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**Chinese Infrastructure and Natural Resources
Investments in North Korea**

by
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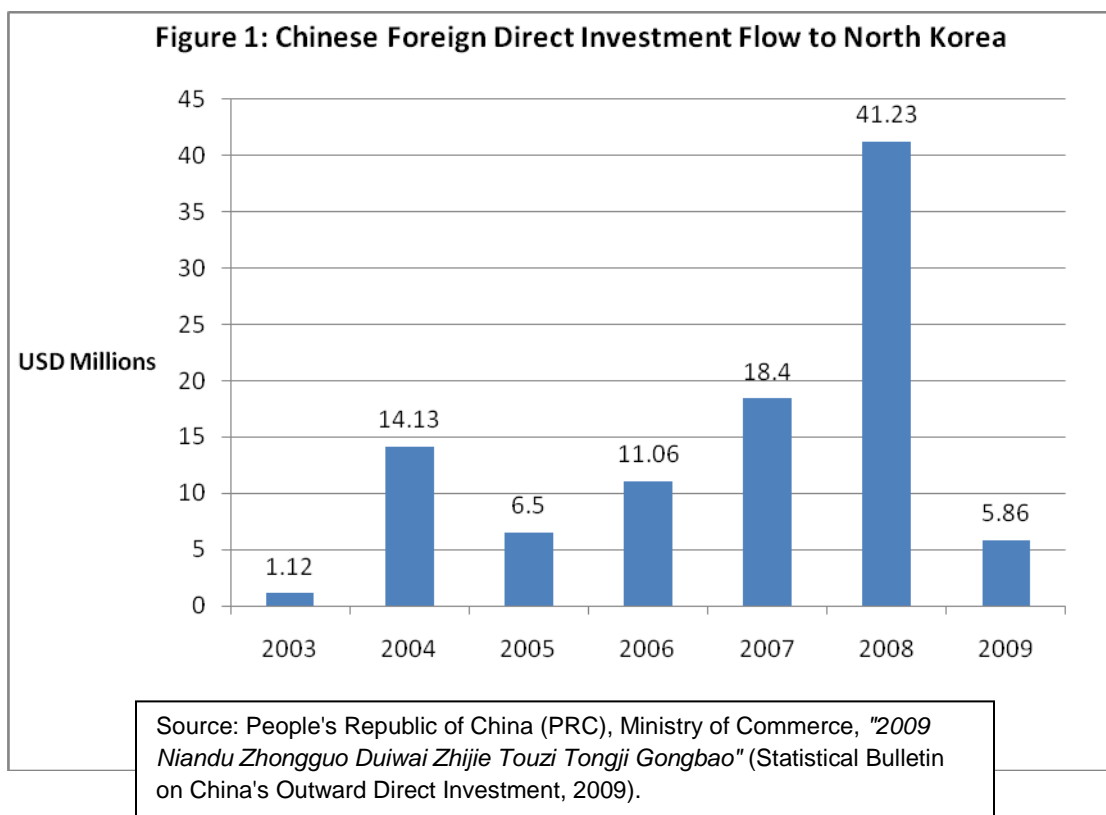
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Summary

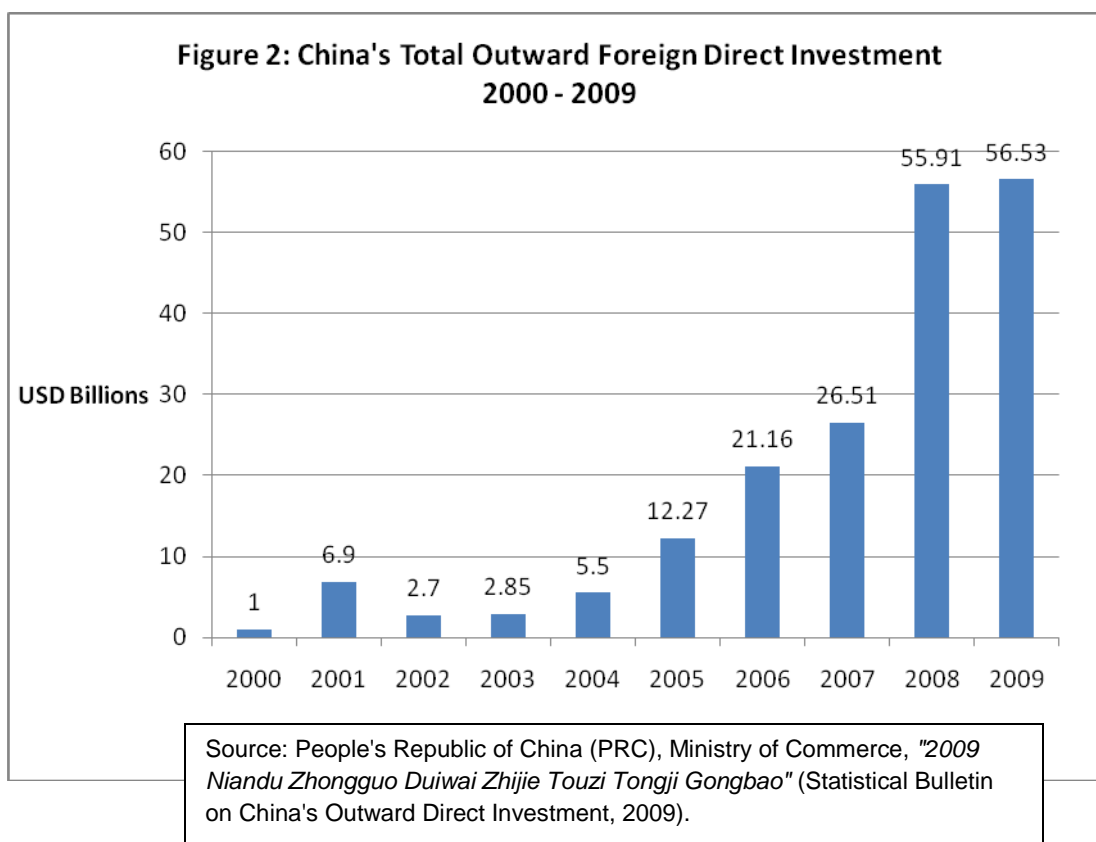
Investments made by Chinese companies in North Korea have increased dramatically over the past decade. Detailing the full extent of the People's Republic of China's (PRC) investment in North Korea is difficult, as the North Korean government provides little information on the subject. While the government of the PRC publishes data regarding Chinese outward-bound foreign direct investment (FDI), it is unclear whether the official data provide a complete picture of the level of PRC investment in North Korea. However, according to China's Ministry of Commerce, investments by Chinese companies have risen dramatically in recent years: the amount of investment reported for 2008 was \$41.23 million U.S. dollars (USD), compared to only \$1.2 million USD in 2003 (see figures below).¹

A substantial amount of this Chinese investment is taking place in the mining and mineral resource sectors of North Korea as well as in port facilities and other infrastructure sectors. A shift in investment strategy appears to have taken place around 2002, with the signing of a new investment agreement between the two governments and the creation of an experimental special economic zone for Chinese investors across the border from the Chinese city of Dandong.² Although the two countries have announced a number of large-scale joint venture projects, there have been a number of obstacles and challenges preventing these investments from achieving their full potential.



¹ People's Republic of China, Ministry of Commerce, *Statistical Bulletin on China's Outward Direct Investment, 2009*. <http://hzs.mofcom.gov.cn/accessory/201009/1284339524515.pdf>.

² In 2002, the two governments signed an "Agreement on Favored Investment Treatment and Protection." This occurred in conjunction with North Korea's 2002 announcement of the creation of the Sinuiju Special Administrative Zone, an area that neighbors China's city of Dandong and is similar to the special economic zones of China., *Guoji Maoyi*, "Analysis of China-DPRK [Democratic People's Republic of Korea] Economic, Trade Relationship," March 20, 2008. OSC ID: CPP20080328308002.



Chinese Investments in the North Korean Mining Industry

China is the world's leading producer of a number of minerals, including aluminum, coal, gold, iron and steel, lead, rare earths, and zinc. Among the 45 major commercial minerals identified by the U.S. Geological Survey, China faces an assessed shortage in nineteen:³ China's demand for chromium, cobalt, copper, iron ore, manganese, nickel, petroleum, and potash exceeds domestic supply, and imports were estimated to account for more than 30 percent of domestic consumption in 2008.⁴ Geologists in China are confident that significant amounts of undiscovered minerals exist in the western territory of the country, leading to increased investment in numerous exploration projects.⁵ However, at least in the near to intermediate term, China will continue to rely on mineral imports to meet its domestic demand.

China's enormous demand for resources has been well documented over the past several years and is one reason why China has turned to North Korea as an additional source of raw materials.⁶ While North Korea does not rank as one of China's largest trade partners,⁷ the

³ Pui-Kwan Tse, *2008 Minerals Yearbook - China* (Washington, DC: U.S. Department of the Interior, U.S. Geological Survey, October 2009), p. 9.2. <http://minerals.usgs.gov/minerals/pubs/country/2008/myb3-2008-ch.pdf>

⁴ Ibid. p. 9.1.

⁵ Ibid. 9.2.

⁶ Peter Goodman, "Booming China Devouring Raw Materials," *Washington Post*, May 21, 2004. <http://www.washingtonpost.com/wp-dyn/articles/A43765-2004May20.html>; Keith Bradsher, "China's Commodity Buying Spree," *New York Times*, June 10, 2009.

importance of China for the North Korean economy is significant. Since the collapse of the Soviet Union, the PRC has been North Korea's largest trading partner, with China importing ores, mineral fuels (coal), iron and steel, and marine products from North Korea and exporting mineral fuels and oil, electrical machinery, knit apparel, plastic, vehicles, and iron and steel to North Korea.⁸ While this aspect of the trade relationship has existed for some time, the nature of the relationship has changed in recent years, with Chinese companies investing in infrastructure projects and joint ventures in North Korea's mining industry. North Korea holds an estimated \$2 trillion USD worth of mineral reserves, making it an enticing destination for Chinese mining companies.⁹

Investments in Coal

In 2004, North Korea opened a number of investment opportunities in the mining industry to Chinese companies.¹⁰ Within a year of this announcement, China Minmetals Corporation reportedly signed an agreement with North Korea's Ministry of Foreign Trade to establish a joint venture to renovate and operate the Yongtung coal mine located in South Pyongan Province, which was North Korea's first joint venture with a foreign company outside of the special economic zone.¹¹ The Yongtung coal mine is one of the leading coal mines in North Korea, with a production rate of about 1 million tons per year of anthracite.¹²

Investments in Ferrous Metals

In 2005, China Tonghua Iron and Steel Group (a state-owned but partially privatized enterprise)¹³ invested approximately \$7 billion renminbi (RMB) (\$940 million USD) in developing the Democratic People's Republic of Korea's (DPRK) Musan iron mine, the largest open-cut iron mine in Asia with verified, iron-rich ore reserves reaching seven billion tons.¹⁴ The investment contract stipulates a 50-year period of mining rights, with a production goal of ten million tons of iron ore per year. However, in December 2005 an anonymous Chinese source reported that the development project was canceled by officials in North Korea embarrassed by the publicity of

<http://www.nytimes.com/2009/06/11/business/economy/11commodity.html?scp=2&sq=china+demand+ore&st=nyt>

⁷ In 2008, North Korea ranked 64th among China's export markets and 70th as a source of imports. Source: Congressional Research Service Report, *China-North Korean Relations* (Washington, DC: January 2010). <http://fpc.state.gov/documents/organization/138774.pdf>.

⁸ Ibid.

⁹ *Washington Post*, "Value of N. Korea Sanctions Disputed," June 12, 2009.

<http://www.washingtonpost.com/wp-dyn/content/article/2009/06/11/AR2009061102323.html>.

¹⁰ John C. Wu, *2005 Minerals Yearbook - North Korea* (Washington, DC: U.S. Department of the Interior, U.S. Geological Survey, June 2007).

<http://minerals.usgs.gov/minerals/pubs/country/2005/knmyb05.pdf>.

¹¹ China Minmetals News Release, October 2005.

http://www.minmetalsusa.com/detail.jsp?article_milliseconds=200512150171&column_no=03.

¹² John C. Wu, *2005 Minerals Yearbook - North Korea* (Washington, DC: U.S. Department of the Interior, U.S. Geological Survey, June 2007).

<http://minerals.usgs.gov/minerals/pubs/country/2005/knmyb05.pdf>.

¹³ Shougang, one of China's largest state-owned steel companies, purchased a 77.59 percent stake in Tonghua for around \$370 million in July 2010. See *Wall Street Journal*, "A Year After Riots, Tonghua Goes to State Buyer," July 19, 2010. <http://blogs.wsj.com/chinarealtime/2010/07/19/a-year-after-riots-tonghua-goes-to-state-buyer/>.

¹⁴ Shanghai Northeast Asia Investment & Consultancy Company, "A Study Report on the DPRK [Democratic People's Republic of Korea] Mineral Resources," December 7, 2007. OSC ID: KPP20080123032002.

the deal, which highlighted the level of foreign investment required for such a project.¹⁵ A subsequent media article in February 2006 indicated that the two sides were still in negotiations over the deal.¹⁶ The current status of the deal is uncertain.

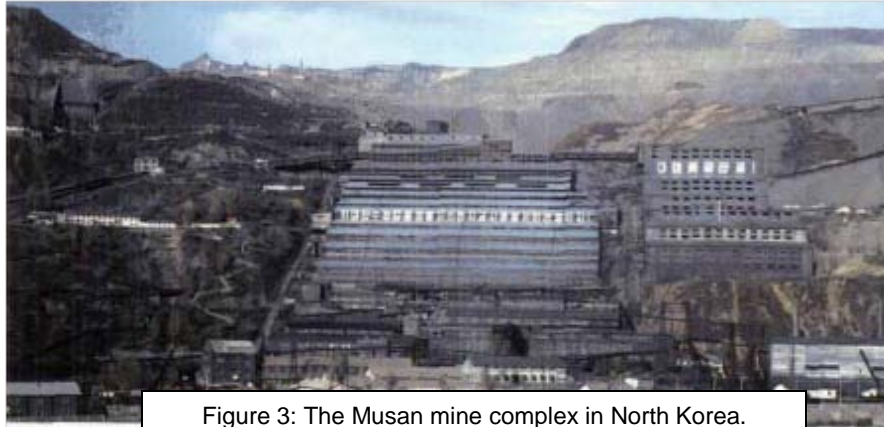


Figure 3: The Musan mine complex in North Korea.
Source: Open Source Center, *Musan Mine Profile*.

The Tangshan Iron and Steel Company (which became the Hebei Iron and Steel Company after a recent merger)¹⁷ also signed a deal in November 2007 to build a steel smelting plant in Chongjin, North Korea, with an annual steel output of 1.5 million tons, along with a 600,000 kilowatt thermal power station. It is to be jointly funded by the North Korean government and is to involve joint development and utilization of nearby deposits of iron ore.¹⁸

Investments in Copper

The Zhejiang-based Wanxiang Group acquired a 51 percent stake in the Hyesan Youth Copper Mine of North Korea in 2006.¹⁹ The Hyesan mine, located just ten kilometers from the border with China, is estimated to have over 250,000 metric tons of copper. The Chinese company secured the right to develop the mine for 15 years, and it will provide mining equipment, materials, supplies, and technicians.²⁰ Development of the mine was reportedly halted in 2009 following the imposition of U.N. sanctions against North Korea in response to Pyongyang's

¹⁵ Sohu Business, "Chinese Company's Investment Plans in North Korea's Musan Mine Come to an End," December 8, 2005.

<http://business.sohu.com/20051208/n240909258.shtml>.

¹⁶ National Development and Reform Commission News Release, "China Steel Plans to Develop Musan Mine," February 24, 2006.

http://cbj.ndrc.gov.cn/xgxx/t20060224_60792.htm.

¹⁷ *China Daily*, "CSRC [China Securities Regulatory Commission] Approves Hebei Steel Merger Plan," September 22, 2009.

http://www.chinadaily.com.cn/bizchina/2009-09/22/content_8718749.htm.

¹⁸ Current as of December 2007. Shanghai Northeast Asia Investment & Consultancy Company, "A Study Report on the DPRK Mineral Resources," December 7, 2007. OSC ID: KPP20080123032002.

¹⁹ *Chosun Ilbo*, "China Investing Heavily in N.Korean Resources," March 12, 2007.

http://english.chosun.com/site/data/html_dir/2007/04/12/2007041261016.html; and Wanxiang News Release, "Wanxiang Group and North Korea Mining Corp Announce a Joint-Venture in North Korea's Largest Copper Mine," November 28, 2007.

http://www.wanxiang.com.cn/product/wxdt_show.asp?id=1326&action=newsmg&newstype=1.

²⁰ John C. Wu, *2006 Minerals Yearbook - North Korea* (Washington, DC: U.S. Department of the Interior, U.S. Geological Survey, September 2007).

<http://minerals.usgs.gov/minerals/pubs/country/2006/myb3-2006-kg.pdf>.

nuclear test in May of that year. After the PRC assented to the sanctions, NHI Shenyang Mining Machinery, which was commissioned to build facilities for the mine, was reportedly forced to stop construction.²¹ However, in July 2010, a spokesperson from Wanxiang Group stated that the mine's development work is continuing.²² Furthermore, a recent press release from Jilin's provincial government referenced "current negotiations" between China and North Korea over copper and gold mine projects,²³ which may represent in part an indirect reference to the Hyesan mine project.



Figure 4: The Hyesan mine complex in North Korea.
Source: Open Source Center, *Hyesan Mine Profile*.

Investments in Molybdenum

The China Iron and Steel Association reportedly is developing a rare-earth molybdenum mine in the DPRK with a goal of producing more than 10,000 tons of molybdenum concentrate per year. The location of this planned mining project is unknown.²⁴ Molybdenum is valued for its ability to withstand extreme temperatures, making it ideal for the manufacture of aircraft parts, electrical contacts, industrial motors, and filaments. In March 2010, the North Korean government announced that it was taking measures to protect molybdenum and cobalt, citing policies that would create a strategic reserve of the precious metals, invest in imports of rare metals, and enhance mining and recycling technologies.²⁵

Investments in Gold

China's Zhaoyuan Shandong Guoda Gold Stockholding Company and the DPRK Committee for the Promotion of External Economic Cooperation have established a joint venture mining

²¹ Chosun Ilbo, "N.Korea Mining Project Buckles Under UN Sanctions," July 30, 2009.

http://english.chosun.com/site/data/html_dir/2009/07/30/2009073000470.html.

²² Sina News, "Zhejiang's Wanxiang Group Denies Reports of Divestment in North Korean Copper Mine," July 2, 2010.

<http://news.sina.com.cn/c/2010-07-02/170420599306.shtml>.

²³ Jilin Province Press Release, Economic Watch: Northeast Asian Cooperation Enters an "Accelerated Pace," September 2, 2010.

http://www.chinajilin.com.cn/content/2010-09/03/content_2070371.htm.

²⁴ Shanghai Northeast Asia Investment & Consultancy Company, "A Study Report on the DPRK Mineral Resources," December 7, 2007. OSC ID: KPP20080123032002.

²⁵ Ministry of Commerce of Metals, Minerals and Chemicals Imports Press Release, "North Korean government will introduce measures to protect rare metals molybdenum and cobalt," March 3, 2010.

<http://cccmc.mofcom.gov.cn/aarticle/zhongqyswhd/201003/20100306803579.html>.

company to mine gold from the DPRK's Mt. Sangnong, located 50 kilometers from Tanchon in South Hamgyong Province on the eastern coast of North Korea and to ship all the mined gold concentrate to Zhaoyuan in China's Shandong Province for smelting. Five other North Korean gold mines have also garnered the interest of various Chinese mining companies, although the extent of their investment in them is unknown.²⁶



Figure 5: Map of North Korea (Sites of interest are marked in bold; note the close proximity of most investment projects to the Chinese–North Korean border.)
 Source: University of Texas Libraries

²⁶ Shanghai Northeast Asia Investment & Consultancy Company, "A Study Report on the DPRK Mineral Resources," December 7, 2007. OSC ID: KPP20080123032002.

Chinese Investments in North Korea's Infrastructure Sectors

Since 1995, the PRC has signed various deals with North Korea that allow for Chinese use of the Rajin port facility in the Rajin-Sonbong special economic zone (in the northeastern-most corner of North Korea), which provides valuable access to the Sea of Japan. In 2008, an official from the PRC's Yanbian Korean Autonomous Prefecture announced that China had been granted exclusive rights to Pier No. 1 at the Rajin port and that negotiations were underway to extend those rights for a period of ten years.²⁷ The Rajin port has many features that make it attractive to Chinese investors: it remains ice-free year round, has ten berths, a cargo storage area of 203,000 square meters, and is located a mere 52 kilometers from public roads along the Chinese border. The Chuangli Group, a company based out of the Chinese city of Dalian, reportedly invested \$3.8 million USD in 2009 to renovate parts of Pier No.1 and has constructed an additional 40,000-square-meter storage facility.²⁸

The Rajin port deal is important for the regional economy, rather than representing part of a strategic plan for China's national security, according to Lü Chao, a researcher on North Korean affairs at the Liaoning Academy of Social Sciences.²⁹ Freight from the Chinese city of Hunchun in Yanbian usually travels through Dandong port or Dalian port before being exported to Japan, a process that takes three to four days. According to Xia Kejun, a trade manager in Hunchun, if the same freight were able to go through Rajin port, it would cut the transportation time down to just over 10 hours to reach Japan's Niigata Port.³⁰



Figure 6: Shipping containers and cranes at the Rajin port facility in North Korea.
Source: *Daily NK*, "Emperor Hotel Casino Reopens," June 14, 2007.
<http://www.dailynk.com/english/read.php?catId=nk03100&num=2222>

In addition to the Rajin port deal, an official from the Chinese city of Tumen in Jilin Province indicated that a Chinese state company had obtained rights to the third and fourth piers in the

²⁷ Jamestown Foundation China Brief, *Strategic Implications of China's Access to the Rajin Port* (Washington, DC: March 18, 2010).

²⁸ *Ibid.*

²⁹ *Global Times*, "China Gains Sea of Japan Trade Access," March 10, 2010.

http://china.globaltimes.cn/diplomacy/2010-03/511351_2.html.

³⁰ *Ibid.*

port of Chongjin, located about 70 kilometers south of Rajin.³¹ Chongjin port is one of North Korea's largest, with a handling capacity of up to thirteen 5,000–10,000 ton freighters at one time. It is linked by rail to the Musan iron mine, where Chinese investors have reportedly made additional infrastructure investments, as noted above.³²

In 2009, North Korea accepted a Chinese proposal to construct a new highway bridge over the lower Yalu River at the Dandong-Sinu'iju crossing.³³ This acceptance comes after past refusals and delays of similar deals offered since 2000. China reportedly agreed to cover the total cost of the new bridge, estimated to cost in the hundreds of millions of dollars. The bridge will act as a supplement to the Sino-Korean Friendship Bridge built by the Japanese in 1943, which currently serves as the only connection between the two countries in this border area. Construction of the new bridge was reportedly scheduled to begin in October 2010, but it was delayed.³⁴

In the latest sign of closer economic relations between North Korea and the PRC, Chinese authorities agreed in October 2010 to allow hundreds of North Koreans to work in factories in the border cities of Dandong and Tumen. The factory workers will be assigned to a plastic processing plant, the products of which will be shipped by rail to Chongjin and eventually sold to South Korea and Japan. Tumen City is also hoping to attract more labor-intensive industries, such as apparel making, to capitalize on the new influx of low-cost North Korean labor.³⁵



Figure 7: The "Friendship Bridge" over the Yalu River, which connects China and North Korea.
Source: Ethan Epstein. "Staring at North Korea," *Slate Magazine*, October 4, 2010.
<http://www.slate.com/id/2269090/entry/2269769>

³¹ Yonhap News Agency, *North Korea Newsletter*, July 29, 2010.

<http://english.yonhapnews.co.kr/northkorea/2010/07/28/40/0401000000AEN20100728008000325F.HTML>

; Yonhap News Agency, "North Korea Named the Chinese Pier in Chongjin the 'Tumen Pier'," October 11, 2010.

http://chinese.yonhapnews.co.kr/n_international/2010/10/11/8000000000ACK20101011002200881.HTML

³² Greater Tumen Initiative, *Port Facilities in the Tumen Region*, June 20, 2003.

<http://www.tumenprogramme.org/news.php?id=425>

³³ *Chosun Ilbo*, "Beware of the Chinese When They Bring Gifts," October 7, 2009.

http://english.chosun.com/site/data/html_dir/2009/10/07/2009100700827.html

³⁴ Dandong Xinwen, "Dandong Fang Chan Sheng Zhi Kong Jian Ju Da" (*Dandong's Real Estate Value Has Enormous Room to Grow*), October 9, 2010. <http://dd.nen.com.cn/76576586828087296/20101009/2358534.shtml>;
Wall Street Journal, "Border Bridge Reflects Dilemma," November 28, 2010.

<http://online.wsj.com/article/SB10001424052748703785704575642532418802438.html>

³⁵ *Asahi Shimbun*, "China Gives Nod to North Korea Workers at Border Cities," October 19, 2010.

<http://www.asahi.com/english/TKY201010180277.html>

Conclusions

The incomplete nature of statistical data from both the PRC and North Korea complicates the picture, but available statistical and anecdotal evidence shows a dramatic increase in China's investments in North Korea over the past seven years. To date, China has reportedly invested a total of \$264 million USD in North Korea.³⁶ Much of this investment has come since 2003, with a 44 percent increase in investment taking place between 2007 and 2008 alone (from \$18.4 million to \$41.23 million, respectively). Data on China's total outward foreign direct investment bolster this argument, as China's FDI into North Korea increased dramatically within this same time frame (see figure 1).

However, this increase is most likely a reflection of the PRC's "Going Out Policy" to promote foreign expansion by Chinese companies³⁷ rather than representing a coherent plan based on the perceived geopolitical importance of North Korea. The Chinese government's promotion of investment abroad through its "Going Out Policy" has provided China's domestic companies with further incentives to look abroad for economic opportunities; for its part, North Korea has offered additional incentives for increased foreign investment with its creation of special administrative zones that are more attractive to foreign companies.³⁸ This trend appears likely to continue in the future: Media reports from spring 2010 indicated that the PRC has agreed to an additional \$10 billion USD investment plan for North Korea to build ports, roads, railways, and tourist infrastructure. This huge investment would amount to almost 70 percent of North Korea's domestic gross product; however, there has yet to be any formal confirmation of the deal.³⁹

Despite this more favorable climate for foreign investment, Chinese involvement in this area has not been without its problems. Many of the investment projects appear to have suffered from fits and starts caused by the North Korean regime's insecurity regarding any type of foreign investment into its domestic economy as well as potential complications resulting from the most recent round of U.N. sanctions levied against North Korea. Furthermore, although there has been a substantial increase in Chinese investment activity in North Korea, from the perspective of China, North Korea remains a relatively insignificant trade partner: total trade between the two countries amounted to a meager \$3 billion USD in 2009, compared to the \$366 billion USD in total trade between the United States and China in the same year.⁴⁰ However, from the

³⁶ People's Republic of China, Ministry of Commerce, *Statistical Bulletin on China's Outward Direct Investment, 2009*. <http://hzs.mofcom.gov.cn/accessory/201009/1284339524515.pdf>.
<http://hzs.mofcom.gov.cn/accessory/201009/1284339524515.pdf>.

³⁷ The "Going Out" strategy is a Chinese government campaign introduced at the 2002 Communist Party Congress to raise China's global economic profile by investing overseas and acquiring foreign assets. See U.S.-China Economic and Security Review Commission, *Annual Report to Congress 2009* (Washington, DC: U.S. Government Printing Office, November 2009), p. 94, footnote 52. See also Jamil Anderlini, "China to Deploy Forex Reserves," *Financial Times*, July 21, 2009; and Accenture Consulting, "China Spreads Its Wings: Chinese Companies Go Global," 2007.

³⁸ The Central People's Government of the People's Republic of China, "Geng Hao De Shi Shi 'Zou Chu Qu' Zhan Lue [Better Implementation of the 'Going Out' Strategy], March 15, 2006.
http://www.gov.cn/node_11140/2006-03/15/content_227686.htm.

³⁹ *Global Times*, "North Korea Looking for an Economic Jump-Start," April 1, 2010.

<http://opinion.globaltimes.cn/commentary/2010-04/518341.html>; *New York Times*, "China's North Korean Quandry," May 25, 210.
<http://www.nytimes.com/2010/05/26/opinion/26iht-edzimmerman.html>.

⁴⁰ Council on Foreign Relations, *The China-North Korea Relationship* (Washington, DC: October 7, 2010).
http://www.cfr.org/publication/11097/chinanorth_korea_relationship.html; and The U.S.-China Business Council, *US-China Trade Statistics 2009* (Washington, DC). <http://www.uschina.org/statistics/tradetable.html>.

perspective of North Korea, the partnership becomes increasingly important with each passing year, with some estimates suggesting that North Korea relies on China for 80 percent of its consumer goods and 45 percent of its food.⁴¹

Investment in North Korea's infrastructure and mining industry provides China with the opportunity to acquire exclusive mining and transportation rights in areas of critical need at a bargain price while simultaneously bolstering the North Korean economy and preventing it from collapse. North Korea's refusal to adopt the type of economic liberalization that China has advocated for, along with its nuclear program and its periodic international brinksmanship, remain areas of serious concern for Beijing. However, the continuation of Chinese investment projects despite these irritants in the relationship suggests that the PRC values these investment opportunities and that it prefers a stable North Korea to one teetering on the edge of collapse.

⁴¹ Council on Foreign Relations, *The China-North Korea Relationship*, (Washington, DC: October 7, 2010).