

North Korea's Economic Crisis: Last Chance for Denuclearization?

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Summary

North Korea is in trouble. The COVID-19 pandemic, self-imposed isolation and lockdowns, crop failures, sanctions, and more have put the economy in a parlous state, a fact acknowledged by Kim Jong Un himself. The state planning mechanism seems broken, foreign exchange holdings are down, state revenue is shrinking, foreign trade numbers have collapsed, and growth is declining. The measures taken thus far by the regime to deal with the crisis seem unlikely to turn things around. Indeed, they may make matters worse, especially if Pyongyang follows through on plans to divert scarce resources to expand its nuclear weapons and missile programs.

Despite its difficulties, don't count Pyongyang out. For decades, the North Korean regime has demonstrated remarkable determination, diplomatic dexterity, and uncanny survival skills. And the DPRK has the support of China, which is prepared to live with Pyongyang's nuclear status and committed to keeping the regime on "life support." North Korea is down, but hardly out.

In the midst of this economic crisis, Kim Jong Un is gambling that expanding his nuclear and missile arsenals will convince the United States to engage in "arms control talks" that would tacitly accept the DPRK as a nuclear power and give Pyongyang the sanctions relief it needs.

But North Korea's economic crisis represents a major vulnerability for Pyongyang. It presents an opportunity to apply overwhelming pressure on the regime across a broad front and convince Kim Jong Un that his pursuit of nuclear weapons could end his regime. Previous efforts to do so were half-hearted and failed to change Kim's calculus. The current crisis may be the last opportunity to try.

Today, prospects for North Korea's denuclearization are all but gone. But that goal may still be achievable if the United States, its allies, and partners recognize that Kim Jong Un and his regime are standing on shaky ground, and that now is the time to convince Kim that the trembling he feels is a sign that the regime's days could be numbered.

A Tough New Year

North Korea has begun 2021 in the grip of economic hardship. The COVID-19 pandemic, bad weather, international sanctions, self-imposed isolation, economic mismanagement, and a

dramatic drop in trade have combined to create an economic crisis that some compare to the “arduous march” of the 1990s.

The North’s economic predicament intensified steadily throughout 2020, due in part to the onset of the COVID-19 pandemic and crop damage caused by typhoons. As economic setbacks accumulated, the seriousness of the North’s difficulties made it necessary for North Korean leader Kim Jong Un to announce in August that the 8th Congress of the ruling Workers’ Party would be held in January 2021 to address “deviations and shortcomings” in the economic plan issued at the 7th Party Congress in 2016.¹ The 7th Congress had taken place after a 36-year hiatus in such meetings. Since Kim Jong Un’s accession to power, he has now held two Party Congresses, each with an important economic focus.

A Call to “Battle”

Further indication of mounting problems was seen in Kim’s remarks to a meeting of the Party’s Politburo in October 2020. Kim called for an “80-day battle” to boost productivity and meet planning targets.² This national mobilization failed to overcome the problems the DPRK was facing.

As North Korea prepared for the 8th Party Congress, the severity of the DPRK’s plight was again highlighted by Kim Jong Un’s decision to forego his annual New Year’s message to the nation. That annual address is a ritualistic speech normally used to extol accomplishments and exhort the working masses to achieve even loftier goals as a new year begins. Faced with poor economic results, Kim opted to give his downbeat presentation to the January Party Congress and use the event to present a recovery plan.

Breaking Bad News

Kim’s message to the Congress was somber. He acknowledged the serious difficulties the country faced and admitted that the country’s five-year development plan had “fallen short in almost every category.” That admission almost certainly understated the difficulty of the situation.

Foremost among the blows striking the economy was the COVID-19 pandemic. North Korea continues to insist it is virus-free – a claim that is almost certainly untrue, especially for a country that shares a border with China and has a notoriously fragile public health infrastructure. To defend itself against the virus’s onslaught and ease the pressure on its health system, North Korea has taken a series of drastic measures that have shut down much of its international trade and imposed an intense level of self-isolation – all with major economic consequences.

The regime has put several cities under lockdown, domestic and international travel has been severely curtailed, cross-border trade with China has been restricted, and frequent border closures imposed. These steps have brought about a significant drop in economic growth and a dramatic decline in trade with China – North Korea’s economic lifeline.

After a slight uptick in 2019, the DPRK's economic growth is believed to have fallen significantly – perhaps by as much as 8.5% – in 2020. Meanwhile, China-DPRK trade has declined by almost 80% -- an ominous sign since trade with the PRC represents some 90% of North Korea's total trade.³

Heavy rains and typhoons in 2020 took a major toll on agricultural output, resulting in widespread shortages of some food staples that continue today. At the same time, the international sanctions regime, despite its shortcomings and ongoing efforts by the DPRK and China to skirt sanctions, has limited Pyongyang's ability to earn foreign exchange. Even if sanctions have not been able to force North Korea to end its nuclear weapons program, they appear to have imposed a major burden on North Korea's economy.

Re-tightening Belts

In his first public speech after assuming the leadership, Kim Jong Un declared he would work to ensure that the North Korean people “would never have to tighten their belt again.”⁴ The economic setbacks of 2020-2021 have demonstrated the failure of that promise.

So has Kim's inability to achieve sanctions easing through negotiations with the United States. Kim's failed summit with U.S. President Donald Trump in Hanoi in February 2019 closed the door on a partial nuclear deal that might have brought about some relief from U.S. and international sanctions. Trading a limited freeze on the DPRK's nuclear program for sanctions easing had been Kim's key goal for the summit.

With the end of the Trump administration, Kim now faces a new U.S. president who has rejected Trump-style summit engagement and called the North Korean leader a “thug.” And with this new U.S. president, there seems no chance Kim Jong Un can recreate the relationship he enjoyed with Donald Trump. That bodes ill for the DPRK's hopes for near-term sanctions relief.

Meet the New Fix: Same As the Old Fix

Faced with this array of challenges, one might have expected North Korea to rely on economic reform and freed-up market forces to spur growth. Kim Jong Un's economic program at the 7th Party Congress had given a quiet nod to such reforms, reflecting Kim's willingness to accept ideologically problematic market measures in order to jump-start the economy. But in 2021, Kim has opted to go down a very different path.

In his remarks to the 8th Party Congress, and in his new economic plan approved by the Congress and North Korea's parliament, the Supreme People's Assembly (SPA), on January 17, Kim Jong Un took a page out of a timeworn DPRK playbook. Kim called for self-reliance, increased mobilization to spur production, and an enhanced role for the state in guiding the economy.⁵ Building on the state-centric economic plan described in his speech to a Workers' Party Plenum in December 2019, Kim cited the need for strengthened ideological work and enhanced centralization of control over the economy – an indication that more liberalization aimed at spurring market forces is not in the cards.

Instead of reform, the DPRK is pursuing economic policies that have shown themselves inadequate in addressing the country's problems. It remains to be seen whether Kim will follow in the footsteps of his father by cracking down on the limited reform efforts that have already been carried out, or whether he will allow the market to supply the North Korean people the goods and services the state has been unable to provide. Signs suggest he may opt for the former.⁶

At the Party Congress Kim also sacked six of eight cabinet deputy premiers responsible for economic affairs, holding them responsible for "deviations and shortcomings." Missing from Kim's guidance was any reference to economic reform and restructuring. Nor was there any recognition that the essence of North Korea's problem is the system itself. As the noted North Korea expert Andrei Lankov has written, "Pigs do not fly, and Stalinist economies do not work."⁷

The Solution: More Nukes

Although many analysts viewed Kim Jong Un's remarks to the Congress as evidence the economy is his central concern, in fact Kim's main focus lay elsewhere. In his remarks, Kim reminded the Party – and by extension the United States – that North Korea's creation of a robust nuclear capability had long been the country's "strategic and predominant goal."⁸ Kim announced his intention to significantly bolster that capability.

He presented the Congress with a list of new technologies whose development would greatly strengthen the DPRK's deterrent against its "main enemy," the United States. The list included a nuclear-powered submarine, solid fuel land-launched and submarine-launched ICBMs, multiple warhead missiles, and "hypersonic gliding flight warheads." Kim left no doubt that North Korea is and will remain a nuclear weapons power.

How to Pay the Bills?

Nowhere in Kim's address to the Party Congress was there mention of the price tag for these new capabilities. Nor did Kim recognize the obvious contradiction between finding the resources needed to pursue his nuclear and missile buildup and the requirement to rescue the economy. After the 8th Party Congress and SPA sessions, it remains unclear how Kim Jong Un intends to pursue a robust military buildup in an environment in which state revenues are showing almost no growth and foreign exchange holdings are shrinking.⁹

Also unmentioned in Kim's guidance to the Party and the SPA was that the DPRK's proposed military buildup will further antagonize the United States and alienate the international community, making it even less likely Pyongyang could obtain the sanctions easing it seeks.

Tightening Control

Meanwhile, in parallel with North Korea's evident shift towards a more state-centric economic agenda, the regime is carrying out an internal crackdown that may indicate concern about

growing public indiscipline, unacceptable practices in the market economy, and openness to foreign influence.

In 2020, Kim Jong Un's moves to increase central control over the economy and push back against market forces led to a steep appreciation in the value of the North Korean won, sparking fears of economic instability. In November 2020, the regime reportedly executed a currency trader in what may have been a warning to others not to violate the state's tight controls on increasingly scarce foreign currency.¹⁰

In December 2020, the SPA presidium adopted new guidelines for suppressing "reactionary thought" and imposed tighter controls on foreign media, recordings, publications, and cultural products, particularly those from South Korea. The new legislation reportedly includes punishment for those guilty of "speaking or writing in the South Chosun (i.e., South Korean) style."¹¹

These steps may be just the latest manifestation of the periodic crackdown the regime carries out to prevent ideological laxity and reduce foreign influence. But they bear careful watching lest they are a precursor to a broader campaign aimed at extinguishing local markets and the country's tiny private economy. Such a campaign would eliminate a vital safety net for a population that is ill-served, or not served at all, by the state-led economy.

North Korea's current travails tell us the national economy is under considerable stress. Thus far, Kim Jong Un's response to these economic challenges shows a lack of imagination, an attachment to flawed old remedies, and fear of losing control if reform is pursued.

Kim began his tenure as leader by demonstrating willingness to allow experiments in marketization of the economy. He seemed to believe that the economic gains created by a degree of liberalization would show his concern for the people's welfare, bring about much-needed economic growth, and strengthen his popular appeal. A ski resort, water park, and sparkling new housing developments were symbols of this new approach.

Today, that approach has lost its luster. The upbeat vision of growth and improved livelihoods Kim once promoted has faded. Belt-tightening, economic centralization, and a focus on expensive weapons of mass destruction are now emerging as the guiding principles of the regime as Kim looks towards the beginning of his second decade in power later this year.

On the Road to Collapse?

North Korea's economic situation today begs several questions. What are the implications of the challenges the regime faces? Is North Korea in the grip of a terminal, systemic illness? Do economic difficulties and social problems portend political instability? Can the regime deal successfully with the array of challenges it faces? Should the United States and the Republic of Korea be preparing for North Korean regime collapse or implosion?

In considering these questions, it is best to reflect carefully on the DPRK's experience after the collapse of the former Soviet Union and its loss of Soviet aid and privileged access to trade with Moscow's Eastern European allies. The end of Communism in Europe was a devastating blow to North Korea, leaving a gaping hole in its economy. And when combined with crop failures and agricultural mismanagement in the mid-1990s, it led to a horrific famine.

During this period, many believed that the DPRK could not possibly survive. And yet it did.

Survival Skills

For almost three decades, the Pyongyang regime has shown remarkable determination, diplomatic dexterity, and uncanny survival skills. The regime was dealt a terrible hand, yet it navigated a famine, engaged all of the region's major powers as well as the United States, and received billions in international assistance. Despite the challenges, it has become a de facto nuclear weapons state that has managed both to "tame" its South Korean neighbor into becoming its frequent advocate, and gain the international legitimacy bestowed by three meetings with the president of the United States.

In those meetings, and in those with the ROK and Chinese leadership, Pyongyang has come to the table as a nuclear power – a force to be reckoned with and respected. And in future negotiations, as Kim Jong Un recently reminded us, Pyongyang will again be at the table as a nuclear weapons state, but this time to engage the United States in "arms control talks" – a long standing North Korean goal.

The lesson of all this is that we should not assume the demise of the North Korean regime. We should not bet that difficult economic straits will inevitably cause the regime to implode. It did not in the mid-1990s, and it is unlikely to do so today. We should remember the sacrifices North Korea made in order to survive during its "arduous march," and the lengths the regime went to develop the "insurance policy" it believes will guarantee its survival – nuclear weapons.

With a Little Help From Their Friends

It is equally important to remember that China, the DPRK's sole treaty ally, major trading partner, and fraternal neighbor, remains determined to prevent the regime from collapsing.

PRC-DPRK relations have recovered from the days of mutual antagonism in 2017 when Pyongyang's nuclear and ballistic missile tests and volatile rhetoric seemed to be taking the Korean Peninsula to the brink of war. Instability on its doorstep has long been China's nightmare, and Pyongyang's actions and the U.S. "fire and fury" response were the toxic combination that seemed about to make Beijing's nightmare become a reality.

The reset of PRC-DPRK relations seen since 2018 has restored decorum, dialogue, and cooperation between Beijing and Pyongyang. While it would be too much to say that all is perfect between the two occasionally fractious allies, as long as Pyongyang avoids a repeat of its provocative behavior of 2017, China seems likely continue to underwrite the regime's survival.¹²

Meanwhile, Beijing seems to have reconciled itself to the permanence of North Korea's nuclear arsenal, although China continues to tout the goal of denuclearization. Maintaining the illusion of eventual denuclearization meets China's diplomatic needs, but the reality is that Beijing no longer seems inclined to take steps to coerce or compel the DPRK to give up its nuclear weapons.

Rather, the PRC appears determined to keep its ties with North Korea on a stable trajectory as it tries to exploit frictions in U.S.-South Korea relations, problems in South Korea-Japan cooperation, and the decline in U.S. regional leadership seen during the Trump years. Beijing also sees an opportunity in that the current leadership in Seoul is arguably more pro-China than any previous ROK government.

Today, all may not be perfectly harmonious in PRC-DPRK relations, but bilateral ties are greatly improved, and the two allies share strategic goals. For China, even an occasionally problematic partnership with Pyongyang has great value.

Nevertheless, despite North Korea's history of resilience and Beijing's willingness to keep the regime on what a Chinese official once called "life support," the current economic crisis suggests the DPRK is in a vulnerable position. The regime's economic fundamentals are in a precarious state, the planning mechanism appears broken, foreign exchange holdings are down, state revenue is shrinking, foreign trade numbers have collapsed, and growth is declining. The measures adopted so far by the Party and government seem unlikely to turn things around, and indeed may make matters worse, especially if the regime uses its shrinking resources to expand spending on weapons of mass destruction.

For those reasons, the United States and the ROK should monitor developments carefully, frequently exchange assessments of the North's economic and political situation and update contingency plans regularly as a precaution. But the allies should not presume that a regime that has weathered so many storms will founder on this occasion.

An Opportunity

Nevertheless, while North Korea's collapse is not imminent and there are no signs of internal turmoil, the Kim regime's current vulnerability can be exploited. Indeed, doing so may be the only way to rescue denuclearization's disappearing prospects.

Pyongyang today is revising its approach to the United States. In his address to the 8th Party Congress, Kim Jong Un made clearer than ever that denuclearization is off the table. Declaring that the DPRK is now a "responsible nuclear weapons state," Kim's message to Washington was that the regime intends to remain a nuclear power. Having attained his "strategic and predominant goal" of developing nuclear weapons, Kim Jong Un is now seeking to fulfill another long-standing ambition: Engaging in "arms-control talks" with the United States.

Pyongyang hopes that by accelerating its nuclear and ballistic missile programs it can convince the United States both to accept the DPRK as a nuclear power and agree to “arms control talks” in order to try to slow North Korea’s nuclear buildup. Such talks would, as then-DPRK Foreign Minister Ri Yong Ho once told a group of American experts, bring the DPRK and the United States to the table to negotiate “as one nuclear power with another.”¹³

For Pyongyang, Ri said, the aim of such talks would be to remove the “threat” posed by the U.S.-ROK alliance, the presence of U.S. troops in South Korea, and the U.S. nuclear umbrella that defends the ROK and Japan.

There is no doubt that North Korea would also seek the removal of international and U.S. sanctions in these talks, possibly in return for a freeze on some elements of its nuclear weapons program. However, based on Washington’s past experience negotiating with North Korea, North Korea would not allow the intrusive inspections necessary to verify such a “freeze.” As one arms control expert remarked during the Clinton administration, “you can’t freeze what you can’t see.”

Pyongyang’s emerging approach would kill remaining hopes for denuclearization. Some analysts have interpreted Kim Jong Un’s remarks to the 8th Party Congress as a signal that the DPRK is ready for talks with the United States. That may be the case, but the conversation North Korea plans to have is not about denuclearization. Rather, it is about how the DPRK and the United States can manage their relations in the context of Pyongyang’s status as a de facto nuclear weapons state.

The long history of U.S.-DPRK nuclear negotiations tells us that nothing the United States has tried, nothing that it has offered or promised, has achieved anything more than a temporary pause in North Korea’s known nuclear weapons program. And nothing Washington has done has been able to slow or stop Pyongyang surreptitious nuclear weapons program. North Korea remains more wedded to its nuclear weapons than ever and firmly convinced that nuclear weapons are its salvation -- the “tool” that guarantees the regime’s existence.

But that cold-blooded North Korean calculus contains the seed of an approach that could yet bring about the North’s denuclearization.

A Policy Proposal

The United States has never been able to make the DPRK regime reconsider its calculus. Washington has failed to convince the North Korean leader that, not only is he wrong about nuclear weapons guaranteeing the survival of his regime, but these weapons may actually hasten the end of the regime.

With the failure of all previous efforts to denuclearize North Korea, and with Pyongyang now seeking to “change the subject” of U.S.-DPRK dialogue to arms control, the window of opportunity for denuclearization is all but closed. But **if** the U.S. policy goal is still the denuclearization of North Korea, then it is time to try an approach that, by shaking the

foundations of the DPRK economy, intensifying Pyongyang's international isolation, drying up its foreign exchange, pressuring its military, and taking advantage of its current difficult economic straits, could convince the North Korean leader to either change course or put his regime at risk.

To do so, the United States must lead an international effort to apply unprecedented pressure on the Kim regime across a broad front. It means taking diplomatic, economic, military, and covert steps designed to massively pressure a system that is already experiencing great difficulty. Such steps would have to be much more intense and far reaching than those taken during the "maximum pressure" campaign of the Trump years. Despite the rhetoric at the time, that campaign never came close to being "maximum."

Pursuing the proposed approach would require a whole-of-government effort by the United States, and a major organizational effort to build an international coalition of the willing. The approach would require the United States and its allies and partners to apply an even broader and deeper array of sanctions and enforcement measures aimed at cutting North Korea off from the international trading and banking systems.

A U.S.-led international coalition could shut down North Korean embassies, consulates, and overseas trading companies engaged in illicit activities. The U.S. and its Korean and Japanese allies could increase the frequency and scope of military exercises, which would require Pyongyang to expend scarce resources in order to increase its own training in response.

The United States could carry out new deployments, including of nuclear-capable systems, into the region, which would both send a strong deterrent message to Pyongyang and boost allied confidence in the U.S. deterrent commitment. U.S., ROK, Japan trilateral defense consultations, perhaps to include a joint nuclear planning component, would also send a clear message of allied resolve.

The United States could lead an international effort to interdict North Korean ships and aircraft suspected of sanctions busting or engaging in illicit trade. Biting sanctions could be applied on Chinese and other firms that are helping North Korea evade or violate international sanctions. A special target of such measures would be dual-use technologies and components essential to North Korea's nuclear and missile programs.

The United States and others could consider using their cyber capabilities to attack North Korean banks in the same way that Pyongyang's cyber experts have been attacking foreign banking institutions. Other, covert steps could be taken to disrupt the DPRK's economy, including its electric power grid.

All of these steps, in combination with the many difficulties North Korea is currently facing, could convince Kim Jong Un that he is facing an unprecedented challenge -- one that might cause his regime to founder. This array of unprecedented pressure would make Kim Jong Un's options starker than they have ever been. If Kim Jong Un's goal is regime survival, and it is, and

if he is rational, and he is, this might convince him that the time has come to follow a different path.

This approach carries risk, including the possibility of a North Korean overreaction. That fact has probably deterred previous U.S. administrations from pursuing it. But prospects for North Korea's denuclearization are now evaporating, and the time to act is soon if denuclearization is to be achieved. The United States and its partners will soon face a crucial decision: Either take robust steps to convince or compel Kim Jong Un to denuclearize or, failing that, be prepared to accept the fact that North Korea is going to remain a nuclear-armed state and deal with it as such.

In the latter case, the United States could try to limit the North's nuclear threat via arms control talks. But by entering into such talks Washington would effectively concede the fact that it is dealing with North Korea "as one nuclear power with another." To avoid the arms control trap, the United States could argue that it is pursuing a "freeze" designed to limit North Korea's nuclear weapons program quantitatively and qualitatively. But with the denuclearization agreements of 1994, 2005, and 2007 all having failed in large part because of Pyongyang's unwillingness to accept monitoring and verification, a new agreement seems likely to meet a similar fate, especially now that the DPRK is a de facto nuclear power.

Some argue that the United States should offer a partial lifting of sanctions in return for Pyongyang's cessation of fissile material production. The Hanoi summit collapsed when Kim Jong Un sought to exclude known nuclear production facilities from just such an agreement. He also denied the existence of other fissile material production facilities outside Yongbyon – a stark reminder of Pyongyang's determination to retain the ability to produce fissile material for nuclear weapons.

Alternatively, the United States could continue to assert that denuclearization, however unachievable, remains its goal, and rely on a version of earlier, failed approaches in an effort to attain that goal. The outcome of that choice seems predictable.

But with the door to North Korea's denuclearization closing, Kim Jong Un is gambling that he can shut it permanently and open a new one that will lead to the DPRK becoming a permanently nuclear-armed state. Even as he pursues this new approach, however, Kim is standing on shaky economic ground. The United States, the Republic of Korea, and like-minded partners have an opportunity to convince Kim Jong Un that the trembling he feels is a sign that the regime's days may be numbered if he makes the wrong choice.

¹ "North Korean Party Congress Primer," 38 North, December 22, 2020, <https://www.38north.org/2020/12/partycongress122220/>; Also, Do Je-hae, "Kim Jong-un's admission of failure shows serious economic situation in North Korea," *The Korea Times*, January 6, 2021, https://www.koreatimes.co.kr/www/nation/2021/01/103_302049.html

² Jeong-Ho Lee, “Kim Jong-un Calls for ‘80-day Battle’ to Boost North Korea Economy,” Bloomberg, October 5, 2020,

<https://www.bloomberg.com/news/articles/2020-10-06/kim-jong-un-calls-80-day-battle-to-boost-north-korea-economy>

³ Jeong-Ho Lee, “Kim Jong-un Calls for ‘80-day Battle’ to Boost North Korea Economy;” See also, Sam Kim, “‘Severe test’: As North Korean economy tanks, Kim needs solutions,” Al Jazeera, December 30, 2020, <https://www.aljazeera.com/economy/2020/12/30/severe-test-as-north-korean-economy-tanks-kim-needs-solutions>

⁴ Choe Sang-hun, “North Korean Leader Stresses Need for Strong Military,” *The New York Times*, April 15, 2012, <https://www.nytimes.com/2012/04/16/world/asia/kim-jong-un-north-korean-leader-talks-of-military-superiority-in-first-public-speech.html>

⁵ “North Korea’s parliament approves Kim Jong-un’s development plans,” Associated Press, *South China Morning Post*, January 18, 2021, <https://www.scmp.com/news/asia/east-asia/article/3118120/north-koreas-parliament-approves-kim-jong-uns-development-plans>

⁶ Patrick Winn, “In crisis, North Korea is turning further inward,” *The World*, January 26, 2021, <https://www.pri.org/stories/2021-01-26/crisis-north-korea-turning-further-inward>

⁷ Andrei Lankov, “It’s not about nukes. The real news is North Korea’s economic reforms,” NK News, January 15, 2021, <https://www.nknews.org/2021/01/its-not-about-nukes-the-real-news-is-north-koreas-dangerous-economic-reforms/>

⁸ Choe Sang-hun, “Kim Jong-un Uses Party Congress to Double Down on Nuclear Program,” *The New York Times*, January 13, 2021, <https://www.nytimes.com/2021/01/13/world/asia/north-korea-kim-jong-un-nuclear.html>

⁹ Julian Ryall, “Cash strapped North Korea seeks new sources of income,” DW, November 16, 2020,

<https://www.dw.com/en/cash-strapped-north-korea-seeks-new-sources-of-income/a-55617501>; See also, Ruediger Frank, “SPA Session: Lowest Official Growth Rate in Decades,” 38

North, January 22, 2021,

<https://www.38north.org/2021/01/spa-session-lowest-official-growth-rate-in-decades/>

¹⁰ Edward White and Kang Buseong, “North Korea executes forex trader as Kim tightens grip on economy,” *Financial Times*, November 27, 2020, <https://www.ft.com/content/fa63988d-fe48-4f3e-932d-876a3523b220>;

See also, William Brown, “Something Is Odd in North Korea’s Foreign Exchange Markets,” 38 North, December 21, 2020, <https://www.38north.org/2020/12/wbrown122120/>

¹¹ Jang Seul Gi, “Exclusive: Daily NK obtains materials explaining specifics of new ‘anti-reactionary thought’ law,” Daily NK, January 19, 2021,

<https://www.dailynk.com/english/exclusive-daily-nk-obtains-materials-explaining-specifics-new-anti-reactionary-thought-law/>

¹² For analysis of recent PRC-DPRK relations, see Evans J.R. Revere, “Lips and teeth: Repairing China-North Korea relations,” *Brookings*, November 2019,

<https://www.brookings.edu/research/lips-and-teeth-repairing-china-north-korea-relations/>

¹³ Remarks made at a meeting in New York City, March 10, 2012.