

# Korea's Economy 2008

Korea's Economic Achievements and Prospects

The Graying of Korea: Addressing the Challenges of Aging

Financial Asia Rising: Asian Stock Markets in the New Millennium

Korea's Money Market

Ingredients for a Well-functioning Capital Market

The Capital Market Consolidation Act and the Korean Financial Market

Progress in Corporate Governance

Tax Issues Affecting Foreign Invested Companies and Foreign Investors

U.S.-Korea Economic Relations: View from Seoul

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Peering into the Future: Korea's Response to the New Trading Landscape

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The Roles of China and South Korea in North Korean Economic Change

Realistic Expectations of the Future Role of the IFIs on the Peninsula

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# NORTH KOREA'S ECONOMIC DEVELOPMENT AND EXTERNAL RELATIONS

## NORTH KOREA'S EXTERNAL RESOURCES AND CONSTRAINTS

By Stephan Haggard and Marcus Noland

### Introduction

During the 1972 U.S. presidential campaign, “Deep Throat,” later revealed to be Associate Director Mark Felt of the FBI, counseled *Washington Post* journalists Bob Woodward and Carl Bernstein to “follow the money” to unravel the Watergate scandal. In his final paper, “How North Korea Finances Its International Trade Deficit: An Educated Guess,” Edward M. Graham, to whom this volume is dedicated, plowed similar terrain in seeking to unravel Pyongyang’s external accounts.<sup>1</sup>

This paper represents an extension of that earlier effort. We summarize an effort to construct an internally consistent balance of payments for North Korea, adopting the conventions embodied in the International Monetary Fund’s *Balance of Payments Manual* (5th ed., 1993).<sup>2</sup> We consider licit and illicit merchandise trade, services, current transfers, and capital flows, and we attempt to separate out transactions occurring on a commercial basis from politically determined transactions such as aid. We also pay careful atten-

tion to the degree of uncertainty surrounding each of these estimates.

We find that—despite the constraints on the country associated with its political isolation and the onset of the nuclear crisis—trade, the current account deficit, and by implication capital inflows have all showed steady growth since the famine of the mid-1990s. Like Graham, we conclude that some oft-cited estimates of illicit transactions are probably exaggerated; these transactions appear to account for a declining share of trade.<sup>3</sup> The country remains significantly dependent on aid to finance imports, principally from South Korea and China. The nature of integration with these two partners is very different, however: China’s interaction with North Korea appears to be increasingly on market-oriented terms while South Korea’s involvement has a growing noncommercial or aid component.<sup>4</sup> This finding has important implications for the purported logic of engagement, which claims that increased economic openness will socialize North Korea toward greater commercial interaction with the world economy. High dependence on aid could

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1. Edward M. Graham, “How North Korea Finances Its International Trade Deficit: An Educated Guess,” *Korea’s Economy 2007* 23 (2007): 74–82, [www.keia.org/2-Publications/2-2-Economy/Economy2007/17.Graham.pdf](http://www.keia.org/2-Publications/2-2-Economy/Economy2007/17.Graham.pdf).

2. See Stephan Haggard and Marcus Noland, “North Korea’s External Economic Relations,” Working Paper 07-7, Peterson Institute for International Economics, Washington, D.C., August 2007, [www.petersoninstitute.org/publications/wp/wp07-7.pdf](http://www.petersoninstitute.org/publications/wp/wp07-7.pdf), for details of sources and methods used to construct the estimates reported in this paper.

3. For example, an unnamed U.S. military source in Seoul estimated annual income from drugs at \$1 billion annually; see Jay Solomon and Jason Dean, “Drug Money: Heroin Busts Point to Source of Funds for North Korea,” *Wall Street Journal*, 23 April 2003, A1; and Richard C. Paddock and Barbara Demick, “N. Korea’s Growing Drug Trade Seen in Botched Heroin Delivery,” *Washington Post*, 21 May 2003. An unnamed Seoul-based U.S. government official estimated annual income from missile sales at \$560 million in 2002, well after these numbers had almost certainly declined; see Andrew Ward, “US Accuses North Korea of Narcotics Trade,” *Financial Times*, 4 December 2002; and Bertil Lintner, *Great Leader, Dear Leader: Demystifying North Korea under the Kim Regime* (Chiang Mai, Thailand: Silkworm Books, 2005). Estimates of licit Japanese remittances are similarly exaggerated, with high estimates ranging from \$1 billion to \$2 billion; see Jennifer Lind, “Gambling with Globalism,” *Pacific Review*

4. For example, even though some share of Chinese trade passes through state-owned enterprises, most of these transactions—with the exception of oil and food exports—do not appear to enjoy subsidies. In addition to outright assistance, some nominally commercial trade between North and South Korea is subsidized directly or indirectly.

in fact have the opposite effect, reducing pressure for economic reform.

## Current Account Transactions

### *Observed Goods Trade*

North Korean commercial trade volumes began falling in 1991 with the dissolution of the Soviet Union and collapse of the Eastern Bloc, North Korea's primary trade partners at the time. But trade continued to decline thereafter, reaching a minimum of \$1.6 billion at the end of the famine period in 1998 at less than 40 percent of the 1990 value of \$4.2 billion. Beginning in 2000, it began to revive, though as of 2005 both imports and exports remained below their 1990 values. Since the onset of the nuclear crisis in 2002, exports have continued to increase, but imports have grown even more, implying a widening merchandise trade deficit.

### *Weapons Trade and Illicit Activities*

In addition to the recorded trade flows, North Korea derives additional revenues from unobserved transactions, which include arms sales that are not technically illegal as well as drug trafficking and counterfeiting. It may appear obvious that arms sales and illicit activities are nonrecorded activities and thus should be added to the balance of payments as exports, thus reducing the financing gap. But it is also possible that illicit trade is misreported in other commodity categories and therefore does not represent a dollar-for-dollar addition to North Korea's net exports. Missiles, for example, could be misreported as fabricated metal products in the importer's statistics. Public discussion of revenues from these controversial sources has a greater tendency to overstate their contribution (by assuming that they are entirely additional) than understate it (by excessively correcting for the likelihood that they are partly captured elsewhere in the trade data). We explicitly address this issue when reconstructing the overall balance of payments.

**Arms.** In the 1980s, North Korea emerged as a significant player in the global arms market, exporting as much as \$500 million a year (20 percent or more

of total merchandise exports) of conventional arms based on Soviet designs and including short-range ballistic missiles, as well as exporting a variety of military-related training, consulting, and praetorian guard services.<sup>5</sup>

The two sources that venture estimates of total arms sales over time, the U.S. State Department's publication, *World Military Expenditures and Arms Transfers*, and the Stockholm International Peace Research Institute (SIPRI), show steadily declining sales over time. These sources suggest that the upper-end estimates that are sometimes reported—such as the statement by a U.S. official that North Korea earned \$560 million from missile sales in 2001—are probably exaggerated. The declining sales of major weapons systems are no doubt partly offset by provision of technical assistance packages, the follow-on sale of parts and fuel, and diversification into other military sales such as patrol boats and ammunition. However, trade in any dual-use technologies that might have a connection with either weapons of mass destruction (WMD) or missile manufacture is now formally subject to sanction under the UN Security Council Resolutions (1695 and 1718) that followed the missile tests of July 2006 and the nuclear test of October 2006, respectively.

Although significant at one time, the importance of weapons sales as a source of foreign exchange has probably declined. Two caveats to this conclusion are worth noting. The interest of a small number of states in acquiring weapons has no doubt grown; Iran and Syria head this list. Moreover, owing to the increased price of oil in recent years, some of North Korea's historic customers are flush with cash; Iran, again, falls quite clearly in this category, as do Syria and, by extension, its proxy Hizballah. Nevertheless, we suspect that the relative importance of arms sales in overall exports has declined from a high point in the 1980s.

**Drugs.** Evidence exists—in the form of diplomatic expulsions—for North Korean state involvement in a variety of illicit activities and schemes. The country has long been involved in drug trafficking, initially exporting opiates and later synthetics such as methamphetamines, as well as providing courier services for

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5. U.S. Arms Control and Disarmament Agency, *World Military Expenditure and Arms Transfer Report* (Washington, D.C.: USACDA, 1997).

other producers. Published estimates of drug-related revenues range from \$71 million to \$1 billion (!) annually, and even Graham hazards a guess of \$500 million. But because drug sales involve extraordinary markups as one moves down the distribution chain, estimates of the drug trade are easily inflated by confusing wholesale with retail or street-level prices. Our calculations of estimated acreage under cultivation, together with likely output and wholesale prices, lead us to believe that the lower estimates in the public domain should in fact be treated as an upper bound.

Moreover, there is considerable evidence that these numbers have fallen during the 2000s. The most systematic overview of public reports of drug seizures through 2006 shows a dramatic increase in seizures beginning in the mid-1990s, again corresponding with the desperation of the famine period, but a downward trend thereafter.<sup>6</sup> The *2005 World Drug Report*, published by the United Nations, makes no mention whatsoever of North Korea in its detailed discussion of the international heroin and opium markets, and North Korea was dropped entirely from the list of major drug-producing or -trafficking countries in the *2007 International Narcotics Control Strategy Report*, put out by the U.S. State Department. The decline in seizures could reflect adoption of alternative means for bringing drugs into major export markets; however, the decline in seizures also corresponds with increased surveillance and interdiction of North Korea's activities. We believe the \$71 million figure should be treated as an upper-bound estimate, with the more probable figure for 2005–06 being one-quarter to one-half that.

**Counterfeiting.** A second major form of illicit activity is counterfeiting. U.S. government officials had long suspected North Korea to be the origin of the so-called supernotes, very high-quality counterfeits of \$100 bills. The issue surged to prominence in 2005 with a series of criminal cases and the Treasury Department finding that a Macau bank, Banco Delta Asia (BDA), was a financial institution of “primary money laundering concern,” an action that was to play a role in the breakdown of the six-party talks in late 2005 and their

ultimate revival in early 2007. Subsequent Treasury Department statements accused the bank not only of introducing counterfeit notes but of money laundering on behalf of North Korean WMD-linked enterprises. U.S. government officials have estimated that notes worth \$50 million have been seized since 1990, with the total amount of counterfeiting very much larger than that, even in the hundreds of millions of dollars. As with drugs, however, North Korea's earnings from this activity need to take into account the difference between wholesale and retail prices and increased surveillance. According to one former U.S. government official, North Korea earns 40 percent of the face value of all notes counterfeited.<sup>7</sup> If one simply allocated the \$50 million in seizures over the 16-year period, applied the 60 percent discount, and assumed that a dollar was seized for every one successfully passed, it would imply revenues of only \$1.25 million per year. Of course seizures could constitute a much lower share of total notes passed, but it appears that counterfeiting is in retreat; according to Chesnut, currency counterfeiting incidents dropped to zero in 2006.

Counterfeiting has not been limited to currency, however; evidence also exists of North Korean involvement in counterfeiting of cigarettes and pharmaceuticals, and a tobacco industry group places North Korean revenues from counterfeiting in the range of \$80–160 million a year, with a central estimate of perhaps \$100 million.

As this review shows, there is extraordinarily high variation in the valuation of North Korea's illicit sales. Commentaries, however, frequently make reference to prior periods or peak levels of the given activity and often do not consider the likely effect of the closer scrutiny of North Korea's economic activity and outright sanctions that have occurred since the onset of the crisis in October 2002.

### *Services Transactions, Including Tourism*

Little data exist on licit services transactions. North Korean construction enterprises have been increasingly active internationally in recent years, and the

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6. Sheena Chesnut, “Illicit Activity and Proliferation: North Korean Smuggling Networks,” *International Security* 32, no. 1 (2007):

7. David L. Asher “The North Korean Criminal State, Its Ties to Organized Crime and Possibility of WMD Proliferation,” Nautilus Institute Policy Forum Online, no. 05-92A, 15 November 2006, [www.nautilus.org/for a/security/0592Asher.html](http://www.nautilus.org/for_a/security/0592Asher.html).

country derives revenues from overflight rights, but the bulk of services revenues are likely to be derived from the Mount Kumgang, a tourism project undertaken as a joint venture with South Korea. Today, North Korea receives \$72 million annually in rent for Kumgang, plus an additional fee per visitor that has been totaling between \$9 and \$14 million a year. North Korea derives additional benefits from hotel stays and sales of sundries, and, until the nuclear test, the project also received a direct government subsidy.

### *Current Transfers*

**Private transfers: workers' remittances.** Workers' remittances are transfers made by workers temporarily abroad (the equivalent transfers by permanent migrants appear in the capital account). In recent years North Korea has sent organized contract workers to a variety of countries, starting with Russia and diversifying to include Kuwait, Qatar, the United Arab Emirates, and China. (A distinct form of unrequited transfer originates from the Korean community in Japan; this will be discussed in the context of the capital account.)

The main source of remittances is Russia, where, in addition to 15,000–20,000 loggers covered under a bilateral government agreement, 8,000–15,000 contract laborers are involved in activities such as construction. In addition to some contract workers in China, the country also hosts a community of North Korean refugees. Because of severe constraints on their freedom of movement and employ, many of these refugees are not employed or earn low wages; the amounts that they are transferring back to North Korea are small. A resident ethnic Korean population in China also makes private transfers to North Korea and is a conduit for money originating in Korean communities outside China. This non-refugee channel is almost surely more important in financial terms than funds emanating from the refugees themselves.

We have estimated annual revenues from contract labor in Russia on the order of \$10–20 million. One source, without substantiation, put revenues from all sources (that is, including the Middle East and other countries) at \$30–40 million.<sup>8</sup> These figures imply that in some cases the earnings of North Koreans involved

primarily in low-skilled work exceed local per capita incomes. These strike us as rather aggressive estimates, and we set the upper bound of worker remittances at \$30 million.

**Official transfers:** There are various kinds of official transfers, including bilateral aid from foreign governments, official assistance from multilateral organizations, and North-South cooperation projects.

*Aid.* Since the famine of the 1990s North Korea has received nearly \$2.5 billion in aid from official and private sources, overwhelmingly in-kind transfers of food and other humanitarian items. Multilateral aid has become much more erratic since the onset of the nuclear crisis, with bilateral assistance from China and South Korea playing a more prominent role.

Assessing the magnitude of Chinese support poses the greatest challenge: China does not participate in multilateral initiatives such as the World Food Program, is not a member of the OECD's Development Assistance Committee, and does not publish figures on its bilateral aid programs. Chinese customs statistics do categorize some transactions as "aid," but these would appear to constitute a lower bound: the figures appear to exclude major transactions in food and fuel that embody a concessional element, although of unknown magnitude. We take the high-end estimate of Chinese aid as the total value of its exports of food and fuel to North Korea, although we believe that some of these exports—perhaps even the majority—are in fact financed and do not constitute aid.

*Other official transfers.* North Korea has also been the recipient of transfers associated with the Korean Peninsula Energy Development Organization (KEDO). KEDO's remit was to construct two nuclear reactors to replace the nuclear facilities shut down under the 1994 Agreed Framework. KEDO also had the responsibility of supplying the heavy fuel oil shipments promised under the Agreed Framework, but these were stopped in December 2002 following the onset of the nuclear crisis. Reactor construction slowed to a halt in 2003–04, and KEDO itself was formally terminated in 2005.

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8. Cho Myong-chul and Kim Ji-yeon, "North Korea's Current Business Abroad [in Korean]," *World Economy Update* (Seoul, KIEP), 23 July 2007.



However, the lion's share of the more than \$4 billion pledged through KEDO was both raised and spent outside of North Korea for, for example, the design and procurement of reactor components. From a balance-of-payments perspective, transfers to North Korea would appear to consist only of the heavy fuel oil and whatever funds were used for site construction, including payment for workers and shipped construction materials such as cement. According to the 2004 KEDO annual report, the organization spent nearly \$400 million on oil between 1995 and 2002, when deliveries were halted. The South Korean government, which had primary responsibility for overseeing construction, reports that "non-commercial exports" associated with the project peaked at nearly \$59 million in 2002. North Korean workers reputedly received \$110 in monthly wages; \$1 million in annual wages would appear to be a generous estimate of what the North Koreans were receiving through this channel.

*North-South cooperation projects.* A final source of current transfers to North Korea is from South Korea. These transactions are dominated by direct support, which has mostly taken the form of food aid and provision of fertilizer. Although this support is officially financed by so-called loans, there can be little doubt that they are in fact aid. However, the aid relationship also encompasses a number of large, highly visible, and symbolically significant North-South "cooperation projects" that occupy a gray area between commercial and noncommercial transactions.

In connection with agreements reached in 1998 and the North-South summit of 2000, Hyundai promised payments to North Korea of approximately \$800 million through 2005. Over time, however, the public component of these projects has actually increased either because of the financial burden they imposed on the private actors (mainly Hyundai Asan) or because the political risks seemed too substantial for firms—smaller firms in particular—to invest on their own.

In addition to these highly visible large-scale projects, a large number of South Korean nongovernmental organizations (NGOs) are involved in North Korea-related projects such as "cultural tourism," and "knowledge partnership" projects have arisen through them. Anecdotally, these reconciliation projects are often alleged to have a significant transfer component. It is unclear how much money flows into

North Korea as a result of these endeavors, and some nominally private or NGO activity is in fact funded by the government.

Last, in July 2007 the governments of North and South Korea announced an agreement under which South Korea would supply inputs such as textiles to North Korea's light industry in return for South Korean firms being granted concessions for the development of North Korean mines, an initiative reaffirmed at the October 2007 North-South summit. Such deals resemble barter: in principle they should increase both exports and imports by an equivalent amount, leaving the net balance unchanged. In reality, given the opacity of pricing and the scope for politicization, these arrangements may become another channel for implicit South Korean aid.

### **Capital Account Transactions**

Since defaulting on bank loans in the late 1970s, North Korea's ability to borrow internationally has been limited to a relatively low volume of short-term trade credits. It has received significant, though declining, unrequited private transfers, labeled in the balance of payments as migrants' remittances, primarily from ethnic Koreans in Japan. By contrast, although hard data are limited, it appears that inflows of foreign direct investment (FDI), mostly from China but from other sources as well, has become a more important component of the overall balance of payments picture. The increase in FDI reflects in part policy changes taken in response to the growing external constraints we have highlighted in the previous sections, in part an adaptive response on the part of North Korean enterprises.

#### ***Capital Transfers: Private Unrequited Transfers***

Estimates dating from the early 1990s of remittances from Japan alone ranged from \$10 million a year to a high of \$2 billion, but the most credible estimates have been less than \$100 million a year. Since then, a string of events, including the failure of financial institutions linked with the Chongryun, the organization of Pyongyang-affiliated Korean residents, and the routine interruption of scheduled ferry and shipping services, combined to reduce remittances from Japan quite dramatically by 2004–06.

The Japanese Ministry of Finance reports \$29.5 million in transfers for fiscal year 2002 (ending in March 2002) but only \$4 million for FY 2006, supplemented by a small share of funds that are still remitted through bank transfers. Although there is no doubt some currency smuggling, the wherewithal for the Chongryun to engage in large-scale transfer is much diminished by the failure of linked financial institutions and closer scrutiny of all economic exchanges with North Korea.

**Investment: FDI**

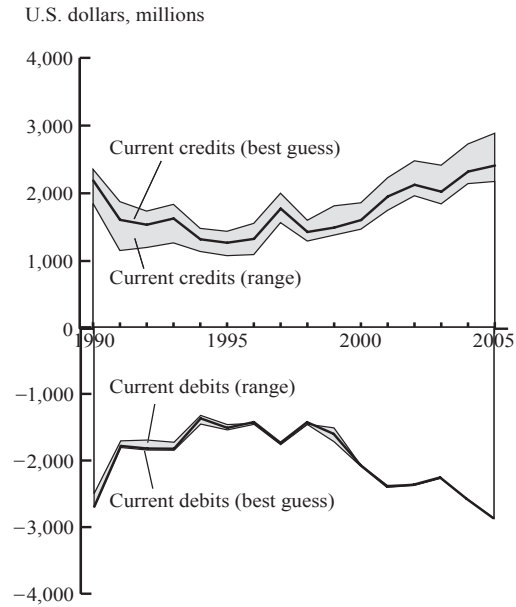
We have only one international series on FDI, UNCTAD’s annual *World Development Report*. Apart from a brief spike in the data associated with the push to expand the Rajin-Sonbong zone, the various editions of the *World Development Report* show that investment was low or negative for much of the period since the zone’s inception. Investment turned up sharply in 2003, however, led by investors from South Korea and China. The onset of the second nuclear crisis did not deter such investment, at least through 2005; the 2002–05 period saw the most sustained inflows into the country since 1990.

**Modalities of North Korea’s External Economic Transactions**

North Korea’s current account credits and debits are shown in *Figure 1*. In addition to our baseline or best-guess estimates, Figure 1 also displays high and low estimates formed by applying the extreme estimates in the reviewed literature. The band defined by the extreme estimates for credits is much larger than for debits: there is considerable uncertainty about the magnitude of a number of the underlying credit components, including arms sales, illicit activities, Chinese aid, and remittances.

The time patterns of these aggregates largely track those of the reported merchandise trade figures. Current account credits bottom out in the mid-1990s and then begin rising, first, as aid begins to ramp up and, later, with the growth of merchandise exports and presumed capital inflows at the end of the decade. Not until 2005 do the baseline magnitudes of both current account credits and debits exceed their values for 1990.

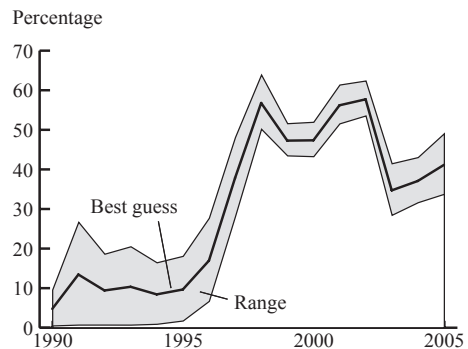
**Figure 1: Total Current Account Credits and Debits in North Korea, 1990–2005**



Source: Authors’ calculations.

The balance-of-payments framework can be used to depict the shifting importance of differing modalities of exchange. *Figure 2* documents the growing importance of official transfers during the famine period of the 1990s, with the baseline estimate reaching a peak value of more than half of commercial imports, followed by decline. However, it is noteworthy that, despite the nuclear crisis, official transfers have risen again, equaling more than 40 percent of the country’s commercial goods imports in 2005.

**Figure 2: Official Transfers (Current and Capital) as a Share of Commercial Goods Imports in North Korea, 1990–2005**



Source: Authors’ calculations.



According to the baseline estimate, North Korea ran a current account deficit during the entire sample period. We have greater confidence in the data on imports—collected from North Korea’s trading partners—than the export data, which include some unrecorded illicit component. If the import data are broadly correct, then the “high” estimate of the current account implies that North Korea ran a current account surplus and exported capital, possibly including reserve accumulation, during the worst of the famine and its immediate aftermath. This implausible result suggests an important finding: either the upper-bound estimates of various nonconventional revenue streams are unlikely to be true, at least jointly, or major expenditure items are missing.

In theory, the current account and capital account should sum to zero. For the period 1990–2005, the absolute value of the discrepancy over licit merchandise exports averaged 15 percent, taking the value 1.8 percent in the terminal year of 2005. As points of comparison, the equivalent figures for South Korea, China, Japan, and the United States range from 1.0 percent (South Korea) to 2.2 percent (China). The discrepancy has also taken both positive and negative values: the positive values imply that the country was consuming more resources than can be accounted for by the estimated transactions, that is, the magnitude of its current account deficit exceeds capital inflows.

In most years the baseline estimate of the statistical discrepancy takes a negative value, implying that North Korea has resources not accounted for. There are a variety of possible explanations for this discrepancy, none mutually exclusive. The first is that the earnings generated by unconventional activities are even less than our skeptical best guesses. A second explanation would be that imports are undercounted. It is possible that North Korea is importing weapons systems that go unreported, or that other items—for example, luxury goods—are not accounted for in existing statistics. A third possibility is that the authorities have been accumulating official reserves. Although this is difficult to believe for the famine period, it is certainly possible that the regime saw the resumption of trade and investment in the early 2000s as an opportunity to rebuild foreign exchange holdings.

Finally, there could be unaccounted capital outflows. North Korea is not engaged in any substantial FDI

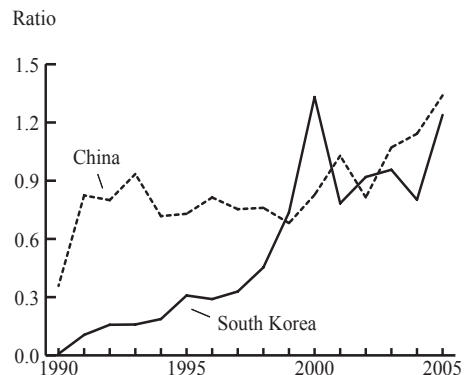
of its own, but there is certainly some, such as the establishment of trading companies engaged in labor contracting or North Korean-themed restaurants. More significantly, the top circles of the North Korean elite may hold the proverbial Swiss bank accounts, although the controversy over a mere \$24 million in BDA suggests that such overseas investments are not likely to close the statistical discrepancy.

### Shifting Patterns of Engagement

The analysis thus far has addressed aggregate trade and financial flows. To illustrate the role that South Korea and China are playing in North Korea’s external economic relations, *Figure 3* takes all economic interactions with the two countries—trade, aid, and investment—and expresses them as a function of licit merchandise exports. After falling from the temporary peak at the time of the 2000 summit, the series has converged back to its long-run upward trajectory. The indicator for China rises fairly steadily throughout the sample period, from 0.4 in 1990 to 1.3 in 2005, slightly exceeding that of South Korea in this terminal year of our sample period. This gross measure of economic interaction helps explain South Korean concerns about China’s “economic colonization” of North Korea.

The picture changes, however, if transactions on commercial terms and those embodying a concessional or grant element are separated. What is striking is the difference between the deepening integration between North and South Korea depicted in *Figure 3*, and the

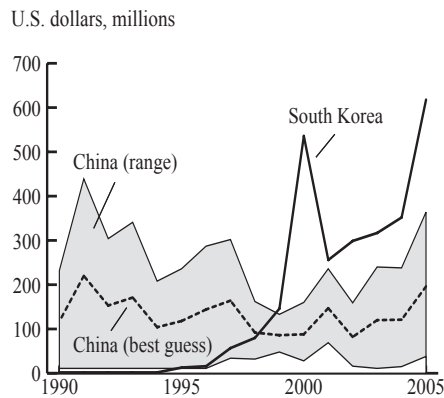
**Figure 3: Ratio of Balance of Payments Transactions to Licit Merchandise Exports for South Korea and China Relating to North Korea, 1990–2005**



Source: Authors’ calculations.

relative stagnation of South Korea's role in commercial trade. This point is reinforced in **Figure 4**: the magnitude of Chinese transfers, while uncertain, appears to be fairly constant. Since 1999, they have been dwarfed by South Korea's skyrocketing transfers. The ironic message is that North Korea's deepening economic integration with China is largely market based, while exchange with South Korea has a growing official component. Whatever its perceived political utility in the short-run, this particular profile raises serious questions about the transformative effects of South Korea's engagement with the North.

**Figure 4: Official Support to North Korea from South Korea and China, 1990–2005**



Source: Authors' calculations.

## Conclusion

Despite the onset of the nuclear crisis in 2002, North Korea's trade grew steadily in the first half of the decade. Our best guess is that North Korea has run current account deficits (inclusive of revenues from illicit sources) throughout the sample period 1990–2005, and that those deficits widened in the first half of the 2000s.

The discrepancy between the estimated current and capital account balances in most years suggests that North Korea is generating more revenues than it is spending. One possible explanation, and one that we favor, is that public estimates of earnings from illicit sources may be too large, either singularly or jointly, or these activities may have been successfully impeded in recent years.

North Korea's deficits have to be financed, and observable transfers and capital inflows into North Korea are trending up, at least through 2005. These transfers and capital flows come mostly from two sources, China and South Korea. Two strategic implications follow from North Korea's growing reliance on these two partners. First, while sanctions have no doubt hurt North Korea, they have also resulted in a reorientation of the North Korean economy toward trading and investment partners that are more favorably disposed toward a strategy of engagement. Although evidence is preliminary, the missile and nuclear tests of 2006 probably accelerated this trend. Those inclined toward sanctions deployed them; those inclined toward engagement did so cautiously (China) or barely at all (South Korea).

South Korea's economic ties continue to be characterized by a relatively high level of state involvement, either directly (in the relatively high share of aid and financial transfers in total bilateral transactions) or indirectly (through subsidies to, or guarantees on, nominally commercial transactions); this is true even when compared with China's economic relations with the DPRK. The extensive involvement of the South Korean government in investment and trade relations with North Korea and the very large role played by outright transfers in the relationship are understandable; the South Korean public appears supportive of policies that will avoid economic collapse in the North.

South Korea's policies raise serious questions, however, about the argument that engagement will have the socializing effects that proponents of engagement suggest. Two of the most prominent examples of South Korea's engagement, the Mt. Kumgang and Kaesong projects, are enclaves, literally fenced off from the rest of the North Korean economy, while an increasing share of the remainder of South Korea's transactions with the North takes the form of aid. The summit of October 2007 held forth the promise of an ambitious program of public South Korean investment in North Korean infrastructure and joint public-private partnerships in the North. The debate about the appropriate balance between commercial and noncommercial relations between South and North is likely to be an ongoing issue for the new administration taking office in Seoul in February 2008.

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