

Illicit Activity and Proliferation

Sheena Chestnut

North Korean Smuggling Networks

After allegations surfaced in October 2002 that the Democratic People's Republic of Korea (DPRK) was pursuing a covert uranium enrichment program, and after Pyongyang announced that it had reactivated its plutonium facilities at Yongbyon in January 2003, policymakers and academics expressed concern that North Korea would export nuclear material or components. Former U.S. Secretary of Defense William Perry has warned that North Korea might sell the products of its nuclear program "to the highest bidders, including terrorists."¹ Robert Gallucci, a high-level official in Bill Clinton's administration, referred to this possibility as the "overriding priority" of the United States.² Gallucci and Mitchell Reiss, State Department director of policy planning during George W. Bush's first term, reiterated this caution in their spring 2005 article on the DPRK's uranium program.³ In July and October 2006, Pyongyang's missile and nuclear tests heightened that concern. Graham Allison asked, "Could [North Korea] contemplate selling a bomb to another state or to a terrorist like [Osama] bin Laden?"⁴ When asked to summarize the threat posed by North Korea, Secretary of Defense Donald Rumsfeld mentioned the possibility of nuclear transfer first.⁵ These statements illustrate widespread agreement that North

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1. William J. Perry, "Crisis on the Korean Peninsula: Implications for U.S. Policy in Northeast Asia," speech given at the Center for International Security and Cooperation, Stanford University, Stanford, California, January 4, 2003; and William J. Perry and Ashton B. Carter, "The Crisis Last Time," *New York Times*, January 19, 2003.

2. Robert L. Gallucci, "Drugs, Counterfeiting, and Weapons Proliferation: The North Korea Connection," hearing before the Senate Governmental Affairs Subcommittee on Financial Management, the Budget, and International Security, 108th Cong., 1st sess., May 20, 2003.

3. Mitchell B. Reiss and Robert L. Gallucci, "Dead to Rights," in Reiss, Gallucci, Richard L. Garwin, and Selig Harrison, "Red-Handed," *Foreign Affairs*, Vol. 84, No. 2 (March/April 2005), pp. 142–145.

4. Graham Allison, "Bush on North Korea: Worse Than You Think," *Los Angeles Times*, July 9, 2006.

5. Kristin Roberts, "Rumsfeld Eyes ICBMs in Terror War," Reuters, August 27, 2006.

Korea's nuclear program constitutes a major international security threat, largely because of the risk of nuclear transfer. Although the agreement reached on February 13, 2007, is a step toward the denuclearization of North Korea, the risk of nuclear export will remain as long as the DPRK possesses a stockpile of fissile material.⁶ For these reasons, concerns over nuclear smuggling are warranted, yet they remain largely unexamined. Does North Korea have the capabilities to transfer nuclear material or components to other states or nonstate actors? Would it do so, and under what circumstances?

Although scholars and policy analysts have noted North Korean involvement in criminal activity, neither the activity's full extent nor its implications for the risk of nuclear export have been systematically considered.⁷ The DPRK has developed extensive nonnuclear covert smuggling capabilities; some North Korean-linked networks have included terrorist groups such as the Japanese Red Army and the Official Irish Republican Army (OIRA); and some, such as the Asian criminal gangs arrested in the summer of 2005 in New Jersey and California, have smuggled counterfeit currency and other items through such U.S. ports. The DPRK regime justifies illicit activity on ideological terms, but it is motivated primarily by extreme financial necessity, indicating that the DPRK has strong economic incentives to sell nuclear materials or components. An examination of patterns in illicit activity, however, reveals that although North Korean criminal smuggling has been centrally inspired and sanctioned, it is not always centrally controlled; the state has shifted over time from using solely state agents and assets to contracting out transportation and distribution of smuggled goods to criminal partners over whom it has less control. In short, the DPRK possesses both the means and potential motivation to engage in nuclear smuggling, but it also risks losing control of its own proliferation activities.

In addition to their implications for understanding North Korea, these findings reflect an evolution in the characterization of proliferation threats in

6. Office of the Spokesman, U.S. Department of State, "North Korea—Denuclearization Action Plan," Beijing, China, February 13, 2007, <http://www.state.gov/r/pa/prs/ps/2007/february/80479.htm>.

7. Among academic works referencing DPRK criminal activity are Adrian Buzo, *Guerilla Dynasty: Politics and Leadership in North Korea* (New York: I.B. Tauris, 1999); Marcus Noland, *Avoiding the Apocalypse: The Future of the Two Koreas* (Washington, D.C.: Institute for International Economics, 2000); and Kongdan Oh and Ralph C. Hassig, *North Korea through the Looking Glass* (Washington, D.C.: Brookings, 2000). For a policy focus, see Andrew J. Coe, "North Korea's New Cash Crop," *Washington Quarterly*, Vol. 28, No. 3 (Summer 2005), pp. 73–84; Balbina Y. Hwang, "Curtailing North Korea's Illicit Activities," *Background*, No. 1679 (Washington, D.C.: Heritage Foundation, August 25, 2003); and Raphael F. Perl, *Drug Trafficking and North Korea: Issues for U.S. Policy*, CRS Report for Congress (Washington, D.C.: Library of Congress, updated January 27, 2007), Order Code RL32167.

two main ways. First, although recent articles have stressed a shift from state-based proliferation toward networked proliferation,⁸ this analysis has largely been contextualized in reference to the nuclear transfers orchestrated by Pakistani scientist A.Q. Khan. It has therefore focused on increasing domestic control of dual-use exports through measures such as United Nations resolution 1540.⁹ The DPRK case suggests that these measures are likely to overlook the significant risk posed by illicit smuggling networks. Much has been said about the problem of illicit nuclear smuggling in the former Soviet Union, but relatively little has discussed how criminal networks might be used as deliberate tools by other states pursuing or assisting nuclear proliferation.¹⁰ Without understanding the capabilities and motivations of future proliferators, the international community may underestimate their willingness and ability to transfer nuclear material or components. Second, the increasing participation of criminal actors in proliferation networks creates additional opportunities for proliferation to take place outside of state control, lending increased weight to the argument made by organizational theorists that nuclear weapons, once created, cannot always be effectively controlled.¹¹ For these reasons, the involvement of criminal networks in proliferation portends a dangerous future if nuclear states multiply. It is therefore imperative to track and curtail illicit networks not only to reduce the intrinsic social and economic costs they impose, but also to increase the effectiveness of countersmuggling efforts for deterring and defending against the transfer of nuclear materials and components.

In the next section, I establish North Korea's smuggling capabilities by presenting the empirical record of DPRK involvement in a range of illicit non-nuclear activities, including drug production and trafficking, currency coun-

8. Chaim Braun and Christopher F. Chyba, "Proliferation Rings: New Challenges to the Nuclear Nonproliferation Regime," *International Security*, Vol. 29, No. 2 (Fall 2004), pp. 5–49; Alexander H. Montgomery, "Ringing in Proliferation: How to Dismantle an Atomic Bomb Network," *International Security*, Vol. 30, No. 2 (Fall 2005), pp. 153–187; and John P. Caves Jr., "Globalization and WMD Proliferation Networks: The Policy Landscape," *Strategic Insights*, Vol. 5, No. 6 (July 2006).

9. United Nations Security Council, "1540 Committee," Resolution 1520, April 28, 2004, <http://disarmament2.un.org/Committee1540/index.html>; "Black Markets, Loopholes, and Trade Controls," panel transcript, 2005 Carnegie International Nonproliferation Conference, Washington, D.C., November 8, 2005; and Michael Beck and Seema Gahlaut, "Creating a New Multilateral Export Control Regime," *Arms Control Today*, Vol. 33, No. 3 (April 2003), pp. 12–18.

10. See, for example, Matthew Bunn and Anthony Wier, *Securing the Bomb, 2006* (Cambridge, Mass., and Washington, D.C.: Project on Managing the Atom, Harvard University, and Nuclear Threat Initiative, July 2006); and Rensselaer W. Lee III, *Smuggling Armageddon: The Nuclear Black Market in the Former Soviet Union and Europe* (New York: St. Martin's, 1998).

11. Scott D. Sagan, *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons* (Princeton, N.J.: Princeton University Press, 1993); and Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: A Debate Renewed*, 2d ed. (New York: W.W. Norton, 2002).

terfeiting, endangered species smuggling, and production and distribution of counterfeit products, primarily cigarettes and pharmaceuticals. I identify a major shift in North Korean smuggling during the 1990s from a state-operated network to one that relies on criminal networks over which the DPRK has decreased control. I also use this behavior as a lens for examining North Korea's motivations. In the second section, I examine the extent to which criminal networks overlap with proliferation in three key areas: finances, smuggling, and knowledge. In the third section, I consider how these networks might be employed for proliferation purposes in the future by examining factors likely to affect a potential DPRK export decision. In the fourth section, I assess the implications of my findings for North Korea specifically and more broadly for proliferation, concluding with recommendations for future strategies.

North Korean Criminal Smuggling

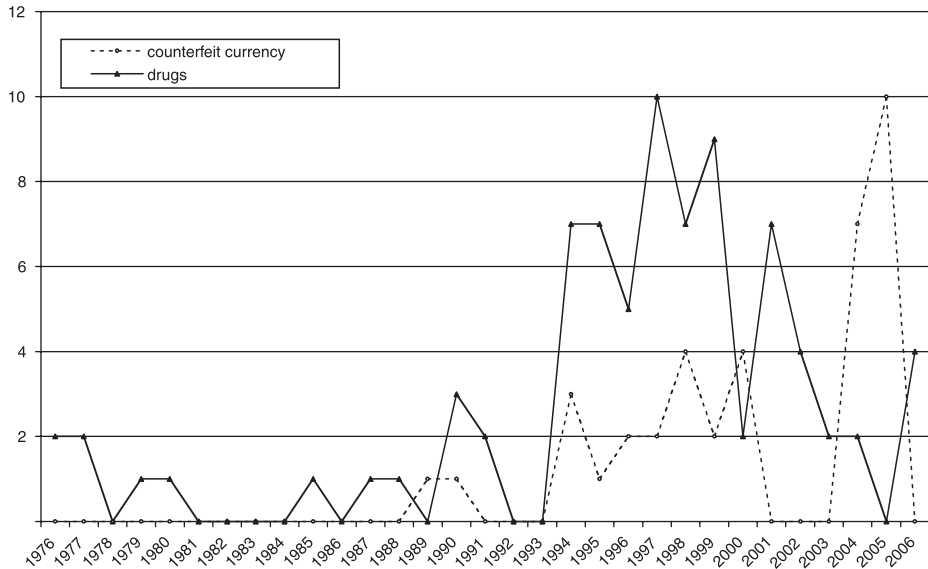
Since 1976 North Korea has developed extensive involvement in transnational criminal smuggling. It has a decades-long record of official involvement in the drug trade, produces the world's best counterfeit currency, smuggles endangered species products, and has recently begun manufacturing counterfeit cigarettes and pharmaceuticals in collaboration with Asian criminal syndicates. The regime justifies these activities on ideological terms, but they exist primarily to supplement its meager hard currency earnings. Most important, the organizations providing this income have evolved from purely state-run, centralized structures to decentralized, compartmentalized networks involving not only DPRK agents and assets but also criminal organizations.¹²

Figures 1 and 2 show the scale and pattern of DPRK criminal activity from 1976 to 2006.¹³ These graphs are likely to underrepresent DPRK involvement

12. The conclusions drawn in this section are based on original data sets of DPRK involvement in illicit activity, constructed from publicly available sources including Drug Enforcement Administration and Defense Department reports and media accounts (U.S. and foreign). The data were supplemented with qualitative observations obtained through interviews with almost fifty policymakers, law enforcement officials, and North Korean defectors in Washington, Seoul, and Tokyo. Complete data sets may be obtained from the author, and a preliminary version may be found in Sheena E. Chestnut, "The 'Sopranos State'? North Korean Involvement in Criminal Activity and Implications for International Security," Working Paper (San Francisco, Calif.: Nautilus Institute, January 19, 2006), <http://www.nautilus.org/napsnet/sr/2006/0605Chestnut.pdf>. See also Europe/Asia/Africa Unit Intelligence Section, Drug Enforcement Administration (DEA), "Major Incidents of Drug Trafficking by North Koreans," in *North Korea Advisory Group Report to the Speaker of the U.S. House of Representatives*, November 1999; and Joint Interagency Task Force West (JIATFW), "North Korean Drug Trafficking," Department of Defense, May 2000.

13. It is possible that increased income from new lines of business, coupled with high-profile coverage of two DPRK-linked drug seizures, may have convinced North Korea to abandon highly

Figure 1. Drug and Counterfeit Currency Incidents Linked to North Korea, 1976–2006

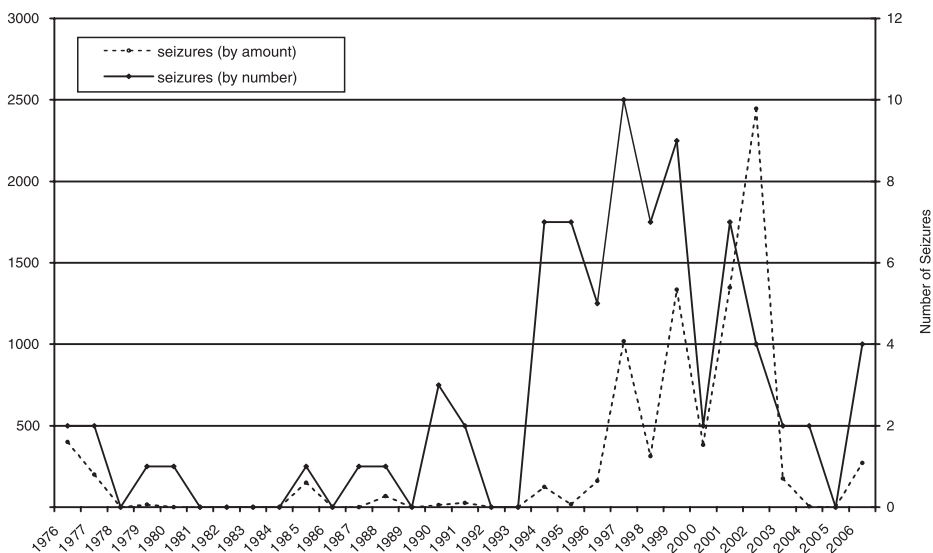


in criminal activity, because a zero was entered in the data set whenever seizure amounts were unavailable and because seizure data are particularly prone to underestimating the magnitude of sophisticated operations. The figures do, however, reveal key basic trends: involvement in criminal activity beginning in 1976 and a steep rise during the mid-to-late 1990s. Two major events may explain this increase.¹⁴ First, North Korea suffered a severe eco-

scrutinized drug trade involvement. (In 2001 the Japanese Coast Guard sank a North Korean spy ship suspected of making a drug drop, and in 2003 Australian authorities captured the North Korean ship *Pong Su* and linked it to the seizure of 125 kilograms of heroin.) Still, sporadic reports from Japanese and Taiwanese media, indications that postal traffic may be a new transport method, and preliminary indications of continued drug trafficking across the DPRK-Chinese border suggest that this conclusion would be premature. It could also be a function of the time lag inherent in collecting publicly available data, which are often not released until investigations are concluded, months to years later. David Ibson, "Pyongyang's Spy Ship Reveals a Dark Secret," *Financial Times*, May 28, 2003; Jamie Tarabay, "Australia Charges North Korean Ship's Crew in Drug Case," *Wall Street Journal*, April 22, 2003; "Taiwan Gangs Reported Working with North Korea," *Taipei Times*, January 5, 2004; Tokyo Broadcasting System television broadcast, Tokyo, Japan, June 25, 2006; "Spike in Postal Remittances to D.P.R.K. Scrutinized," *Japan Times*, February 16, 2006; and Masaki Kubota, "Pursuing a Syndicate Which Smuggles Drugs into Japan," *Sapio*, July 26, 2006.

14. Don Oberdorfer, *The Two Koreas: A Contemporary History*, rev. ed. (New York: Perseus, 2002); and Bruce Cumings, *Korea's Place in the Sun: A Modern History*, rev. ed. (New York: W.W. Norton, 2005).

Figure 2. Drug Seizures Linked to North Korea, 1976–2006



conomic crisis in the early and mid-1990s, when the loss of Russian and Chinese Cold War subsidies was compounded by natural disasters and famine. This may have increased the regime’s incentive to pursue nontraditional income sources. Second, the leadership transition following Kim Il-sung’s death in July 1995 could have provided a window of opportunity for government officials to make independent decisions that deviated from previous guidelines, or the new leadership may have imposed new rules.¹⁵ The evolution of North Korean criminal smuggling is described below.

DPRK CRIMINAL SMUGGLING: FROM STATE MANAGEMENT TO OUTSOURCING

After North Korea defaulted on its international debts in 1975, its embassies were required to “self-finance” their operations.¹⁶ DPRK diplomats began to

15. The increase could also reflect changed enforcement patterns, because seizure data represent “the interaction of enforcement tactics with underlying reality.” Interviews with policymakers and law enforcement officials, however, indicated no shift in enforcement until 2002. Peter Reuter and Edwin M. Truman, *Chasing Dirty Money: The Fight against Money Laundering* (Washington, D.C.: Institute for International Economics, 2004).

16. Noland, *Avoiding the Apocalypse*, pp. 119–121; and U.S. government officials, interviews by author, Washington, D.C., March 2005.

purchase drugs (primarily opiates) for resale,¹⁷ relying on official personnel to transport them via diplomatic pouch and on diplomatic immunity to avoid arrest and prosecution. A series of drug seizures, globally distributed in a pattern closely correlated with DPRK establishment of diplomatic relations, were linked to North Korean embassies; in one case, this resulted in the ejection of most of the North Korean diplomatic corps from Scandinavia.¹⁸ North Korean diplomats have also been intercepted smuggling other items including gems, pharmaceutical products, and endangered species products.¹⁹ The amounts of animal products involved totaled hundreds of kilograms; some diplomats were repeat offenders.²⁰ Diplomatic personnel also transported and distributed counterfeit currency whenever they traveled abroad, mixing the notes with real bills.²¹ (For example, counterfeit currency was reportedly carried and distributed during the early 1990s by officials from Office 99, a Central Party Committee bureau handling weapons sales.)²²

The DPRK insists that these diplomatic incidents were instances of individual misbehavior for which offenders were punished. Pressure to finance operations independent of central funding, however, suggests that the regime at a minimum tolerated and perhaps encouraged criminal activity to ensure its embassies' financial viability. Moreover, one former North Korean diplomat indicated that officials ejected from their posts for smuggling were not punished upon return.²³ Further, anecdotal evidence suggests the falsity of official denials; one North Korean diplomat expelled from Sweden in 1976 for drug trafficking resurfaced in Vladivostok in 1998 attempting to exchange counterfeit bills; he was identified as a deputy director of the International Department of the Korean Workers' Party.²⁴ During the early stages of North Korean

17. JIATFW, "North Korean Drug Trafficking."

18. For a table of diplomatic relations, see Byung Chul Koh, *The Foreign Policy Systems of North and South Korea* (Berkeley: University of California Press, 1984), pp. 11–13.

19. One former diplomat (who also transported counterfeit currency) claims he smuggled gems from Africa as often as five times a month, making more than \$80 million, "both for the regime and for himself." David E. Kaplan, "The Wiseguy Regime: North Korea Has Embarked on a Global Crime Spree," *U.S. News and World Report*, February 15, 1999, pp. 36–39; and JIATFW, "North Korean Drug Trafficking."

20. David Asher, "North Korea—Illicit Activity Funding the Regime," hearing before the Senate Homeland Security and Governmental Affairs Subcommittee on Federal Financial Management, Government Information, and International Security, 109th Cong., 2d sess., April 25, 2006; "Smuggling of Specimens of CITES-listed Species by Diplomats," Doc. S.C.42.12.7, 42d meeting of the Standing Committee, Convention on International Trade in Endangered Species of Wild Fauna and Flora, Lisbon, Portugal, September 28–October 1, 1999.

21. "What Is a Superdollar?" *BBC News*, June 19, 2004.

22. North Korean defector, interview by author, Seoul, South Korea, April 2005.

23. Former North Korean diplomat, interview by author, Seoul, South Korea, April 2005.

24. The KWP International Department outranks the Foreign Affairs Ministry. JIATFW, "North

criminal activity, the involvement of the central leadership in diplomatic trafficking varied; it was higher for products produced inside the DPRK, such as counterfeit currency, but less certain in cases where no domestic involvement was required, as in endangered species trafficking.

During the late 1980s and early-to-mid-1990s, North Korean involvement in trafficking diversified.²⁵ According to North Korean defectors, after inexperienced diplomats were caught smuggling, intelligence personnel stepped in to assist with operations.²⁶ This was especially true in the Far East, where North Koreans repaid state debts to the Russian government by working in logging camps; intelligence officials may have orchestrated a scheme using timber workers to transport drugs.²⁷ (The combination of large-scale purchases with multiple smaller incidents raises the question of whether officials were diverting opium to sell for personal profit, one indication of the difficulty of maintaining control over state agents.) DPRK trading companies also emerged as a focal point for drug trafficking and counterfeiting. The best-documented case is Macao's Chogwang (Zokwang) Trading Company, which had multiple personnel, including its director, arrested in several incidents during the mid-1990s on counterfeit charges.²⁸ This method was fairly short lived, however; because DPRK trading companies often operated as quasi-diplomatic entities, they came under scrutiny as word of North Korean abuse of diplomatic privilege spread. As a result, these companies took on a more disguised coordinating role, such as facilitating cooperation between DPRK organizations and criminal networks.²⁹

In addition to the increase in the scale of North Korean criminal activity in the mid-1990s, shown in Figures 1 and 2, Figure 3 demonstrates how the manner of North Korean involvement shifted. The dotted line represents seizures in which the drug trafficker had a known North Korean official affiliation.³⁰

Korean Drug Trafficking"; and John Pomfret, "North Korea's Conduit for Crime," *Washington Post*, April 25, 1999.

25. Sometimes the official designation was not publicly declared, but revealed during an investigation.

26. Former North Korean diplomat, interview by author.

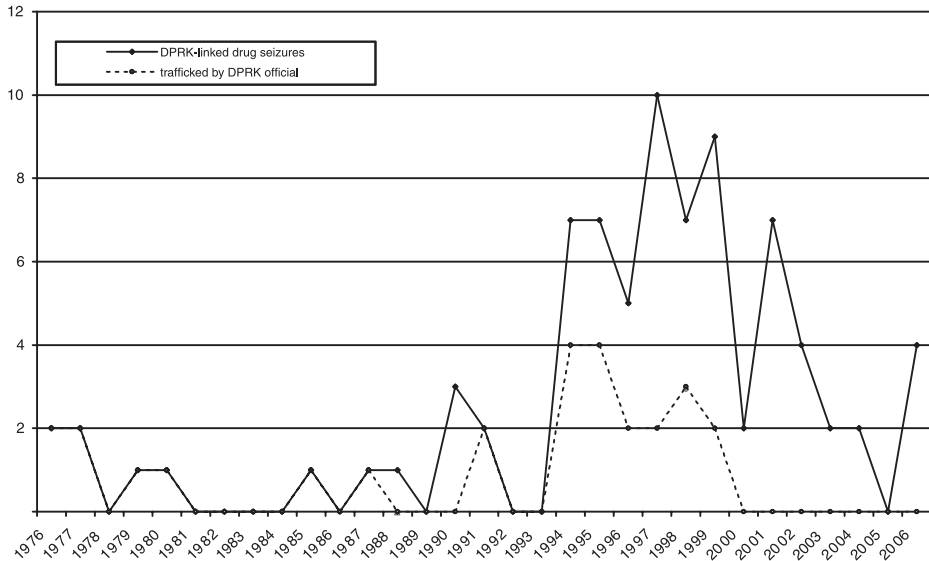
27. Sophie Quinn-Judge and Shim Jae Hoon, "Opiate of the Party: North Korea Fuels Opium Boom in Russia," *Far Eastern Economic Review*, December 5, 1996, pp. 28–30.

28. Glenn R. Simpson, Gordon Fairclough, and Jay Solomon, "U.S. Probes Banks' North Korea Ties," *Wall Street Journal*, September 9, 2005.

29. For example, one defector reported that a military trading company hosted a meeting where Laotians and Burmese gave advice on drug production. Jay Solomon and Jason Dean, "Drug Money: Heroin Busts Point to Source of Funds for North Koreans," *Wall Street Journal*, April 23, 2003.

30. From 1976 to 1994, most were declared diplomatic personnel, but unstated official designations such as State Security or Intelligence were also included and are primarily responsible for the

Figure 3. North Korean Official Involvement in Drug Smuggling, 1976–2006



The difference between the dotted and solid lines is therefore the divergence arising in the mid-1990s between general DPRK involvement in the drug trade and DPRK involvement in drug trafficking. Under the new arrangement, North Korea produced drugs (as well as counterfeit currency and other contraband) but handed them off to criminal organizations for transport and distribution. The shift began in the late 1980s, when North Korea reportedly began partnering with Asian crime rings to help move drugs produced by others, but a clear kind of division of labor does not appear to have become widespread until the mid-1990s.³¹

The testimony of defectors from the DPRK offers a detailed picture of the internal organization of North Korea's criminal activity.³² After establishing an

late-1990s' increase. There have been no recorded incidents of known DPRK officials apprehended for illegal narcotics trafficking since 2001.

31. Chris Dobson, "The Failure of Kim il-Sung to Maintain North Korea's Self-Reliance," *South China Morning Post*, July 17, 1994; and Kaplan, "The Wiseguy Regime."

32. Unless cited otherwise, this information was obtained through a series of defector interviews, mainly with former members of the North Korean elite, conducted by the author in April 2005. The accounts were compiled with media reports into an overarching story that, as with much defector reporting, cannot be substantiated and may contain outdated or incorrect information. I believe, however, in the potential value of such information if viewed critically and have chosen to include it with this caveat rather than to exclude it entirely.

experimental farm in Hamkyung Province in 1988–89, the regime issued a countrywide public order in the early 1990s to develop opium for export,³³ and police officials ordered farmers to switch from growing grain to the more lucrative poppy crop.³⁴ To meet the regime's "foreign currency earning requirement," agricultural committees set up collective farms, sometimes guarded by state security agents, and turned over their harvests to trading companies.³⁵ Hypothetically, earnings were to be given back to farmers to shop at Workers' Party stores, but some defectors say they never received payment.³⁶ Drug processing and counterfeit currency manufacturing took place at state-run factories; opiates, and later methamphetamines, were processed and plastic-wrapped at refinement plants established in consultation with Southeast Asian experts and run by state security.³⁷ Similarly, North Korean-made counterfeit currency, dubbed Supernote by authorities for its extremely high quality, is reportedly manufactured on European-source intaglio presses in a print house in Pyongsong operated and closely guarded by the Ministry of Public Security.³⁸ (Drugs and counterfeit currency sourced to North Korea are forensically identifiable and extremely high quality in both their manufacturing and packaging.)³⁹ The entire process of growth, production, and distribu-

33. Statement of Former High-Ranking North Korean Official, "Drugs, Counterfeiting, and Weapons Proliferation: The North Korea Connection," hearing before the Senate Governmental Affairs Subcommittee on Financial Management, the Budget, and International Security, 108th Cong., 1st sess., May 20, 2003.

34. Richard Paddock and Barbara Demick, "North Korea's Growing Drug Trade Seen in Botched Heroin Delivery," *Los Angeles Times*, May 21, 2003; and Statement of Former High-Ranking North Korean Official, "Drugs, Counterfeiting, and Weapons Proliferation."

35. Noland, *Avoiding the Apocalypse*, pp. 119–121.

36. Anthony Spaeth, "Kim's Rackets," *Time Asia*, June 9, 2003.

37. Outside consultants reportedly included Burmese, Laotian, and Thai visitors. Multiple defectors have identified Chongjin as the processing plant location. Solomon and Dean, "Drug Money"; Kim Young Il, "North Korea and Narcotics Trafficking: A View from the Inside," *North Korea Review* (Washington, D.C.: Jamestown Foundation, March 1, 2004); and Quinn-Judge and Hoon, "Opiate of the Party."

38. Stephen Mihm, "No Ordinary Counterfeit," *New York Times Magazine*, July 23, 2006; Ron Moreau and Russell Watson, "Is It Real, or Super K?" *Newsweek*, June 10, 1996, p. 42; Kaplan, "The Wiseguy Regime"; "S. Korean Experts Agree Bogus Dollar Trail Leads North," *Chosun Ilbo*, December 22, 2005; "N. Korea's State Mint Counterfeited Dollars, Yonhap Says," Kyodo News Service, January 12, 2000; and Tetsuya Suetsugu, "Risky Business: Leading North Korea to Ruin," *Yomiuri Shimbun*, August 22, 2003. For alternate explanations of the Supernote's origin, both dismissed by the Secret Service, see Perl, "Drug Trafficking and North Korea"; House Republican Research Committee, "Iran, Syria, and the Trail of Counterfeit Dollars" (Washington, D.C.: July 1, 1992); House Republican Research Committee, "Update: Iran, Syria and the Trail of the Counterfeit Money" (Washington, D.C.: July 13, 1994); and Government Accountability Office (GAO), *Counterfeit U.S. Currency Abroad: Issues and U.S. Deterrence Efforts* (Washington, D.C.: GAO, February 26, 1996).

39. Drugs sourced to North Korea share distinctive characteristics: they are extremely high quality, containing an element not present in Chinese methamphetamines, and are identifiable by their

tion is coordinated by an entity called Bureau 39 of the Korean Workers' Party Central Committee,⁴⁰ reportedly created by Kim Jong-il in the 1970s with the dual purpose of obtaining hard currency for the regime and financing his personal rise to power.⁴¹ (Although suggestions about Kim's personal involvement cannot be substantiated, changes in DPRK criminal activity correlate fairly well with his career and consolidation of power.)⁴² Operating through front companies and illicit affiliates, Bureau 39 is one of several Central Committee offices that procure luxury items for party and military elites, obtain technology and components for weapons programs, and pursue illicit activity to fund the first two tasks.⁴³ In network theory terms, Bureau 39 is the core node of the North Korean-directed wheel network.⁴⁴

More recently, North Korea may not only be selling its products to criminal organizations, but also providing them with a safe haven for operations on North Korean soil. In 2005 a consortium of cigarette manufacturers noted the DPRK's recent emergence as "one of the principal sources of counterfeit international brand cigarettes."⁴⁵ According to the consortium's investigations,

bulk shipment and top-quality packaging. Supernotes are also distinguishable by quality: they are the best \$100 bill counterfeits in existence, with images sharper than those on legitimate currency, and have mimicked U.S. currency through a series of nineteen forensically linked adaptations. On drugs, see "Observers Disagree on How Official the North Korean Drug Trade Is," *Sydney Morning Herald*, May 5, 2003; and Japanese government officials, interview by author, Tokyo, Japan, April 2005. This high-quality product also appeared in South Korea and Macao. See Pomfret, "North Korea's Conduit for Crime"; and "DPRK Money-Laundering Operation in Macao," *Wolgan Choson*, April 1, 2003, pp. 182–204. On counterfeiting, see U.S. Secret Service agent, interview by author, Washington, D.C., March 2005; Bruce Townsend, "Remarks to the International Association of Financial Crimes Investigators," Chicago, Illinois, September 2004; Mihm, "No Ordinary Counterfeit"; and *United States of America v. Sean Garland*, U.S. District Court for the District of Columbia, September 30, 2004.

40. JIATFW, "North Korean Drug Trafficking."

41. Spaeth, "Kim's Rackets." See also Michael Breen, *Kim Jong Il: North Korea's Dear Leader* (Singapore: John Wiley and Sons, 2004).

42. One U.S. official commented that the people formerly conducting terrorist activity appeared to have moved into criminal activity, further corroborating speculation of leadership involvement. U.S. government official, interview by author.

43. Kongdan Oh Hassig, Joseph S. Bermudez Jr., Kenneth E. Gause, Ralph C. Hassig, Alexandre Y. Mansourov, and David J. Smith, "North Korean Policy Elites," IDA Paper, P-3903 (Washington, D.C.: Institute for Defense Analyses, June 2004).

44. According to Michael Kenney, core nodes are multitask enterprises that organize transactions and supply resources to different nodes, arrange finances, and gather intelligence on law enforcement. Using Alexander Montgomery's typology, North Korea is between a star and clique network. John Arquilla and David Ronfeldt, *Networks and Netwars: The Future of Terror, Crime, and Militancy* (Santa Monica, Calif.: RAND, 2001); Michael Kenney, "From Pablo to Osama: Counterterrorism Lessons from the War on Drugs," *Survival*, Vol. 45, No. 3 (Autumn 2003), pp. 187–206; and Montgomery, "Ringing in Proliferation," p. 170.

45. "Production of Counterfeit Cigarettes in the Democratic People's Republic of Korea (DPRK)," Report by Consortium of Asian Tobacco Manufacturers, June 25, 2005.

around a dozen factories inside North Korea produce multiple brands of counterfeit cigarettes. Although some of these factories are owned by North Korean entities, the majority appear to be managed by Taiwanese syndicates or Chinese-operated companies that were ejected from China during a 2001 crackdown.⁴⁶ There are also reports that North Korea manufactures counterfeit pharmaceuticals such as Viagra in factories in Chongjin, but it is as yet unclear whether the factories are run by North Korea or by outsiders.⁴⁷ Like other DPRK products, cigarette and pharmaceutical counterfeits are distinguishable from their competitors by high chemical purity and packaging quality.

Since the mid-1990s, transnational criminal organizations have been the primary distributors of illegal products manufactured by North Korea.⁴⁸ The Marxist-oriented Official Irish Republican Army formed one major channel for counterfeit distribution in Europe; Sean Garland, OIRA head and leader of the Irish Workers' Party, ran a distribution ring that circulated Supernotes for more than a decade in Belarus, the Czech Republic, Denmark, Great Britain, Ireland, Poland, and Russia: an estimated total of \$28 million.⁴⁹ For drug trafficking, which is primarily concentrated in Asia, drugs either have been handed off to traffickers across the porous Chinese border or have been picked up in North Korean waters by criminal organizations such as the Chinese Triads.⁵⁰ Criminal rings also began to smuggle drugs and counterfeit currency in disguised or mismarked containers aboard ships, with dollars or drugs hidden in jars of honey, inside cigarettes, or in the linings of boxes.⁵¹ Customs officials have found these containers primarily in Taiwan and Japan, but some have also arrived in the United States. In one of the largest counterfeit smuggling cases in history, uncovered in the summer of 2005, an Asian criminal syn-

46. Cited in Asher, "North Korea—Illicit Activity Funding the Regime."

47. Japanese government officials, interviews by author; Shin Eun-jin, "North Korean Viagra?" *Chosun Ilbo*, July 1, 2004; and Andrew Ward, "North Korea May Have Potent New Cash Raiser," *Financial Times*, July 3, 2004.

48. These criminal organizations also act as a conduit for orders to reach North Korea; one investigation noted "a [S]upernote trail that saw orders placed with senior officials in Pyongyang via underworld figures in Taiwan." Greg Torode, "How the Dirty Dollars Flow," *South China Morning Post*, March 5, 2006.

49. Among the evidence cited by the indictment is a June 1999 meeting between Garland and DPRK officials in Russia. See *United States v. Sean Garland*.

50. North Korean defectors, interviews by author; Spaeth, "Kim's Rackets"; JIATFW, "North Korean Drug Trafficking"; Suetsugu, "Risky Business"; and Paddock and Demick, "North Korea's Growing Drug Trade Seen in Botched Heroin Delivery."

51. U.S. government officials, interviews by author; Asher, "North Korea—Illicit Activity Funding the Regime"; Jay Solomon, "Undercover Operation Nets Counterfeit Money Group," *Wall Street Journal*, August 23, 2005; and "Over 2 Million Faked U.S. Bills Seized in Kaohsiung," *Taipei Tzu-Yu Shih-Pao*, August 25, 2005.

dicade was discovered shipping Supernote and counterfeit cigarettes into the United States; four defendants were also indicted for attempting to smuggle in shoulder-fired missiles.⁵² Officials have recovered DPRK-sourced Marlboros in more than 1,300 incidents across the United States, further confirming that North Korean contraband has successfully been smuggled through U.S. customs and border control.⁵³

DPRK SMUGGLING—MOTIVATIONS AND LEVEL OF REGIME CONTROL

North Korea's criminal activities demonstrate that the regime has acted upon strong financial incentives to engage in criminal smuggling. Since the 1970s, North Korea's situation has been characterized by economic difficulties, a weakening military capability, and a deterioration in support from major allies; in the last decade, declining income from arms sales and remittances from ethnic Koreans in Japan has been only partially offset by Chinese and South Korean aid. Illicit activity generates significant amounts of revenue for the North Korean regime: estimates of counterfeiting income range from \$15 million to \$100 million annually,⁵⁴ while the DPRK regime's annual earnings from cigarette counterfeiting are estimated at \$80 million to \$160 million.⁵⁵ In April 2005, U.S. officials estimated North Korea's total income from criminal activities at \$500 million, an amount roughly equal to income from arms sales and 35–40 percent of the income provided by legitimate exports.⁵⁶ Senators have publicly speculated that this money finances DPRK weapons programs; although U.S. officials interviewed by this author in 2005 restricted their assessments to noting that money was fungible once in North Korea's hands,⁵⁷ illicit

52. The missiles were never delivered. *United States vs. Chao Tung Wu, Yi Qing Chen, Dong Jie Li, and Kevin Lnu*, U.S. District Court for the Central District of California, June 2005, pp. 19–27.

53. Peter A. Prahar, "North Korea—Illicit Activity Funding the Regime," hearing before the Senate Homeland Security and Governmental Affairs Subcommittee on Federal Financial Management, Government Information, and International Security, 109th Cong., 2d sess., April 25, 2006.

54. The U.S. government has specified only seizure amounts averaging \$2.8 million per year, with production presumably some percentage higher. Michael Merritt, "North Korea—Illicit Activity Funding the Regime," hearing before the Senate Homeland Security and Governmental Affairs Subcommittee on Federal Financial Management, Government Information, and International Security, 109th Cong., 2d sess., April 25, 2006; "DPRK Prints \$15 Million in Fake Dollars," *Korea Times*, November 16, 1998; and Larry Wortzel, "Drugs, Counterfeiting, and Weapons Proliferation: The North Korea Connection," hearing before the Senate Governmental Affairs Subcommittee on Financial Management, the Budget, and International Security, 108th Cong., 1st sess., May 20, 2003.

55. "Production of Counterfeit Cigarettes in the DPRK." One tobacco executive placed his company's losses to North Korean counterfeiting at \$100 million worldwide. Frederik Balfour, "Fakes!" *Business Week*, February 7, 2005, pp. 54–64.

56. U.S. government officials, interviews by author; and Asher, "North Korea—Illicit Activity Funding the Regime."

57. "North Korea—Illicit Activity Funding the Regime"; and U.S. government officials, interviews by author.

activity does provide the DPRK military and security services with an internally generated, directly accessible source of hard currency for procurement. Although U.S. officials were also cautious in assessing the contribution of criminal activity to regime stability, defectors have claimed that Kim Jong-il cannot remain in power without the illicit activities run by Bureau 39.⁵⁸ Kim himself reportedly expressed concern during a 2006 visit to Shanghai that prolonged sanctions of the type levied by the United States could lead to regime collapse.⁵⁹ The previously unrecognized significance of these funds may be why North Korea refused to return to nuclear negotiations until the United States took steps to release the \$24 million frozen in Macao's Banco Delta Asia (BDA) on charges of money laundering for the DPRK.

SIGNIFICANCE OF CRIMINAL ACTIVITY

The above history of North Korea's criminal activities yields four main findings. First, it illustrates the economic desperation of the regime and the unconventional measures it is willing to take to make up its hard currency shortfall. Indeed, the chronological correlation between economic problems and illicit activity confirms both the theoretical proposal that North Korea will become increasingly risk acceptant to avoid further losses, and the importance of economic factors in affecting the DPRK's risk acceptance level.⁶⁰ The financial incentives at work in North Korea's criminal activity imply a heightened risk for nuclear smuggling based on the regime's level of economic desperation; the DPRK's claim that it would consider transferring nuclear material "if backed into a corner" indicates that a worsening economic outlook for the regime will make a nuclear sale more likely.⁶¹ North Korea is therefore more likely to sell nuclear material to head off further threats than it would be to augment existing profits.

Second, of three major threats to regime stability—external military threat,

58. Spaeth, "Kim's Rackets."

59. Several U.S. officials emphasized their skepticism that sanctions directed at illicit activity would induce regime collapse. International Institute for Strategic Studies, "Sanctions against North Korea," *Strategic Comments*, Vol. 12, No. 3 (April 2006).

60. Under prospect theory, actors are risk averse when choosing among gains but risk acceptant in seeking to avoid losses. Victor D. Cha notes that the DPRK's framing of its situation as a losing one shortens its decisionmaking time horizon and increases the likelihood of provocative action. (Note, however, that Cha argues that provocation is a form of coercive bargaining; it is therefore a public action, unlike nuclear export.) Cha, "Hawk Engagement and Preventive Defense on the Korean Peninsula," *International Security*, Vol. 27, No. 1 (Summer 2002), pp. 40–78; David C. Kang and Victor D. Cha, *Nuclear North Korea: A Debate on Engagement Strategies* (New York: Columbia University Press, 2003); and Jack S. Levy, "Prospect Theory, Rational Choice, and International Relations," *International Studies Quarterly*, Vol. 41, No. 1 (March 1997), p. 87.

61. Vice Foreign Minister Kim Gye-gwan, quoted by Selig Harrison, "N. Korea Warns of Nuke Proliferation Possibility: U.S. Scholar," *Kyodo News Service*, April 9, 2005.

economic crisis, and weakened domestic political support—only changes in the latter two will likely push the North Korean leadership toward a nuclear sale. Under heightened military threat (anticipation of imminent action or commencement of operations), the deterrent or battlefield utility of nuclear weapons would exceed the value of anything obtained by a sale. With regard to the second and third threats, however, the regime relies on illicitly derived income to sustain its power base and possibly to obtain weapons technology.⁶² The economic benefits contained in the February 13 denuclearization agreement, therefore, will likely lower the regime's incentives to sell nuclear material, particularly if the return of funds from Banco Delta Asia is accompanied by a lightening of pressure on North Korean finances worldwide.⁶³ If, however, pressure on North Korea continues and the regime does not regain its access to international banking, Pyongyang will be more tempted to offset its losses. Moreover, even the provision of economic aid from the United States under the new agreement and continued assistance from South Korea and China may not reduce the incentives for nuclear entrepreneurship as much as analysts have suggested, given that aid and trade benefit the population as a whole, whereas income from illicit activity primarily supports the elite.

Third, although the North Korean regime cites ideological justifications for its pursuit of criminal activity, this motivation appears to be secondary to financial incentives. Evidence suggests that counterfeiting began in the 1970s to finance DPRK covert operations, and defectors say these actions were explained as a tool of guerrilla warfare to undermine North Korea's enemies.⁶⁴ They also suggest that criminal activity was justified under *juche*—the official ideology of the DPRK that can be loosely translated as “self-reliance”—because it was regime controlled, did not require dependence on unfriendly governments, and assured the survival of the beleaguered North Korean state in a hostile international environment.⁶⁵ By the 1980s, however, criminal activity had become another way to keep North Korea's deteriorating economy afloat,⁶⁶ and defectors were consistent in their assessment that the widening of

62. Trading missiles for nuclear technology is the current understanding of the arrangement made by the DPRK with Khan Research Laboratories in Pakistan; defector testimony and North Korean international purchases testify to the use of hard currency to procure luxury items for the regime's elite.

63. Shawn Donnan and Song Jung-a, “Vietnam Banks ‘Shut N. Korean Accounts,’” *Financial Times*, August 23, 2006.

64. Joseph S. Bermudez Jr., *Terrorism: The North Korean Connection* (New York: Crane Russak, 1990), p. 187; and Joseph S. Bermudez Jr., *North Korean Special Forces*, 2d ed. (Annapolis: Naval Institute Press, 1998), pp. 86–87, 158, 217.

65. North Korean defectors, interviews by author.

66. Early North Korean counterfeits of South Korean currency from the Korean War period are on display in Seoul's National War Museum. *Ibid.*; and Mihm, “No Ordinary Counterfeit,” p. 40.

poppy production inside North Korea in the early 1990s was driven by the regime's hard currency needs.⁶⁷ Indeed, contemporary North Korean criminal smuggling follows market logic in appealing to markets in China and Russia as well as in Japan, Taiwan, and the United States. And although North Korea's cooperation with criminal organizations shows a strong propensity to collaborate with groups that share its ideological orientation, such as OIRA and the Japanese Red Army, in the 1990s it also partnered with criminal organizations that do not share the regime's beliefs—the traditionally rightist Japanese yakuza, for example.⁶⁸ If North Korean smuggling is driven by ideological motivations to even a small extent, however, U.S. concerns over nuclear smuggling should increase.

Fourth, it is unclear how much control the North Korean regime currently exercises over its smuggling activities. North Korea chose to use its own agents (diplomats and other officials) for criminal activity until they lost the capacity to conduct their operations, at which point the regime concentrated on production and delegated responsibility for smuggling to external agents. For criminal organizations, a state partner offers a steady supply of high-quality drugs, escape from inefficiencies associated with avoiding enforcement, and resources exceeding those of a typical nonstate group. For North Korea, this arrangement balances risk reduction with satisfactory profit, capitalizing on the state's competitive advantage in creating an enforcement-free production environment, eliminating competition over distribution, and obtaining the cover of plausible deniability. In doing so, it mimics other criminal organizations, which commonly isolate the more risk-exposed trafficking cells from the rest of the network.⁶⁹ Partnership with criminal organizations, however, also means that North Korea has, over time, decreased the amount of control it exercises over the smuggling activities it sponsors. There is little doubt that North Korea has engaged in state-sponsored criminal activity for more than three decades; the number and scale of incidents, duration of activity, consistent patterns of seizure data, titles and circumstances of individuals involved, recurrent involvement of state agents and assets, defector testimony, and forensic evidence cumulatively argue that the regime is engaged in the encouragement and management of a range of criminal activities.⁷⁰ Moreover, there is

67. JIATFW, "North Korean Drug Trafficking"; Solomon and Dean, "Drug Money"; Kaplan, "The Wiseguy Regime"; and Quinn-Judge and Hoon, "Opiate of the Party."

68. Bertil Lintner, *Blood Brothers: The Criminal Underworld of Asia* (New York: Palgrave Macmillan, 2003).

69. Kenney, "From Pablo to Osama."

70. I am aware that this conclusion may be met with some skepticism. The DPRK has denied all allegations of state-sponsored criminal behavior, and has even accused the United States of coun-

little evidence that elites could employ limited state assets to conduct risky, financially lucrative behavior outside central supervision. The DPRK's security ministries have retrieved misbehaving officials from overseas; in March 1999 State Security operatives attempted to covertly arrest a North Korean Bangkok-based counselor on charges variously cited as "embezzling government funds, being involved in narcotics trafficking, or attempting to defect."⁷¹ So long as North Korea used its own agents to conduct smuggling activities, such agents remained subject to the control of the regime. Increased contact with criminal organizations, however, could provide DPRK officials and citizens with smuggling expertise, connections, and opportunities that are increasingly independent of the state; and criminal organizations' motives and preferences are unlikely to align perfectly with the regime's. In particular, hosting criminal organizations increases individual North Koreans' opportunities and incentives to freelance proliferation via criminal channels, either for personal enrichment or organizational autonomy.

A number of media reports around the region in recent years have described criminal activity taking place outside the purview of the North Korean state. Investigative reporting and statements by a former DPRK bodyguard suggest that nonstate groups inside the DPRK now produce and distribute counterfeit currency, albeit of a lower quality than the government-manufactured Supernote.⁷² In addition, nongovernmental organizations have reported a ris-

terfeiting its own currency to frame it. UN officials vacillated as late as 2002; South Korean and Chinese authorities have expressed skepticism or declined to comment, though recent behavior suggests a low-profile shift in both cases toward the U.S. position. Meanwhile, U.S. pronouncements have grown more assured. In April 2006, State Department official Peter Prahar asserted to the Senate, "There's no doubt that the government of the [DPRK], the Korean Workers' Party, and the Korean People's Army are all involved in criminal activities." Prahar, "North Korea—Illicit Activity Funding the Regime." (Note: This was the transcript of his oral remarks; Prahar's written statement, submitted for the record, was more cautious). See also "North Korea Brands U.S. Forged Dollars Allegations 'Smear Campaign,'" Korean Central News Agency, December 15, 2005; Peter Michael, "Hong Kong 'Key Market for North Korean Drugs,'" *South China Morning Post*, May 26, 2003; Solomon and Dean, "Drug Money"; "U.S. and Japanese Plot-Breeding Organizations' Anti-DPRK Operation Under Fire," Korean Central News Agency, April 19, 2006; "Observers Disagree on How Official the North Korean Drug Trade Is"; International Narcotics Control Board 1997 Annual Report (February 1998), quoted in JIATFW, "North Korean Drug Trafficking"; Burt Herman, "U.S. Embassy Says S. Korean Police Seized Counterfeit Dollars Made by North Korea," Associated Press, February 22, 2006; "Seoul Swings behind U.S. in N. Korea Forgery Charge," *Chosun Ilbo*, December 21, 2005; "China's Central Bank Warns against Counterfeit U.S. Dollars," Associated Press, March 17, 2006; "China Cracks Down on Trade in Counterfeit Dollars," *Chosun Ilbo*, March 19, 2006; Choi Hyung-ku and Brian Lee, "U.S., China Agree to Help Attack North Counterfeiting," *JoongAng Daily*, August 1, 2006; and "Suspect Admits Smuggling N. Korean 'Supernotes,'" *Chosun Ilbo*, August 28, 2006.

71. Joseph S. Bermudez Jr., *The Armed Forces of North Korea* (London: I.B. Tauris, 2001), p. 200.

72. Kwon Jeong Hyun, "Counterfeit Dollars, as 'Official Currency' Circulating in North Korean Markets," *Daily NK*, August 1, 2006.

ing drug addiction rate inside North Korea, as well as increased attempts by the regime to curtail drug trafficking—such as the execution of two men for counterfeit and drug trafficking in Chongjin in 2005, reported arrests of more than 150 people for drug trafficking in the fall of 2006 in Pyongyang and North and South Hamkyung Provinces, and the arrest of a Women’s Union chairwoman in Hoeryong in March 2007.⁷³ These efforts imply that the regime may be attempting to crack down on criminal activity burgeoning outside of state authority.

North Korean Illicit Networks and Nuclear Smuggling

To what extent are North Korea’s illicit networks already playing a role in its nuclear program? Although some interaction exists between smuggling mechanisms used for criminal products and for proliferation, those networks appear still to be primarily state operated rather than criminal, and to date DPRK smuggling has apparently concentrated on importing rather than exporting possible weapons components. For example, the Mangyongbong ferry, run by the pro-DPRK ethnic Korean group Chosen Soren in Japan, transported a jet mill used for missile fuel in 1994; and in 2002 a Chosen Soren–run trading company blocked a shipment of three power-control devices that could be used either in missile launches or to stabilize electric current to uranium centrifuges.⁷⁴ The transfer was intended for Daesong General Trading Company, whose subsidiary Chogwang Trading Company has been linked to the distribution of counterfeit currency and whose banks have been implicated in the provision of highly enriched uranium (HEU) components.⁷⁵ However, of the North Korean entities targeted under U.S. Executive Order 13382, “Blocking Property of Weapons of Mass Destruction Proliferators and Their

73. “DPRK Intensifying Drug Trafficking Control,” *North Korea Today*, newsletter produced by the aid organization Good Friends, Seoul, South Korea, January 31, 2007; “Decreases in Circulation of DPRK-Made Illegal Products in China,” *Weekly Dong-A*, April 25, 2006; “Chairwoman of Women’s Union Caught with Drugs Unsettles Hoeryong,” *Daily NK*, March 1, 2007; and “15kg Drugs Found in the Home of a Chairwoman of the Women’s Union,” *Daily NK*, February 28, 2007.

74. “Japanese Firm Admits to Exporting Nuke-Related Devices to North Korea,” *BBC Monitoring International*, July 9, 2003; Sachiko Sakamaki and Doug Struck, “Japan Cracks Down on Firms Tied to N. Korea,” *Washington Post*, May 22, 2003; Emma Chanlett-Avery, *North Korean Supporters in Japan: Issues for U.S. Policy*, CRS Report for Congress (Washington, D.C., Library of Congress, February 7, 2003), Order Code RL32137; and Bertil Lintner, “North Korea’s Creepy-Crawly Capitalism,” *Asia Times*, May 26, 2006.

75. Daesong accounts also reportedly received the Kim Dae Jung administration/Hyundai payment that facilitated the June 2000 North-South presidential summit. Larry A. Niksch, *U.S.-Korean Relations: Issues for Congress*, CRS Issue Brief for Congress (Washington, D.C.: Library of Congress, February 22, 2005), Order Code IB98045, p. 13.

Supporters,"⁷⁶ none have been publicly linked to criminal activity. Thus far, the predominance of state-owned ships and assets in proliferation-related smuggling suggests that these exports are still primarily managed by a state-operated, relatively centralized network.

Nevertheless, North Korea appears to be applying tools developed in criminal activities—for example, the use of middlemen, multiple names, front companies, and complicated financial arrangements—to proliferation. Two of these companies, Korea Mining Development Trading Corporation and Korea Ryongbong General Corporation, have (under alternate names) exported ballistic missile technology to countries such as Iran and Pakistan; and a Pakistan-based DPRK diplomat working for Changgwang Credit Bank (another name for Tanchon Commercial Bank) arranged for a Moscow institute to provide Pakistan and North Korea with maraging steel potentially usable in uranium-enrichment gas centrifuges.⁷⁷ The DPRK also appears to have learned from criminal activity how to adapt its smuggling practices quickly in response to scrutiny; after unconfirmed reports surfaced that a North Korean freighter had delivered SS-N-6 intermediate-range ballistic missiles to Iran, a U.S. official noted that the DPRK had responded to interdiction of its maritime traffic by shifting to air transportation.⁷⁸ Moreover, reports that Iranian scientists observed the DPRK's missile and nuclear tests,⁷⁹ and that North Korea may be helping Iran to construct its own nuclear test site, suggest that North Korea may have learned that transmission of "tacit knowledge" is one of the more valuable services it can provide in the missile and nuclear industries.⁸⁰ If launch observations are a form of technical consulting, they have precedent both in DPRK reliance on Burmese help to establish drug factories and in A.Q. Khan's one-stop proliferation shop. These examples suggest that the DPRK has transferred its ability to compartmentalize, camouflage operations, and adapt rapidly to enforcement from illicit activity to proliferation. This is unsur-

76. "Executive Order 13382: Blocking Property of Weapons of Mass Destruction Proliferators and Their Supporters," *Federal Register*, Vol. 70, No. 126 (June 28, 2005), pp. 38567–38570.

77. Bertil Lintner, "Coming in from the Cold?" *Far Eastern Economic Review*, October 25, 2001, pp. 60–65; and Gaurav Kampani, "Second-Tier Proliferation: The Case of Pakistan and North Korea," *Nonproliferation Review*, Vol. 9, No. 3 (Fall/Winter 2002), p. 110.

78. Gordon Fairclough, "Pyongyang Deepens Tehran Ties with Suspected Arms Exports," *Wall Street Journal*, July 6, 2006; and Andrew Koch, "U.S. Moves to Step Up Pressure on North Korea," *Jane's Defence Weekly*, November 2, 2005.

79. David Albright and Corey Hinderstein, "The A. Q. Khan Illicit Nuclear Trade Network and Implications for Nonproliferation Efforts," *Strategic Insights*, Vol. 5, No. 6 (July 2006); Barbara Demick, "N. Korea–Iran Ties Seem to Be Growing Stronger," *Los Angeles Times*, July 27, 2006; and Con Coughlin, "N. Korea Helping Iran with Nuclear Testing," *Telegraph*, January 26, 2007.

80. Montgomery, "Ringing in Proliferation," p. 176.

prising in the DPRK case, where the overlap between domestic actors conducting illicit activity and those pursuing missile and nuclear proliferation means that military and security organizations have already created and tested the infrastructure and practices of covert smuggling.

Other Factors Affecting the Risk of Nuclear Smuggling

In addition to the broader economic and ideological motivations for potential North Korean nuclear export, several other factors provide insight into a potential DPRK decision to export nuclear material, components, or expertise: North Korea's declared policy; its history of proliferation-related exports; available amounts of plutonium or HEU; nuclear doctrine and safety; identity of potential buyers; feasibility of undetectable transfer; and perception of consequences if detected. Some factors have received more attention than others, but all will likely influence the probability of a transfer. DPRK participation in criminal smuggling can shed additional light on each of them.

DECLARATORY POLICY

North Korean government officials have not consistently rejected the option of nuclear export. In April 2004 President of the Supreme People's Assembly Presidium Kim Yong-nam told visiting journalist Selig Harrison, "We make a clear distinction between missiles and nuclear material. We're entitled to sell missiles to earn foreign exchange. But in regard to nuclear materials, our policy past, present, and future is that we would never allow such transfers to al-Qaeda or anyone else." Foreign Minister Paik Nam-soon added, "We denounce al-Qaeda, we oppose all forms of terrorism, and we will never transfer our nuclear material to others."⁸¹ As the nuclear stalemate continued, however, the DPRK shifted. In 2005 Harrison reported that Vice Foreign Minister Kim Gye-gwan had warned, "[The United States] should consider the danger that we could transfer nuclear weapons to terrorists, that we have the ability to do so." Kim said the regime had no plans to transfer but would not rule it out "if the United States drives [us] into a corner."⁸² James Kelly, the U.S. State Department's assistant secretary for East Asian and Pacific Affairs, testified in July 2004 that a similar threat had been made during trilateral talks in April

81. Quoted in Victor Mallet, "N. Korea Offers U.S. Pledge on Arms," *Financial Times*, May 4, 2004; and Selig Harrison, "Inside North Korea," *Financial Times*, May 4, 2004.

82. Vice Foreign Minister Kim Gye-gwan, quoted by Harrison, "N. Korea Warns of Nuke Proliferation Possibility."

2003.⁸³ And although the DPRK told a visiting delegation after its nuclear test that it would not give nuclear weapons to terrorists,⁸⁴ the February 13 agreement contained no mention of the potential for DPRK nuclear export.⁸⁵ Although these assertions may be an exercise in brinkmanship, dismissing them entirely would be irresponsible. In particular, the DPRK's 2003 withdrawal from the Nonproliferation Treaty (NPT) may convince its leadership that nuclear material and components, like missiles, are now justifiable export commodities.⁸⁶ Notably, North Korea has denied any involvement in state-sponsored illicit activity, while explicitly threatening or asserting a right to conduct a nuclear transfer. The implicit recognition of the norm against criminal dealings contained in DPRK rhetoric, and the possible lifting of normative constraints on nuclear export after North Korea's NPT withdrawal, should heighten concern that Pyongyang might consider a sale a viable option.

PROLIFERATION HISTORY

Precedents for nuclear export may also be drawn from the DPRK's record of proliferation-related sales. Here, history is inconclusive. One report mentions North Korean nuclear assistance to Iran and chemical and biological weapons (CBW) assistance to Iran and Syria, but it provides no information substantiating this claim.⁸⁷ Despite international consensus that the DPRK possesses CBW, no evidence indicates that it has sold them internationally.⁸⁸ In 2005 U.S. Assistant Secretary of State for Intelligence and Research Thomas Fingar noted, "There is no convincing evidence that the DPRK has ever sold, given, or even offered to transfer such material to any state or non-state actor." But he reiterated, "We cannot assume it would never do so."⁸⁹ Additionally, although North Korea's extensive missile sales are well documented, one study speculates that the regime temporarily refrained from exporting missiles twice due to political sensitivity.⁹⁰ Similarly difficult to gauge is the charge that North

83. James A. Kelly, "Dealing with North Korea's Nuclear Programs," testimony before the Senate Foreign Relations Committee, 108th Cong., 2d sess., July 15, 2004.

84. Siegfried S. Hecker, "Report on the North Korean Nuclear Program," Working Paper (Stanford, Calif.: Center for International Security and Cooperation, Stanford University, November 15, 2006), p. 9.

85. Office of the Spokesman, U.S. Department of State, "North Korea—Denuclearization Action Plan."

86. Montgomery, "Ring in Proliferation," p. 184.

87. Niksch, *U.S.-Korean Relations*, p. 9.

88. I thank Christopher Chyba for this insight. See also International Institute for Strategic Studies, *North Korea's Weapons Programmes: A Net Assessment* (London: IISS, 2004).

89. Quoted in Paul Kerr, "U.S. Pushes to Restart North Korea Talks," *Arms Control Today*, Vol. 35, No. 4, May 2005, pp. 36–37.

90. IISS, *North Korea's Weapons Programmes*, p. 82; and Barry Rubin, "North Korea's Threat to the Middle East and the Middle East's Threat to Asia," *Middle East Review of International Affairs*.

Korea provided uranium hexafluoride (UF₆) to Libya through the A.Q. Khan network: an allegation that, if true, would signal a higher willingness to export than might otherwise be assessed. Details of the allegation, however, have been contested; it is unclear whether the DPRK was actually the source of the uranium and, even if it was, whether it knew the UF₆ would go to Libya from Pakistan.⁹¹ (Alternatively, Pyongyang may have believed, based on precedent in illicit activity, that using a middleman would enable it to evade attribution.) Future assessments will have to balance North Korea's apparent restraint in selling CBW against a mixed record of missile sales and an unclear role in the UF₆ transfer.

AVAILABILITY OF FISSILE MATERIAL AND NUCLEAR COMPONENTS

Although North Korea could export nuclear components, technical expertise, or fissile material, the latter is generally considered the most dangerous threat.⁹² Current estimates of Pyongyang's plutonium stockpiles vary. Prior to the DPRK's October 2006 nuclear test, Robert Norris and Hans Kristensen estimated that North Korea possessed enough plutonium for eight to twelve nuclear weapons.⁹³ In contrast, Alexander Montgomery argued that the DPRK might possess as little as three bombs' worth.⁹⁴ After the nuclear test, however, former Director of Los Alamos National Laboratories Siegfried Hecker visited Pyongyang; he subsequently estimated that North Korea had possessed a stockpile of 40 to 50 kilograms of plutonium (enough for six to eight nuclear weapons), but that the test had depleted it by 6 kilograms.⁹⁵ As officials have noted, North Korea's willingness to sell nuclear material will increase as it produces more.⁹⁶ For this reason, further reprocessing of plutonium from North Korea's 5-megawatt reactor represents an incremental increase in the risk of export, whereas completion of its 50-megawatt reactor would increase plutonium production ten times, significantly heightening the threat. Plutonium

91. For a discussion of the technical questions about North Korea's role in the transfer of UF₆ to Libya, see Montgomery, "Ringing in Proliferation," pp. 174–175. See also David E. Sanger and William J. Broad, "Tests Said to Tie Deal on Uranium to North Korea," *New York Times*, February 2, 2005; and Glenn Kessler and Dafna Linzer, "Nuclear Evidence Could Point to Pakistan," *Washington Post*, February 3, 2005.

92. See, for example, Gallucci, "Drugs, Counterfeiting, and Weapons Proliferation"; and Roberts, "Rumsfeld Eyes ICBMs in Terror War."

93. Robert S. Norris and Hans M. Kristensen, "North Korea's Nuclear Program, 2005," *Bulletin of the Atomic Scientists*, Vol. 61, No. 3 (May/June 2005), pp. 64–67.

94. Montgomery, "Ringing in Proliferation," p. 160.

95. Hecker, "Report on the North Korean Nuclear Program," p. 4.

96. According to one assessment from the State Department's Bureau of Intelligence and Research, the regime is "most likely to export nuclear material if it has more fissile material than it believes it needs for deterrent purposes and if it perceives little risk" of detection. Quoted in Kerr, "U.S. Rushes to Restart North Korea Talks."

produced in the DPRK, however, may not be the first choice of unsophisticated terrorist groups; the implosion-type design of plutonium bombs is relatively difficult to engineer. Although the status (and perhaps existence) of North Korea's uranium-based program has been called into question, an operational HEU program would increase the risk significantly; a gun-type HEU device requires twice as much material, but it is easier to weaponize and therefore more attractive to nonstate groups or unsophisticated state programs.⁹⁷

North Korea could also export elements of its nuclear program other than fissile material. As Hecker and William Liou note, some interested buyers could benefit greatly from technologies and expertise short of weapons-grade material or a bomb design, especially fuel cycle capabilities.⁹⁸ Although the performance of DPRK technicians may have been brought into some question after the dubious results of the October 2006 test, North Korea's components and expertise would still be valuable to a state with a less developed nuclear program than the DPRK's, even if that assistance consisted of helping the client state learn from North Korea's mistakes. Moreover, because fuel cycle expertise can be classified as energy assistance,⁹⁹ the DPRK could export dual-use components at much lower risk or cost than selling plutonium, enriched uranium, or an assembled nuclear device. Providing components or expertise is less dangerous than exporting fissile material but more likely, and will remain a possibility even if the six-party talks succeed in rolling back North Korea's nuclear program and removing its stockpile of nuclear materials.

NUCLEAR DOCTRINE AND SAFETY

A North Korean nuclear doctrine requiring high numbers of nuclear weapons would lower the risk of nuclear export; a relatively minimalist strategy would require fewer weapons and leave more room for export. Hecker reports that his visit uncovered "rather little indication of a nuclear doctrine or war-fighting strategy," making it difficult to determine what the regime considers sufficient for a credible—perhaps usable—deterrent.¹⁰⁰ The lack of public in-

97. Fifty kilograms of HEU are required for a gun-type bomb, twenty-five for an implosion-type. Charles Ferguson, *Preventing Catastrophic Nuclear Terrorism*, Council Special Report, No. 11, (Washington, D.C.: Brookings, March 2006), pp. 7–8.

98. Siegfried S. Hecker and William Liou, "Dangerous Dealings: North Korea's Nuclear Capabilities and the Threat of Export to Iran," *Arms Control Today*, Vol. 37, No. 2 (March 2007), pp. 6–11.

99. *Ibid.*

100. *Ibid.* According to a 2003 Korean Central News Agency statement, the nuclear deterrent will remain unused "unless anyone provokes the DPRK." The commentary says nothing about how nuclear weapons would be used if "provocation" occurs. "Rodong Sinmun on DPRK's Nuclear Deterrent," Korean Central News Agency, September 2, 2003.

formation on DPRK nuclear doctrine makes it difficult to assess how much Pyongyang's own needs impinge on its willingness to sell.¹⁰¹ Perhaps most troubling, however, is Hecker's statement that his visits revealed "little recognition of the safety hazards posed by primitive nuclear bombs."¹⁰² This indicates that North Korean nuclear materials and technologies may be poorly safeguarded, and therefore may be vulnerable to exploitation by military and security service actors with established connections to a variety of customers: not only other states, but criminal and terrorist organizations. During negotiations, therefore, the United States and other members of the six-party talks should make it a priority to locate and secure existing stockpiles of North Korean plutonium and nuclear components; obtaining an accurate inventory and safeguarding them from misuse will be key to preventing unauthorized transfer.

BUYER IDENTITY

Because a transfer's perceived risks and benefits will vary according to the customer's identity, the DPRK is more likely to transfer nuclear material or components to another state than to a criminal or terrorist organization. Collaborative arrangements with a state offer more long-term political benefits, as well as more tangible resources such as economic aid. The regime may also perceive the consequences of selling to another state as relatively less, based on the low cost thus far of the Bush administration's apparent belief that North Korea was the source of the UF₆ provided to Libya.¹⁰³ Of potential state buyers, customers who have purchased missiles from North Korea—for example, Iran and Syria—are likely to be the first market considered.¹⁰⁴ Hecker and Liou highlight in particular the risk of nuclear transfer to Iran, noting that it possesses not only a history of arms trading with the DPRK, but "money and oil, just what Pyongyang needs most."¹⁰⁵ In many of these states, it would be a short step from the government to some of the sponsored terror groups; whether the regimes buying material or components would provide them to such a group is a separate question, but the pathways certainly exist.

101. For a general analysis of North Korea's doctrine on weapons of mass destruction, written when the DPRK's nuclear arsenal was considerably smaller, see Joseph S. Bermudez Jr., "The Democratic People's Republic of Korea and Unconventional Weapons," in Peter R. Lavoy, Scott D. Sagan, and James J. Wirtz, eds., *Planning the Unthinkable: How New Powers Will Use Nuclear, Biological, and Chemical Weapons* (Ithaca, N.Y.: Cornell University Press, 2000).

102. Hecker and Liou, "Dangerous Dealings," p. 9.

103. Glenn Kessler, "North Korea May Have Sent Libya Nuclear Material, U.S. Tells Allies," *Washington Post*, February 2, 2005.

104. IISS, *North Korea's Weapons Programmes*.

105. Hecker and Liou, "Dangerous Dealings," p. 10.

Equally frightening, though less probable, is the possibility that the DPRK could sell nuclear materials to terrorist groups directly. In addition to its past terrorist activity against South Korea, the DPRK has previously provided financial support and training to Iranian and Palestinian militant groups, among others.¹⁰⁶ Although North Korea's direct involvement in terrorist acts has waned—it has not conducted terrorist acts since the 1987 Korean Air bombing and issued a joint statement with the United States renouncing terrorism in 2000¹⁰⁷—it has continued to collaborate with former terrorist organizations to conduct criminal activity. In 1994 a former Japanese Red Army terrorist (given asylum after hijacking a flight to North Korea) was arrested on the Thai-Cambodian border in a North Korean diplomatic car on a diplomatic passport with \$120,000 in Supernote; OIRA, although no longer actively engaged in hostilities in Northern Ireland, distributed counterfeit dollars until arrests were made in 2002.¹⁰⁸ This history suggests that the North Korean regime has no compunction about working with terrorist-turned-criminal organizations when it is profitable. The cost of detection is comparatively extremely high, however, in the case of a terrorist buyer—a sale is the closest the Bush administration has come to issuing a “red line”¹⁰⁹—and the benefit likely to be a one-off monetary addition rather than a more sustained financial or political benefit. Accordingly, the North Korean regime would have to consider its economic woes a sufficient threat to survival to justify risking transfer to terrorists. Alternatively, as noted above, if the DPRK's nuclear security protocols are lax, substate organizations or individuals may decide to conduct a transfer for personal enrichment or bureaucratic benefit, or because of sympathy for the buyer's cause.

AVOIDING DETECTION

Analyses of illicit smuggling suggest that should North Korea want to transfer nuclear material, it has the capabilities and channels to do so. Hecker and Liou write that it possesses the capability to produce both “plutonium metal or plutonium oxide powder, the two most likely forms for transport.” Six palm-sized

106. Bermudez, *Terrorism*; and Joseph S. Bermudez Jr., *Proliferation for Profit: North Korea in the Middle East* (Washington, D.C.: Institute for Near East Policy, 1994).

107. For history on DPRK terrorist involvement, see Bermudez, *Terrorism*; and “Joint U.S.-D.P.R.K. Statement on International Terrorism,” U.S. Department of State, October 6, 2000.

108. In 1994 a former Japanese Red Army terrorist given asylum after hijacking a flight to North Korea was stopped on the Thai-Cambodian border in a North Korean diplomatic car on a DPRK diplomatic passport with \$120,000 in Supernote. DEA, “Major Incidents of Drug Trafficking by North Koreans.”

109. “U.S. Sets New North Korean ‘Red Line’: Yomiuri Shimbun,” *Chosun Ilbo*; and David E. Sang-er, “Bush Shifts Focus to Nuclear Sales by North Korea,” *New York Times*, May 5, 2003.

pucks of plutonium can be shielded from sensors,¹¹⁰ and would likely pose little difficulty for organizations adept at smuggling much larger plastic bags of drugs. Although North Korea's maritime traffic has been placed under strict scrutiny as a result of the Proliferation Security Initiative (PSI), the DPRK has also developed overland smuggling routes, and air traffic is similarly difficult to interdict. Although it is logical to assume that North Korea would strongly prefer to use its own agents and assets for nuclear transfer if at all possible,¹¹¹ the decentralization of illicit activity, essential to North Korea's financial viability and regime stability, should imply that the DPRK may consider utilizing criminal networks if increased pressure is placed on state-operated networks. This is particularly true if exports can be conducted piecemeal. Criminal goods are comparatively higher volume, lower risk, and lower cost than nuclear exports; disaggregating nuclear sales into multiple transactions (several small shipments of nuclear material, or pieces of components rather than assembled components themselves) would reduce the difference between the two export products. Disaggregation would also allow North Korea to lower exposure, reduce risk, and increase profits by prolonging relationships and charging for technical expertise. It can use systems and practices developed to avoid detection, draw on entrenched, resilient links to criminal organizations, and continue adapting to avoid law enforcement. It would likely exploit the international financial architecture, use front companies to disguise purchases, and utilize a range of methods and networks to conceal its activities. Finally, detection capability at most ports is woefully inadequate; short time frames, long distances, and shielding can prevent sensors from picking up radiation, while bananas and ceramic tiles have been known to set off false alarms on some detector equipment.¹¹² In sum, these capabilities create a dangerous precedent should the North Korean regime adapt criminal practices for exporting nuclear material or technology. A sale might not go permanently undetected, but it could well be completed before a third party could intervene.

PERCEIVED CONSEQUENCES

Finally, DPRK decisionmaking will be affected by the perceived consequences of a nuclear transfer. As noted above, the DPRK is most likely to market com-

110. Hecker and Liou, "Dangerous Dealings," p. 10.

111. The Khan network used state assets, such as Pakistani air force planes, land routes through China, and legitimate maritime commercial channels, albeit with false cargo manifests. Andrew Prosser, *Nuclear Trafficking Routes: Dangerous Trends in Southern Asia* (Washington, D.C.: Center for Defense Information, November 22, 2004), pp. 6-7.

112. Government Accountability Office, *Preventing Nuclear Smuggling: DOE Has Made Limited Progress in Installing Radiation Detection Equipment at Highest Priority Seaports* (Washington, D.C.: GAO, March 2005), pp. 22-23.

ponents or expertise, but the most dangerous threat is the transfer of nuclear material. With regard to fissile material, attribution capabilities and the credibility of response are two key factors in determining how the DPRK could view the consequences of a sale. Publicly available information suggests that credibly attributing the source of nuclear material is a complex technical challenge, dependent on bomb type and design as well as on the availability of samples for matching.¹¹³ Because knowledge of DPRK nuclear sophistication is limited, and because North Korea may have already reprocessed plutonium, it is unclear whether nuclear material could be reliably attributed to Pyongyang, especially within a politically actionable time frame. Challenges to the forensic evidence linking North Korea to Libya's UF₆ underscore the difficulty of technical attribution, as well as of convincing others of its accuracy. Even if the material could be traced, it is hard to predict what tangible penalties China and South Korea would impose; over the past several years, these countries have increased aid to North Korea, partially negating the pressure imposed by U.S. strictures on illicit activity.¹¹⁴ As such, the DPRK may believe that inadequate technical attribution capabilities and lack of international political will might allow a transfer with impunity. The United States should therefore stress its technical attribution capabilities and continue to pursue research designed at augmenting those abilities. It should continue to track criminal smuggling to increase the DPRK's fear of a transfer being interdicted. Finally, it should stress that the transfer of any nuclear materials or technology is a red line triggering a military response from the United States and international partners that would end the current regime. This combined approach has the best chance of deterring North Korea from attempting to export nuclear materials or components.

The paucity of information on the DPRK's domestic structure impairs confidence in assessing the operational context of potential export decisions, including choice of method. In the DPRK's highly personalized, overlapping authority structure, it is unclear whether fractured personal interests or the "national interest" (as determined by the regime) would drive the decision.

113. William Dunlop and Harold Smith, "Who Did It? Using International Forensics to Detect and Deter Nuclear Terrorism," *Arms Control Today*, Vol. 36, No. 8 (October 2006), pp. 6–10; Michael May, Jay Davis, and Raymond Jeanloz, "An International Databank of Nuclear Explosive Materials," draft paper submitted for publication, summer 2006; Jon Fox, "Khan Network Could Erode U.S. Deterrence, Expert Says," *Global Security Newswire*, June 23, 2006; and Ferguson, *Preventing Catastrophic Nuclear Terrorism*, p. 4. For a more optimistic perspective, see Hecker and Liou, "Dangerous Dealings."

114. Anthony Faiola, "Despite U.S. Attempts, N. Korea Anything but Isolated: Country's Regional Trade Boom Hints at Split between Administration, E. Asia," *Washington Post*, May 12, 2005.

For example, while top Workers' Party organs act as Kim Jong-il's personal secretariat, his relationship and that of party bureaus to the military has been debated.¹¹⁵ Information is lacking on who could access fissile material and what access those people might have to export capabilities: knowledge that can be helpful in assessing the likelihood of freelance proliferation. These gaps hamper understanding of North Korean decisionmaking and identification of credible indicators; they also reduce the capacity to mount credible deterrent or interception strategies.

Responding to the Threat of North Korean Nuclear Smuggling

Since 2003 the United States has led an effective effort to address North Korea's criminal smuggling capabilities. In the past, interagency efforts under the direction of senior officials have had the highest success rate in combating threats posed by criminal networks,¹¹⁶ and North Korea has proved no exception. The Illicit Activities Initiative (IAI), established by the Bush administration in 2003, achieved several high-profile successes in its efforts to curtail North Korean criminal activity, including the June 2005 indictment of counterfeit currency distributor Sean Garland; the August 2005 Royal Charm and Smoking Dragon operations, which broke up a multiproduct Asian smuggling ring with access to the United States; and the October 2005 designation of Macau's Banco Delta Asia as a primary money-laundering concern.¹¹⁷ These actions created a spiral effect of international pressure on DPRK banking.¹¹⁸ Similar financial tools targeted North Korean entities linked to proliferation, which one designated company acknowledged had caused "great difficulties" in conducting business.¹¹⁹ Finally, the United States instituted interdiction-based measures, of which the PSI is the most highly publicized, but which also

115. Oh Hassig et al., "North Korean Policy Elites."

116. Arquilla and Ronfeldt, *Networks and Netwars*.

117. Department of the Treasury, "Finding That Banco Delta Asia SARL Is a Financial Institution of Primary Money Laundering Concern," *Federal Register*, Vol. 70, No. 181 (September 20, 2005), pp. 55214–55216; Asher, "North Korea—Illicit Activity Funding the Regime"; James A. Kelly, "An Overview of U.S.–East Asia Policy," testimony to the House International Relations Asia and the Pacific Subcommittee, 108th Cong., 2d sess., June 2, 2004; and Steven Weisman, "U.S. to Send Signal to North Koreans in Naval Exercise," *New York Times*, August 18, 2003.

118. "U.S. Believes North Korea's Macau Bank Account Linked to Kim Jong Il," *Yonhap*, July 20, 2006; Simpson, Fairclough, and Solomon, "U.S. Probes Banks' North Korea Ties"; "Bank of China in U.S. Sights Over N. Korea Cash Flow," *Chosun Ilbo*, September 9, 2005; and "DPRK Agents Withdraw Deposits from Slush Funds Targeted by U.S.," *Wolgan Choson*, January 1, 2006.

119. Anna Fifield, "N. Korea Is 'Looking to Beat' U.S. Financial Sanctions," *Financial Times*, March 12, 2006.

included what Undersecretary of State for Nonproliferation Robert Joseph referred to as “defensive measures,” including asking countries to deny overflight to suspicious DPRK flights, and installing radiation detectors and surveillance equipment at airports and land borders.¹²⁰

In addition to their utility for addressing North Korea’s potential ability to smuggle nuclear material or components, the United States has also found that efforts to track and curtail North Korea’s illicit activities can be a useful source of political leverage. The money frozen at BDA became the focal point of North Korean dialogue with the United States, as DPRK officials refused to return to the six-party talks until the BDA accounts were unfrozen,¹²¹ and it was reportedly the U.S. commitment to take steps toward releasing those funds that was a turning point in achieving the February 13 agreement.¹²² The North Korea case therefore illustrates the importance of incorporating illicit activity into sanctions intended to alter the economic incentives of the regime in question.¹²³

As the United States has discovered, however, there is a tension between the immediate need to address North Korea’s smuggling capabilities and the longer-term goal of addressing North Korea’s motivations: that is, of convincing the regime to commit to denuclearization. As the recent furor over BDA showed, efforts that curtail DPRK smuggling capabilities can unintentionally create short-term obstacles to negotiation, and may increase the regime’s incentive to sell or smuggle nuclear materials and components. North Korea has incentives to avoid nuclear entrepreneurship and desist from criminal activity only if legitimate commercial pathways remain open while illegal channels are blocked. U.S. Treasury Undersecretary Stuart Levey’s comment in the summer of 2006 about the lack of distinction between licit and illicit North Korean income, though probably descriptively accurate, would therefore be troubling if applied as policy.¹²⁴ (Acknowledging North Korea’s right to conduct legal business transactions is also more likely to be supported by China and

120. Koch, “U.S. Moves to Step Up Pressure on North Korea”; and David E. Sanger, “U.S. Widens Campaign on North Korea,” *New York Times*, October 24, 2005.

121. Glenn Kessler, “N. Korea Sets Terms for Return to Nuclear Talks,” *Washington Post*, March 9, 2006.

122. Jay Solomon and Neil King Jr., “Financial Leverage: How U.S. Used a Bank to Punish North Korea—Nuclear Talks Are Said to Proceed, as Macau Frees Frozen Accounts,” *Wall Street Journal*, April 12, 2007; and Steven R. Weisman and Donald Greenlees, “U.S. Discusses Releasing North Korean Funds,” *New York Times*, March 1, 2007.

123. In the DPRK case, however, the United States had the reverse problem; targeting illicit sources of regime finance proved an effective pressure tactic, but would have been more effective earlier if accompanied by strictures in licit Chinese and South Korean support.

124. “Kim’s Cash Squeeze,” *Wall Street Journal*, August 26, 2006.

South Korea, whose participation is key to creating effective leverage on the DPRK.)

Negotiations in pursuit of denuclearization should remain the priority of the United States for several reasons. First, they are the only way to permanently eliminate the threat of North Korea exporting nuclear material. Second, despite the efficacy of countersmuggling efforts in constraining North Korea's capabilities, these tools are far from a silver bullet. Interdiction has a notoriously low success rate, with antidrug campaigns averaging between 5 and 25 percent,¹²⁵ and PSI's eleven 2004 interdictions are less than reassuring when placed against an estimated sixty-five nuclear smuggling incidents every year.¹²⁶ These statistics suggest not only that interdiction is unlikely to catch a North Korean export if one is attempted, but also that it may be a less effective deterrent than is sometimes hypothesized.¹²⁷

Because complete denuclearization is not likely to be achieved for some time, however, and because some risk of nuclear export will remain even after fissile material is removed from the DPRK, the United States must continue the efforts summarized above to monitor and curtail North Korean smuggling capabilities. In March 2007 the U.S. Treasury announced that the money at Banco Delta Asia was indeed criminally laundered; this was followed by a State Department announcement that the money would be returned to North Korea. Together they marked a shift from the past U.S. position that North Korean illicit activity was purely a law enforcement issue.¹²⁸ This somewhat paradoxical arrangement was the result of conflicting pressures: to reach a denuclearization deal with the DPRK on the one hand, and, on the other to maintain the credibility of U.S. law enforcement tools (particularly section 311 of the USA Patriot Act, the terrorist financing statute under which BDA had been designated). Returning money declared criminal, however, runs the risk of precipitating a global relaxation of scrutiny of DPRK activity, which could reduce the

125. Gavin Cameron, *Nuclear Terrorism: A Threat Assessment for the 21st Century* (New York: Palgrave, 1999), p. 7.

126. Stanford Database on Nuclear Smuggling, Theft, and Orphan Radiation (DSTO), <http://iis-db.stanford.edu>; and International Atomic Energy Agency, Illicit Trafficking Database, <http://www.iaea.org>.

127. John Bolton, "Stopping the Spread of Weapons of Mass Destruction in the Asian-Pacific Region: The Role of the Proliferation Security Initiative," Tokyo American Center, Japan, October 27, 2004. Even if PSI and IAI succeeded in raising transfer costs enough to prohibit future sales, they are unlikely to terminate transfers already in motion. Deterrence efforts may be more effective for the intended purchaser of nuclear weapons, whose decisional frame is unlikely to be as negative and therefore as risk acceptant as that of the DPRK. Levy, "Prospect Theory, Rational Choice, and International Relations," p. 93.

128. Demetri Sevastopulo and Andrew Yeh, "Rice Helped Unfreeze N. Korean Funds," *Financial Times*, March 22, 2007.

ability to pressure North Korea and thereby facilitate the development of capabilities pernicious to U.S. and international security.

For these reasons, a viable policy must balance curtailing North Korean criminal activity in order to reduce its general smuggling capabilities, on the one hand, with negotiating a permanent end to the DPRK nuclear program, on the other. The United States must maintain its scrutiny of and enforcement against North Korean smuggling capabilities while offering Pyongyang clear and substantial economic incentives to forgo criminal activity and roll back the nuclear program.

Conclusions and Implications

North Korea possesses sophisticated smuggling capabilities developed from years of transnational criminal activity, driven by economic necessity and justified with an ideological veneer. These activities provide the regime with a significant source of hard currency, but state control over the activity has decreased over time. Concerns that North Korea may decide to export nuclear material or components, therefore, are well founded. The DPRK possesses both the means and motivation to export, and criminal smuggling may also provide windows of opportunity for proliferation outside of state control. Thus far, smuggling has played a larger role in assembling the DPRK nuclear program than in exporting it, and proliferation-related transfers remain primarily state run. A number of factors, however, could increase North Korea's incentives for nuclear entrepreneurship. The context of both the A.Q. Khan network and past cases of nuclear smuggling in the former Soviet Union further suggests that criminal involvement in proliferation may be an emerging security challenge far broader than North Korea; Southeast Asian criminal organizations have dabbled in nuclear trafficking and in South and Central Asia, the nuclear black market already utilizes drug trafficking pathways.¹²⁹ North Korean criminal smuggling, however, represents a heightened danger; in contrast to most nuclear traffickers, neither North Korea nor its criminal partners are amateurs at their business.¹³⁰

These criminal networks not only impose significant social and economic costs, but also create channels for proliferation that, by their very nature, evade

129. Stanford DSTO; Friedrich Steinhausler and Lyudmila Zaitseva, Division of Physics and Biophysics, Salzburg University, 2004; and Prosser, "Nuclear Trafficking Routes," pp. 8–9.

130. Lyudmila Zaitseva, "Organized Crime, Terrorism, and Nuclear Trafficking: DSTO Case Study 2001–2005," conference presentation at the Naval Postgraduate School, Monterey, California, July 25, 2006.

detection. In doing so, these networks may encourage future proliferators by convincing them that they can sell nuclear material and technology without fear of detection or reprisal. Most important, they may provide terrorist organizations with nuclear material or components, thus enabling them to stage an attack on the United States or its allies. These findings suggest not only the urgency of tracking and curtailing illicit smuggling networks, but also the need for renewed attention to negotiating North Korean nuclear disarmament. The North Korean case highlights emerging proliferation challenges by predicting a difficult future in which proliferation networks are bolstered and emboldened by criminal smuggling capabilities. It also suggests, however, that the path toward this future is not inevitable, and that solutions to address these challenges are within the grasp of policymakers. Synthesizing countersmuggling and counterproliferation efforts, and integrating these with traditional nonproliferation tools, will give policymakers a wide array of approaches with which to address the full range of proliferation threats.