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North Korea's Sanctions Evasion and Its Economic Implications

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The UN Security Council Sanctions Committee on North Korea closely monitors the implementation of sanctions on North Korea, and its findings are disclosed in reports by the Panel of Experts. According to these reports, North Korea has actively engaged in various activities to evade sanctions, including coal smuggling, sale of fishing rights, financial cyber attacks, and illegal import of refined petroleum. These attempts, however, are not sufficient to nullify the impact of sanctions. While North Korea may be able to mitigate the immediate economic damages through sanctions evasion, it seems likely that there is no significant difference in the long-term impact of sanctions. Though sanctions are not being implemented perfectly, they seem to be serving the basic purpose of pressuring the North Korean regime by substantially hurting the economy.

Two years have passed since the Hanoi summit between the U.S. and North Korea failed and negotiations over North Korea's denuclearization were suspended. The newly elected U.S. administration has attempted to restart negotiations but North Korea has not yet responded. Why has North Korea not changed its approach despite the strong economic sanctions imposed by the international community? Are sanctions being adequately implemented? How has North Korea tried to evade the sanctions, and how much have their efforts weakened the impact of sanctions?

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annual and interim reports by the Panel of Experts.¹⁾ According to these reports, North Korea has actively engaged in various activities to evade sanctions, including coal smuggling, sale of fishing rights, financial cyber attacks, and the illegal import of refined petroleum products. However, the scale of North Korea's illicit trade to evade sanctions is not as large as to nullify the impact of sanctions. While North Korea may be able to mitigate the immediate economic damages through sanctions evasion, it seems likely that there is no significant difference in the long-term impact of sanctions.

Coal Smuggling

Sanctions imposed by the UN Security Council (UNSC) focus on preventing North Korea from earning foreign currency.²⁾ From 2016 to 2017, the UNSC had gradually strengthened the restriction and prohibition of export by North Korea. As a result, the export of main items that North Korea has traditionally exported has been banned since the fourth quarter of 2017. The sale of fishing rights within its territorial waters has been prohibited since 2018, while income-earning activities of North Korean workers abroad have also been banned since 2020. Consequently, North Korea's methods of legally earning foreign currency have all been restricted except for tourism and the small-scale export of selected items. Both these legal sources of income were more or less suspended in 2020 due to the COVID-19 pandemic.

According to reports by the Panel of Experts of the UNSC Sanctions Committee on North Korea, North Korea has continued various transactions to earn foreign currency in violation of UN resolutions. The most important of these efforts is the

1) The official name of the Committee is the "Security Council Committee established pursuant to resolution 1718 (2006)." This Committee was established by UN resolution 1718 passed in 2006 when the UN Security Council first began imposing sanctions on North Korea. Reports of the Panel of Experts established pursuant to resolution 1874 can be downloaded from the Committee's website; <https://www.un.org/securitycouncil/sanctions/1718> (Accessed April 2, 2021). The number of the reports and their publication date is referenced without the URL when reports of the Panel of Experts are cited hereafter.

2) For a summary of the UN sanctions on North Korea, see, Hyungsoo Zang and Suk-Jin Kim, "Estimation of the Balance of Foreign Exchanges and Foreign Exchange Reserves of the Kim Jong-Un Regime and Implications for North Korea-US Denuclearization Negotiations," *Review of North Korean Studies*, vol. 22, no. 1 (2019), pp. 8-43 (in Korean).

export smuggling of coal. North Korea's export of coal was restricted to about 400 million dollars per year by UN resolution 2321 passed in November 2016, and was later banned altogether by UN resolution 2371 passed in August 2017. But in official statistics published by countries, it has been reported that North Korea's export of coal in 2017 exceeded the 400 million dollar limit by more than 12 million dollars. Moreover, the Panel of Experts investigated more than 30 unreported coal shipments from North Korea to ports of China and other countries from January to November in 2017.³⁾ 25 such instances were additionally detected between December 2017 and December 2018 after the export of coal was banned entirely.⁴⁾

The Panel of Experts concluded that the scale of North Korea's illegal coal exports increased in 2019 and estimated that North Korea exported 3.7 million tons of coal from January to August that year with an estimated value of 370 million dollars.⁵⁾ While unconfirmed, North Korea is believed to have continued its coal exports after September 2019, which means that the earnings gained through coal exports in 2019 were actually greater. Moreover, the Panel of Experts estimated that more than 2.5 million tons of coal were illegally exported from January to September of 2020 through more than 400 shipments.⁶⁾ While North Korea's earnings through these transactions have not been disclosed, it seems likely that it was less than 200 million dollars considering the fact that the international prices of coal dropped substantially in 2020 compared to the previous year.⁷⁾ North Korea's shipments of coal appeared to have been suspended since late July 2020 because the arrival of all foreign vessels at North Korean ports has been prohibited in response to the COVID-19 pandemic.⁸⁾ According to recent news reports, it has been observed that the activities at sea of vessels that sail between China and North Korea have increased since March

3) S/2018/171 (March 5, 2018), p. 21.

4) S/2019/171 (March 5, 2019), p. 21; Annex 15, pp. 120~121.

5) S/2020/151 (March 2, 2020), pp. 25~26.

6) S/2021/211 (March 4, 2021), p. 28.

7) According to the World Bank's database on commodity prices, the annual average price of Australian coal, indicative of the international prices of coal, dropped from 77.89 dollars per metric ton in 2019 to 60.79 dollars in 2020. The international prices of coal has begun to rise since the fall of 2020. The price of Australian coal fell to 50.14 dollars in August 2020, but has since rapidly rebounded to 94.92 dollars in March 2021. World Bank, "World Bank Commodity Price Data," <https://www.worldbank.org/en/research/commodity-markets> (Accessed April 6, 2021).

8) S/2021/211 (March 4, 2021), p. 4 and 21.

2021, indicating that North Korea's coal exports have likely resumed.⁹⁾

The scale of North Korea's coal exports is much smaller compared to when sanctions were not yet imposed. Most of the coal exported by North Korea goes to China, and as is illustrated in <Table 1> below, North Korea's coal exports to China from 2015 to 2016 before being banned amounted about 20 million tons, worth more than 1 billion dollars per year. In recent years, North Korea has illegally exported a few million tons of coal per year earning a few hundred million dollars, which is a small fraction of the amount it used to export before sanctions were imposed. In other words, while the sanctions regime has failed to completely ban North Korea's export of coal, it has had the effect of substantially limiting it nonetheless.

<Table 1> North Korea's Annual Exports of Coal to China, from 2012 to 2017

	2012	2013	2014	2015	2016	2017
Quantity (million tons)	11.86	16.53	15.46	19.63	22.45	4.91
Value (billion dollars)	1.22	1.39	1.14	1.06	1.19	0.41

Source: UN Comtrade Database, <https://comtrade.un.org/data> (Accessed April 2, 2021).

Other Foreign Currency Earnings

Another important source of foreign currency earnings is the sale of fishing rights. North Korea has sold fishing rights within their territorial waters to Chinese fishing boats, but it has been prohibited by UN resolution 2397 passed in December 2017. According to reports by the Panel of Experts, however, North Korea appears to have earned foreign currency by selling fishing rights even after 2018. Chinese fishing boats have been witnessed fishing in North Korean waters either with North Korean fishing license plates or temporary registration tags, while there have also been testimonies confirming the purchase of fishing rights from North Korea.¹⁰⁾ One

9) "Increased Presence of North Korean ships at Sea since March (in Korean)," *Radio Free Asia*, March 15, 2021, https://www.rfa.org/korean/in_focus/food_international_org/nkship-03152021153733.html (accessed April 6, 2021).

10) S/2019/171 (March 5, 2019), p. 28; S/2020/151 (March 2, 2020), pp. 43~44; S/2021/211

member state of the UN has estimated that North Korea earned about 120 million dollars through the sale of fishing rights in 2018.¹¹⁾ There have been no estimates since, but it is unlikely that there has been much change. One study that analyzed North Korea's foreign currency earnings estimated that North Korea's annual revenue from selling fishing rights was about 100 million dollars from 2011 to 2013 and 170 million dollars from 2014 to 2016.¹²⁾ Assuming that these estimates are valid, North Korea appears to have continued to earn a considerable amount of revenue through the sale of its fishing rights even though it decreased substantially after 2018.

North Korean cyber attacks against foreign financial institutions can also be an important source of foreign currency income. In their August 2019 report, the Panel of Experts revealed that it was investigating apparent attempts by North Korea to attack banks and cryptocurrency exchanges in various countries including South Korea from December 2015 to May 2019, with estimated losses totaling close to 2 billion dollars.¹³⁾ However, it is unlikely that North Korea managed to gain this amount entirely. This is because the cases that the Panel of Experts was investigating included not only reported incidents where theft actually occurred but also cases of attempted thefts.¹⁴⁾ The estimated losses of only reported thefts where funds were actually stolen are substantially smaller, estimated to be about 270 million dollars.¹⁵⁾ Meanwhile, the Panel of Experts cited a member state's estimate that the total amount of virtual assets that North Korea has stolen from 2019 to November 2020 was 316.4 million dollars.¹⁶⁾

While this is not a small amount, it is largely insufficient to replace the loss of foreign currency income incurred by sanctions. Moreover, one needs to take into account the possibility that North Korea might fail to launder the financial assets that it steals into foreign currency that it can actually use. For example, the U.S. Justice Department in August 2020 launched a lawsuit to confiscate 280

(March 4, 2021), p. 27.

11) S/2020/151 (March 2, 2020), p. 43.

12) Zang and Kim, "Estimation of the Balance of Foreign Exchanges," (2019), p. 19 (in Korean).

13) S/2019/691 (August 30, 2019), p. 26.

14) S/2019/691 (August 30, 2019); Annex 21, pp. 109~112.

15) Hyungsoo Zang, "What the Estimates of the Balance of Foreign Exchange of North Koreans Would Tell Us," *KDI Working Paper* (Korea Development Institute, July 2020), p. 18.

16) S/2021/211 (March 4, 2021), p. 56.

cryptocurrency accounts that North Korean hackers were accused of managing. Nobody has claimed ownership of these accounts since the lawsuit began, and the U.S. government is expected to obtain ownership of them as a result.¹⁷⁾ Additionally, cyber crimes and money laundering involve complex transactions, and North Korea likely had to share a substantial portion of their earnings with foreign co-conspirators. Given this, the foreign currency that North Korea was actually able to earn through financial cyber crimes may be even less.

North Korea is suspected to have engaged in other activities to earn foreign currency in addition to those discussed so far. The Panel of Experts estimated that North Korea earned more than 22 million dollars by exporting more than 1 million tons of sand in 2019.¹⁸⁾ In addition, there is a probability that North Korea illegally exported other minerals as well. But, the export of other minerals represented a small fraction of its overall exports, while coal has traditionally been North Korea's main export item. It is also possible that North Korea has illegally exported textiles (mainly garments), another main item that North Korea has traditionally exported, although violations have not been detected by the Panel of Experts. North Korea's revenue through the export of textiles, however, were limited even before sanctions were implemented as it relied on processing trade. Earnings through illegal textile exports would be even considerably lower. Meanwhile, the Panel of Experts has reported attempts by North Korea to conduct illegal operations such as military cooperation, construction projects, and the sale of works of art in Africa, the Middle East, Southeast Asia, and China. However, the scale of foreign currency earnings through these projects is likely to be limited.

The last remaining source of revenue is North Korean workers abroad. UN resolution 2397 passed in December 2017 stipulated that all member states were required to repatriate all North Korean workers earning income in their jurisdiction to North Korea by December 2019. In other words, the UNSC has prohibited North Korea from earning foreign currency through dispatching workers abroad since 2020. North Korean workers appear to have mostly returned to North Korea as a result.

17) "U.S. Prosecutors Close to Confiscating North Korean Cryptocurrency Accounts (in Korean)," *Radio Free Asia*, January 25, 2021, https://www.rfa.org/korean/in_focus/food_international_org/cybermoney-01252021143236.html (accessed April 6, 2021).

18) S/2020/151 (March 2, 2020), p. 39.

According to reports by the Panel of Experts, the repatriation of North Korean nationals was delayed in some instances. The closure of borders due to COVID-19 pandemic prevented the return of some North Korean workers who were forced to remain in certain host countries, although the number of such workers appears to be small.¹⁹⁾ Foreign currency earnings gained through the income of North Korean workers abroad was estimated to average about 200 million dollars annually from 2015 to 2017,²⁰⁾ but this source of income has mostly disappeared after 2020.

Refined Petroleum Smuggled into North Korea

While the UNSC prohibited the export of main items by North Korea, it either prohibited or restricted the import of only selected items. UN resolution 2397 passed in December 2017 prohibited the export to North Korea by member countries (i.e. import of North Korea) of iron, steel, and other metals (HS codes through 72 through 83), all machinery including electronic equipment (HS code 84 and 85), and transportation vehicles (HS codes 86 through 89). The import of crude oil was also restricted to 4 million barrels or 525 thousand tons per year, and refined petroleum products limited to 500 thousand barrels per year.

When the resolution was passed, much more attention was paid to import restriction on oil than import prohibition on metals, machinery, and transportation vehicles. This was because the import prohibition on the latter goods would harm the long-term growth potential of the North Korean economy by impacting investment, but not immediately impact consumption. In contrast, it was anticipated that the restriction of oil imports would result in a serious transportation crisis due to a fuel shortage, which would, in turn, drastically shrink the economy in general. When the resolution was passed, the U.S. Mission to the United Nations estimated that UN sanctions would have the effect of decreasing North Korea's import of refined petroleum by 89% based on the estimation that the amount of refined petroleum that North Korea had imported in 2016 was approximately 4.5 million barrels.²¹⁾ The decrease of

19) S/2020/840 (August 28, 2020), pp. 37~42; S/2020/151 (March 2, 2020), pp. 50~51.

20) This estimate was calculated by referencing statements by the South Korean National Intelligence Service (NIS) at the Korean National Assembly. Zang and Kim, "Estimation of the Balance of Foreign Exchanges," (2019): 21.

supply of fuel for transportation would have been smaller than that of the import of refined petroleum due to the fact that North Korea could domestically refine crude oil supplied by China and use some for fuel. Nevertheless, North Korea would have faced a severe transportation crisis if the sanctions had been properly implemented.

However, there have been no reports of a transportation crisis in North Korea since 2018. This appears to be because North Korea has succeeded in illegally importing a sufficient amount of refined petroleum even after the resolution was adopted. According to Panel of Experts reports, North Korea has continued to illegally import refined petroleum through ship-to-ship transfers. The amount of refined petroleum that North Korea has imported easily exceeds the 500 thousand barrel cap set by UN resolution 2397, even if the vessels were partially laden. The deliveries amounted to more than eight times the cap in 2020, if the vessels were 90 per cent laden, as shown in <Figure 1> below. Considering that the shipping cost can be saved by sufficient loading, it seems likely that the actual loading rate was relatively high. Moreover, as there has also been imports allowed by the UN resolution, a sufficient amount of refined petroleum appears to have been supplied to North Korea to fulfill their domestic needs.

There have otherwise been no indications that goods other than refined petroleum have been illegally imported in large quantities. The most recent Panel of Experts report notes that some North Korean vessels transporting coal to China returned loaded with humanitarian cargo or some prohibited items including trucks in 2020.²²⁾ It does not appear, however, that these cases were frequent. At the 8th Party Congress of the Workers' Party of Korea, North Korea admitted the failure of its

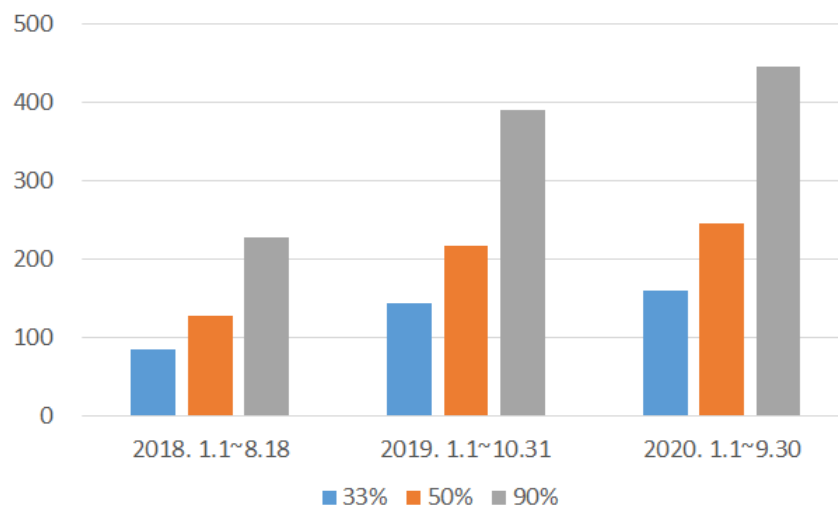
21) United States Mission to the United Nations, "Fact Sheet: UN Security Council Resolution 2397 on North Korea," December 22, 2017, <https://usun.usmission.gov/fact-sheet-un-security-council-resolution-2397-on-north-korea/> (Accessed April 6, 2021). The imported amount reported in official statistics differ vastly from U.S. estimates. According to statistics from UN Comtrade, North Korea imported approximately 280 thousand tons or 2.15 million barrels of refined petroleum in 2016. In short, the U.S. estimated that the unreported amount of refined petroleum imported by North Korea exceeded the amount that was declared. For analysis of official imports of refined petroleum, see Table 2-8 on page 35 and Table 2-11 on page 42 in Kyoochul Kim, *Analysis of North Korea's Oil Trade and Policy Implications* (Sejong, South Korea: Korea Development Institute (KDI), 2018). The tonnage and barrels were calculated using the following conversion rates; gasoline 8.50, diesel 7.23, heavy oil 6.91. For information about conversion rates, see, "UN Energy Statistics Yearbook – Conversion factors," <https://unstats.un.org/unsd/energy/yearbook/conversion.htm> (Accessed April 6, 2021).

22) S/2021/211 (March 4, 2021), pp. 28~31; Annex 37, pp. 231~232.

five-year national economic development plan from 2016 to 2020, and it is believed that one of the main reasons for this failure was the prohibition on the import of capital goods such as machinery and metal products that led to delays in many investment projects.²³⁾ Based on this observation, it appears that the prohibitions on the import of capital goods succeeded in achieving its intended goals.

<Figure 1> Estimates of Refined Petroleum Illegally Imported by North Korea

(Unit: 10 thousand barrels)



Source: S/2019/171 (March 5, 2019), p. 80; S/2020/151 (March 2, 2020), p. 89; S/2021/211 (March 4, 2021), p. 15.

Note: The graphs indicate the estimated amount imported by North Korea based on the lower laden (33%), half laden (50%), and higher laden (90%) scenario, respectively.

Limits of Sanctions Evasion

The reports from the UN Panel of Experts clearly illustrate how North Korea has engaged in various attempts to circumvent economic sanctions imposed by UNSC resolutions. However, it appears unlikely that North Korea will manage to escape its economic crisis through these efforts. As seen in <Figure 2> below, the total

23) Suk-Jin Kim, "Why Did North Korea's Five-Year Development Strategy Fail?" Korea Institute for National Unification (KINU) Online Series CO21-06, February 24, 2021, pp. 2~5, <https://www.kinu.or.kr/www/jsp/prg/api/dlVE.jsp?menuIdx=645&category=72&thisPage=1&searchField=&searchText=&biblioId=1549130>.

value of annual exports by North Korea was on average around 3 billion dollars from 2012 to 2016, and North Korea was able to additionally earn foreign currency through various methods such as the sale of fishing rights, wage income of workers abroad and in the Kaesong industrial complex. The volume of official exports by North Korea since the implementation of sanctions has been reduced to a tenth of what it used to be in the past. As discussed earlier, foreign currency earned by North Korea through sanctions evasion, including coal smuggling, trading of fishing rights, and financial cyber attacks, is estimated to have only been a few hundred million dollars per year. In other words, the amount of foreign currency earned through these illegal activities is far less than what would be required to replace the losses incurred by sanctions.

<Figure 2> The Total Imports and Exports of North Korea Reported in Official Statistics, 2012–2020

(Unit: 100 million dollars)



Source: Data from 2012 to 2019 cited from KOTRA, *Trends in North Korea's Foreign Trade, 2019* (Seoul, South Korea: Korea Trade-Investment Promotion Agency (KOTRA), 2020), p. 40. 2020 statistics cited from Korea International Trade Association (KITA), China's Foreign Trade Statistics Database (in Korean), <https://stat.kita.net/stat/istat/cts/CtsWholeList.screen> (accessed April 2, 2021).

Note: The amounts for 2012 to 2019 refer to North Korea's trade globally, whereas the 2020 amount refers to trade with China.

The total value of goods imported by North Korea averaged around 3.5 and 4.5 billion dollars per year between 2012 to 2016, but this was reduced to about 70% of past level during 2018 and 2019 after sanctions were vastly strengthened. This is because the import of capital goods such as metals, machinery, electronic equipment, and transportation vehicles were prohibited while the import of other general items continued. Also as noted above, North Korea appears to have procured a sufficient amount of refined petroleum through illegal imports. In other words, while the suspension of imports of capital goods caused delays to investment projects, the regular supply of other goods meant that there has been no significant change in daily consumption until 2019. This is because while North Korea's foreign currency earnings were significantly reduced, it was able to continue importing a considerable amount of goods using its foreign currency reserves that it had accumulated prior to stronger sanctions. The increase in the domestic supply of consumer goods due to the North Korean regime's intense efforts over the past few years to modernize its state-run light industries seems to have also helped to stabilize consumer activities.

This situation changed drastically after the border was closed due to the COVID-19 pandemic. As the import of goods that are not restricted by sanctions decreased significantly, the negative impact on the economy has been acute. Of course, North Korea's imports will be restored to a certain extent once the border opens and foreign trade resumes. But in the long-term, it seems that it will be difficult for North Korea to maintain its past level of imports. This is because North Korea's foreign currency reserves would be depleted if it continues its past level of imports, while foreign currency earnings through illegal methods will remain limited.

In conclusion, North Korea's attempts at evading economic sanctions are insufficient in nullifying the impact of sanctions. Though sanctions are not being implemented perfectly, they seem to be serving the basic purpose of pressuring the North Korean regime by hurting the economy. Unless sanctions are lifted, North Korea's foreign trade will continue to be much smaller than before and North Korean economy will inevitably suffer the consequent damage. ©KINU 2021

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