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Feature: North Korean Economy, Past and Present

China's Aid to North Korea - Centered on the China-North Korea Oil Pipeline*

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Introduction

A former U.S. State Department official with "long experience" in dealing with North Korea describes the situation as follows.

"The day China decides to break with the DPRK and the moment the PRC decides that a reunified Korean Peninsula (under Seoul's aegis) is more in its interest than a divided peninsula, that is when the process of Korea's national unification will begin in earnest, and there will be little the DPRK can do to sustain itself as an independent entity. It is for that reason that the North has been extremely cautious in its ties with Beijing. . . . China is the DPRK's lifeline and insurance policy, which for a nationalistic North Korea is something that necessarily sticks in the craw, but it is a fact of life." (Committee on Foreign Relations, United States Senate, 2012: 10)

This can be considered a very frank expression of the U.S. opinion that without the PRC (hereinafter "China"), the DPRK (hereinafter "North Korea")¹ cannot exist. I basically have no disagreement with this statement. On the other hand, however, China is in a strategic dilemma versus North Korea as a geopolitical bulwark. North Korea is well aware of these troubling conditions for China, and exerts autonomy within the range where it will not be forsaken by China. In these relations with North Korea, can China display diplomatic skills and exercise appropriate influence on the Korean Peninsula issue as a responsible superpower in the region, as requested by the international community?

In this paper, Chapter II examines China's geopolitical view of North Korea, which is a key pillar of Chinese diplomacy. In the Korean War, China positioned North Korea as a bridgehead against American influence and paid a great sacrifice to intervene. Thereafter, China and North Korea signed a de facto alliance treaty. Through this history, the understanding was formed that China and Korea have a special relationship that goes beyond normal relations between two countries. Since North Korea began conducting nuclear tests, however, there have been moves in China toward reconsidering that relationship. In fact, discussions were held on changing China's foreign policy at the Foreign Affairs Leading Small Group in 2009, but at that time a decision was made to maintain the existing policy. Accordingly, Chapter

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II discusses how China is giving priority to its geopolitical strategic viewpoint. Chapter III reconfirms what type of support China has been giving to North Korea. This chapter also clarifies that China has consistently provided support from the time that the North Korean regime was founded and after the collapse of the Cold War as well. Chapter IV discusses the operational conditions of the oil pipeline from China to North Korea, which is North Korea's lifeline, whereby the volume of oil transported cannot be adjusted because of a technical issue. Information previously conveyed in a piecemeal fashion is examined in detail from internal documents on Chinese oil obtained from *Baidu Wenku*, etc. This clarifies how it would be difficult for China to use energy supply as a sanctions card against North Korea. As a final conclusion, the paper confirms that China has no effective means of preventing North Korea's nuclear development because China has to continue to support North Korea as in the past, unless it changes its geopolitical view and abandons the premise of upholding the North Korean regime.

The source materials, whenever possible, are from China which is one of the countries involved.

I. The Korean Peninsula in China's Geopolitical View

1. China-North Korea Relations as "Bonds among Comrades"

The relations between China and North Korea have the aspect of political relations that were formed through bonds among comrades before two countries were founded. Kim Il-sung (who became the Supreme Leader after North Korea was established) and some of the other Korean communist guerrillas fought against Japanese security forces in Manchuria in anti-Japanese units organized by the Communist Party of China together with Chinese people. Kim Il-sung then provided aid to the Communist Party of China forces in the civil war on the Chinese mainland after the Japanese defeat. In Kim's words, "Right after the liberation, when the Chinese People's Liberation Army was in a disadvantageous position in the northeast region, we actively gave them support. That was a difficult time when we were just taking the first steps of forming the nation, but we supported the Chinese people's war of liberation as a matter of course, and did everything we could to fulfill our international obligations" (Gil Jae-jun and Lee Sangjeon, 2008: cover). The North Korean officers and 14,000 soldiers who fought in the Chinese Civil War as the Fourth Field Army of the People's Liberation Army were allowed by the Central Committee of the Communist Party of China to return to North Korea with their arms. This was approved as "support for the Korean unification project" (Yu-Hui Zhang, 2012: 97).

Further, as symbolized by the diplomatic expression "relations of friendship forged with blood," during the Korean War (1950-1953) China sent over a million soldiers to the Korean Peninsula as the People's Volunteer Army, who fought against the U.N. forces centered on the South Korean army and the U.S. army. China paid a great sacrifice by participating, with 114,000 killed in action, 252,000 wounded, 25,600 missing, and 34,600 who died from wounds. Moreover, during the war the percent of national defense expenditures in China's fiscal spending was 41.16% in 1950, 43.12% in 1951, and 33.61% in 1952 (Xinning Guo, 2011: 132). There is no doubt that the Korean War was a huge financial burden for China, which had finally ended its civil war and been established as a state less than a year before.

2. The Korean Peninsula Is among China's "Core Interests"

The strong skepticism and fears which China then held about the U.S. advance into Asia were a powerful motivation for China's entry into the Korean War. Xiaodong Li (2010: 184-185) explains this as follows. When Mao Zedong met with Kim Il-sung during Kim's visit to China in May 1950, Mao noted the need to pay careful attention to the possibility that a foreign reactionary army might invade Korea. This was based on a strategic awareness that the U.S. invasion of Korea would be the first step to the final goal of

the Chinese mainland, and that America was preparing to use Korea as a forward eastern base for world war. So the Communist Party of China made the grave decision to aid the Korean people and delay the liberation of Taiwan. Mao Zedong recognized the 38th parallel as the limit and said "If the U.S. imperialists intervene—we will not challenge the 38th parallel, though—if they go beyond the 38th parallel, we will definitely attack." For that reason, after the U.S. army crossed the 38th parallel, the Central Committee of the Communist Party of China formed the People's Volunteer Army and decided to "oppose the U.S. and support North Korea, and to protect families and defend the nation".

It is deeply interesting that for China protecting the socialist administration that formed on the northern part of the Korean Peninsula was given priority over the nearly accomplished goal of unifying the fatherland through the liberation of Taiwan. Even today, China views Taiwan as one of its core interests (Maeda, 2012: 4)² and Taiwan remains an important presence. China's participation in the Korean War was the occasion for the separation between China and Taiwan that continues to this day.

The Korean War had a great influence on China's viewpoint on the Korean Peninsula. Under the Sino-North Korean Mutual Aid and Cooperation Friendship Treaty concluded in 1961³, each party must provide military and other aid to the other party if it is invaded. For both China and North Korea, this is the only military alliance treaty still in effect today.⁴

3. Do China and North Korea Have Normal Country-to-Country Relations?

For China, North Korea's nuclear tests were an epoch-making development which made China question whether supporting North Korea is in China's own national interests. When North Korea conducted its first nuclear test in October 2006, Chinese Ministry of Foreign Affairs Chief Spokesman Liu Jianchao said the relations between China and North Korea are normal country-to-country relations in accordance with international standards. (In response to a question about whether China and North Korea are allies, and whether China provided technical support to secure the safety of the nuclear tests) Liu did not agree with the characterization of China and North Korea as allies. He said China is pursuing a non-alliance policy and does not form alliances with any country. He said the relations between China and North Korea are normal country-to-country relations based on the rules of international relations (Radio Press, 2006).

The Chinese Ministry of Foreign Affairs then made the following announcement regarding North Korea's second nuclear test in May 2009. "On May 25, 2009, the Democratic People's Republic of Korea conducted another nuclear test ignoring the unified opposition of the international community. The government of China expresses its firm opposition to this testing" (Radio Press, 2009).

China has not accepted the nuclear testing by North Korea by any means, and has taken a harsh stance. Following North Korea's third nuclear test in February 2013, Chinese Foreign Minister Yang Jiechi summoned North Korean Ambassador to China Ji Jae Ryong and expressed the following strong displeasure. "The Chinese government expresses its harsh dissatisfaction and firm opposition to North Korea for conducting a nuclear test once again without considering the universal opposition of the international community" (Ministry of Foreign Affairs of the People's Republic of China, February 12, 2013). This message was distributed via the Ministry of Foreign Affairs website that same day to appeal to the world with the stance of the Chinese government which had become still more resolute. Also, subsequent to the February 2013 nuclear test, as North Korea announced they would no longer observe the armistice ending the war and initiated more provocative words and acts against South Korea, Chinese Foreign Minister Wang Yi spoke with U.N. Secretary General Ban Ki-moon by phone and expressed concern that the tensions on the Korean Peninsula were worsening. He expressed unprecedentedly harsh criticism of

North Korea, saying "We will not allow trouble-making on China's doorstep" (Ministry of Foreign Affairs of the People's Republic of China, April 6, 2013).

The Chinese government's handling of the North Korean problem had been extremely cautious up until that time. The paper "Yi xin shijiao shenshi Chaoxian wenti yu dongbeiya xingshi [A New Perspective on the North Korea Problem and Northeast Asian Situation]" (Zhongwen Wang, 2004: 92-94) criticizing North Korea, which appeared in *Strategy and Management* in 2004, became a problem. The magazine was temporarily forced to suspend publication and the authorities issued an order to recall the edition (*Asahi Shimbun*, September 22, 2004). This paper criticized North Korea for maintaining a hereditary system, and for its far-left politics and political oppression, and used expressions indicating that North Korea was not thankful for China's political support and economic aid. It also criticized North Korea's brinkmanship diplomacy against the U.S. and warned that China must not follow that lead.

4. China's Move toward Revising Diplomatic Policy toward North Korea

The self-restraint that the Chinese government has exercised in its criticism of North Korea has become merely nominal following North Korea's repeated nuclear tests. After the second nuclear test in 2009, comments said to be leaking changes in the policy toward North Korean inside the Chinese government were printed in *Huanqiu Shibao*, which is affiliated with the Communist Party newspaper, as follows. "Since the nuclear test conducted by the North Korea, China's policy toward North Korea is being adjusted and shifting from a 'special relationship' to 'normal government relations." The article pointed out it was also necessary to revise and adjust the Sino-North Korean Mutual Aid and Cooperation Friendship Treaty in line with objective demands. It further said the abnormal economic aid of only giving must be reconsidered and that viewing North Korea as China's strategic "bulwark" clearly was already obsolete, showing the core areas of China's policy toward North Korea were starting to be reviewed (Baokang Xu, 2009).

Just before this article appeared, the Foreign Affairs Leading Small Group met for three days in August 2009. That meeting was attended by about 10 people including President Hu Jintao, Vice President Xi Jinping, State Councilor Dai Bingguo and other leaders responsible for Chinese diplomacy and national defense, and reportedly the Leadership Small Group on the Korean Peninsula Problem also attended. While reconsidering aid to North Korea and abandoning the alliance treaty were discussed, the meeting's conclusions can be summarized in the following words: "no war, no instability, no nuclear weapons." That is, decisions were made to maintain continued support and the existing policy line, to separate the nuclear issue from Chinese-North Korean relations, and to strengthen the bilateral relations separate from the nuclear issue (chosun.com, February 15, 2013).

While no change was implemented in the policy direction, the fact that revisions were discussed itself is highly significant. From that time, voices frankly criticizing North Korean diplomatic tactics which heighten tensions began to appear in Chinese media.⁵

As for the nuclear issue in North Korea, some comments averted China's responsibility by stressing that the U.S. is responsible. In March 2013 interviews with *Phoenix New Media* and *Yangcheng Evening News*, retired Rear Admiral Yin Zhuo who serves as the chairman of the People's Liberation Army Navy Advisory Committee of Experts on information responded as follows. The relations between China and North Korea are different from those between Japan and the U.S., or between the U.S. and South Korea. China has no military forces stationed in North Korea, and does not have command over the North Korean army. Therefore "China does not have a military alliance relation with North Korea." He also said that the primary responsibility for the nuclear problem lies with the U.S., not with China. He stressed,

"The proposition that because China and North Korea are close, China cannot remain an idle spectator that says nothing is completely false. The U.S. is presently making every effort to position China as the main actor, but that is completely preposterous" (Hong Kong Wenweipo, March 9, 2013). This statement may be an expression of China's frustration over the North Korean nuclear problem, but it was China that continuously supported North Korea until North Korea forced the third nuclear test. To insist at this late date that China is not a main party sounds a bit too self-serving.

II. Structure of Support to North Korea

1. Assistance to North Korea in the History of China's Foreign Aid

While there are many uncertain points regarding the conditions of China's foreign aid, the White Paper on China's Aid to Foreign Countries was released by China's State Council Information Office on April 26, 2011. This was the first official paper clarifying the contents of China's foreign aid. According to this White Paper, the history of China's foreign aid began from material assistance to North Korea and Vietnam in 1950, China's first grant aid began from 1954 with aid to North Korea and to Vietnam for railroad repairs and other infrastructure construction, and China has given North Korea aid for development of human resources including invitation of exchange students and emergency humanitarian aid.

2. Aid to North Korea from the 1950s through the 1980s

The Sino-North Korean Economic and Cultural Cooperation Agreement was concluded on November 23, 1953, after the end of the Korean War (PRC Ministry of Foreign Affairs, 1957: 6-7). This agreement discharged North Korea from any repayment for the costs of all relief supplies received from the beginning of the Korean War through the end of 1953, and determined that China would provide North Korea with grant aid of 8 trillion Chinese yuan (in the former currency unit) over four years from 1954. In addition to China, the Soviet Union and Eastern European socialist countries also gave a lot of aid to North Korea for post-war restoration following the Korean War. For that reason, in 1954 just after the end of the war foreign aid accounted for 33.4% of North Korea's fiscal revenues, and this reportedly declined to 2.6% in 1960 as the economic recovery advanced(Zhihua Shen and Jie Dong 2011; 57).

In August 1958 China and North Korea restored the Sup'ung (Shuifeng) Hydroelectric Power Station, which had suffered outstanding damages from plundering by the Soviet army and the Korean War (Liaoning sheng difangzhi bianzuan weiyuanhui bangongshi, 1996: 37-38). China and North Korea also jointly invested 302,038,000 yuan to build the Unbong (Yunfeng) Hydroelectric Power Station, with construction beginning from September 1959 and completed in April 1967. The generated electricity is shared equally by China and North Korea.

From 1950 through 1963, aside from weapon and equipment aid, "China dispatched 6,700 instructors to Vietnam, North Korea, Cuba, Laos, Albania and other countries who trained all types of military personnel, and also dispatched over 700 military experts who were responsible for training in actions against foreign armies" (Xinning Guo, 2011: 133), so China is believed to have provided military training to North Korea. China also accepted trainees from North Korea to study technology. Based on mutual agreement, North Korea sent 2,962 trainees in the second half of 1954, and they studied at factories and mines in 39 cities in China. The trainees acquired expert knowledge in steelmaking, casting, shipbuilding, construction, railway track laying, fertilizer manufacturing, spinning, textile printing, reeling, printing, leather working, wood processing, canning, cigarette manufacturing, and other fields. China continued accepting trainees thereafter, but this was stopped by a declaration of the Foreign Economic Liaison Committee on May 10, 1967, as the full-scale impact of the Cultural Revolution began to emerge

(Jie Dong 2011: 52-55).7

From 1964 through 1970, China provided plant facilities as well as material and cash assistance, with 25 construction aid projects including sugar factories, industrial textiles plants, knitted fabrics factories, steel cold rolling facilities, power plants, electronic tube factories, radio parts factories, radio communications equipment factories, radio stations, and television stations (Yu-Hui Zhang, 2012: 127-128). China also assisted in building the stations on the Pyongyang Metro which opened in 1973 (PRC State Council Information Office, April 26, 2011). In 1975 the three main countries receiving Chinese aid were North Korea, Vietnam and Pakistan, and the aid they received was primarily military aid (Yu-Hui Zhang, 2012: 206).⁸

Examples of Chinese Construction Aid to North Korea

(Construction Aid by Liaoning Province 1960-1985)

Examples of Chinese Constituetion find to North Rolea	(Gollott action	Tira o j Braom	ing 110vinee 1500 1505,
Item	Contracting Body	Date Completed	Concessionary Loan Amount
Spinning and dyeing factory facilities in Pyongyang, Sinuiju, Kusong and Kaesong.	Provincial bureau of spinning industry	1962	12.8985 million rubles
Cotton spinning equipment for spinning and dyeing factory in Sinuiju	Provincial bureau of spinning industry	Dec.64	8.0258 million rubles
Sinuiju boiler	Northeast electric industry management bureau	Dec.64	3.1892 million rubles
Hamhung fish hook factory	Provincial bureau of light industry	Jun.66	60,000 rubles
Sunchon power plant	Northeast electric industry management bureau	1968	1.6787 million rubles
Huichon power plant	Northeast electric industry management bureau	Sep.68	2.1277 million rubles
Two coal boilers	Northeast electric industry management bureau	Mar.69	1.3897 million rubles
Two coal boilers for Manpo cement factory and Hungnam chemical factory	Northeast electric industry management bureau	1971	0.9168 million rubles
Sariwon spinning factory	Provincial bureau of spinning industry	Nov.73	3.0778 million rubles
Five coal boilers for 2.8 vinylon factory, Chongjin synthetic fiber factory, Sinuiju synthetic fiber factory, and Hungnam fertilizer factory	Northeast electric industry management bureau	Dec.75	4.1597 million rubles
#1600 thermal power plant	Northeast electric industry management bureau	Jun.78	87.38 million yuan
Pihyon oil refinery	Dalian Petroleum Factory No.7	Oct.81	82.45 million yuan
Metal smelting factories (36 items)	Provincial bureau of metal industry	Jul.82	Grant aid

(Liaoning sheng difangzhi bianzuan weiyuanhui bangongshi, 2003; 441-447).

Among the Chinese aid during the 1970s, the laying of a pipeline which sends oil (carried from the Daqing Field in China) directly to North Korea deserves particular mention. Construction of this pipeline from Dandong City in China which crosses the bottom of the Yalu River into North Korea began in

1973, and the pipeline began operating in December 1975 (*Zhongguo shiyou xinwen zhongxin*, March 23, 2010 a). This pipeline is still used to transport oil from China to North Korea today, and as a route for the stable supply of oil to North Korea. This pipeline is discussed in detail in the next chapter.

Additionally, the construction of the Taipingwan (T'aep'yŏngman) Dam (total generation capacity of 190,000 kW) began in the 1980s as a joint energy development project between China and North Korea (Liaoning sheng difangzhi bianzuan weiyuanhui bangongshi, 1996: 40), and was completed in 1987. Also, the construction of the Weiyuan Dam (total generation capacity of 390,000 kW) was completed in 1988 (Zhongguo shuili shuidian chubanshe shuidian zhishiwang; accessed August 31, 2013).

3. Assistance to North Korea after the Collapse of the Cold War Structure

One turning point in China's assistance to North Korea was the end of the Cold War regime in the early 1990s from the collapse of the Soviet Union. President Kim Il-sung's visit to China in October 1991 was his last trip overseas. In a meeting with Kim held at that time, Premier Li Peng used China's population growth problem and losses from flooding indirectly as reasons to refuse requests for aid from North Korea (Jun Yang and Qiubin Wang, 2006: 261-262). The governments of the two countries then signed a trade agreement in Pyongyang on January 26, 1992 (Jinzhi Liu, Jingchu Pan, Rongying Pan and Xiyu Li 2006; 37), and the trade between China and North Korea was changed from the former barter trade to a hard currency format (Jun Yang and Qiubin Wang, 2006: 262).

There was subsequently a cooling period due to the normalization of diplomatic relations between China and South Korea in August 1992 and the 1994 death of President Kim Il-sung, but the Agreement on Economic and Technological Cooperation between the Governments of the DPRK and China was signed on May 23, 1996, and China decided to provide food aid to North Korea (Jinzhi Liu, Jingchu Pan, Rongying Pan and Xiyu Li, 2006: 196). This agreement set the annual food aid at 500,000 tons, of which half was grant aid (Jun Yang and Qiubin Wang, 2006: 265). In 1997, China provided 207,000 tons of food as grant aid, and in 1998 China provided 100,000 tons of food and 20,000 tons of chemical fertilizer in grant aid (Jinshu Lin, 2006: 175). On June 3, 1999, when President of the Presidium of the Supreme People's Assembly of North Korea Kim Yong-nam was visiting China, China provided 150,000 tons of food and 400,000 tons of coke in grant aid (Jinzhi Liu, Jingchu Pan, Rongying Pan and Xiyu Li, 2006: 13). 11

While the settlement of trade at friendly prices practiced in the past was ended, China still provided aid to North Korea in the latter half of the 1990s, the era referred to as an "arduous march".

During the current century, China provided 200,000 tons of food and 30,000 tons of diesel fuel in grant aid when President Jiang Zemin visited North Korea in 2001. China also provided the equivalent of 50 million yuan of material in April 2002, and \$24 million of equipment to a glass factory in Taean in gratis aid in 2004 (Jinshu Lin, 2006: 175).

When Premier Wen Jiabao visited North Korea in October 2009, which was the year of China-North Korea friendship, an agreement was reached for China to provide 30,000 tons of food, 50,000 tons of fuel oil, and 80,000 tons of high-quality coal (*Jiji Press*, December 3, 2009). Additionally, when President Kim Jong-il visited China in May 2010, he requested \$10 billion in investment centered on infrastructure at the China-North Korea border, one million tons of food aid, and 800,000 tons of oil aid within the year (*Tokyo Shimbun*, August 13, 2010). During Kim's second visit in a year in August, he is said to have also requested 500,000 tons in rice aid (*Tokyo Shimbun*, October 28, 2010), but whether this request was actually made cannot be confirmed.

Based on the understanding that losing North Korea would be a loss of China's national interests,

China has continued its economic aid to North Korea through to today, even though the Cold War has ended. At the Chinese Ministry of Foreign Affairs regular press conference on January 17, 2012, Ministry of Foreign Affairs Spokesman Liu Weimin explained this as follows. "China has always provided the necessary aid to the North Korean side within the range of our capabilities. This contributes to North Korea's economic and social development. We also welcome concerned parties and the international community to continue providing aid to North Korea" (Radio Press, 2012). This may be a demonstration that China has made no change to its stance of providing aid to North Korea even after the succession to the Kim Jong-un administration.

III. The China-North Korea Oil Pipeline

1. Supply of Oil to North Korea

Among the items China supplies to North Korea, the most important high-priority item is oil. Because North Korea depends on imports from China for virtually all of its oil, any reduction in China's oil exports to North Korea would be a severe blow to North Korea, which suffers chronic energy shortages. It was reported in 2003 that exports were suspended for three days to put pressure on North Korea, and the recent report that the statistics for February 2013 show zero oil exports may be analyzed as possible Chinese sanctions against North Korea's insistence on nuclear testing. However, the cause-effect relation for the former is not entirely clear, and as for the latter there have been times in the past when the statistics have shown zero exports for February (JETRO, 2011: 5, 10-11), and these figures may also be viewed as trade settlement adjustments, etc. Moreover, while the 2009 figures from August onward are not recorded in the statistics, the totals for "other Asian countries" remain on the scale of typical years (Editorial Division, Tozai Boeki Tsushinsha, 2013: 58).

So, how is oil carried from China to North Korea?

"The oil is first moved not by pipeline, but all carried by railway freight tanks, unloaded into an oil tank, and then transported by a pressurized heated pipeline. This is a unique production process used by Dandong Branch of China Petroleum Pipeline Engineering Corporation (*Zhongguo shiyou xinwen zhongxin*, September 21, 2009). So the oil is carried from the Daqing Field to the facilities in Dandong as railway freight. In fact the pipeline is a short one connecting Dandong, China to Sinuiju, North Korea. Regarding the details of the oil shipments from China, there is not much systematic information published, perhaps because of its importance, so we review the history of the laying of the China-North Korea oil pipeline.

Incidentally, regarding the name of the company presently operating the China-North Korea pipeline, when the author visited in August 2009 the sign on the front gate of the facility read "Zhongguo shiyou guandao Dandong shuyu qifen gongsi [Dandong Branch of China Petroleum Pipeline Engineering Corporation]." There are reports that the name changed ZhongChao youyi shuyouqi gongsi [China-North Korea Friendship Oil and Gas Pipeline Company] to Guandao Dandong shuyou qifen gongsi [Dandong Branch of China Petroleum Pipeline Engineering Corporation] in 2008 (*Kyodo News*, August 27, 2009). The company does not have an official website, so the official name could not be identified, but there is no question that the pipeline is managed and administered by a subsidiary of PetroChina Company Limited (*Zhongguo shiyou*; *Zhongguo qiye shujuku*, unknown: accessed August 31, 2013). The oil transportation facilities comprise two locations: "Dandong Oil Transportation Station" where the oil carried by train is stored in an oil tank in Xingguang Cun in the suburbs of Dandong City, and "Dandong Measuring Station (Yalu River Oil Transportation Station)" along the Yalu River. The two facilities are linked by pipeline, and also connected to the valve room in Tajido on the North Korean side.

2. Supply of One Million Tons or More at the Peak Period

The details of what types of discussions were held and agreements made until the oil pipeline from China to North Korea was constructed are not well known. Based on the Agreement on Mutual Supply of Critical Materials 1971-1976¹² signed on October 17, 1970, China decided to supply North Korea with 500,000 tons of oil per year (Zhe Jin et al, 2005: 46). The discussions on the construction of the pipeline may have advanced along with this. On May 22, 1973, the two governments signed the Memorandum on the Construction of an Oil Pipeline across the Yalu River (Dandongshi difangzhi bangongshi, 1993: 188). Then as mentioned above, the construction works were finished in December 1975. A ceremony to celebrate the opening on the Chinese side was held at the Dandong Cultural Palace on January 3, 1976, and a tape cutting ceremony for the opening of the China-Korea Friendship Oil Pipeline took place on the 4th in Dandong City. There were opening ceremonies on the North Korean side on the 6th as well (Dandongshi difangzhi bangongshi, 1993: 192). The media coverage at the time by Xinhua News Agency did not give the name of the location on the Chinese side and referred to the location on the North Korean side as "a certain place in Korea," and the reporting by the Korean Central News Agency only referred to the locations of the ceremonies on both the Chinese and North Korean sides as "the place," with both sides making an effort to camouflage where the pipeline was laid (Kokusai Kankei Kyodo Kenkyujo, 1976: 45-49). This suggests the oil pipeline was being handled like a high-level military secret. 13

The conditions when operations began were as follows (Haixian Ouyang 2010; Shiyou shangbao, September 12, 2008). On September 1, 1978 the Ministry of Foreign Trade placed the China-North Korea Pipeline under the management of the Ministry of Fuels and Chemical Industry, 14 and the Waiyu shuoyouzhan [Outward Oil Transportation Station] was renamed the Dongbei shuyou guanliju ZhongChao youyi shuyou guanlichu [China-North Korea Friendship Oil Transportation Administration Office of Northeast Oil Transportation Administration Bureau]. Then Zhang Wenyan, Sun Ruxian, Sun Qiwen and Han Changfu were appointed as secretary of the Party committee, vice manager and vice secretary of the Party committee, vice secretary of the Party committee and deputy director of the political department respectively, and these four officials took office on September 5. From that day, the pipeline was officially placed under the management of China National Petroleum Corporation. At that time, it seems there were many problems with the management of the administration office. Crude oil, gasoline and diesel oil were transported together, with "leaks, spills, dripping and seepage everywhere," and black oil spilled during discharge from freight trains, polluting the surrounding area. There was also oil floating on the surface of a small river nearby and a black vein of oil flowing to an adjacent farmhouse. There is a horrifying report that the nearby farmers were walking around with cigarettes hanging from the sides of their mouths. Beyond that, the locals were using oil, diesel oil and gasoline as fuel. The place was called the "Xingguang little oil field." The workers made fun of the conditions, saying they were covered in oil from head to toe, carrying a lunch bucket of oil, soaked in a sea of oil during the day, sleeping in a bed of oil at night. Granted that this was just after the confusion of the Cultural Revolution, the work really was conducted covered in oil, with an extremely high danger of fire, etc. Around that time China-North Korea Friendship Oil Transportation Administration Office was fined 50,000 yuan by the Dandong Environmental Protection Bureau for causing severe environmental pollution.

China's oil exports to North Korea were 500,000 tons per year from 1971 through 1975, but with the signing of a long-term trade agreement between China and North Korea on March 14, 1977, the exports were increased to 1.0-1.5 million tons per year from 1976 through 1979. From 1980 through 1984, exports were fixed at 1.0 million tons per year (ZhongChao guanxi tongshi bianxiezu, 1996: 1232). At

that time, the friendly price for the sales from China to North Korea was \$4 per barrel, which was a highly concessionary price compared with \$14-26 per barrel for exports to Japan (Jinshu Lin, 2006: 173-174).

In parallel, with special financing from the government of China totaling 82.45 million yuan, the Pihyon Oil Refinery (Ponghwa Chemical Factory) was constructed in Pengma-li, Pihyon-kun, Pyongangpuk-to, North Korea for refining crude oil. Surveys were conducted in June 1970 and construction was completed in October 1981. The facility has an annual refining capacity of 1.5 million tons (Liaoningsheng difangzhi bianzuan weiyuanhui bangongshi, 2003: 447). Actually, there were originally two pipelines, one for crude oil and the other for processed oil, but the pipeline for processed oil was closed in 1981 (Yan Baodong de Blog, September 7, 2008). The Pihyon Oil Refinery was completed the same year this pipeline was closed, and from that time there may have been a switch to refining the oil on the North Korean side.

The oil exports were 1.2 million tons per year through 1988 and approximately 1.0 million tons per year from 1989 through 1996, and have since fallen to an average of 500,000 tons per year (Editorial Division, Tozai Boeki Tsushinsha, 2013: 58-59). Considering that North Korea was importing a total of 2.0 million tons per year from China and Russia combined during the 1980s, this means that North Korea is presently only procuring one-fourth of that amount.

3. Aging of Facilities and Minimum Transport Volume Restrictions

Having reviewed the historical background, we now examine the current conditions of the China-North Korea oil pipeline using two papers written by Chinese petroleum technology experts. Except as otherwise noted, the following information in this section comes from Wuzhong He (2000) and from Yibing Tian and Jinping Huang (2001).

The China-North Korea oil pipeline has a total length of 30.31 km (10.81 km on the Chinese side). On April 24, 1995 there was a crack and oil spill on the Chinese side of the pipeline. This was a major incident in which the transportation of oil had to be suspended for 55 hours and the pipe was almost clogged. The oil spill took place because the proper erosion prevention measures were not taken when the pipeline was built. While the cause-effect relation with this incident is not clear, from the following year the quantity of oil sent through the pipeline to North Korea started to decrease. The oil production from the Daqing Field had been flat, and with increased oil imports, China became a net oil importer from 1996 (Editorial Division, Tozai Boeki Tsushinsa, 2013: 31). Those developments may have had an impact on the decreased oil transfer. The volume of oil transported through the China-North Korea oil pipeline became extremely small in August 1996. Specifically, the volume which had been 2,900 tons per day up until that time was decreased to 1,700 tons. The pipeline pressure was increased in December because internal clogging began to occur from winter.

With the aging of the pipeline and the paraffin content of the Daqing crude oil, it seems pipeline clogging is a serious problem. Considering that the heat-treated Daqing oil solidifies at 24 degrees Celsius, the oil must be transported with a minimum temperature of 28 degrees at the terminus and suitable heating is required depending on the season. However, the heat of the pipeline is easily lost because on the North Korean side which accounts for two-thirds of its length, it is buried to a very shallow depth or passes beneath rice fields.

Moreover, according to operating regulations in the internal document "ZhongChao shuyou guandao chaodi shuliang yunxing guiding [Operating regulations for Dandong-Sinuiju oil pipeline under overlow throughput process]," due to the very low volume of oil transported, the periods when oil

transport can be temporarily suspended because of changes in surface temperature, periodic inspections, and accidents are strictly specified by season.

Even when managed with these procedures, with the temporary suspension of oil transportation in the summer and pipeline cleaning of accumulated paraffin, the minimum safe transportation volume per year is still on the order of 525,000 tons.

China-North Korea Oil Pipeline Maximum Permitted Oil Transport Suspension Time

(Hours)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Time	4	2	2	4	6	8	12	12	12	6	4	4

(Pipeline Branch of PetroChina Company Limited 2001; 1)

China-North Korea Oil Pipeline Minimum Oil Transport Quantities

(10,000 tons)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Minimum	5	5	5.5	4.5	4	3	2.5	2.5	2.5	3.5	5	5

(Pipeline Branch of PetroChina Company Limited 2001; 2)

Looking at this, it becomes clear that the supply volume cannot easily be adjusted unless the oil pipeline itself is replaced with a new pipeline. As shown by the table above, to prevent clogging, the pipeline can only be shut for a maximum of 12 hours even in summer. Consequently, it is clear that China cannot use stopping oil supply to North Korea through the pipeline as a sanctions measure. While it appears that pipeline examinations even covering the North Korean portion and improvements of the Dandong Measuring Station (Yalu River Oil Transportation Station) along the Yalu River are being implemented (*Zhongguo shiyou xinwen zhongxin*, March 23, 2010 a; *Shiyou shangbao*, March 23, 2010 b; *Shiyou shangbao*, September 29, 2010), the conditions will not change significantly without a replacement of the entire pipeline.

4. Oil Supply by Routes Other than the Pipeline

There are reports by South Korean media that China regularly sends oil to North Korea each year as aid using routes other than the oil pipeline (dongA.com, October 24, 2006; *Yonhap News*, April 1, 2013). According to these reports, the supply of oil and petroleum products from China to North Korea is divided into the "trade volume" and the "aid volume," and marine transportation using North Korean tankers is also taking place. These reports indicate that what has been explained in this paper is aid and "aid volume" as long-term low-interest loans, and if tanker transportation is actually being used for the "trade volume," then there is a possibility that China could exert effective pressure on North Korea by adjusting this tanker supply, regardless of the pipeline capacity. The truth of this information cannot be confirmed since there are no materials providing proof, and because there is a possibility that a so-called petroleum products category may be mixed up with oil transported by sea. Regardless, the trade between China and North Korea prior to 1992 had more of the characteristic of aid than of pure trade. And there are uncertain points; for example, since that time the prices have been higher than international prices (JETRO, 2011: 10-12). While it is difficult to say if this is aid or trade, in any case the fact remains that China solely controls North Korea's main energy supply.

Conclusion

This paper has shown that as a geopolitical reality, it is difficult for China to make a decision to change its policy toward North Korea. Discussions on whether the foreign policy should be corrected are formally taking place in internal meetings among national leaders. Under the present conditions, however, there is no change to the fundamental points—that is, the premises that China will maintain its geopolitical strategic view and continue to uphold the existence of the North Korean administration.

As expressed by the former U.S. State Department official quoted at the beginning of this paper, there is no doubt that if China resolves to change its policy toward North Korea the continued existence of North Korea would become very difficult. However, while the Chinese government has made its stance clear that it absolutely does not accept North Korea's nuclear development, it seems China cannot exercise decisive influence that would control North Korea.

An editorial printed in *Huanqiu Shibao* on February 17, 2013 following North Korea's third nuclear test in February 2013 developed the following argument. "As a response to the third nuclear test, China should reduce its aid to North Korea. We are opposed to North Korea's nuclear tests, and this opposition must be demonstrated by action. Regardless of how much this may displease Pyongyang, we must take this action. Beijing must convey to Pyongyang China's firm and unchanging stance that if North Korea launches another strategic rocket or conducts another nuclear test, China will further reduce its aid to North Korea."

This editorial states that China will reduce its aid to North Korea in stages if North Korea repeats similar provocative actions in the future.

However, the same editorial also says, "While China is against North Korea's nuclear possession, the country's stance toward North Korea will not change 180 degrees," adding that the stance toward the Kim Jong-un administration will not greatly change. Even if China imposes harsh sanctions, the truth is that China does not want to trigger the disappearance of North Korea as a state from the world map. As long as that premise holds, it will remain difficult for China to reduce aid in stages using the oil pipeline. That is because, as explained above, it is functionally impossible to increase and decrease oil transportation volumes in stages through a pipeline that clogs unless a minimum of 500,000 tons of oil are transported each year.

At present, the Chinese government appears to have notified all government agencies that it will observe the sanctions under UN Security Council Resolution 2094 (*Zhonghua renmin gongheguo jiaotong yunshubu*, April 25, 2013), and China has also finally begun full-scale implementation of financial sanctions (*Reuters*, May 8, 2013). China is implementing the measures it can take little by little within the range that will not collapse the Kim Jong-un regime. Now that such measures are being implemented, provided China is not pulled by the symbolism of the oil pipeline that was once called the China-North Korea Friendship Pipeline, it cannot be said there is no possibility that China will move to adjust the oil supply in the future to push North Korea to abandon its nuclear development. If the existing pipeline were closed, in practice the oil could still be supplied via maritime transport. The transportation conditions could also be improved by advancing construction of a new pipeline at the same time. But as for whether or not China can actually conduct such realistic diplomatic negotiations with North Korea, that depends on whether or not China can shift from its own geopolitical strategic thinking.

Looking from the perspective of the oil pipeline, China-North Korea relations were truly backed by the special bilateral relations of the last century. Focusing on their economic relations centered on the pipeline, this paper introduced how China has fallen into a type of dilemma. So how will China-North Korea relations be transformed into normal relations between two countries, including the form of China's aid to North Korea? Those developments may be appearing directly in the problems concerning the oil pipeline.

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- 1 However, "Korea" alone is sometimes used in translations from the Chinese documents.
- 2 According to the same author, China only began to call Taiwan part of its "core interests" since 2004. Maeda introduces this, including how there is a debate within China as well regarding the interpretation of the phrase "core interests."
- 3 According to KBS, July 16, 2011, China's CCTV (July 11) reported that this treaty was automatically extended in 1981 and 2001, and is in effect until 2021.
- 4 Article 5 of the Treaty of Friendship and Cooperation concluded between North Korea and Libya in 1982 states that military and material assistance and aid will be provided if either country is threatened or invaded by imperialist forces, but North Korea made no moves toward assisting Libya during the 1986 U.S. bombing and the 2011 NATO bombing that collapsed the Gaddafi regime. Similarly, Article 7 of the Treaty of Friendship and Cooperation which North Korea signed with Cuba in 1986 states that assistance and aid is to be given to the extent possible if either country is threatened or invaded, but this has no specific stipulations regarding military aid.
- 5 However, it seems any outspoken denial of the Kim Jong-un administration, like the theory of giving up on North Korea by *Study Times* Deputy Editor Deng Yuwen (Deng Yuwen, 2013), will be punished.
- 6 The effective period is 10 years, but this is automatically extended unless one party notifies the other of discontinuance.
- 7 According to the same article, a problem occurred concerning whether or not the information and technology that the trainees bring back to North Korea constitute the leak of official secrets.
- 8 The book also notes that the total amount of Chinese foreign aid greatly increased from 1960 and peaked in 1973, and that military aid accounted for about 27% of the total aid at this time.
- 9 According to Hiraiwa (2010: 199-201), while Kim Il-sung was visiting China, President Jiang Zeming clearly told Komeito Chairman Koshiro Ishida that China and North Korea are not allies.
- 10 On page 197, the book says the two countries signed an economic and trade memorandum on June 5 as well, and China provided fuel oil to North Korea.
- 11 The book says China provided North Korea with 20 million yuan worth of material and 80,000 tons of crude oil as grant aid in 1997
- 12 Jiasong Li and Zhengbao Lian (2002: 270) says this was signed together with an agreement on economic and technological aid to North Korea.
- 13 *Shiyou Shangbao* (July 19, 2011) calls the workers on this pipeline "the operators of the China-North Korea energy artery, which has great political, economic, and military significance."

- 14 The Ministry of Fuels and Chemical Industry was abolished in 1975 and the Ministry of Petrochemical Industry was created, so as of 1978 the former ministry should not exist, but here the original source is left as it is.
- 15 On May 14, 2013 Kyodo News distributed an article entitled "Suspending Crude Oil Supply to North Korea is Difficult: Chinese Document Prescribes," apparently using the same source materials.