THE IMPACTS OF ECONOMIC SANCTIONS AND COVID-19 ON THE NORTH KOREAN ECONOMY: 2017-2020

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Abstract

This paper examines how the pandemic affected the North Korean economy. While UN sanctions significantly reduced trade in sanctioned items, the changes in non-sanctioned items from border closures to prevent the entry of COVID-19 have proven nearly as significant. It is estimated that North Korea lost $8.71 billion in exports and $3.94 billion in imports due to sanctions from 2017-2020, which equates to an annual loss of $2.2 billion in foreign currency revenue and $1 billion-worth of capital goods. The pandemic has cost it another $2 billion in imports in 2020.

The impact was not limited to trade. There were indirect blows to the formal sector, especially to the national budget, and the informal sector, especially to prices and the exchange rate. In terms of the national budget plan for 2021, the growth of both revenue and expenditure marked the lowest levels since Kim Jong-un took power, confirming COVID-19's negative impact on the formal sector. Meanwhile, in the informal sector, rice prices have remained relatively stable. However, there was a spike in the prices of substitute items for rice, such as corn, as well as for food and agricultural goods, and other consumer goods.

To cope with these challenges, the North Korean regime has recently strengthened its control over the informal sector; however, the strong measures are not expected to continue, as the regime recognizes that the informal sector has been a major growth engine. If the restrictive stance were prolonged, it could pose a risk to the regime by making key growth engines obsolete. Therefore, rather than controlling the markets, the measures appear to be aimed at normalizing informal sectors that were operating abnormally to achieve orderly markets.

It has been more than two years since the COVID-19 outbreak was declared a pandemic, but the virus remains an economic threat in many countries. North Korea is one of the countries most affected by COVID. Exports were dealt a major blow by sanctions before COVID hit and borders were quickly sealed off to even incoming trade. It is clear how agonizing this has been, especially considering that, despite the sanctions, the inflow of essential intermediate goods and daily necessities had maintained North Korea's price stability, and allowed the regime to remain defiant.

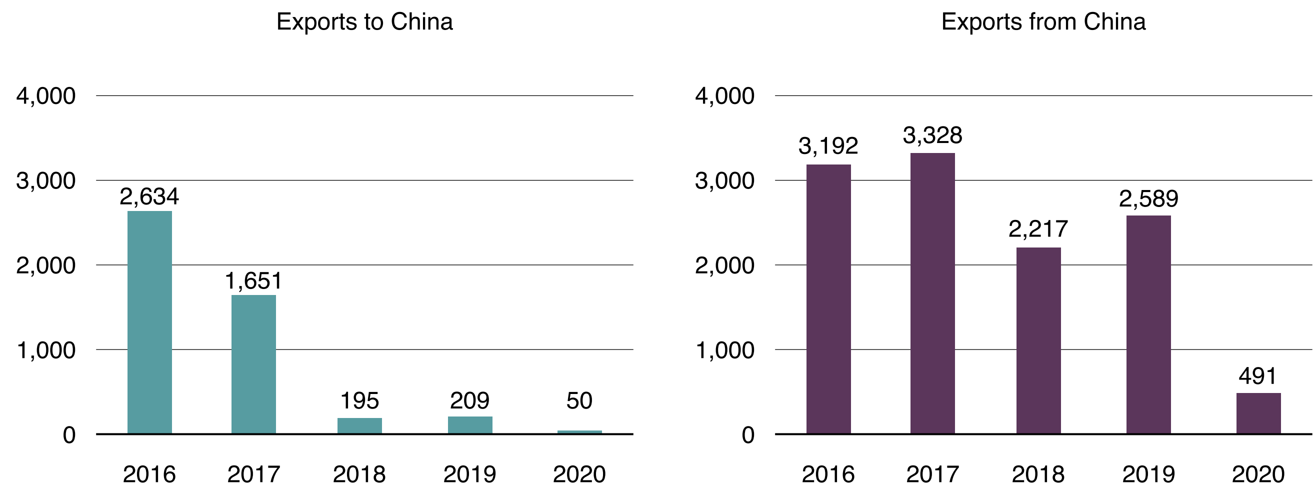
This paper explores and discusses the economic hardships that North Korea is enduring. Obtaining accurate data has become even more difficult with its doors tightly closed to not only commodities but also to any news. Nevertheless, there are clues hidden in overseas trade data acquired through mirror statistics, North Korea's annual national budget release, price and exchange rate data from the informal sector, and related official announcements and testimonies from outside observers that can, if thoroughly cross-checked, offer us an indirect but valuable look into the current state of the North Korean economy.

Direct Effects of COVID-19

1. Impact on Overseas Trade

An initial look into the conditions before the COVID-19 crisis reveals that the economic sanctions imposed by the international community were steadily gaining traction. Indeed, these sanctions have gradually expanded to encompass a growing number of items, which has, in turn, deepened the hardship of North Korea. For example, UNSCR 2270, which was implemented on March 2, 2016, following the fourth nuclear test, banned the export of gold, rare earth elements, vanadium ore, titanium ore, etc. The impact was limited, as these items only had a 1 percent share of North Korea's total exports to China in 2015. On the other hand, UNSCR 2371, adopted on August 5, 2017, in response to the launch of Hwasong-14, completely suspended the export of major items such as coal, iron, and iron ore, which accounted for 58 percent of North Korea's total exports to China in 2016. Additional sanctions in 2017 covered items such as textiles and apparels, machinery and electrical appliances. Consequently, sanctions in place as of 2017 covered 96 percent of North Korea's 2016 exports. As a result, North Korea's exports to China fell from $2.6 billion in 2016 to around $200 million in 2018 and 2019, showing the regime that sanctions could in fact have serious and immediate consequences for its overseas trade (Figure 1).

Figure 1 Trends in DPRK-China Trade in 2016-2020 ($1 million)

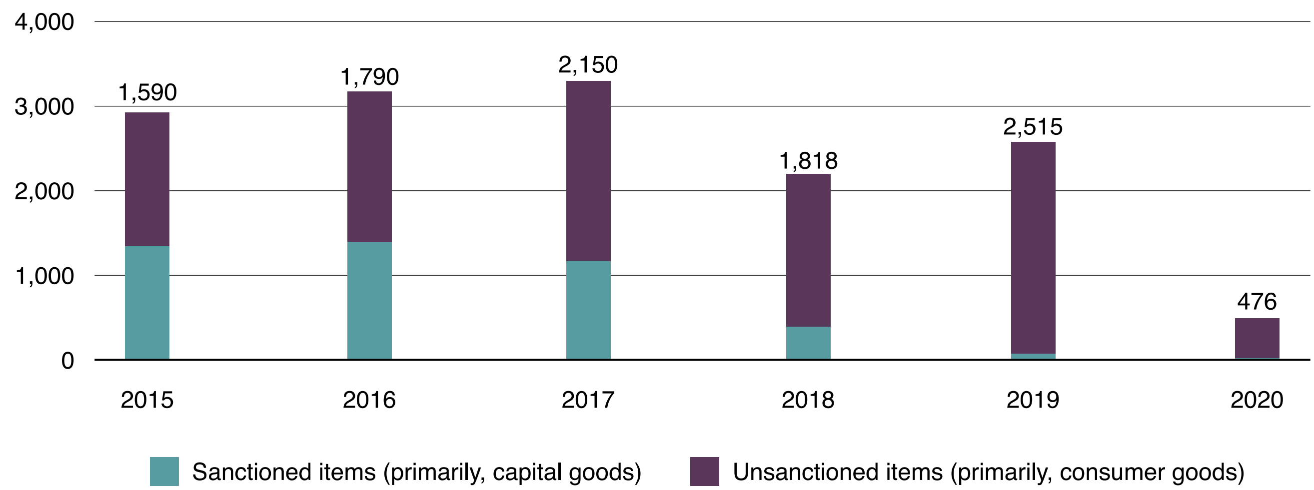


Source: Lee Jong Kyu, "DPRK Sanctions and North Korea's Overseas Trade;" Lee Suk ed., "Impact of DPRK Sanctions and North Korea's Economic Future," Research Paper, KDI, 2021 (in Korean).

However, the same cannot be said for imports, which essentially served as the backbone for North Korea's survival against the sanctions. Marking $3.19 billion in 2016, imports from China sustained healthy levels at $3.33 billion in 2017, $2.22 billion in 2018, and $2.59 billion in 2019. This is substantial when juxtaposed with exports. The inflow of non-sanctioned items such as intermediate and consumer goods even boasted an increase, jumping from $1.59 billion in 2015 to $2.52 billion in 2019. The implications is that, with import sanctions imposed primarily on capital goods, distribution channels for daily necessities functioned at almost normal levels. It would also be fair to assume that the domestic production of consumer goods was "business as usual" on the back of these imports of intermediate products.

Yet, in 2020, the landscape dramatically shifted with the emergence of COVID-19. The import of non-sanctioned items plummeted by a staggering 81 percent to $476 million with agricultural goods and food, and general goods (medical supplies, furniture, cosmetics, toys, etc.) accounting for 23.2 percent and 6 percent of the total decline (Figure 2).[1] From this perspective, COVID-19 derailed North Korea's ability to withstand the sanctions, and cut short the time it was able to avoid a serious negative impact.

Figure 2 Changes in Imports from China ($1 million)



Note: “Sanctioned items” represents trade in goods eventually sanctioned by the UN, but not necessarily in the year shown, to demonstrate how trade in sanctioned items declined.

Source: Lee Jong Kyu, “DPRK Sanctions and North Korea’s Overseas Trade;” Lee Suk ed., “Impact of DPRK Sanctions and North Korea’s Economic Future,” Research Paper, KDI, 2021 (in Korean).

2. Direct Damages from Sanctions and COVID-19

As examined above, sanctions and COVID-19 disrupted the stability that the North Korean economy achieved under Kim Jong-un. Although it is difficult to specify the extent of the damage from each of the shocks on North Korea’s overseas trade, sanctions had an extensive impact on exports in particular in 2018-2019 while COVID-19 delivered a hard blow to imports from 2020.

Table 1 and Table 2 present clearer pictures of the impact of sanctions (2017-2019) and COVID (2020). Exports of sanctioned items in 2016 to China were $2.572 million, but decreased to $0.24 million in 2019. By contrast, the value of non-sanctioned items increased from $62 million to $208 million during the same period. Imports followed a similar pattern. As for the sanctioned group, imports from China dropped from $1.4 billion (in 2016) to $74 million (in 2019), whereas the non-sanctioned group increased from $1.7 billion to $2.5 billion. After the pandemic began in 2020, however, imports of non-sanctioned items fell rapidly.

Table 1	Sanctioned Items by UNSCR		
UNSCR	**Adopted date (M/Y)**	**Export sanctioned items (HS Code)**	**Import sanctioned items (HS Code)**
2270	03/2016	2614 / 2615 / 2805 / 2846 / 7108 / 7109 / 261690	93 / 7013 / 8703 / 8903 / 9101 / 9506 / 27101220 / 27101240 / 27101910 / 27101920 / 27101928
2321	11/2016	74 / 75 / 79 / 2603 / 2604 / 2608 / 7106 / 7107 / 9703 / 261610	57 / 89 / 5805 / 6911 / 8802
2371	08/2017	3 / 78 / 1604 1605 / 2601 / 2607 / 2701 / 2702 / 7201 / 1603003000 / 1603004000 / 1603009000	
2375	09/2017	50~63	2709 / 2710 / 2711 / 2712 / 2713 / 271012 / 271020 / 27090010
2397	12/2017	7 / 8 / 12 / 25 / 44 / 84 / 85 / 89	72 / 73 / 74 / 75 / 76 / 78 / 79 / 80 / 84 / 85 / 86 / 87 / 88 / 89 / 2709 / 2710 / 2712 / 2713 / 81~83

Source: Lee Jong Kyu, "DPRK Sanctions and North Korea's Overseas Trade;" Lee Suk ed., "Impact of DPRK Sanctions and North Korea's Economic Future," Research Paper, KDI, 2021 (in Korean).

Table 2 Trade of Sanctioned vs. Non-sanctioned Items (2016-2020) ($1 million)

	Exports to China			**Imports from China**		
	Total	**Sanctioned**	**Non-sanctioned**	**Total**	**Sanctioned**	**Non-Sanctioned**
2016	2,634	2,572	62	3,192	1,402	1,790
2017	1,650	1,548	102	3,328	1,177	2,150
2018	194	24	170	2,217	399	1,818
2019	208	0.24	208	2,588	74	2,515
2020	48	0.01	48	491	15	476

Source: Lee Jong Kyu, "DPRK Sanctions and North Korea's Overseas Trade;" Lee Suk ed., "Impact of DPRK Sanctions and North Korea's Economic Future," Research Paper, KDI, 2021 (in Korean).

Official trade data also offers many implications from which we can deduce some interesting, stylized facts. Firstly, while there was a significant downturn in the import and export of items included in the sanctions, non-sanctioned items marked an increase from 2016 to 2019. Secondly, however, COVID-19 was a game changer for the non-sanctioned group. Exports and imports of non-sanctioned items with China decreased by 77 percent and 81 percent, respectively, in 2020. Thirdly, it seems that the pandemic has been more painful to North Korea than any other country. In 2020, North Korea's trade dropped by 78.2 percent, while global trade declined only by 7.5 percent, showing how agonizing COVID has been.

How much direct damage has North Korea suffered from sanctions and the pandemic specifically? In order to find out, the direct losses incurred from sanctions must first be calculated. In 2016, just before the effects of the sanctions began to emerge, North Korea's exports to China and imports from China of products that were sanctioned in earnest beginning in 2017 recorded $2.57 billion and $1.40 billion, respectively (Table 2). A comparison of DPRK-China trade in these products during 2016 (before sanctions) and 2017-20 (after sanctions) shows the amount that was directly lost as a result. Using the same method, we are able to calculate that North Korea saw losses totaling $8.71 billion in its exports to China during the 2017-2020 period, and $3.94 billion in its imports (Table 3). This is an annual loss of roughly $2.2 billion and $1 billion, respectively.

Table 3	Estimates of the Direst Losses Incurred from Sanctions (2017-2020) ($)	
	The decline in trade of sanctioned items	
	DPRK exports to China	**DPRK imports from China**
2017	1.02 billion	0.22 billion
2018	2.55 billion	1.00 billion
2019	2.57 billion	1.33 billion
2020	2.57 billion	1.39 billion
Total	**8.71billion**	**3.94 billion**

Note: The decline is calculated as the amount of exports or imports in 2016 shown in Table 2 minus the amount of exports or imports in each year between 2017 and 2020.

Source: Lee Jong Kyu, "DPRK Sanctions and North Korea's Overseas Trade;" Lee Suk ed., "Impact of DPRK Sanctions and North Korea's Economic Future," Research Paper, KDI, 2021 (in Korean).

As for the damages inflicted by COVID-19, a comparison of the import of non-sanctioned items from China in 2020 with that of the previous year reveals that there was a fall from $2.52 billion in 2019 to merely $476 million in 2020 (Table 2). It is assumed that this steep decline of $2.04 billion was purely the result of the pandemic. In all, North Korea has lost an annual $2.2 billion in exports and $1 billion in imports due to sanctions, and $2 billion in imports due to COVID-19 in 2020. In 2021, the situation gets even worse as trade decreased by 41 percent compared with 2020.

Indirect Effects of COVID-19

1. Impact on the Formal Sector

In 2021, North Korea saw the trade shock resulting from COVID-19 pervade the government budget. The growth rate for the budget revenue was set at a mere 0.9 percent year-on-year, which is the lowest since the 0.8 percent in 1966 if the period during the Arduous March (1995-1998) is excluded, as financial statistics were not released during that time. Conversely, just prior to the outbreak in 2017-2019 and after it was declared a pandemic in 2020, the regime used every means to expand revenue. The depreciation cost, which was excluded from 2014, was reinstated in 2020, and various measures were implemented to maintain budget revenue, including budget payment from some service transactions and improved fiscal management. However, the prolonged hardships resulting from the health crisis left North Korea with little to no capacity to do the same in 2021.

Table 4	Budget Revenue Growth Rate by Category in 2021 (YoY) (%)				
		2012-2016 Early Kim Jong-un era	**2017-2019** Stronger sanctions	**2020** COVID-19 pandemic	**2021** Fiscal shock
	Revenue growth rate	5.0	3.3	4.2	0.9
Major Revenue Sources	Transaction revenue	4.3	3.0	1.1	0.8
	Revenue from state-owned enterprises	6.7	3.8	1.2	1.1
Other Revenue Sources	Revenue from cooperatives	4.0	1.2	0.4	0.4
	Property use fees	3.9	1.4	0.1	0.0
	Social insurance fees	2.7	0.9	0.0	0.3
	Revenue from asset sales and price variations	2.1	0.5	0.3	0.1
	Other revenue	1.3	0.8	0.2	0.6
	Revenue from special economic zones	4.3	1.8	0.3	0.2
	Depreciation cost	2.6	-	Added again	0.1

Source: Lee Jong Kyu, "North Korea's Fiscal Shock, What is the Economic Impact?", *KDI Review of the North Korean Economy* 23, no. 1 (July 2021) (in Korean).

The shock to the budget revenue had an immediate ripple effect on expenditure. Again, the expected growth rate was the lowest it had been under Kim Jong-un at 1.1 percent and since 1966 when it marked 0.8 percent (if the period during the Arduous March is excluded as above). In particular, the notable decline in previously key areas, i.e. science and technology (9.5% ⟶ 1.6%) and core sectors (7.2% ⟶ 0.9%), is expected to lead to difficulties in pursuing some government priorities. The reverberations were evident in North Korea's 2021 Five-year Economic Plan announced at the 8th Party Congress, which contained a striking shift in the regime's focus to the metal and chemical industries and disregard of all other sectors. But such a move is unavoidable considering the dire financial circumstances.

Table 5	Budget Expenditure Growth Rate by Category in 2021 (YoY) (%)

<table>
<tr><th></th><th></th><th>2012-2016
Early Kim Jong-un era</th><th>2017-2019
Stronger sanctions</th><th>2020
COVID-19 pandemic</th><th>2021
Fiscal shock</th></tr>
<tr><td></td><td>Expenditure growth rate</td><td>6.7</td><td>5.3</td><td>6.0</td><td>1.1</td></tr>
<tr><td rowspan="7">People’s Economy</td><td>Light industry</td><td rowspan="5">6.7</td><td rowspan="5">5.5</td><td rowspan="5">7.2</td><td rowspan="3">0.9</td></tr>
<tr><td>Basic industries</td></tr>
<tr><td>Agriculture</td></tr>
<tr><td>Fisheries</td><td>-</td></tr>
<tr><td>Forestry</td><td>-</td></tr>
<tr><td>Science & technology</td><td>6.3</td><td>8.2</td><td>9.5</td><td>1.6</td></tr>
<tr><td>Basic construction</td><td>8.9</td><td>4.7</td><td>6.2</td><td>-</td></tr>
<tr><td rowspan="3">People’s Service</td><td>Education</td><td>7.2</td><td>6.8</td><td>5.1</td><td>3.5</td></tr>
<tr><td>Health care</td><td>4.9</td><td>8.4</td><td>7.4</td><td>2.5</td></tr>
<tr><td>Social insurance</td><td>4.0</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td rowspan="2">Social / Cultural Projects</td><td>Culture & arts</td><td>4.8</td><td>3.9</td><td>5.8</td><td>2.7</td></tr>
<tr><td>Sports</td><td>8.2</td><td>5.3</td><td>4.3</td><td>1.6</td></tr>
</table>

Source: Lee Jong Kyu, “North Korea’s Fiscal Shock, What is the Economic Impact?”, *KDI Review of the North Korean Economy* 23, no. 1 (July 2021) (in Korean).

The fiscal shock’s impact on North Korea’s mid- to long-term economic development plans was inevitable. Indeed, a comparison of the five-year strategy announced at the 7th Party Congress in 2016 with the five-year plan announced at the 8th Party Congress in 2021 paints a stark contrast. The former centers around the new vision and development strategy for the overall economy while the latter concentrates on a “select and focus” strategy and implementing defensive response measures amid an increasingly restrictive environment both internally and externally that does not leave enough resources for other sectors.

As the central government devotes its attention to the metal and chemical industries, it has stressed that each economic unit is responsible for the remaining areas such as construction, tourism, and local industries. However, target figures have been released only for construction (50,000 homes in Pyongyang, 25,000 in the Geomdeok district that was damaged by a typhoon, eight million tons of cement, etc.) while other sectors remain in the dark. It has also been declared that the plan for 2020 was considered to be an opportunity to overhaul and reinforce the current chaotic system. In sum, the shock to North Korea’s overseas trade had an instant chain reaction on its formal sector, which is embodied by the regime’s “select and focus” strategy in the mid- to long-term economic plan, and its defensive stance.

Table 6	Five-year Strategy vs. Five-year Plan	
	Five-year Strategy (2016-2020)	**Five-year Plan (2021-2025)**
Internal & external environment	DPRK sanctions (external)	DPRK sanctions (external) + COVID-19 (internal)
Overall stance	Comprehensive growth strategy	Defensive response strategy
Keyword	Exceptional design	Overhaul/reinforce
Key strategy	Development/growth/modernization	Normalization of economic project systems/ foundation for independence
Key sector	Energy/science & technology/overall industry	Metal/chemical

Source: Lee Jong Kyu, DPRK Sanctions and North Korea's Overseas Trade; Lee Suk ed., Impact of DPRK Sanctions and North Korea's Economic Future, Research Paper, KDI, 2021 (in Korean).

2. Impact on the Informal Sector

Compared to the formal sector, where the COVID-19 shock was instantly visible, the impact on the informal sector has been far less conspicuous, with the price of rice exhibiting a stable downward trend while the exchange rate has appreciated significantly. Under Kim Jong-un, rice prices had remained very stable (5,000-6000 won per kilogram) in the post-sanction period. Contrary to expectations, a stable downtrend has been observed since borders were closed (4,000 won range). At the same time, the foreign exchange rate has seen a more dramatic shift, with the KPW/USD exchange rate appreciating from the 8,000-won range to the 4,000-won range and a similar appreciation relative to the Chinese yuan. Indeed, it is normal for the exchange rate to depreciate as conditions deteriorate in the overall economy, but the reverse is true for North Korea during the external shocks. It is even more puzzling when we consider the fact that, although the exchange rate and prices can no longer affect the North Korean economy as they once had, for example, by revitalizing overseas trade, maintaining a steady food supply, and spurring dollarization, among others, there has been neither a destabilization nor increases in the prices of rice. So, how is this possible?

An examination into North Korea's prices reveals that rice prices have fallen and have remained at low levels since the border closures, a sharp fall in rice imports and a decline in domestic production in 2020, factors which would normally drive up the price. The decline could be due to several reasons. Firstly, the regime may have distributed the emergency food supply in order to stabilize inflation. In fact, there have been reports that citizens were given provisions of rice that had been stored in warehouses for reserve stock. Secondly, the authorities may have enforced a price cap on rice prices as well as crackdowns on merchants selling rice priced above the cap. This tactic of capping food prices at market stalls has often been used by the regime during times of hyperinflation. Thirdly, food production in North Korea may have sustained robust levels before 2020. For example, according to estimates from South Korea's Rural Development Administration (RDA), annual food production jumped from 4.17 million tons in 2000-2009 to 4.69 million in 2012-2019. Finally, the people of North Korea may have shifted their consumption from rice to other substitutes, such as corn, which is half the price, as their incomes contracted. Subsequently, this would have increased the demand for cheaper grains. This assumption is given some validity by the fact that corn prices spiked to 2,494 won per kilo in August 2021 from 1,260 won in January 2020 just before borders were closed due to the pandemic.[2]

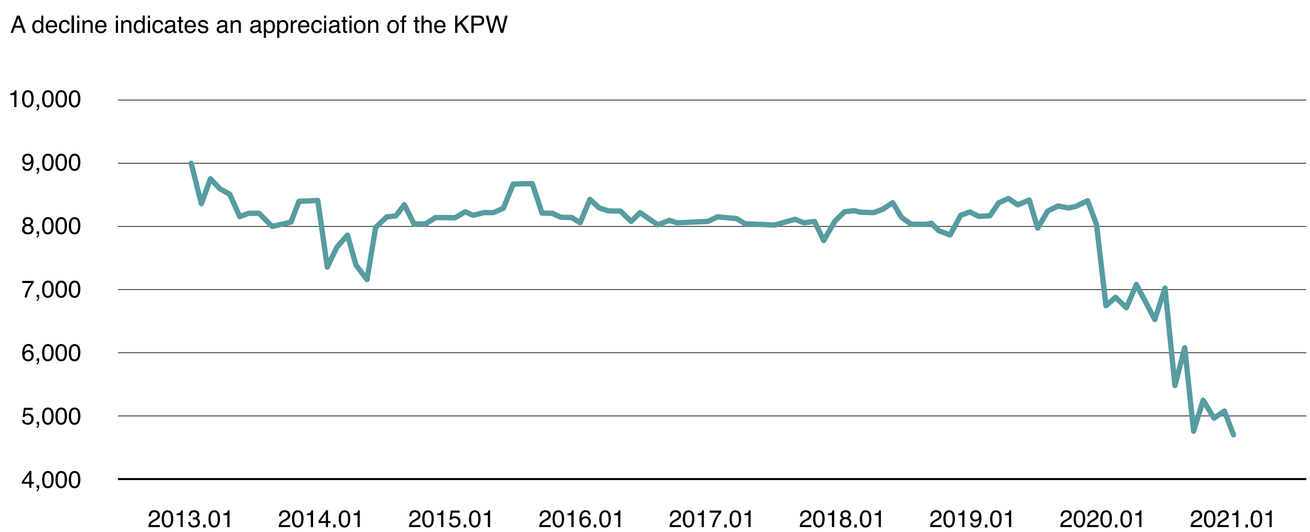
Meanwhile, as rice prices exhibited an overall downward trend, the opposite is true for agricultural and food products such as soybean oil, sugar, condiments, corn, flour, cooking oil, etc., and daily necessities and consumer goods such as antibiotics, painkillers, wrist watches, gas lighters, etc. These products have one commonality: they are all highly import-dependent on China.[3] Specifically, it seems that the regime was able to cap and control the price of rice and maintain a favorable production environment through 2021, which in turn reduced its price, but was not able to do the same for other products, especially items with a high dependency on China. Additionally, the price gap between regions continues to widen since the outbreak. The gap was almost eliminated thanks to the exponential growth seen in the service industry, including transportation, communications, and distribution, under Kim Jong-un. However, COVID-19 has reduced trade between different regions.

However, the government's ability to achieve the overall stability of prices based on the price of rice may be questionable. Accordingly, the regime is expected to, at a minimum, partially reopen North Korea to increase the import of essential goods as the risks associated with COVID-19 wane.

As noted above, the North Korean won, which previously depreciated during times of crisis, has strengthened and remains strong against the dollar. It is difficult to gain an accurate understanding of why, given the lack of official documents and announcements. However, the trend of the North Korean exchange rate suggests some degree of intervention by the regime. In fact, some North Korean literature assert that by arbitrarily strengthening the exchange rate, prices can be controlled and the foreign currency in the market can be absorbed. From this perspective, it appears likely that the authorities intervened in the foreign currency market.

Alternative explanations are also possible. For North Korea to maintain a strong won, certain conditions must be satisfied. The first condition is the expansion of the foreign currency supply. However, this is unlikely to have happened due to the imposition of sanctions. It is more reasonable to assume that the decline in foreign trade diminished the supply of foreign currency. The second is a lower demand for foreign currencies and higher demand for the won. As borders closed and trade collapsed, economic agents would have had little incentive to keep their holdings of dollars and yuan. Moreover, in such an environment, if the regime were to ban foreign currency-based transactions or arbitrarily boost the won by imposing a floor, the demand for foreign currency could temporarily fall. There have, in fact, been reports that a ban was enforced on foreign currency-based transactions between businesses. Meanwhile, in terms of the demand for the won, it may have increased due to the regime's regulations on foreign currencies and because, regardless of the circumstances, people have to trade to make a living. Thirdly, the supply of the won may have also decreased. It was recently reported that North Korea was facing difficulties due to a lack of resources, such as paper and ink, to print money. However, this is difficult to verify, and even if it had occurred, the regime would have urgently imported the necessary materials to correct the situation. Considering all of these conditions, the most rational explanation would be that the strong upward trend in the exchange rate stems from the suspension of trade and the reduced demand to hold foreign currencies and trade with them due to the measures put in place by the regime.

Figure 3 KPW/USD Exchange Rate (KPW/USD)



Source: Calculated by the author using data from *Daily NK*.

Implications

We have thus far examined how the pandemic has affected the North Korean economy. It is challenging to differentiate between the fallout from sanctions, which predate the health crisis, from the fallout due to the pandemic. It is clear, though, that the sanctions imposed since 2016 caused the decline in trade in sanctioned items, and that the border closures in the wake of COVID-19 caused the changes in non-sanctioned items. Accordingly, it is estimated that North Korea lost an annual $2.2 billion in exports and $1 billion in imports due to sanctions, which equates to $2.2 billion in foreign currency revenue and $1 billion-worth of capital goods. In, addition the changes in non-sanctioned items in 2020 reveals that the direct damages incurred by the pandemic amounted to approximately $2 billion. In other words, $2 billion of intermediate and consumer goods, which had sustained North Korea during the sanctions, essentially disappeared. This trend continued in 2021.

Additionally, the impact was not limited to trade. There were indirect effects on the formal sector, especially to the national budget, and the informal sector, particularly through changes in prices and the exchange rate. In terms of the national budget plan for 2021, the expected growth of both revenue and expenditure were at their lowest levels since Kim Jong-un took power, confirming that COVID-19 had a negative impact on the formal sector. Meanwhile, in the informal sector, rice prices have been on a stable downtrend. However, there was a spike in the prices of substitute items for rice, such as corn, as well as for other food and agricultural goods (soybean oil, sugar, condiments, corn, flour, cooking oil, etc.) and daily necessities and consumer goods (antibiotics, painkillers, wrist watches, gas lighters, etc.). This shows that it is difficult to conclude that prices in North Korea are stable, by merely looking at the price of rice. As for the exchange rate, the won remains strong, contrary to expectations. However, this was primarily the result of the reduced demand for foreign currency and the regime's intervention in the foreign exchange market and subsequent increase in the demand for the won. With borders closed, and virtually no trade, the demand for foreign currency has fallen and the regime's forceful measures have amplified the decline.

For North Korea, 2021 was a particularly significant year for many reasons. From a short-term perspective, there was an accumulation of external shocks as the health crisis continued into its second year. The sanctions had resulted in three years of shocks (2017-19), followed by the border closures. From a medium-term perspective, 2021 was the year to launch its new five-year economic plan. However, the wide array of hardships that North Korea faced from both home and abroad has created many obstacles, which are confirmed by the 2021 national budget plan and the economic strategy, which focuses narrowly on the metal and chemical industries.

The North Korean regime has recently strengthened its control over the informal sector. It is uncertain whether this marks the end of the tolerant policy stance that the Kim Jong-un regime had taken towards the informal sector. It is unclear whether the degree of interference in and control of the informal sector will increase further or return to the previous stance of tolerance. The policy stance toward the informal sector will determine the level of economic growth in the future. Comments against the informal sector are frequently observed in the current North Korean media; for example, "Nothing must be overlooked, and strong disciplinary action must be taken to tackle the phenomena that undermine our unified leadership and distinct characteristics." However, the informal sector has been a major growth engine in the Kim Jong-un era, replacing numerous formal sectors and improving the efficiency of resource allocation (through the development of the service sector, e.g. distribution, transportation, communication, etc.), labor market, and workforce productivity. Furthermore, a large portion of local governments' budgets is generated from markets (taxes). If the restrictive stance is prolonged, it could undermine current growth engines. Given that the regime recognizes this fact, it is expected to relax the restrictions as soon as the double shocks of sanctions and COVID-19 wane. Therefore, rather than controlling the markets, the measures appear to be aimed at stabilizing informal sectors during the most turbulent period in North Korea since the 1990s.

Author Bio

Jong-Kyu Lee is a Senior Fellow at KDI. His research focuses on current macroeconomic situation of North Korea as well as its special trade relationship with China. Prior to joining KDI, he was a Research Fellow at Samsung Economic Research Institute (SERI) from 2008 to 2013. He obtained a doctorate at the University of London(UCL) in 2008. His current interest lies in understanding the impact of sanctions, marketization, dollarization, and demographic change on the DPRK economy and its policy responses.

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[1] In 2020, global trade declined by 7.5 percent, according to the IMF. The drop in North Korea's trade, at 78.2 percent according to KITA, was much larger.

[2] The price stands at 2,104 won as of Dec. 2021 (calculated by the author using *Daily NK's* statistics on market prices).

[3] In contrast, the prices of household appliances, such as TVs and refrigerators, and furniture, such as bedding cabinets, have continued to fall since 2017. This is assumed to be the result of decreased demand due to lower household income rather than supply-side factors.