broadcasting Corporation. N. Korea: Paper Supports Leader Kim Jong-il's Military-first Ideology, April 26, 2003. Reported by BBC from KNCA News Agency (Pyongyang).

⁵⁹ Toyama, Shigeki. Expert on Kim Chong-il's "Military-First Politics," South-North Issues, Tokyo Gunji Kenkyu (in Japanese, translated by FBIS), August 1, 2002. P. 108-117.

⁶⁰ Nam, Woon-Suk. Guidelines of Economic Policies. KOTRA, January 9, 2001.

⁶¹ Gause, Ken E. *North Korean Civil-military Trends: Military-first Politics to a Point*. Army War College, September 2006. P.

course, the ultimate decision maker in Pyongyang is the Dear Leader, Kim Jong-il, who is Chairman of the National Defense Commission.

North Korea claims to spend about 15% of its GDP on national defense. In 2006, Pyongyang's defense budget was an estimated \$2.3 billion to maintain its 1.1 million member military.⁶² South Korea estimated the North's military expenditures at \$5 billion in 2003. In 2005, North Korea stated that the defense budget was 15.9% of its total annual budget,⁶³ but others had put the figure at 27.2% in 2003. Even a defense budget of \$2.3 billion, however, implies an expenditure of \$2,090 per member of the military, a woefully small amount. This implies that the tug of war between "guns and butter" within the North Korean regime must be quite intense given the scarcity of resources throughout the country even though the military does operate businesses that bring in additional revenues.

The heavy weight of the military in Pyongyang's decision making may help explain what to outsiders seem to be inexplicable actions by the North Korean government. For example, almost immediately after negotiators had issued the September 19, 2005, Six-party Statement in which North Korea ostensibly committed itself to abandoning all nuclear weapons and existing nuclear programs, Pyongyang began backtracking and within two months announced a boycott of future Six-Party Talks.⁶⁴ It also may help explain North Korea's carrying out its nuclear tests despite being warned not to do so by the United States, China, and other nations. Progress in the six-party talks under which North Korea shut down its Yongbyon nuclear reactor as required in phase I of the February 13, 2007 agreement arguably represented a defeat for the military, but the restart of Yongbyon and nuclear tests in 2009 indicate a strong resurgence by military interests.⁶⁵

When *juche* is combined with central planning, a command economy, and government ownership of the means of production, economic decisions that in a market economy would be made by private business and farmers have to go through a few elite in Pyongyang. These decisionmakers may or may not understand advances in agronomy or manufacturing and tend to be motivated by non-economic factors, such as maintaining political power or avoiding blame for initiatives gone awry. Farming methods based partly on crop rotation or new varieties of rice, for example, may be viewed as too risky.⁶⁶ Foreign investment also is hindered partly because the regime abhors being "exploited" by capitalists who seek to make profits on their business ventures in North Korea and partly because of their deep-seated mistrust of Westerners, Japanese, and South Koreans.

⁶² The International Institute for Strategic Studies. *The Military Balance, 2006*. London, Routledge, 2006. P. 276. Also, *The Military Balance, 2007*, p. 357. Note: in the 2008, edition of the *Military Balance*, the DPRK's defense budget is listed as "definitive data not available."

⁶³ "DPRK Allocates 15.9 Percent of State Spending for Military." *People's Daily Online*, April 12, 2005.

⁶⁴ Asia: The deal that wasn't; North Korea. *The Economist*. London: September 24, 2005. p. 81.

⁶⁵ For a description of decisionmaking in the DPRK, see Former DPRK Diplomat's Book on DPRK National Strategy, Inner Circle Politics (2). Open Source Center document KPP20070918037001. August 20, 2007. (Translated by Open Source Center from Korean)

⁶⁶ Current experiments in agriculture are directed from Pyongyang with seven major tasks that include replacing chemical fertilizers with organic and microbial ones. See Yonhap News. N. Korea Eyes China as a Model for Development. May 11, 2004.

Industrial Sectors

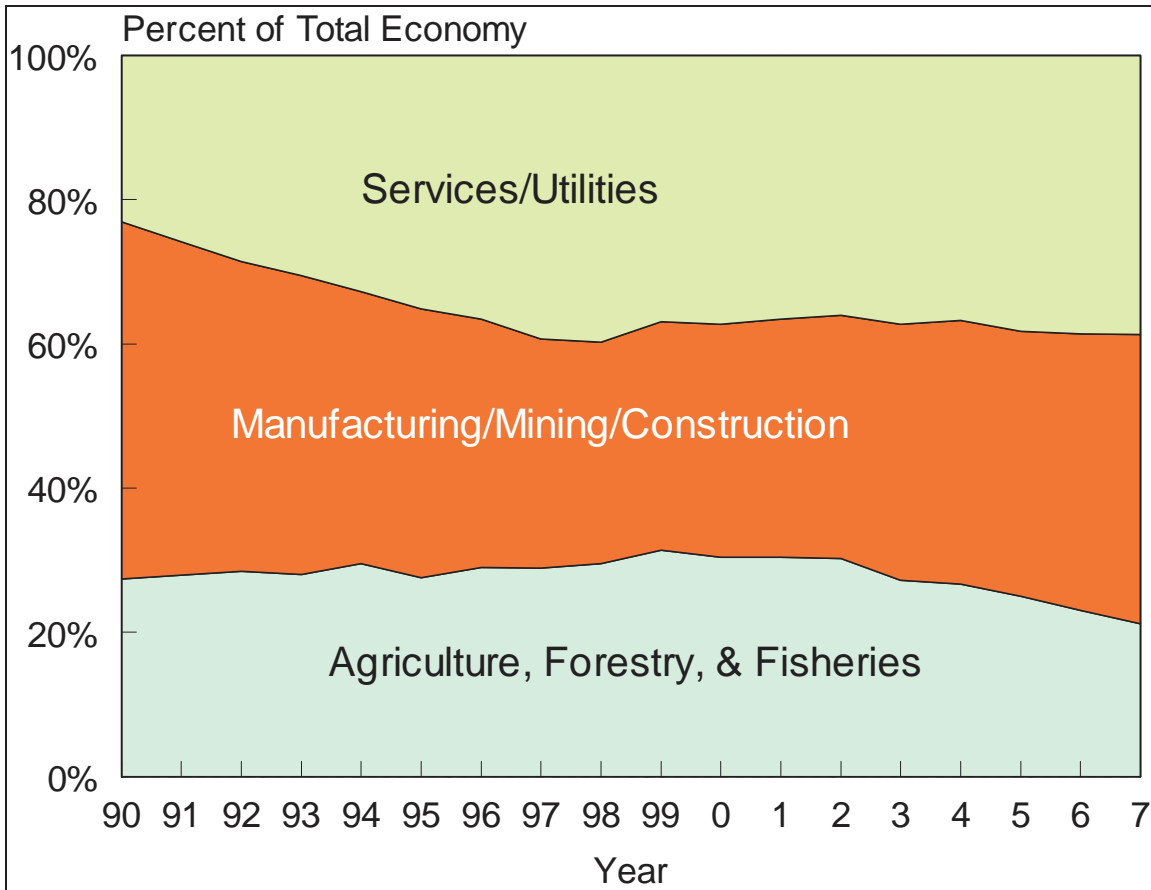
North Korea's industrial sectors are shifting rapidly. At the end of World War II, the DPRK represented the industrialized part of the Korean peninsula. Under Japanese colonialism, heavy industry, water power, and manufacturing were concentrated in the North, while agriculture flourished in the less mountainous South. Even in 1990, 49% of the North Korean economy was in mining, manufacturing, and construction, while 23% was in services (including government and utilities) and 27% in agriculture. In recent years, however, the DPRK's non-military industries have almost collapsed. By 1997, mining, manufacturing, and construction had dropped from 49% to 32% of the economy but in 2003 had risen somewhat to 36%. In 2003, services had risen to 37% of the economy, while agriculture has remained fairly constant at 27%. In 2007, mining, manufacturing, and construction were making a slow recovery to 40% of the economy. Services had gained slightly to 39%, and agriculture had declined to 21% of GDP. (See **Figure 2.**) Some of the most advanced industries in North Korea are associated with its military, and in 2008, about \$250 million in goods were produced in the Kaesong Industrial Complex by South Korean firms using North Korean labor.⁶⁷

The drop in the share of manufacturing in GDP has come about largely because of the rapid decline in production from factories, not because of large absolute increases in services or agricultural production. One report indicated that in 2003 factories were running at about 30% of their capacity. The economy lacks food for workers, raw materials, energy, and foreign currency to buy new equipment and imported inputs into the manufacturing process.⁶⁸ Much industrial capital stock is nearly beyond repair as a result of years of underinvestment and shortages of spare parts. Recently, the government has emphasized earning hard currency, developing information technology, addressing power shortages, and attracting foreign aid, but it appears unwilling to do so in any way that jeopardizes its control.

⁶⁷ Republic of Korea, Ministry of Unification, *Inter-Korean Relations in 2008*, Seoul, Korea, February 2009. See CRS Report RL34093, *The Kaesong North-South Korean Industrial Complex*, by Dick K. Nanto and Mark E. Manyin.

⁶⁸ Former North Korean Professor Interviewed on Pyongyang's Economic Reform. *Choson Ilbo*, April 14, 2003. Translated and reported by BBC Worldwide Monitoring, April 18, 2003.

Figure 2. North Korea's Industrial Sectors



Source: Congressional Research Service with Data from Bank of Korea.

North Korea's mining sector is recovering somewhat. In 2008, 28% of China's imports from North Korea were in mineral fuels (\$208 million, mostly coal), and 28% were ores (\$213 million, mostly iron, zinc, precious metal, lead, and molybdenum).⁶⁹ North Korea is rich in minerals and ores.⁷⁰ The regime looks askance, however, at exporting ores or commodities that were typical of "economic imperialism" during the colonial era when the foreign companies "exploited" the resources of less developed economies.

The DPRK leadership, in their joint editorial at the beginning of 2008, however, emphasized the need for rebuilding the national economy, particularly mining and the metal, chemical, and light industries. They noted the construction of a large-scale hydroelectric power plant completed in 2007 and set out the goal of constructing an economically powerful state by 2012.⁷¹

⁶⁹ Global Trade Atlas using Chinese data.

⁷⁰ Shanghai Northeast Asia Investment & Consultancy Company. *A Study Report on the DPRK Mineral Resources*. Shanghai Northeast Asian Forum website, in Chinese, December 7, 2007. Reported by Open Source Center, document #KPP20080123032002.

⁷¹ Pak, Yo'n. Basic Spirit That Runs Consistently in This Year's Joint Editorial, *Rodong Sinmun*, in Korean, January 4, 2008. Translated by Open Source Center, document #KPP20080104053004.

As has been previously noted, the agricultural sector also is in dire straits. The economy depends heavily on collective farms that have been devastated by drought or floods, lack of fertilizers and other inputs, antiquated farming methods, and a lack of incentives for private production. In recent years, there has been a new emphasis on fishing—using both traditional methods and new aquaculture technology. The lack of fertilizer deliveries from South Korea in 2008 had a large effect on agricultural production.

The increase in the service sector is typical of industrializing countries, but in North Korea's case, much of it is because of the relative decline of the manufacturing sector. For a country undergoing economic stress, service sector freelancing often is employment of last resort for urban dwellers.

Economic Reforms and Free Trade Zones

As with other isolationist economies in the contemporary world of globalization and interlinked societies, North Korea has been plagued with the negative effects of its attempts at self sufficiency: technological obsolescence, uncompetitive exports, economic privation, and lack of foreign exchange. Much of the reforms, however, have been from the “bottom up” by necessity as the central government faltered on its ability to deliver food and basic necessities through its distribution system. These difficulties, together with advice from China and Russia, have compelled the Pyongyang regime to allow some economic reforms.⁷² To the extent possible, they are allowing reforms in the Chinese sequence with economic reforms preceding political reforms while eschewing the Russian model of political reform preceding and concurrent with economic reforms.⁷³ The DPRK also has been examining the Vietnamese model of development and *do moi* (reform). Kim Jong-il reportedly prefers the Vietnamese style of gradual economic reform rather than the abrupt Chinese style.⁷⁴

The reforms began in July 2002 when Pyongyang announced a series of measures that some had hoped would mark the beginning of the end of the Stalinist controls over the economy and the onset of more use of the market mechanism to make economic decisions, particularly production and consumer purchases. Although the government has dubbed the reforms an “economic adjustment policy,”⁷⁵ in the manufacturing sector, in particular, the actions appear to be a desperate attempt to revive the moribund economy. 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.⁷⁶ This, in turn, has raised pressures on Pyongyang to increase the productivity of its economic system.

⁷² Mika Marumoto, “North Korea and the China Model: The Switch from Hostility to Acquiescence,” *Academic Paper Series, On Korea*, Korea Economic Institute, vol. 1 (2008), pp. 98-117.

⁷³ For a history of DPRK reforms in light of interaction with China, see Mika Marumoto. North Korea and the China Model: The Switch from Hostility to Acquiescence. Korea Economic Institute. Academic Paper Series, Vol. 2, No. 5, May 2007.

⁷⁴ The DPRK Learns Vietnam, *Kookmin Ilbo*, Seoul, October 25, 2007. CanKor Report #296. DPRK-Vietnamese Relations, November 1, 2007. Jung Sung-ki. Kim Jong-il Interested in Vietnamese-style Reform Policy, *Korea Times*, October 28, 2007.

⁷⁵ Hong, Inh-pyo. A Shift Toward Capitalism? Recent Economic Reforms in North Korea. *East Asia Review*, vol. 14, Winter 2002. Pp. 93-106.

⁷⁶ In January 2007, the communist party's central committee reportedly asked families to “voluntarily” offer food to the (continued...)

The adjustments (reforms) featured an end to the rationing system for daily commodities (except for food), a huge increase in prices of essentials and in wages, a major devaluation of the currency (official exchange rate), abolishment of the foreign exchange coupon system, increased autonomy of enterprises, authorization of the establishment of markets and other trading centers, and a limited opening of the economy to foreign investment. Prices still remain under centralized control but at levels closer to those existing in peasant (free) markets. North Korea has not abandoned the socialist planned economy, but it has been compelled to “adjust” certain aspects of it.

Under the initial reforms, overall prices increased by 10 to 20 times. Government prices for many essential items, however, rose by much more. The price for rice rose by 550 times, for corn 471 times, for diesel oil 38 times, and for electricity 60 times. Wages also were raised but not enough to keep pace with skyrocketing consumer prices. Wages rose by 18 times for laborers and 20 times for managers.⁷⁷ Even though not all workers received the promised wage increases, the price and wage reforms caused households to face rampant consumer inflation, and many people ended up worse off financially than before the reforms.

In North Korean factories, reforms include greater control over prices, procurement, wages, and some incentives to increase profits in order to distribute them based on individual performance. The regime also is looking to implement reforms in agriculture similar to those implemented in China (along the lines of the rural household contract system). In the mid-1990s, North Korea’s agricultural work squads had already been reduced in size. Now they are moving toward family oriented operations with farmers allowed to retain more of any production exceeding official targets.

Although small farmers’ markets have long existed in North Korea, Pyongyang did not legalize such farmers’ markets until June 2003. This followed the formal recognition of commercial transactions between individuals and the 1998 revision to the constitution that allowed individuals to keep profits earned through legitimate economic activities.⁷⁸ Now free markets and shopping centers that use currency, not ration coupons, are spreading. The Pyongyang Central Market, for example, became so crowded that a new, three-story supermarket had to be built. Pyongyang’s Tongil market with its lines of covered stalls stocked with items such as fruit, watches, foreign liquor, clothes, Chinese-made television sets, and beer from Singapore also is bustling with sellers and consumers reminiscent of those in other Asian countries.⁷⁹ Visitors to Pyongyang in late 2006 indicated that the market was thriving with all types of products and shoppers driving European cars.⁸⁰

The North Korean population is gradually becoming re-accustomed to operating in open markets. This has raised fears by the DPRK regime of encroachment by capitalism into their socialist

(...continued)

army, since the food shortage in the people’s army was severe. Yang, Jung A. Citizens Exploited as the Nation Cannot Produce its Own Income. *The Daily NK* (Internet edition), January 24, 2007.

⁷⁷ Hong, Ihk-pyo, A Shift Toward Capitalism?, *East Asia Review*, Winter 2002. Pp. 96.

⁷⁸ Jeong, Chang-hyun. Capitalist Experiments Seen Expanding into DPRK. *Joong Ang Ilbo*, October 19, 2003. Translated in CanKor #160 by Canada-DPR Korea e-clipping Service, April 13, 2004.

⁷⁹ Lintner, Bertil. North Korea, Shop Till You Drop, *Far Eastern Economic Review*, May 13, 2004. P. 14-19.

⁸⁰ Pritchard, Charles L. Siegfried S. Hecker, and Robert Carlin. News Conference: Update from Pyongyang, sponsored by the Korea Economic Institute, held at the National Press Club, Washington, DC, November 15, 2006.

economic system. On August 26, 2007, Kim Jong-il announced that “markets have become anti-socialist, Western-style markets.” This has led to a steady stream of government edicts restricting market activity across the country. At first, authorities prohibited women under the age of 40 from selling goods in Pyongyang markets. Then on December 1 the authorities banned women under the age of 49 from running businesses in Pyongyang. (Since males are officially required to be at their assigned workplaces, women generally run the businesses.) Certain products, such as videos of South Korean dramas, movies, and other so-called non-socialist elements are also banned from central markets.⁸¹

Enforcement of the new regulations at first was spotty, but in late 2007, it appears to have become more strict. According to news reports, policing is also being conducted by central government security agencies, organizations that normally deal with issues such as intelligence gathering and sedition.⁸² The extent of the Kim regime’s attempts to control the development of a market economy can be illustrated by the increased difficulty of acquiring travel permits for persons suspected of being wholesale merchants intending to carry goods from one place to another. This crackdown on travel also is affecting normal tourist and family trips. Corruption, however, allows some businesses to continue, as certain officials reportedly are receptive to bribes. Secret peddling on streets and other banned activity also continues out of sight of the authorities (particularly by young and nimble traders).⁸³

Foreign Investment

North Korean economic reforms also include opening certain areas to foreign investment. Under the Joint-Operation Act of 1984 to 1994, there were 148 cases of foreign investment worth about \$200 million into North Korea. Of these 148 cases, 131 were from pro-North Korean residents of Japan. In 1991, Pyongyang opened the Rajin-Sonbong free trade zone and established the Foreigner Investment Act. To 1997, some 80 investments totaled \$1.4 million. Other areas receiving foreign investment include Nampo, Pyongyang, Kosung-gun, Shimpo, Wonsan, and Mt. Kumkang. Foreign companies in North Korea include 50 South Korean companies (e.g., Hyundai, daewoo, Taechang, LG, Haeju, and G-Hanshin), DHL, ING Bearing Bank; Japan’s Hohwa, Saga, and New Future Ltd. companies; Taiwan’s JIAGE Ltd., and the China Shimyang National Machinery Facility Sales Agency Corporation.⁸⁴ The U.N. Development Programme is promoting the Tumen River Valley Development Project which aims to develop business based on transit transportation, tourism, and commissioned processing trade.⁸⁵ Mt. Kumkang has been developed with the cooperation of South Korea’s Hyundai corporation into a tourist destination for South Koreans and a venue for reunions of families separated by the DMZ. As relations with South Korea soured and a tourist there was shot operations at Mt. Kumkang have ceased.

According to data compiled by the United Nations Conference on Trade and Development (UNCTAD) since 1987, the DPRK had a cumulative \$1.56 billion in foreign direct investment

⁸¹ Institute for Far Eastern Studies. *State of the Market in the DPRK*, North Korea Brief No. 07-12-5-1. Posted December 11, 2007.

⁸² Han Young Jin. Even the National Security Agency Participates in the Control of the Jangmadang. *The Daily NK* (electronic version). December 26, 2007.

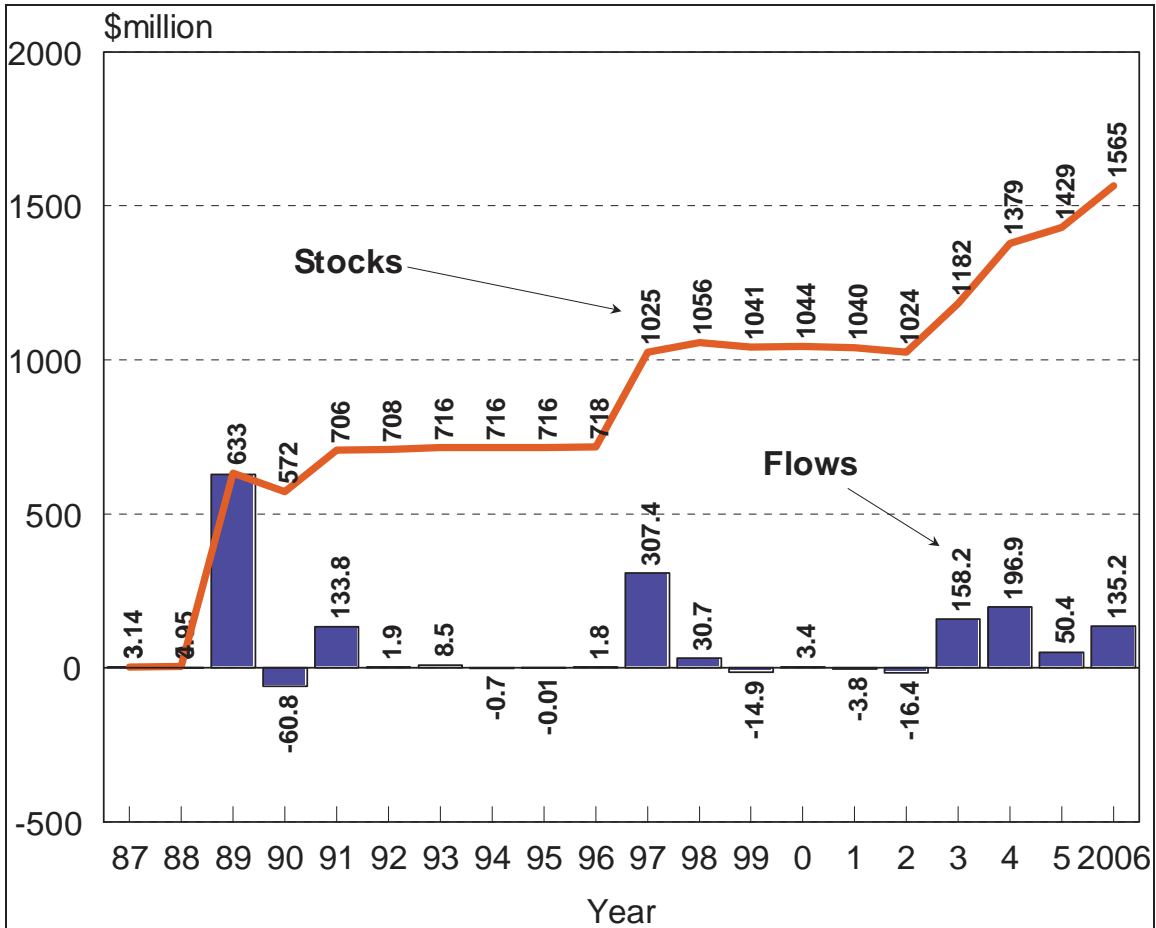
⁸³ Good Friends: Centre for Peace, Human Rights and Refugees, *North Korea Today*, No. 103, December 2007.

⁸⁴ KOTRA, North Korea, Status of Induced Foreign Capital.

⁸⁵ K. Park. A Report on Visit to Rajin-Seonbong Region, January 4, 2001. KOTRA,

(FDI) as of the end of 2006. Annual FDI flows have been sporadic, even negative in some years, but since 2003, they have been rising. (See **Figure 3**.) In 2007, both South Korea and China increased their investments in North Korea.

Figure 3. Foreign Direct Investment Flows and Stocks in the DPRK, 1987-2006



Source: United Nation Conference on Trade and Development, FDI database.

The industrial sector is receiving some help from Chinese investments and from South Korean firms operating in the Kaesong Industrial Complex. It also is able to attract a limited amount of foreign investment from other nations. For example, in January 2008, Orascom Telecom, the fourth-largest Arab phone operator based in Cairo, Egypt,⁸⁶ announced that its subsidiary in North Korea (CHEO Technology—25% owned by the state-owned Korea Post and Telecommunications) had received a license to be the first provider of mobile telephone services throughout the country. The company is to invest up to \$400 million in network infrastructure over the first three years and to provide service to Pyongyang and other major cities within one year.⁸⁷

⁸⁶ Orascom also reportedly is investing \$115 million in a North Korean cement manufacturer for a 50% stake in the firm.

⁸⁷ Arab Firm Earns First Mobile License In DPRK. *Yonhap*, January 30, 2008.

Since 2000, the DPRK has attempted to emulate China's highly successful free trade zones (FTZ) by establishing the Sinuiju Special Administrative Region (SAR) on the northwestern border with China and Kaesong (Gaesong) Industrial Complex along the border with South Korea. Since being established in 2002, the development of the Sinuiju SAR has been stymied partly because of the arrest by Beijing of Chinese businessman Yang Bin, a Chinese-Dutch entrepreneur who was named as its governor, on charges of illegal land use, bribery and fraud. After Kim Jong-il's visit to China in 2006, Sinuiju appears to be receiving new attention. Foreign currency management groups reportedly are moving in, and ordinary citizens are being replaced by residents of Pyongyang and other areas.⁸⁸

Kaesong Industrial Complex⁸⁹

The most significant effort at creating free-trade zones is the Kaesong Industrial Complex (KIC), although North Korea in 2009 has threatened to shut it down. Some South Korean companies already are moving out of the complex.⁹⁰ Until 2009, this joint effort between the North and South was developing rapidly, despite tensions over North Korea's testing of ballistic missiles and a nuclear weapon. The KIC is managed by South Korea's Hyundai Asan and Korea Land Corporation. Located just over the border 43 miles north of Seoul on the route to Pyongyang, this 810-acre complex aims to attract South Korean companies, particularly small and medium sized enterprises, seeking lower labor and other costs for their manufactured products and who may not be able to establish subsidiaries in China or other countries. As of December 2008, 93 companies had begun operations in Kaesong. They were employing 38,931 North Korean personnel and 1,055 South Korean personnel.⁹¹ To be completed in three stages, the first stage (2002-2007) had 3.3 million square meters of a total of 66 million square meters being constructed or under construction in 2006. Hyundai Asan and the Korea Land Corporation plan to eventually attract 300 businesses in the first stage, 700 in the second, and 1,000 businesses in the third stage with an estimated total of 300,000 workers. Of the \$374 million initial cost for the first stage, \$223 million was to be provided by the South Korean government. In December 2006, the Korea Electric Power Corporation connected North and South Korea by a 100,000 kilowatt power-transmission line for use by the companies in the KIC.

The initial 15 companies operating in Kaesong and their products included Living Art (kitchenware), Shinwon (apparel), SJ Tech (semiconductor component containers), Samduk Trading (footwear), Hosan Ace (fan coils), Magic Micro (lamp assemblies for LCD monitors), Daewha Fuel Pump (automobile parts), Taesung Industrial (cosmetics containers), Bucheon Industrial (wire harness), Munchang Co. (apparel), Romanson (watches, jewelry), JY Solutech (automobile components and molds), TS Precision Machinery (semiconductor mold components), JCCOM (communication components), and Yongin Electronics (transformers, coils).⁹²

⁸⁸ Institute For Far Eastern Studies. Interest Revived in the Sinuiju Special Administrative Region. Reported by Nautilus Institute, Policy Forum Online 06-25A, March 30, 2006.

⁸⁹ For details, see CRS Report RL34093, *The Kaesong North-South Korean Industrial Complex*, by Dick K. Nanto and Mark E. Manyin

⁹⁰ "Tenant Companies Are Moving Out of Kaesong," *Hankyoreh*, June 3, 2009, Open Source Document ID: KPP20090604049004.

⁹¹ Republic of Korea. Ministry of Unification. Inter-Korean Relations in 2008. February 2009.

⁹² Republic of Korea. Ministry of Unification. Gaeseong Industrial Complex Project—Status and Tasks, June 2005.

In 2006, the KIC produced some \$7.5 million worth of goods each month.⁹³ In September 2007, monthly production had reached \$17.1 million. In 2008 yearly production reached about \$250 million or about \$20.8 million per month. The major products include textiles, chemical products, metals and machinery, and electric and electronic products.⁹⁴

Kaesong developed partly from South Korea's sunshine policy of economic engagement with the North. The KIC serves both geopolitical and economic purposes. Geopolitically, it provides a channel for rapprochement between North and South Korea, a bridge for communication, a method of defusing tensions, and a way to expose North Koreans to outside ideas and ways of doing business. Economically, the KIC provides small- and medium-sized South Korean firms with a low-cost supply of labor for manufacturing products, provides jobs for North Korean workers, and provides needed hard currency for Pyongyang. Although KIC operations continued even after the North Korean nuclear test in 2006, its status in 2009 is in doubt.

A controversial issue has arisen with respect to the KIC and the proposed South Korea-U.S. Free-trade Agreement (FTA). South Korea had requested that products exported from the complex be considered to have originated in South Korea in order to qualify for duty free status under the proposed FTA. Such a provision had been included in other South Korean FTAs.

The language of the proposed Korea-United States FTA (signed but not yet approved by Congress) does not provide for duty-free entry into the United States for products made in Kaesong. Annex 22-B to the proposed FTA, however, provides for a Committee on Outward Processing Zones (OPZ) to be formed and in the future to designate zones, such as the KIC, to receive preferential treatment under the FTA. Such a designation apparently would require legislative approval by both countries.

Other issues raised by the KIC have been the conditions for North Korean workers, whether they are being exploited,⁹⁵ as well as the hard currency funds the industrial complex provides for the ruling regime in Pyongyang. South Korean officials, as well as other analysts, point out that average wages and working conditions at Kaesong are far better than those in the rest of North Korea. The monthly minimum wage is \$50 (\$57.50 including the cost of social insurance). General workers receive \$50, team leaders receive \$52-\$55, and heads of companies receive \$75 per month. After the government, takes its share of the wages, the workers receive about \$37 per month. Workers also receive overtime pay.⁹⁶

The North Korean government derives hard currency from several sources in the KIC project, including leasing fees and its taxes and fees deducted from the wages of North Korean workers. The wages are first paid in hard currency to a North Korean government agency that takes a certain percentage before paying the North Korean workers in won. The government collects about \$20 per month (in social insurance taxes plus its cut of wages) for each of the 10,000

⁹³ South Korea to Continue "Utmost Efforts" for Inter-Korean complex—Minister. Yonhap News Agency. Reported by BBC Monitoring Asia Pacific. London, December 8, 2006.

⁹⁴ Republic of Korea. Ministry of Unification. Key Statistics for Gaeseong Industrial Complex. September 30, 2007.

⁹⁵ Rights Body Criticizes South Korea Over Refugee Protection, Inter-Korean Complex. Yonhap News Agency, Seoul. Reported by BBC Monitoring Asia Pacific. London, January 12, 2007.

⁹⁶ South Korea Considers Expanding Joint Industrial Complex in North. Yonhap News Agency, Seoul. Reported by BBC Monitoring Asia Pacific. London, July 26, 2006. Ministry of Unification (South Korea). The Gaeseong Industrial Complex. Status of North Korean Workers. November 14, 2006. Online at <http://www.unikorea.go.kr/english/EUP/EUP0201R.jsp>.

workers now at Kaesong. Its monthly take from wages, therefore, would amount to approximately \$200,000 per month or \$2,440,000 over a year. One estimate is that Pyongyang has earned a total of about \$20 million from the Kaesong Industrial Complex.⁹⁷

Investment From China

China has a direct interest in economic reform and recovery in the DPRK. Chinese business interests with support from Beijing are beginning to invest widely in the North Korean economy. Unlike, South Korean investors, Chinese are allowed to invest in enterprises fully integrated into the DPRK economy. They also have provided machinery and equipment to existing North Korean factories.

Chinese investment in mineral extraction in the DPRK seems to represent an easing the DPRK constitutional ban against “cultural infiltration (Article 41). This has been interpreted to include international economic integration and globalization.⁹⁸ However, Pyongyang seems to be treating investment from China as being “not contaminated” relative to those from South Korea or other nations. South Korean investments are carefully walled off from the average North Korean citizen, whereas China has been able to invest in production facilities in various locations.

According to Chinese sources, from January to October 2006, the Chinese side approved 19 new investments in the DPRK, with negotiated investment of \$66.67 million. Cumulative investment up to the end of October 2006 included Chinese government approval of 49 investments in the DPRK with negotiated investment of \$135 million.⁹⁹ These figures seem understated. Since 2006, Chinese investments have increased significantly. The projects of the investment covered such fields as food products, medicine, light industry, electronics, chemical industry and minerals.

Major Chinese investments involving mining and minerals in the DPRK include the following:¹⁰⁰

- China Tonghua Iron and Steel Group has invested 7 billion yuan (approximately \$875 million) in developing the DPRK’s Musan Iron Mine. Two billion yuan (approximately \$250 million) is to be used for the preliminary construction of communication facilities and cables from Tonghua, China, to the DPRK’s Musan area; 5 billion yuan (approximately \$625 million) is to be used mainly on technology and equipment in developing the mine as well as in Musan’s overall planning.) This mine is the largest open-cut iron mine in Asia with verified iron-rich ore reserves reaching seven billion tons.
- On October 20, 2007, China’s Tangshan Iron and Steel Company (China’s third largest steel company) and the DPRK’s Department of Foreign Economic

⁹⁷ CRS Report RL33435, *The Proposed South Korea-U.S. Free Trade Agreement (KORUS FTA)*, by William H. Cooper and Mark E. Manyin.

⁹⁸ See Eberstadt, Nicholas. *The North Korean Economy, Between Crisis and Catastrophe* (New Brunswick, NJ, Transaction Publishers, 2007). p. 227.

⁹⁹ Embassy of the People’s Republic of China in the Democratic People’s Republic of Korea. A brief account of the economic and trade relations between China and the DPRK. Online at <http://kp.china-embassy.org/eng/zcgx/jmwl/t306852.htm>.

¹⁰⁰ Shanghai Northeast Asia Investment & Consultancy Company. *A Study Report on the DPRK Mineral Resources*. Shanghai Northeast Asian Forum website, in Chinese, December 7, 2007. Reported by Open Source Center, document #KPP20080123032002.

Cooperation and Taep'ung International Investment Group signed a letter of cooperation intent. The two sides are to cooperate on the DPRK Kimch'aek Metallurgy Park Project, and the DPRK So'ngjin Iron, Steel, Coal, and Electricity Project. Tangshan is to build a steel smelting plant in the DPRK with an annual steel output of 1.5 million tons. It is to be jointly funded by the DPRK side and is to involve joint development and utilization of nearby iron ore.

- The China Iron and Steel Group reportedly is ready to develop a molybdenum mine in the DPRK with a goal of producing more than 10,000 tons of molybdenum concentrate per year.
- China and the DPRK have signed a "PRC-DPRK Inter-Governmental Agreement on Joint Development of Offshore Oil" to pursue joint energy projects.
- China's Jilin Province also has cooperated with the Hyesan Youth Copper Mine (containing the largest copper deposit in Asia), Manp'o Zinc and Lead Mine, and the Hoeryo'ng Gold Mine in the DPRK. One project is to transmit electricity from Jilin's Changbai County to the DPRK in exchange for the gold, copper, and other ores. The joint project is to install power transmission facilities with an estimated total investment of 220 million yuan (\$27.5 million).
- China's Heshi Industry and Trade Company along with the International Mining Company have set up a joint venture with the DPRK's So'gyo'ng 4 Trade Company called the "DPRK-China International Mining Company." The Chinese side is to provide equipment and capital, while the DPRK side is to contribute mineral resources and the existing facilities.
- In October 2005 China Minmetals also signed with the DPRK side an "Agreement on Establishing A Joint Venture in Coal Industry in the DPRK," which called for establishing a joint venture with the DPRK at the Ryongdu'ng Coal Mine.
- On August 23, 2004, China's Zhaoyuan Shandong Guoda Gold Stockholding Company and the DPRK Committee for the Promotion of External Economic Cooperation agreed to establish a joint venture mining company to mine the gold in the DPRK's Mt. Sangnong and to ship all the mined gold concentrate to Zhaoyuan for smelting. The DPRK's Sangnong Gold Mine is estimated to have at least 150 tons of mineable gold. However, due to a shortage of capital and backward technology, it has been in a state of semi-stoppage of production. Guoda is to provide equipment and technology and is to ship the mineral ores by sea to Zhaoyuan for smelting.

International Trade

Despite North Korea's isolation and emphasis on *juche*, it does trade with other countries. According to trade statistics compiled by the International Monetary Fund, the DPRK had at least some trade with 80 of the 182 countries or customs territories that report their trade data to the Fund.¹⁰¹ For Pyongyang, the foreign economic sector plays an important role in that it allows the

¹⁰¹ International Monetary Fund. *Direction of Trade Statistics*. It should be noted that countries occasionally misreport trade with South Korea as trade with the DPRK.

country to import food, technology, and other merchandise that it is unable to produce in sufficient quantities at home. Since North Korea does not export enough to pay for its imports, it generates a deficit in reported merchandise trade that must be financed by other means. Pyongyang has to find sources of foreign exchange—other than from its overtly traded exports—to pay for the imports. Experts point out that the DPRK has used its military threat to “extort” aid and other transfers from the United States, Japan, South Korea, and the humanitarian agencies. This, along with various illicit activities, has helped Pyongyang to finance a surfeit of imports.

Detailed data on the country’s external economic relations suffer from reliability problems similar to those associated with the domestic economy. The foreign economic data on actual commercial transactions, however, tend to be more accurate since they also are reported by trading partner countries and are compiled by the International Monetary Fund and United Nations. Individual countries, for example, report on their imports from and exports to North Korea. These mirror statistics, however, differ from North Korea’s actual annual numbers because of differences in data gathering methods, coverage, timing, and reporting. Countries also may misreport trade with the Republic of Korea as trade with the Democratic People’s Republic of Korea. Detailed and reliable data on trade in military equipment and illegal drugs also are notoriously difficult to obtain and to verify.¹⁰²

South Korea also compiles statistics on trade with North Korea that differ from its data reported to the United Nations. South Korea considers trade with the North as inter-Korean trade, not foreign trade. The trade figures that South Korea reports to the IMF for its commercial transactions with the North are considerably lower than the figures that it reports as inter-Korean trade [usually available from the Korea Trade-Investment Promotion Agency (KOTRA)]. The inter-Korean trade data reported by South Korea also include more detail on non-transactional trade (mostly foreign aid) with North Korea. IMF data also differ somewhat from those reported by data vending companies (such as Global Trade Atlas and Global Insight). This report uses a combination of trade totals (mirror statistics) from the IMF, partner country data from the Global Trade Atlas, intra-Korean trade from South Korea’s KOTRA, and references some estimates of total trade from Global Insight.

The DPRK’s policy of *juche*, its suspicion of foreign countries, and the collapse of its industrial production, has resulted in a minimal level of commercial relations with other nations in the world. This trade has been rising in recent years, although much of this increase can be attributed to investments by South Korea and China in DPRK mining and manufacturing. As shown in **Table 2**, in 2007 North Korea exported an estimated \$1,854 million in merchandise (down from \$2,048 million in 2006) while importing \$3,242 million (up from \$2,962 million in 2006) for a merchandise trade deficit of \$1,388 million. Judging by trade with China and South Korea, total trade in 2008 appears to have risen. Imports from China, in particular, rose 46% from \$1,393 million in 2007 to \$2,033 million in 2008. In recent years, North Korea’s exports to and imports from China and South Korea have risen. South Korea and China account for 73% of North Korean exports and 75% of North Korean imports. Economic sanctions imposed by Japan have reduced that bilateral trade to almost nothing.

¹⁰² For a report on DPRK statistics, see Mika Marumoto, *Project Report: DPRK Economic Statistics Project*, March 2009, <http://uskoreainstitute.org/research/projects/index#dprkSTATS>.

Table 2. Estimated North Korean Trade by Selected Trading Partner, Selected Years, 2000-2008

(\$ in millions)

North Korean Exports									
	2000	2001	2002	2003	2004	2005	2006	2007	2008
World	1,307	1,148	1,278	1,251	1,524	1,683	2,048	1,854	n.a.
China	37	167	271	395	586	499	468	584	754
Japan	257	226	235	174	164	132	78	0	0
S. Korea	152	176	272	289	258	340	520	765	930
Russia	8	17	11	3	5	7	20	34	14
India ^a	20	3	5	1	4	8	9 ^a	41 ^a	n.a.
Thailand	19	24	45	57	91	133	148	34	29
Germany	25	23	29	24	22	45	17	16	21
North Korean Imports									
	2000	2001	2002	2003	2004	2005	2006	2007	
World	1,859	3,083	1,970	2,049	2,615	3,093	2,962	3,242	n.a.
China	451	573	468	628	799	1,081	1,232	1,393	2,033
Japan	207	1,066	133	92	89	62	44	9	8
S. Korea	273	227	370	435	439	715	830	1,032	890
Russia	38	62	69	111	205	206	190	126	97
India	173	162	182	157	121	55	105	660	n.a.
Thailand	189	106	172	204	239	207	216	184	48
Germany	53	80	139	71	68	63	63	34	31
Balance of Trade	-552	-1,935	-692	-799	-1,090	-1,410	-914	-1,388	n.a.

Table 1 Source: S. Korean data from S. Korea, Unification Ministry. World trade data from U.N. COMTRADE Database, accessed via U.S. Department of Commerce, Trade Policy Information System, August 2008. Country data from Global Trade Atlas and U.N. COMTRADE Database. World trade totals mirror data derived from U.N. reporter country trade with North Korea plus inter-Korean trade reported by South Korea and adjusted Indian data for 2006 and 2007.

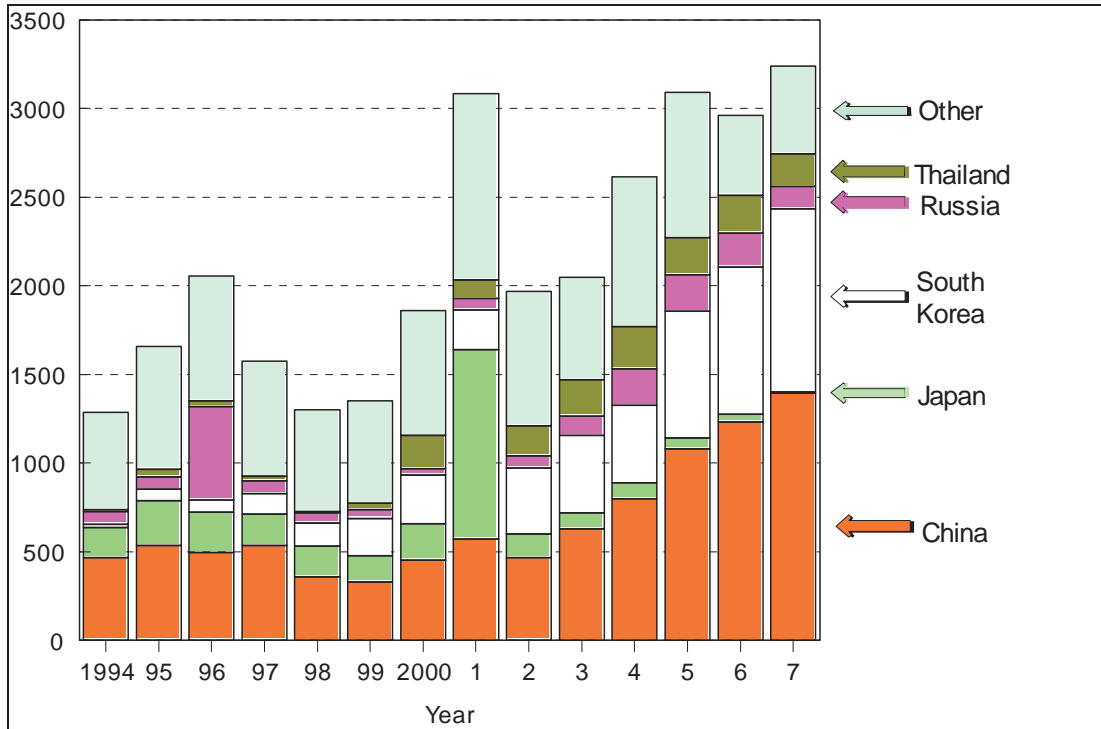
Note: n.a. = not available

- a. Data for Indian imports from North Korea seem in error. (Items such as electrical machinery and parts, in particular, likely actually were imported from South Korea.) After comparing reported Indian data with that for China, 2006 imports by India from North Korea of \$475 million were reduced to \$9 million, and 2007 imports of \$173 million were reduced to \$41 million.

North Korea's major trading partners have been China, South Korea, Japan, Russia, Germany, Thailand and India (as well as Brazil, Singapore, and Hong Kong). As shown in **Figure 4** and **Table 2**, North Korea's major import sources have been China, South Korea, Russia, Japan, and Thailand. Germany and India also are major suppliers. Major imports by North Korea include

machinery, minerals, plant products, and chemical products.¹⁰³ In particular, imports of energy materials and foods reflect Pyongyang’s attempts to remedy these fundamental shortages.

Figure 4. North Korean Imports of Merchandise by Major Country of Source, 1994-2007



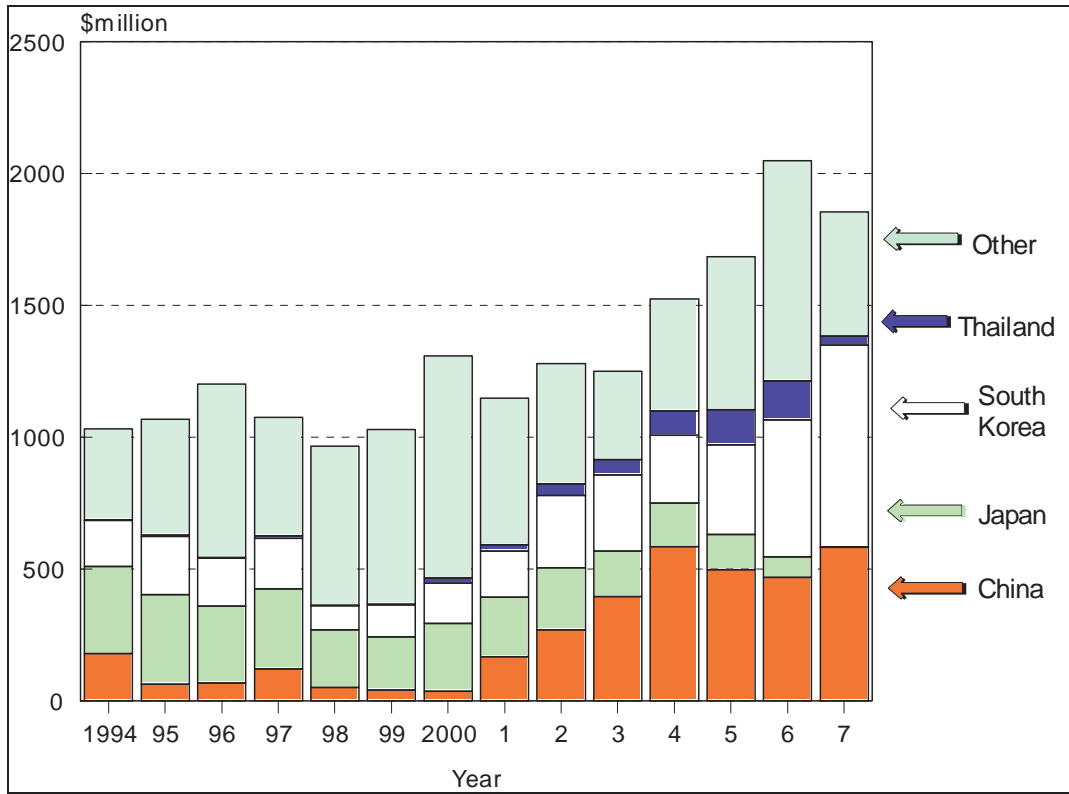
Source: Data from U.N. COMTRADE Database, Global Trade Atlas, and (South) Korea Unification Ministry.

Despite current tensions over Pyongyang’s nuclear program, imports appear to be growing and are estimated to have exceeded their peak in 2001 when a large shipment of food aid from Japan (mainly rice valued at high Japanese prices) artificially increased the import total. Fuel imports from China, food imports from various countries, and supplies of material and components for assembly in the Kaesong Industrial Complex account for most of the increases. Imports from the United States and Japan have been virtually nonexistent. It is apparent that China and South Korea have become the largest sources of imports for the DPRK.

Major export markets for the DPRK have been China, Thailand, and South Korea (primarily because of production from South Korean factories in the Kaesong Industrial Complex). (See **Figure 5** and **Table 2.**) In Europe, Germany has been North Korea’s major trading partner, and in Latin America, Brazil is developing as a market for North Korea’s exports. Since 2003, exports to Japan have declined—due to trade sanctions and friction over the DPRK’s admitted kidnappings of Japanese citizens. North Korea’s major exports include ores, coal, animal products, textiles, machinery, electronic products, and base metals.

¹⁰³ (South) Korea Trade-Investment Promotion Agency.

Figure 5. North Korean Exports of Merchandise by Major Country of Destination, 1994-2007



Source: Data from U.N. COMTRADE Database, Global Trade Atlas, and (South) Korea Unification Ministry.

A recent remarkable development has been North Korea’s increase in exports of primary products (such as fish, shellfish and agro-forest products) as well as mineral products (such as base metallic minerals). Pyongyang reportedly has imported aquaculture technology to increase production of cultivated fish and agricultural equipment to increase output of grains and livestock. It also has imported equipment for its coal and mineral mines. Much of the coal and mineral exports have resulted from partnering with Chinese firms through which the Chinese side provides modern equipment in exchange for a supply of the product being mined or manufactured. The production from the Kaesong Industrial Complex also has become significant. North Korean imports from South Korea and China both exceeded \$1 billion in 2006, and North Korean exports to South Korea reached \$765 million and to China \$582 million.

Meanwhile, traditional exports of textiles and electrical appliances have been declining. This reflects North Korea’s unstable power supply, lack of raw materials and components imported from abroad, and the need to ship finished goods to China or another third country for final inspection. This diminishing ability of North Korea to provide a reliable manufacturing platform for the least complicated assembly operations without help from foreign investors does not bode well for the country’s future ability to generate the exports necessary to balance its trade accounts.

In considering additional economic sanctions on North Korea, one possible action would be to ban DPRK exports of small arms and ammunition. Data on such trade are available to a certain extent, but such exports are likely to be under-reported in official statistics. Some such transactions, however, are revealed in the import data of various countries.

Table 3 shows imports of small arms and ammunition by trading partner countries from North Korea from 2001 to 2007. The total reported transactions has been about \$5.2 million over the seven years. The importers have included countries from Latin America, Europe, Southeast Asia, and the Middle East.

Table 3. Imports by Country of Small Arms and Ammunition from North Korea
(In Dollars)

Importer	2001	2002	2003	2004	2005	2006	2007	Total
9302—REVOLVERS & PISTOLS, DESIGNED TO FIRE LIVE AMMO								
Guatemala	30,268	73,901	0	0	0	0	0	104,169
9303—SPORT SHOTGUNS & RIFLES ETC, VERY PISTOLS, ETC.								
Indonesia	17,600	0	0	0	0	0	0	17,600
Luxembourg	0	0	1,562	0	0	0	0	1,562
9304—ARMS NESOI, OTHER THAN SIDE ARMS AND SIMILAR ARMS								
Bolivia	0	0	0	910	0	0	0	910
Denmark	5,557	0	0	0	0	0	0	5,557
Ethiopia	0	0	0	0	364,414	0	0	364,414
Germany	6,000	0	0	0	0	0	0	6,000
Madagascar	447	0	0	0	0	0	0	447
Mexico	0	0	2,397	0	121,383	0	0	123,780
9305—PARTS & ACCESSORIES OF ARMS OF HEADINGS 9301 TO 9304								
Guatemala	3,027	7,392	0	0	0	0	0	10,419
9306—BOMBS, GRENADES, ETC.; CARTRIDGES, ETC. AND PARTS								
Australia	0	0	0	0	0	3,910	0	3,910
Brazil	0	0	0	0	0	0	45,500	45,500
Czech Republic	0	0	0	0	0	0	0	1,380
Germany	2,000	0	0	0	0	0	0	2,000
Indonesia	675,882	0	0	0	0	0	0	675,882
Wallis and Futuna	0	2,231	0	0	0	0	0	2,231
9307—SWORDS, CUTLASSES, BAYONETS, & SIMILAR ARMS & PARTS								
Ghana	0	0	0	0	23,127	0	0	23,127
United Arab Emirates	0	0	0	0	802,975	3,059,141	0	3,862,116
Total	740,781	83,524	3,959	910	1,311,899	3,063,051	45,500	5,251,004

Source: Congressional Research with Data from United Nations COMTRADE Database.

Note: The categories are by four-digit Harmonized System codes and description. A “Very pistol” is a flare gun.

Other Sources of Foreign Exchange

North Korea's annual merchandise trade deficit of about \$1 billion implies that Pyongyang must either be receiving imports without immediate payment required (aid and capital flows) or be generating foreign exchange through some means—either legal or illegal. Legal means include borrowing, foreign investments, foreign aid, remittances from overseas North Korean workers, selling military equipment not reflected in trade data, and by selling services abroad. Illegal methods include the counterfeiting of hard currency, illegal sales of military equipment or technology, sales of illegal drugs, or by shipping illegal cargo between third countries. The country also can dip into its foreign exchange reserves.¹⁰⁴

Legal Sources of Funds

North Korea is able to borrow on international capital markets. As of the fourth quarter of 2007, the country had loans from foreign located banks that report to the Bank of International Settlements (BIS) of \$50 million (down from \$116 million at the end of 2006 and \$121 million at the end of 2005, \$81 million in 2004, and \$190 million in 2003). The amount of loans for 2007 is a relatively small amount, only about \$2 per capita. Total liabilities to BIS banks (including those located in North Korea) came to \$1,532 million for the fourth quarter of 2007 (up considerably from \$489 million in first quarter 2007). Most of these liabilities appear to be export credits. North Korea also had deposits of \$388 million in BIS banks at the end of 2007.¹⁰⁵

International bond issues are not a major source of funds for North Korea. In May 2003, the country issued ten-year bonds—the first since 1950—but since its sovereign securities are not rated by major Western credit rating agencies, the issue has generated little interest on international financial markets and is aimed at domestic investors. Pyongyang claims that a million people had signed up to receive the bonds, but many speculate that the deductions from the salaries of North Korean purchasers in amounts equivalent to four months' wages to buy the bonds is not voluntary.¹⁰⁶ North Korea does not pay interest on the bonds. Rather the government holds a lottery in which the winners receive monetary prizes greater than the foregone interest on the bonds.¹⁰⁷

Although North Korea is not a major recipient of foreign direct investment (FDI), in 2007, the stock of foreign direct investment in the DPRK was \$1,378 million. The inflow that year was \$53 million, up from the outflow of \$105 million in 2006, and the inflow of \$50 million in 2005, but less than the \$197 million in 2004, and \$158 million in 2003.¹⁰⁸ The FDI comes mainly from South Korea and China. North Korea's free trade zones, particularly the Kaesong Industrial

¹⁰⁴ For an examination of North Korea's external relations, see Stephan Haggard and Marcus Noland, North Korea's External Economic Relations, Peterson Institute for International Economics Working Paper No. WP07-7, August 2007.

¹⁰⁵ Data are from Joint BIS-IMF-OECD-WB External Debt Hub at http://devdata.worldbank.org/sdmx/jedh/jedh_home.html.

¹⁰⁶ Gittings, Danny. Kim Can't Kill the Free Market. *The Wall Street Journal (Brussels)*, May 30, 2003. p. A11.

¹⁰⁷ DPRK Holds Annual Lottery for Government Bond Repayments. Institute for Far Eastern Studies, *NK Brief* No. 08-1-3-2, January 3, 2008.

¹⁰⁸ United Nations Conference on Trade and Development. *World Investment Report, 2007*. New York, United Nations, FDISTAT database showing Major FDI Indicators.

Complex, however, are attracting more foreign direct investment, although the future of Kaesong is now in question.

A major source of funding for imports into the DPRK has been foreign aid or direct government transfers. Both developmental and humanitarian aid and past assistance under KEDO (Korean Peninsula Energy Development Organization, created under the 1994 Agreed Framework, but construction was terminated in 2003) to build two light water nuclear reactors and provide heavy fuel oil have enabled imports into North Korea without financing from Pyongyang.

North Korea also receives funds in the form of official development assistance (ODA) from aid donor nations, multilateral development banks, and other organizations; other official flows; and private flows. The Organisation for Economic Co-operation and Development (OECD) compiles these data from its member nations plus 12 others and from multilateral agencies. The OECD data, however, do not include reporting from South Korea (Seoul considers transactions with the North as intra-country, not as foreign), China, or Russia (not members of the OECD). As shown in **Table 4**, in 2004, net total receipts for North Korea came to \$1,529.6 million from donors, primarily because of a \$1,151.1 million receipt from France, \$142.3 million from the United Kingdom, and \$56.5 million from the United States. In 2005, however, the net total dropped to \$148.7 million as the dispute over North Korea's nuclear program escalated, fell further to \$59.6 million in 2006 as North Korea made significant repayments of previously received funds, and rose to \$178.1 million in 2007. Of this amount, \$102 million came from the Netherlands.

Table 4. North Korea: Total Net Receipts by Major Source/Donor (Excluding Russia, South Korea, and China), 2001-2007

(\$millions)

	2001	2002	2003	2004	2005	2006	2007
U.S.	0.3	131.2	42.9	56.5	6.9	0.4	32.5
Germany	34.1	35.0	11.8	54.2	6.5	3.2	1.2
France	12.8	-656.4	447.7	1,151.1	6.2	-16.9	0.3
Netherlands	0.1	0.6	0.8	0.5	0.65	101.8	102.0
Australia	4.8	5.4	2.1	3.9	5.3	4.5	6.6
Norway	7.9	5.5	9.5	5.6	5.3	3.8	4.4
Sweden	3.4	4.3	4.9	46.2	59.4	-74.8	8.6
Switzerland	6.1	2.1	4.0	3.9	4.2	7.0	5.9
UK	1.1	-15.9	44.8	142.3	0.2	..	1.2
Canada	1.5	0.2	2.1	-1.4	1.6	-1.6	14.8
Multilateral	65.0	40.1	51.7	47.5	41.5	23.3	27.0
—of which EC	40.3	61.2	30.9	31.4	19.4	12.1	16.6
WFP	0.6	0.1	3.2	7.5	8.4	1.8	1.0
UNTA	2.6	2.5	1.8	2.5	3.03	2.01	3.4
UNICEF	2.6	2.5	1.8	2.5	3.03	2.01	3.4
Arab Agencies	14.5	2.2	7.9	1.3	-0.4	-1.7	-0.2
Total	218.6	-440.2	593.4	1,529.6	148.7	59.6	178.1

Source: Organisation for Economic Cooperation and Development. *Source OECD, International Development Statistics*, online database. <http://stats.oecd.org>.

Note: Data are from OECD members, multilateral agencies, and 12 other reporting nations excluding South Korea, China, and Russia. UNTA = U.N. Transitional Authority. WFP = U.N. World Food Program. EC = European Community. Total Receipts include Official Development Assistance + Other Official Flows + Private Flows.

As shown in **Table 5**, much of the total receipts by North Korea came in the form of official development assistance. In recent years, the country has received between \$55 and \$265 million in net official development assistance (ODA) from the countries and agencies that report such data to the OECD (does not include Russia, China, and South Korea). In 2004, total net ODA was \$160.8 million, in 2005 was \$86.8 million, in 2006 was \$54.5 million, and in 2007 was \$97.6 million. The major donors have been the multilateral agencies, European Community, the United States, Sweden, Norway, and Australia. In 2008, the United States provided the DPRK with \$93.7 million in food aid and \$106.0 million in fuel oil for a total of \$199.7 million.¹⁰⁹

¹⁰⁹ CRS Report R40095, *Assistance to North Korea*, by Mark E. Manyin and Mary Beth Nikitin.

Table 5. North Korea: Net Official Development Assistance by Major Source/Donor (Excluding Russia, South Korea, and China), 2001-2007

(\$ in millions)

	2001	2002	2003	2004	2005	2006	2007
U.S.	0.3	131.2	42.9	56.0	7.9	0.4	32.5
Germany	27.0	33.2	7.2	7.5	5.2	2.9	1.4
France	0.3	0.5	-0.4	-0.5	-0.4	0.6	0.3
Australia	4.6	2.0	2.1	3.3	4.6	2.7	6.6
Norway	2.5	3.6	4.4	5.6	5.3	3.8	4.7
Sweden	3.4	4.3	4.9	5.4	5.5	5.1	7.8
Switzerland	4.5	3.4	4.0	3.9	4.2	6.0	5.9
European Community	40.3	61.2	30.9	31.4	19.4	12.1	16.6
Multilateral Agencies (not EC)	1.8	3.1	4.0	1.1	2.7	1.7	10.4
Non-DAC	0.4	1.87	1.4	11.1	5.9	2.3	-0.5
Total	117.6	265.2	131.0	160.8	86.8	54.5	97.6

Source: Organisation for Economic Cooperation and Development, Development Statistics database.

Note: Non-DAC=Non-OECD Development Assistance Committee, such as Thailand and Poland.

The United States also has paid North Korea to search for remains of American servicemen missing from the Korean War. In 2003, it paid \$2.1 million to conduct four searches.¹¹⁰

As indicated in **Table 6**, since 1991, the South Korean government has provided a total of \$3,337.0 million in assistance to the DPRK. Of this, \$2,221.99 million was humanitarian assistance (food aid, fertilizer, or assistance provided through non-governmental organizations). Total assistance reached a high of \$635.43 million in 2007 but dropped to \$159.36 million in 2008 as deliveries of food and fertilizer were halted. South Korean civilian organizations also have provided assistance to North Korea (\$71 million in 2003).¹¹¹

¹¹⁰ U.S. to Pay N. Korea for MIA Search. Associated Press. July 15, 2003. For details on U.S. assistance to North Korea, see CRS Report RS21834, *U.S. Assistance to North Korea: Fact Sheet*, by Mark E. Manyin.

¹¹¹ Republic of Korea, Ministry of Unification. Inter-Korean Relations on the Occasion of the 4th Anniversary of the June 15 Joint Declaration. June 18, 2004. p. 9.

Table 6. South Korean Total and Humanitarian Assistance to the DPRK
(\$millions)

Year	Total Assistance	Total Humanitarian	Food Aid	Fertilizer	Assistance through NGOs
1991	3.02		-	-	-
1992	0.71		-	-	-
1995	236.60		236.60	-	-
1996	9.82		3.76	-	3.07
1997	0.00		-	-	20.05
1998	0.03		-	-	14.26
1999	28.88		-	28.53	-
2000	178.00	163.10	76.69	83.42	2.99
2001	170.72	90.29	14.68	49.47	26.14
2002	254.57	175.37	84.63	66.60	24.14
2003	343.25	256.93	159.21	70.13	27.59
2004	326.75	196.31	98.25	84.46	13.60
2005	596.35	357.26	193.79	123.44	40.03
2006	393.49	226.65	10.65	125.66	90.34
2007	635.43	395.71	157.34	103.49	134.88
2008	159.36	54.11	3.91	0.00	50.20
Total	3,337.00	2,221.99	1,039.51	735.19	447.29

Source: Republic of Korea (South Korea) government and Korean EX-IM Bank, via South Korea Ministry of Unification.

Note: NGO=Non-governmental Organization. Total Assistance = Humanitarian + Economic + Other Assistance

As shown in **Table 7**, in addition to humanitarian assistance, South Korea has provided \$1,115.01 million in economic and other assistance to the DPRK since 1991. This has taken the form of road and rail construction, business subsidies, development of the Kaesong Industrial Complex, tours of Kungang Mountain, family reunions, and other. The road and rail assistance was mainly for connecting the Kaesong Industrial Complex located across the demilitarized zone in North Korea to South Korea. Also related to Kaesong was much of the aid to ROK businesses as well as direct expenditures to develop the industrial complex. Not included in South Korean assistance to the DPRK are the wages of North Korean workers in Kaesong or other internal business transactions.

Table 7. South Korean Economic and Other Assistance to the DPRK
(\$millions)

Year	Road and Rail	Mt. Kumgang Tours	Aid to ROK Business	Kaesong Industrial Complex	Family Reunions	Other
1991						
1992	-	-	-	-	0.71	-
1995	-	-	-	-	-	-
1996	-	-	-	-	-	6.06
1997	-	-	-	-	-	-
1998	-	-	-	-	0.01	0.02
1999	-	-	-	-	0.35	-
2000	12.89	-	0.44	-	2.75	1.81
2001	69.6	34.86	0.83	-	1.20	0.08
2002	53.5	26.71	2.20	-	20.56	0.37
2003	94.09	5.03	10.66	-	3.47	0.66
2004	96.55	6.20	27.78	6.00	3.68	3.83
2005	193.17	0.01	28.62	25.65	16.67	15.00
2006	93.06	1.28	50.16	80.75	15.91	16.02
2007	68.33	0.50	60.95	82.89	30.8	131.13
2008	14.38	1.52	9.79	52.22	19.00	58.54
Total	695.57	76.11	191.45	247.5	115.12	236.55

Source: Republic of Korea (South Korea) government and Korean EX-IM Bank, via South Korea Ministry of Unification.

Another major source of income for certain North Korean families has been in remittances from overseas Koreans, particularly those who live in Japan.¹¹² Most of the North Koreans in Japan either remained there after World War II or are descendants of those people. Some had been forcibly brought there to work in coal mines or factories during the 50-year Japanese occupation of Korea. Currently, of the approximately 650,000 ethnic Koreans who live in Japan, an estimated 56,000 to 90,000 are from the North Korean area, and many are reported to be actively involved in supporting the Pyongyang regime. Ethnic Koreans in Japan work in a variety of businesses and occupations, but they face discrimination in Japanese society and are known for operating pachinko (pinball) parlors and other enterprises providing entertainment and night life as well as being involved with Japan's *yakuza* or gangsters. Many of these, as well as managers of North Korean-related credit unions, regularly have sent remittances to relatives or associates in North

¹¹² For details, see CRS Report RL32137, *North Korean Supporters in Japan: Issues for U.S. Policy*, by Emma Chanlett-Avery. DPRK workers also are countries such as those in the Middle East, China, and Russia.

Korea. One unusual method of smuggling money to North Korea has been to hide 10,000 yen bills (worth roughly \$90 each) under expensive melons being shipped to Kim Jong-il as gifts.¹¹³

Given the decade of stagnation (1992-2002) of the Japanese economy and rising tensions between Japan and North Korea, these remittances have reportedly been declining. A 2003 Japanese newspaper report placed the amount at between \$200 million and \$600 million per year, but that figure could be exaggerated.¹¹⁴ In testimony before parliament, Japan's Finance Minister stated that in Japan's FY2002, \$34 million had been sent from Japan to North Korea through financial channels that required reports to the Japanese government.¹¹⁵ Recent Japanese sanctions include a lowering of the amount on remittances to North Korea that require reporting from 30 million to 10 million yen (. from reported to April, following North Korea's rocket launch, Japan imposed fresh sanctions including reducing the amount of remittance to North Korea subject to reporting to the Japanese government from more than 30 million yen (\$300,000) to more than 10 million yen (\$100,000). Anecdotal evidence indicates that considerable amounts of currency from Japan are simply carried by individuals on ships or sent through China and not reported. Japan, however, has tightened inspections of North Korean ships and curtailed operations of ferry boats traveling between the two countries.¹¹⁶ Remittances by North Koreans living in South Korea and China also are reportedly growing. These could amount to around \$6 million per year from 6,000 (of 10,000) refugees in South Korea and some more from the 100,000 refugees living in China.¹¹⁷

In summary, the DPRK's net total receipts plus remittances, aid and investments from South Korea, and special food and fuel assistance in connection with negotiations over Pyongyang's nuclear program, constitute most of the overt resource inflows that North Korea has received each year over and above its export earnings. These have amounted to perhaps \$700 million on net per year. North Korea must finance the remainder of its trade deficit—about \$300 million—by other means. It appears that these other means have included exports of military equipment and illicit activity.

Illegal or Questionable Sources of Funds¹¹⁸

Data on North Korean sales of military equipment abroad is understandably murky, but the country is thought to have sold hundreds of ballistic missiles to Iran, Iraq, Syria, Pakistan, and other nations in the past decade to earn foreign currency.¹¹⁹ The interdiction by Spain of an unmarked vessel in December 2002 containing parts for 12 to 15 Scud missiles (valued at about \$4 million each) bound for Yemen from North Korea is one example of such arms sales.¹²⁰ In testimony in 2003 before the House Committee on International Relations, the Undersecretary of

¹¹³ Melons Used to Smuggle Cash to N Korea. Japan Today News (Online), January 1, 2003.

¹¹⁴ Remittance Law Reinterpreted Cash Transfers to Pyongyang May Be Suspended as Deterrent. *The Daily Yomiuri* (Tokyo), May 19, 2003. p. 1.

¹¹⁵ Japanese Finance Minister Says "At Least" 34m US Dollars Sent to North Korea. Financial Times Information, Global News Wire—Asia Africa Intelligence Wire. June 6, 2003.

¹¹⁶ See, for example, Masaki, Hisane. N Korea's Missiles Met by Japanese Sanctions, *Asia Times Online*, July 6, 2006.

¹¹⁷ "Refugees' Remittances to N.Korea 'Growing'," *Chosun Ilbo*, February 10, 2009, english.chosun.com.

¹¹⁸ For details, see CRS Report RL33885, *North Korean Crime-for-Profit Activities*, by Liana Sun Wyler and Dick K. Nanto.

¹¹⁹ Asano, Yoshiharu. N. Korea Missile Exports Earned 580 Mil. Dollars in '01. *Daily Yomiuri*, May 13, 2003.

¹²⁰ Solomon, Jay. U.S. Debates North Korean Exports, *Asian Wall Street Journal*, May 5, 2003. p. A1.

State for Arms Control and International Security pointed out that North Korea possesses Scud and No-Dong missiles and is developing the Taepo-Dong 2. He stated that the country is by far the most aggressive proliferator of missiles and related technologies to countries of concern. These sales are one of the North's major sources of hard currency.¹²¹ According to a U.S. military officer quoted in the Japanese press, North Korea exported \$580 million worth of ballistic missiles to the Middle East in 2001.¹²² Between 1998 and 2001, North Korea is estimated to have exported some \$1 billion in conventional arms to developing nations.¹²³ In a 2009 article, the *Wall Street Journal* quotes analysts as saying that North Korean sales of short- and medium-range missile systems remain among North Korea's largest export earners, part of an arms trade that generates \$1.5 billion annually.¹²⁴ This is likely to be an overstatement, since it exceeds the total deficit in North Korea's annual deficit in trade of about \$1 billion.

With respect to illegal drug trade, officials from the U.S. military command in Seoul reportedly said that North Korea is earning between \$500 million and \$1 billion annually from the narcotics trade.¹²⁵ North Korea is thought to produce more than 40 tons of opium per year which would make it the world's third-largest opium exporter and sixth-largest heroin exporter. The regime also is accused of trafficking in methamphetamine stimulants. U.S. counter-narcotics officials are reported to have said that since 1976, there have been at least 50 arrests or drug seizures involving North Koreans in more than 20 countries. Japanese authorities say that nearly 50% of illegal drug imports into Japan come from North Korea.¹²⁶ According to the U.S. State Department, although such reports have not been conclusively verified by independent sources, defector statements have been consistent over years and occur in the context of regular narcotics seizures linked to North Korea. The State Department's *International Narcotics Control Strategy Report* for 2007 stated its view is "that it is likely, but not certain, that the North Korean government has sponsored criminal activities in the past, including narcotics production and trafficking, but notes that there is no evidence for several years that it continues to traffic in narcotics." During 2006, the Japanese media reported that drug trafficking occurred along the DPRK-PRC border with Japanese criminal figures traveling to the border area to purchase methamphetamine for smuggling back to Japan.

According to the State Department, in March 2006, a new decree warned citizens, state factories and groups in the DPRK to "... not sell, buy, or use drugs illegally" and that "organizations, factories and groups should not illegally produce or export drugs." Punishment is severe, up to death, and the family members and shop mates of offenders face collective responsibility and punishment with the perpetrator.¹²⁷

¹²¹ Testimony of John R. Bolton, Under Secretary for Arms Control and International Security, U.S. Department of State. U.S. House Committee on International Relations, June 4, 2003.

¹²² Asano, Yoshiharu. N. Korea Missile Exports Earned 580 Mil. Dollars in '01. *Daily Yomiuri*, May 13, 2003. Pearson, Brendan. Illicit Boost for N Korea Economy. *Australian Financial Review*, May 14, 2003. p. 12.

¹²³ CRS Report RL33696, *Conventional Arms Transfers to Developing Nations, 1998-2005*, by Richard F. Grimmett. p. 53. This figure is rounded to the nearest \$100 million.

¹²⁴ Jay Solomon, "Tests Point to Spread of Weapons Trade," *The Wall Street Journal*, May 28, 2009, p. A6.

¹²⁵ Paddock, Richard C. and Barbara Demick. N. Korea's Growing Drug Trade Seen in Botched Heroin Delivery, *Washington Post*, May 21, 2003. Also see CRS Report RL33885, *North Korean Crime-for-Profit Activities*, by Liana Sun Wyler and Dick K. Nanto.

¹²⁶ Kim, Ah-young, Halt North Korea's Drug Habit; a Narcotic State, *International Herald Tribune*, June 18, 2003. p. 8.

¹²⁷ U.S. Department of State. *International Narcotics Control Strategy Report, 2007*. March 2007.

In a blatant incident in May 2003, the Australian navy and special forces commandeered a North Korean ship (Pong Su) off the country's southern coast that allegedly was moving 110 pounds of almost pure heroin valued at \$50 million. The ship apparently picked up the heroin elsewhere in Asia and took a circuitous route to Australia.¹²⁸

Allegations also have been made that North Korea engages in counterfeiting operations, particularly of U.S. \$100 notes. It is believed that the country has earned \$15 million to \$20 million per year in counterfeiting,¹²⁹ but it is not clear that North Korea currently engages in counterfeit currency production, although such notes still reportedly circulate. In June 2009, the United States reportedly was considering new sanctions on North Korea for U.S. currency counterfeiting operations run by the North Korean government.¹³⁰ Also, North Korean General O Kuk-ryol, who recently was promoted to the country's National Defense Commission and who reportedly is in charge of arranging the succession of Kim Jong-il's third son, Kim Jong-un, was identified by U.S. and foreign intelligence sources as a key figure in the covert production and distribution of high-quality counterfeit \$100 bills.¹³¹

In the opinion of a North Korean expert at Seoul's Sejong Institute, "North Korea's economy had received a death sentence long ago, but it keeps afloat thanks to international aid and the country's trading in weapons and illicit goods."¹³²

Since late 2005, the United States has taken several measures to reduce illicit financial activities by North Korea. On June 28, 2006, President Bush issued Executive Order 13382 (Blocking Property of Weapons of Mass Destruction Proliferators and Their Supporters).¹³³ On October 21, 2005, pursuant to Executive Order 13382, the U.S. Treasury designated eight North Korean entities as proliferators of weapons of mass destruction and their delivery vehicles. The action prohibited all transactions between the designated entities and any U.S. person and froze any assets the entities may have had under U.S. jurisdiction.¹³⁴

On September 15, 2005, the U.S. Treasury designated Banco Delta Asia SARL as a "primary money laundering concern" under Section 311 of the Patriot Act because it represented an unacceptable risk of money laundering and other financial crimes. Treasury stated that "Banco Delta Asia has been a willing pawn for the North Korean government to engage in corrupt financial activities through Macau...."¹³⁵ On March 14, 2007, the Treasury finalized its rule against Banco Delta Asia, barring the bank from accessing the U.S. financial system, but allowing the \$25 million in North Korean funds held to be released.

¹²⁸ Struck, Doug. Heroin Trail Leads to North Korea. *Washington Post Foreign Service*, May 12, 2003. p. A01.

¹²⁹ For details, see CRS Report RL33324, *North Korean Counterfeiting of U.S. Currency*, by Dick K. Nanto.

¹³⁰ Jon Herskovitz, "U.S. Might Impose Counterfeiting Sanctions on North Korea," *Global Security Newswire by National Journal Group*, June 4, 2009.

¹³¹ Bill Gertz, "Exclusive: N. Korea general tied to forged \$100 bills," June 2, 2009, On-line edition.

¹³² Choe, Sang-Hun. N. Korea Sees Sanctions Amid Tough Times. Associated Press Online, June 12, 2003.

¹³³ Available at <http://www.whitehouse.gov/news/releases/2005/06/20050629.html>.

¹³⁴ U.S. Department of the Treasury. Treasury Targets North Korean Entities for Supporting WMD Proliferation. Press Release JS-2984, October 21, 2005.

¹³⁵ U.S. Department of the Treasury. Treasury Designates Banco Delta Asia as Primary Money Laundering Concern under USA PATRIOT Act. Press Release JS-2720, September 15, 2005.

U.S.-DPRK Trade Relations

U.S. trade with the DPRK is quite limited. The United States does not maintain any diplomatic, consular, or trade relations with North Korea, and the country does not have normal trade relations (most favored nation) status. This means that North Korean exports are subject to the relatively high tariffs existing before World War II in the United States. For example, women's blouses of wool or cotton carry a 90% import duty if from North Korea but are duty free if from free-trade agreement countries, such as Canada, Israel, or Mexico, or are subject to 9 to 10% duty if from most other nations. As a communist nation, North Korea also does not qualify for duty-free treatment of certain products that are imported from designated developing countries under the generalized system of preferences program.¹³⁶

The United States, moreover, maintains various economic sanctions on North Korea because the country is considered a threat to national security, is a communist state, and it proliferates weapons of mass destruction.¹³⁷ In June 2008, however, the Bush Administration announced that it was lifting restrictions under the Trading with the Enemy Act and was starting the process to remove the DPRK from the list of State Sponsors of Terrorism. Other sanctions, including U.N. sanctions imposed following North Korea's nuclear test, still remain in place. The United States resumed shipments of food and heavy fuel oil to North Korea as humanitarian aid but subsequently halted them. Travel to and trade with North Korea in other than dual-use goods are allowed if overarching requirements are met, and there are no restrictions on the amount of money Americans may spend in the DPRK. The sanctions related to the proliferation of weapons of mass destruction generally target the offending entities. North Korean assets in the United States frozen prior to June 19, 2000, remain frozen. North Korea is on the most restricted list of countries for U.S. exports (Country Group E list) of items such as computers, software, national security-controlled items, items on the Commerce Control List,¹³⁸ and service or repair of such items. Economic sanctions on North Korea, however, are essentially unilateral by the United States. Most other nations (except Japan) allow relatively free trade in non-sensitive goods with the DPRK.

In October 2007, President Bush reportedly approved the lifting of some sanctions imposed on the DPRK under an act governing human trafficking. This easing allowed the United States to provide assistance in educational and cultural exchanges to the extent that the aid doesn't damage its national interest.¹³⁹ In February 2008, the New York Philharmonic Orchestra performed in Pyongyang.¹⁴⁰

The United States uses trade with North Korea as leverage and to send a message of disapproval for various activities by Pyongyang. As the Six-Party nuclear talks have progressed, however, the United States has expressed its willingness begin discussions to normalize relations with the DPRK, has removed it from the terrorism list,¹⁴¹ and has indicated its willingness to negotiate a

¹³⁶ See CRS Report RL33663, *Generalized System of Preferences: Background and Renewal Debate*, by Vivian C. Jones, *Generalized System of Preferences*, by William H. Cooper.

¹³⁷ See CRS Report RL31696, *North Korea: Economic Sanctions*, by Dianne E. Rennack.

¹³⁸ http://w3.access.gpo.gov/bis/ear/ear_data.html

¹³⁹ Yoon, Won-sup. US Eased Sanctions on North Korea in 2007, *Korea Times*, February 12, 2008.

¹⁴⁰ Daniel J. Wakin. North Koreans Welcome Symphonic Diplomacy. *New York Times*, February 27, 2008. p. 1.

¹⁴¹ The North Korean Counterterrorism and Nonproliferation Act (H.R. 3650, Ros-Lehtinen, Ileana) provides for the (continued...)

peace treaty to formally end the Korean Conflict. The way also could be opened for North Korea's admission to membership in international financial institutions (such as the World Bank, International Monetary Fund, and Asian Development Bank). This would allow the DPRK to receive development assistance that would help finance additional imports from countries such as the United States.

Table 8 shows U.S. merchandise exports, imports, and trade balances with North Korea since 1990. Imports have been zero or relatively low with a peak of \$1,495,000 in 2004. Almost all of these imports from North Korea were organic chemicals and woven apparel. A possible concern is that imports of books, newspapers, and manuscripts have dropped to zero. For a country with great strategic importance to the United States, information on North Korea is not flowing directly into the U.S. market. U.S. exports at \$23,750,000 in 2004 rose from \$32,000 in 1990 to \$25,012,000 in 2002 and to \$52 million in 2008. However, much of this has been food and energy assistance provided as part of North Korea's process of denuclearization. The small annual surplus in U.S. trade with North Korea arises primarily from food and energy assistance that has been provided to the DPRK.

Table 8. U.S. Merchandise Exports, Imports, and Trade Balances with North Korea, 1990-2007

(\$ in thousands)

Year	U.S. Exports	U.S. Imports	Balance
1990	32	0	32
1991	484	10	474
1992	83	0	83
1993	1,979	0	1,979
1994	180	0	180
1995	11,607	0	11,607
1996	541	0	541
1997	2,409	0	2,409
1998	4,454	0	4,454
1999	11,265	29	11,236
2000	2,737	154	2,583
2001	650	26	624
2002	25,012	15	24,997
2003	7,977	0	7,977
2004	23,750	1,495	22,255

(...continued)

continuation of restrictions against the government of North Korea (imposed as a result of the DPRK being deemed a supporter of international terrorism) unless the President certifies to Congress that North Korea has met certain benchmarks respecting: (1) missile or nuclear technology transfers; (2) support of terrorist groups and terrorist activities, (3) counterfeiting of U.S. currency, (4) release of South Korean POWs, Japanese journalists, and Kim Donk-Shik; and (5) Bureau 39's closure.

Year	U.S. Exports	U.S. Imports	Balance
2005	5,757	3	5,754
2006	3	0	3
2007	1,728	0	1,728
2008	52	0	52

Source: U.S. Department of Commerce through World Trade Atlas.

According to the U.S. Department of Commerce, the United States has no direct investment in North Korea.¹⁴² An American company interested in doing business in North Korea, particularly establishing a company, likely would work through an overseas subsidiary. Some American business executives with the U.S. Chamber of Commerce in South Korea, for example, reportedly travel to North Korea for business purposes,¹⁴³ and some U.S. enterprises reportedly are working as subcontractors in the development of North Korea’s Kaesong industrial complex.¹⁴⁴

North-South Korean Economic Relations

Economic relations have been a major route for opening relations between North and South Korea. Seoul has a major stake in relations with the DPRK and the outcome of the current Six-Party Talks.¹⁴⁵ It seeks a “soft landing” for the current standoff over the North’s nuclear program—one that will lead to a lessening of tensions and steady integration of North Korea’s economy into the global economic and financial system. As with other countries divided by ideology and a history of hostilities as “pawns” on the chess board of the Cold War, the two halves of the peninsula face numerous issues to be resolved before they can normalize relations—let alone contemplate reunification.

South Korea has much to gain from rapprochement with the North. Its strategy has been to use its economic leverage and family reunions (families separated by the division of the Korean Peninsula) 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 it recoils at the prospect of funding economic rehabilitation in the DPRK as West Germany did with East Germany. Seoul also recognizes that its economic ties are gradually shifting from reliance on the American market to greater integration with China, Japan, 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 an alternative to cheap labor in China.

¹⁴² U.S. Bureau of Economic Analysis. U.S. Direct Investment Abroad Detail for Historical-Cost Position and Related Capital and Income Flows, 2001. *Survey of Current Business*, September 2002, p. 94.

¹⁴³ Meeting with President of the American Chamber of Commerce and CRS analysts, April 7, 2003, Washington, DC.

¹⁴⁴ Koo, Kyung-hee. U.S. Enterprises Participate in Developing the Gaeseong Industrial Complex. KOTRA-North Korea Team. January 30, 2004. Reprinted in *KOTRA Bulletin*, February 11, 2004.

¹⁴⁵ The Six-Party Talks are made up of representatives from the United States, Japan, North Korea, South Korea, Russia, and China.

In 2008, total merchandise trade between North and South Korea was \$1,820 million, up from \$1,797.9 million in 2007, \$1,349.7 million in 2006, and more than triple the \$403.0 million just seven years earlier. South Korean exports, which had reached \$1,032.6 million in 2007, fell to \$890 million in 2008. South Korean imports from North Korea rose to \$930 million, up from \$765.3 million in 2007. Much of the increase in exports has been in the form of food and industrial goods. In 2006, \$419.3 million in South Korean exports to the North were actually South Korean aid shipments.

The major items purchased by South Korea from the North include food/aquatic/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.

As indicated in **Table 6** and **Table 7** above, South Korea also provides the DPRK with humanitarian and economic assistance. Since 1991, this has amounted to a total of \$3,337.00 million with \$2,221.99 million in humanitarian assistance and \$1,115.01 million in economic and other assistance. Since 2008, this assistance has largely come to a stop.

Since 1992, particularly under the Sunshine Policy of former South Korean President Kim Dae Jung and under the Policy for Peace and Prosperity of former President Roh Moo-hyun, Seoul has permitted its corporations to pursue business interests in North Korea. In 2003, the government allowed activities by 89 companies including 35 involved in contract processing (assembly, sewing, or other processing done under contract) by North Koreans.¹⁴⁶ The companies included Daewoo (jackets, bags), Samsung Electronics (communications center, switchboard), Samcholi Bicycle, Green Cross (medicine), International Corn Foundation (corn seeds), Hyundai (Mt. Kumkang tourism, development), and Hanshin Co. (glass). The Korea Electronic Power Corporation's work on the construction of a light water nuclear power plant under the U.S.-North Korean 1994 Agreed Framework has been halted.¹⁴⁷ One global strategy of South Korean businesses is to develop processing sites in North Korea to take advantage of low labor costs there; in some cases, labor costs are competitive with those in China. The two countries also have taken some halting steps toward linking their economic systems. In addition to the business relationships, since September 2002, the two countries have been reconnecting the Gyeongui (Seoul-Sinuiju) and Donghae (East Sea) railway lines and adjacent highways.

As discussed in the section above on Economic Reforms and Free Trade Zones, the focus of North-South economic cooperation now is the Kaesong Industrial Complex (KIC). Managed by South Korea's Hyundai Asan and Korea Land Corporation and located just over the border in North Korea, this 810 acre complex already has attracted small and medium sized enterprises from South Korea. The KIC accounts for much of the increased commercial trade between the North and the South. In 2008, the KIC produced some \$20 million worth of goods each month.¹⁴⁸

¹⁴⁶ Speech by Minister Jeong Se-hyun on the 34th Anniversary of the Ministry of Unification. *Korean Unification Bulletin*, No. 53, March 2003.

¹⁴⁷ In March 1996, KEPCO was designated the prime contractor for the construction of two 1,000MW light water nuclear reactors in North Korea for KEDO (Korean Peninsula Energy Development Organization). It broke ground near Sinpo in August 1997. By the end of 2001, the project was 16% completed with some 1,200 workers employed. For details on the Agreed Framework, see CRS Report RL33590, *North Korea's Nuclear Weapons Development and Diplomacy*, by Larry A. Niksch. For the approval list, see KOTRA, Companies Approved for South-North Korean Economic Cooperation.

¹⁴⁸ South Korea to Continue "Utmost Efforts" for Inter-Korean complex—Minister. Yonhap News Agency. Reported by BBC Monitoring Asia Pacific. London, December 8, 2006.

It provides small- and medium-sized South Korean firms with a low-cost supply of labor for manufacturing products, provides jobs for North Korean workers, and provides needed hard currency for Pyongyang.

North Korea depends more on South Korea in international trade than South Korea does on the North. North Korea accounts for less than 1% of total South Korean exports, while North Korean exports to South Korea account for more than a third of total North Korean exports. South Korea has access to global markets for many of its world class industries (automobiles, semiconductors, consumer electronics, etc.), while North Korea faces restricted markets for its limited array of exports.

In his inaugural speech on February 25, 2008, President Lee Myung-bak indicated that South Korea attitude toward inter-Korean relations should be pragmatic, not ideological. He reiterated his plan to provide assistance in order to raise the per capita income of North Korea to \$3,000 within ten years if Pyongyang denuclearizes.¹⁴⁹

Table 9. South Korean Merchandise Trade with North Korea, 1990-2007
(\$ in thousands)

Year	South Korean Imports	South Korean Exports	Total Trade	Balance
1990	12,278	1,188	13,466	-11,090
1991	105,719	5,547	111,266	-100,172
1992	162,863	10,563	173,426	-152,3
1993	178,167	8,425	186,592	-169,742
1994	176,298	18,249	194,547	-158,049
1995	222,855	64,436	287,291	-158,419
1996	182,400	69,639	252,039	-112,761
1997	193,069	115,270	308,339	-77,799
1998	92,264	129,679	221,943	37,415
1999	121,604	211,832	333,436	90,228
2000	152,373	272,775	425,148	120,402
2001	176,170	226,787	402,957	50,617
2002	271,575	370,155	641,730	98,580
2003	289,252	434,965	724,217	145,713
2004	258,000	439,000	697,000	181,000
2005	340,300	715,500	1,055,800	375,200
2006	519,563	830,198	1,349,761	310,635
2007	765,346	1,032,550	1,797,896	267,204
2008	930,000	890,000	1,820,000	-40,000

¹⁴⁹ Inauguration Speech of President Lee Myung-bak, February 25, 2008. On website of the South Korean Ministry of Foreign Affairs and Trade. <http://www.mofat.go.kr/index.jsp>.

Sources: South Korea Ministry of Unification, KOTRA.

China-DPRK Economic Relations

China remains the DPRK's chief ally. In addition to sharing its status as one of the last communist regimes in the world, China views the Korean peninsula as vital to its strategic interests. Beijing values North Korea as a buffer between the democratic South Korea and the U.S. forces stationed there, as a rationale to divert U.S. and Japanese resources in the Asia Pacific toward dealing with Pyongyang and less focused on the growing military might of China, and as a destination for Chinese foreign investment and trade. Beijing arguably has more influence in Pyongyang than any other nation.

Cooperation between the two countries is extensive but often strained. In 1961, China and the DPRK signed a mutual defense pact, but recently a Chinese official reportedly said that they are not "well informed of the internal situation of the North Korean military" and that the DPRK "does not listen to what China has to say."¹⁵⁰ (This presumably referred to Pyongyang's missile and nuclear tests.) Also with respect to North Korean refugees, their first destination is usually northeastern China. According to Human Rights Watch, China labels North Korean border-crossers as illegal economic migrants, rather than refugees or asylum seekers, and usually sends them back to North Korea.¹⁵¹

China also is hosting and facilitating the ongoing Six-Party Talks that seek a resolution to the North Korean nuclear problem.

In August 2001, Chinese President Jiang Zemin visited Pyongyang and promised increased humanitarian and economic assistance. In April 2004, Kim Jong-il visited Beijing to discuss food aid and nuclear issues.

According to Jane's Information Group, several issues have arisen to cause friction in the Sino-North Korean relationship. These include

- Chinese exasperation at the DPRK's failure to reform its economy;
- Pyongyang's prevarication over the nuclear and peace treaty issues and the consequent dangerous stimulus this provides to proliferation in the region;
- The nuclear standoff with the United States and Pyongyang's possession of nuclear weapons;
- Growing economic and political rapport between Pyongyang and Taipei;
- The North Korean refugee problem on the China-DPRK border;

¹⁵⁰ Chu, Wan-chung. These Days, North Korea Does not Even Listen to China. *Chosun Ilbo*, August 7, 2006. Reprinted by BBC Monitoring Asia Pacific, August 10, 2006.

¹⁵¹ CRS Report RS22973, *Congress and U.S. Policy on North Korean Human Rights and Refugees: Recent Legislation and Implementation*, by Emma Chanlett-Avery. Human Rights Watch. China: Protect North Korean Refugees, March 9, 2004. James D. Seymour. China: Background Paper on the Situation of North Koreans in China, A Writenet Report by commissioned by United Nations High Commissioner for Refugees, Protection Information Section, January 2005.

- Pyongyang’s missile testing, prompting Japan to acquire a Theater Missile Defense system, with Taiwan wishing to be included;
- North Korea’s construction of underground missile sites close to the Chinese border; and
- North Korea’s cavalier attitude towards business. (China occasionally suspends shipments of humanitarian aid to the DPRK because Pyongyang regularly ‘forgets’ to return Chinese railroad rolling stock.)¹⁵²

In 2006, Pyongyang’s missile and nuclear tests severely strained relations between China and the DPRK. Beijing had warned the DPRK not to conduct either of the tests and “lost face” when Pyongyang went ahead with them anyway. As a result, for the first time China agreed to UN resolutions imposing sanctions on the DPRK¹⁵³ and also took measures to halt banking transactions with North Korean entities and to curtail shipments of petroleum. China, however, did not agree to conduct inspections of shipments along its borders with North Korea. Some analysts indicate that Pyongyang may be growing weary of its lop-sided relations with Beijing and may be attempting to become more independent. Pyongyang may view nuclear weapons as a “trump card to intimidate China as much as the United States.”¹⁵⁴ After North Korea’s long-range missile test in April 2009, China agreed to stronger U.N. sanctions on three North Korean companies. After North Korea’s second nuclear test in May 2009, China issued a strong statement of condemnation and apparently has been cooperating in developing a U.N. Security Council resolution addressing the issue.

Since the collapse of the Soviet Union, China has been the DPRK’s largest trading partner and supplier of concessional assistance (through subsidized trade and direct transfers). As an export market and source of imports, however, North Korea plays a relatively minor role for China. In 2007, the DPRK ranked 64th among China’s export markets—smaller than Peru, Egypt, or Hungary. As a source of imports, North Korea ranked 70th—below Gabon, Yemen, or Belgium. **Table 10** shows China’s merchandise trade with the DPRK.

Table 10. China’s Merchandise Trade with the DPRK, 1995-2008

(\$ in millions)

Year	China’s Imports	China’s Exports	Total Trade	China’s Balance
1995	63.609	486.037	549.646	422.428
1996	68.638	497.014	565.652	428.376
1997	121.610	534.411	656.021	412.801
1998	51.089	356.661	407.750	305.572
1999	41.722	328.634	370.356	286.912
2000	37.214	450.839	488.053	413.625
2001	166.797	570.660	737.457	403.863
2002	270.863	467.309	738.172	196.446

¹⁵² Jane’s Information Group, *op. cit.*

¹⁵³ See UN Security Council Resolution 1718, October 14, 2006.

¹⁵⁴ Kahn, Joseph. China May Press North Koreans. *The New York Times*, October 20, 2006. p. A1.

Year	China's Imports	China's Exports	Total Trade	China's Balance
2003	395.546	627.995	1,023.541	232.449
2004	582.193	794.525	1,376.718	212.332
2005	496.511	1,084.723	1,581.234	588.212
2006	467.718	1,231.886	1,699.604	764.168
2007	581.521	1,392.453	1,973.974	810.932
2008	754.045	2,033.233	2,787.278	1,279.188

Sources: Chinese (PRC excluding Hong Kong) data as supplied by World Trade Atlas.

China is a major source for North Korea of imports of petroleum. According to Chinese data, exports to the DPRK of crude oil reached \$414 million and shipments of oil (not crude) totaled \$120 million. Total exports of mineral fuel oil of \$585 million accounted for 29% of all Chinese exports to the DPRK. China, however, does not appear to be selling this oil to North Korea at concessionary prices. In 2008, the average price for Chinese exports of crude oil to North Korea was \$0.78 per kilogram, while it was \$0.71 for such exports to the United States, \$0.66 for South Korea, \$0.81 for Japan, and \$0.50 for Thailand.¹⁵⁵

China also provides aid directly to Pyongyang. By bypassing the United Nations, China is able to use its assistance to pursue its own political goals independently of the goals of other countries. It is widely believed that Chinese food aid is channeled to the military. This allows the World Food Program's food aid to be targeted at the general population without risk that the military-first policy or regime stability would be undermined by foreign aid policies of other countries.¹⁵⁶

In November 2003, China reportedly transferred responsibility for securing its border with North Korea from the police to its army.¹⁵⁷ Many of China's two million ethnic Koreans live along this border, and it is a favorite crossing point for refugees from North Korea. In 2006, China built a 20-kilometer long fence along its border with North Korea. It is located primarily along areas where the Yalu River dividing the two countries is narrow and the river banks low.¹⁵⁸ Much of China's trade with the DPRK goes through the port of Dandong on the Yalu River. In 2002, 40% of Chinese exports to and 11% of its imports from North Korea passed through Dandong.¹⁵⁹

China's major imports from North Korea include mineral ores, mineral fuels (coal), woven apparel, fish and seafood, iron and steel, and wood. China's major exports to North Korea include mineral fuels and oil, meat, electrical machinery, machinery, plastic, man-made filament, vehicles, and iron and steel. (See section of this report on foreign investments for activity by Chinese firms in the DPRK.)

¹⁵⁵ Average price calculated by World Trade Atlas using Chinese trade statistics.

¹⁵⁶ Babson, Bradley O. *Towards a Peaceful Resolution with North Korea: Crafting a New International Engagement Framework* Paper presented at a conference sponsored by the American Enterprise Institute, Korea Economic Institute, and Korea Institute for International Economic Policy, Washington, DC, February 12-13, 2004.

¹⁵⁷ Foley, James. China Steps Up Security on North Korean Border. *Jane's Intelligence Review*, November 1, 2003.

¹⁵⁸ China Erects Massive Fence on N. Korean Border After Test. *World Tribune.com*, October 25, 2006. Schafer, Sarah. Threatening the Whole World, on China's Border with North Korea, Local Villagers Fear the Fallout from Pyongyang's Nuclear Aspirations, *Newsweek*, October 12, 2006. (Internet edition).

¹⁵⁹ Lee, Chang-hak. China's Trade with N.K. Via Dandong Exceeds US \$200 million. KOTRA, February 21, 2003.

Japan-DPRK Economic Relations

Japan's economic relations with North Korea have declined sharply as tension over Pyongyang's nuclear and missile programs has spiked, and there has been no resolution of the Japanese abducted by North Korea's intelligence agency. North Korea's May 2009 test of a nuclear device reinforced existing trends in DPRK-Japan economic relations. Although the Japanese government was reportedly considering a complete economic embargo on North Korea in the wake of the most recent test, the impact is considered largely symbolic because of the already drastically reduced trade.

After North Korea test launched several missiles in July 2006 and then detonated a nuclear device in October 2006, Japan imposed strict unilateral sanctions, causing bilateral trade to plummet. Japan banned imports and most North Korean nationals from entering Japan, prohibited all North Korean ships from entering Japanese ports, and outlawed the export of "luxury goods" to North Korea, including caviar, jewelry, liquor, and any food known to be favored by North Korean leader Kim Jong-il. Tokyo has also ceased sending any humanitarian aid to North Korea, and has refused to provide economic or energy assistance until their concerns with Pyongyang are resolved.

This pattern is a reversal of earlier economic relations. Although Japan and North Korea have never established official diplomatic relations, the two nations maintained significant economic ties for well over a decade. From the end of the Cold War, Japan was second only to China among North Korea's top trading partners. Bilateral trade declined considerably in the 1980s, but the drop was attributed primarily to the steep overall downturn of the North Korean economy as much as the state of bilateral relations. Before relations deteriorated, Japanese leaders made several efforts to normalize relations with North Korea, promising considerable economic assistance to the country. Since 2002, however, North Korea's provocative missile and nuclear device tests, along with the issue of Japanese citizens kidnapped by North Korean agents in the 1970s and 1980s, has stalled any further diplomatic progress and retarded economic relations. From 2001-2005, Japan's share of North Korean trade declined as China, South Korea, and Russia expanded trade with Pyongyang.

Table 11. Japan's Merchandise Trade with the DPRK, 1994-2007

(\$ in millions)

Year	Japan's Imports	Japan's Exports	Total Trade	Japan's Balance
1994	328.313	171.092	499.405	-157.221
1995	338.073	253.798	591.871	-84.275
1996	290.745	226.480	517.225	-64.265
1997	301.796	178.942	480.738	-122.854
1998	219.489	175.137	394.626	-44.352
1999	202.564	147.839	350.403	-54.725
2000	256.891	206.760	463.651	-50.131
2001	225.618	1,064.519	1,290.14	838.901
2002	235.840	132.645	368.485	-103.195
2003	174.390	91.445	265.835	-82.945

Year	Japan's Imports	Japan's Exports	Total Trade	Japan's Balance
2004	164.299	88.743	253.042	-75.556
2005	132.277	62.505	194.782	-69.772
2006	77.776	43.816	121.592	-33.96
2007	0.000	9.331	9.331	9.331
2008	0.000	7.663	7.663	7.663

Source: Japanese data as supplied by World Trade Atlas.

As indicated in **Table 11**, by 2008, total trade between Japan and the DPRK had fallen to \$8 million from \$1,290 million in 2001. In 2007, Japan had no imports from the DPRK and reported exports of \$8 million.

Before Japan stopped importing from North Korea, seafood made up almost half of the North's exports to Japan, followed by electrical machinery, aluminum and articles thereof, mineral fuels, and apparel. North Korean clams and *matsutake* mushrooms are particularly prized in the Japanese market. Japan sent items such as vehicles, electrical machinery, boilers/reactors, manmade filaments, wool, and articles of iron or steel to North Korea. Some Japanese lawmakers have argued that Japan should expand the ban on imports from North Korea to cover exports as well.

Japan's food aid to North Korea has also dwindled as relations soured. The pattern of Japanese aid reflects developments in the political relationship between Tokyo and Pyongyang: shipments began in 1995 and 1996 when relations warmed, were temporarily suspended periodically as tensions mounted, and eventually ceased altogether in late 2004 because of disagreement over the abduction issue. Between 1995 and 2004, Japan provided 1.2 million metric tons of humanitarian food aid to North Korea, mostly through the United Nations World Food Program.¹⁶⁰

A group of pro-Pyongyang ethnic Koreans living in Japan known as the Chosen Soren (Chongryun in Korean) in the past provided North Korea with additional funds in the form of cash remittances and, possibly, facilitated illicit trade such as drug trafficking and counterfeiting. Although the exact amount of remittances is unknown, the total appeared to be in the neighborhood of \$100 million per year but declined sharply since the early 1990s. A series of scandals involving ethnic Korean banks in Japan revealed that money was illegally channeled to North Korea through the network of Chosen Soren-affiliated credit unions. Following the missile tests in 2006, Japan froze fund transfers and overseas remittances by 15 groups and one individual suspected of links to North Korean weapons programs, and established rules that require financial institutions to report to the Japanese government remittances overseas of more than 300 million yen.

Russia-DPRK Economic Relations

Russian reforms and the end of the Cold War greatly reduced the priority of the DPRK in the strategy of Russian foreign policy. Following Soviet support of North Korea in the Korean War,

¹⁶⁰ CRS Report RL31785, *Foreign Assistance to North Korea*, by Mark E. Manyin.

the USSR provided assistance to Pyongyang that helped equip its military and create its heavy industrial sector. In 1998, at the peak of the bilateral relationship, about 60% of North Korea's trade was with the Soviet Union. Much of the trade was in raw materials and petroleum that Moscow provided to Pyongyang at concessional prices. Relations between the two cooled in the 1990s as Russia recognized South Korea, announced that trade with North Korea was to be conducted in hard currencies, and opted out of its bilateral defense agreement.¹⁶¹

Recently, overall relations between Russia and North Korea have been improving. Russia is upgrading its railway connections with the DPRK and has been participating in an ambitious plan to build a trans-Korean railway. As is the case with China and South Korea, Russia is critical to North Korean security, since Russia shares a border with the DPRK, and Russian cooperation would be necessary to enforce any security guarantee. As fuel aid from abroad has decreased, moreover, North Korea has turned again toward Russia as a source of supply.

An observer of Russia-DPRK relations views Russian policy toward North Korea as an important component of Moscow's general strategy toward what it considers the critically important Asia-Pacific region. Russia's strategic course includes a calculating and pragmatic approach toward North Korea and the Korean Peninsula in general. Moscow has gained unique and exclusive communications capabilities with Pyongyang based on the development of trust between the leadership of the two states at the highest political levels.¹⁶²

This observer also points out that the perspective of Russia on the North Korea nuclear issue does not fully coincide with that of the United States. While Moscow has insisted on a denuclearized Korean peninsula and the irreversible dismantlement of North Korea's nuclear weapons and nuclear development programs, it also firmly supports the peaceful resolution of the issue. Russia is a participant in the Six-Party Talks. Moscow apparently has concluded that the Kim Jong-il regime does not face impending collapse, and therefore, outside pressure and economic sanctions intended to bring about regime change work only to increase tensions and the probability of a military confrontation. Russia also does not favor a Korean Peninsula unified by military force with American help. This would put U.S. forces on the Russia-Korean border. Rather, Russia supports a unified Korea that would maintain friendly relations with all countries, including Russia, and opposes foreign interference in the unification process.¹⁶³

As is the case with China, Russia also is concerned that economic hardships in the DPRK push refugees across the border into Russian territory. Moscow also supported U.N. Security Council Resolutions in 2006 that condemned North Korea's missile and nuclear tests. This has cooled the relationship to some extent. Russia also condemned the May 2009 nuclear test.

The DPRK's trade with Russia lags behind what it has been in the past. In 2008, North Korea ranked 107th among Russia's sources of imports (below Jamaica and Ghana) and 92nd in terms of markets for Russian exports (below the Virgin Islands and Gibraltar). The increasing volume of Russian mineral fuel exports to the DPRK has moved Russia past Japan, Germany, and Thailand to become North Korea's third largest trading partner.

¹⁶¹ Lunev, Stanislav. *New Era in Russian-North Korean Relations*. Newsmax.com, August 23, 2000.

¹⁶² Vorontsov, Alexander. *Current Russia—North Korea Relations: Challenges and Achievements*. The Brookings Institution Center for Northeast Asian Policy Studies, February 2007, 24 p.

¹⁶³ *Ibid.*

Major Russian exports to the DPRK include mineral fuels, wood pulp, machinery, non-rail vehicles, iron and steel, and wood. Russian exports of mineral fuels have been declining from a peak of \$224.4 million in 2005 to \$73.5 million in 2007 and \$41.6 million in 2008. Major Russian imports from North Korea include machinery, electrical machinery, glass, and plastics.

**Table 12. Russia's Merchandise Trade with the DPRK,
1994-2006**
(\$ in millions)

Year	Russia's Imports	Russia's Exports	Total Trade	Balance
1994	44.00 ^a	52.00 ^a	96.00 ^a	8.00 ^a
1995	15.00 ^a	70.00 ^a	85.00 ^a	55.00 ^a
1996	347.00 ^a	525.00 ^a	872.00 ^a	178.00 ^a
1997	16.790	72.449	89.239	55.659
1998	8.463	56.497	64.960	48.034
1999	7.208	48.507	55.715	41.299
2000	7.633	35.631	43.264	27.998
2001	14.664	56.099	70.763	41.435
2002	10.317	47.404	57.721	37.087
2003	2.903	112.343	115.246	109.440
2004	4.575	204.665	209.240	200.090
2005	6.862	224.402	231.264	217.540
2006	20.076	190.563	210.639	170.487
2007	33.539	126.068	159.607	92.529
2008	13.519	97.005	110.524	83.486

Sources: Russian data as supplied by World Trade Atlas.

a. 1994-96 data from International Monetary Fund. Direction of Trade Statistics.

In December 2006, Russia reportedly agreed to write off some 80% of the \$8 billion in debt owed it by the DPRK. North Korea had borrowed the funds in the 1960s to build power plants. This opened the way for Russia to engage in more economic cooperation with the DPRK.¹⁶⁴

Possible Economic Incentives

Normalizing Diplomatic Relations

Normalization of diplomatic relations with the DPRK would apply to the United States, Japan, and South Korea. North Korea already has diplomatic relations with China, Russia, and the European Union (including an embassy in London). Associated with normalizing relations would be a peace treaty formally ending the Korean War. For Japan, the DPRK would have to resolve

¹⁶⁴ Russia to Forgive Most of N. Korea's Debt. The Chosun Ilbo (digital version), January 5, 2007.

certain issues, including a full accounting of the status of kidnapped Japanese citizens, North Korea's missile firings over Japan, and incursions by suspected DPRK espionage and drug-running ships into Japanese waters. Upon conclusion of these normalization talks, Japan is likely to offer \$5 billion to \$10 billion to North Korea in compensation for its occupation.¹⁶⁵

Normalizing diplomatic relations allows countries to communicate with each other in a more direct fashion, enables diplomats to gather information directly, and provides more interaction on a personal level. Normalized relations can help to overcome the Pyongyang propaganda machine both within the DPRK and on the world stage. Normalization, however, can imply that the United States is willing to tolerate conditions in North Korea. This may be unacceptable to some. Absent normalized relations, Washington could seek a relationship similar to that with Cuba. Even without diplomatic ties, the U.S. mission in Havana is attached to that of Switzerland and maintains a staff similar in size to a regular embassy. (North Korea has been a member of the United Nations since 1991 and has representatives in New York.) Japan has initiated talks with Pyongyang that could lead to normalized relations, and South Korea has been seeking diplomatic ties and possibly some form of reunification in the future. In 2007, bilateral talks between Japan and the DPRK on normalization were stymied by the abduction issue, but they have resumed in 2008.

Negotiating a Trade Agreement

After normalization, the United States could negotiate a trade agreement with the DPRK that would cover goods, services, and investments and could be modeled after the 2001 bilateral trade agreement concluded between the United States and the Socialist Republic of Vietnam.¹⁶⁶ Upon implementation of the trade agreement, each country would accord the other normal trade relations (most favored nation) status. The immediate effect would be to allow North Korean exports to the United States to enter at the lower rates of duty accorded to nearly all other nations of the world. The trade agreement also could cover investment and other U.S. interests.

Although the DPRK's market currently is small, eventually it could re-industrialize and become a larger economic player in the region. Liberalization of North Korean trade and investment relations, moreover, can work through the economy in the same way that it did in China and Russia by exposing the public to the benefits of increased wealth. The major negative to establishing trade with North Korea is that, unless it is part of a larger package that includes other concessions, the United States could be viewed as exchanging an important bargaining chip for minimal gain.

Easing U.S. Sanctions

The United States could ease economic sanctions on North Korea if the country resolves the issues that caused the sanctions to be imposed initially. Since North Korea's other trading partners have more liberal trade with North Korea, it is mainly American companies and traders that are impacted by the sanctions. Pyongyang can spend its available foreign exchange in any of a number of world markets—in China, Russia, South Korea, Europe, or elsewhere. Moreover, as

¹⁶⁵ See CRS Report RL32161, *Japan-North Korea Relations: Selected Issues*, by Mark E. Manyin.

¹⁶⁶ The White House, George W. Bush. "Presidential Proclamation: To Implement the Agreement Between the U.S. and Socialist Republic of Vietnam on Trade Relations," June 1, 2001.

North Korea opens its economy, U.S. businesses would be able to decide whether or not to invest there based on their own economic interests and not because they are hindered from doing so by U.S. law.

Allowing the DPRK to Join International Financial Institutions (IFIs)

The United States could stop blocking the DPRK from joining the major IFIs, particularly the Asian Development Bank, World Bank, and International Monetary Fund.¹⁶⁷ Pyongyang is particularly interested in joining the Asian Development Bank, but IFI procedures require membership first in the International Monetary Fund. The IMF requires certain economic data which the World Bank or Asian Development Bank needs to evaluate projects and loan requests. Membership in IFIs requires that a country establish data gathering and reporting mechanisms as well as open their country to visits, surveys, or assessments by the IFI. As an incentive, a special fund could be set up in the World Bank or Asian Development Bank to assist North Korea in its economic transition. This fund could be financed by Japan or South Korea in conjunction with their normalization of relations with the DPRK.

Fuel and Food Aid

The Bush administration resumed shipping fuel and food aid on a humanitarian basis to the DPRK. South Korea also has resumed shipments of fuel, but it has insisted that food and fertilizer aid be sent only if requested by North Korea.

Products from the Kaesong Industrial Complex

When South Korea was negotiating the proposed Korea-U.S. Free Trade Agreement (signed but not yet approved by Congress), they asked that products from the Kaesong Industrial Complex in North Korea be included under the FTA and be accorded duty-free entry into the United States. The resulting FTA language, however, does not provide for duty-free entry into the United States for products made in Kaesong. Annex 22-B to the proposed FTA, however, does provide for a Committee on Outward Processing Zones (OPZ) to be formed and to designate zones (such as the Kaesong Industrial Complex) to receive preferential treatment under the FTA. Such a designation apparently would require legislative approval by both countries.

¹⁶⁷ For information on requirements to join the International Monetary Fund, see Primorac, Marina. How Does a Country Join the IMF? *Finance & Development*, June 1991, vol. 28, Issue. 2; pp 34-5.

Author Contact Information

Dick K. Nanto
Specialist in Industry and Trade
dnanto@crs.loc.gov, 7-7754

Emma Chanlett-Avery
Specialist in Asian Affairs
echanlettavery@crs.loc.gov, 7-7748