

FMSO's Military DIME (M-DIME) Research Project

Tracking Russian and Chinese military influence in states around the world

Instruments of Chinese Military Influence in North Korea

Lucas Winter^a, Jason Warner^b, and Michael Donmoyer^c



MAY 2025

**U.S. Army
Foreign Military Studies Office (FMSO)
Training and Doctrine Command (TRADOC) G-2**



OVERVIEW OF FMSO'S M-DIME RESEARCH PROJECT

The Military DIME (M-DIME) Research Project is a dynamic effort from researchers at the U.S. Army Training and Doctrine Command's Foreign Military Studies Office (FMSO). Its goal is to provide Army leaders with a clear, comparative understanding of how China and Russia employ instruments of national power to obtain military influence around the world. The M-DIME framework is derived from the "DIME" concept, which classes instruments of national power into four types: Diplomatic, Informational, Military, and Economic. Based on this concept, the M-DIME framework gives more narrow attention to the instruments that China and Russia employ to gain military influence in third-party countries.

The M-DIME framework's purpose is to track and analyze the military influence of "Benefactor" countries (i.e. China and Russia) in select "Recipient" countries in Africa, Latin America, the Middle East, and South and Southeast Asia. Benefactor countries are assumed to engage in activities that result in them having increased military influence in Recipient countries to gain leverage over global rivals, competitors, and adversaries; for China and Russia, this means the United States. Within this framework, "military influence" is defined as the ability of a Benefactor country to shape or alter the attitudes, behaviors, and capabilities of actors within—and entities associated with—the armed forces of Recipient countries.

The M-DIME framework identifies 12 distinct instruments of national power employed by Benefactor countries to gain military influence in Recipient countries, three for each of the DIME categories. They are as follows:

DIPLOMATIC INSTRUMENTS

- D1 Defense-Related Diplomacy
- D2 International Military Education and Training
- D3 Soft Power Activities

INFORMATIONAL INSTRUMENTS

- I1 Cultural and Media Outreach, Collaboration, and Alignment
- I2 Information and Communications Technology (ICT) Support
- I3 Cooperation in Military Intelligence and Communications

MILITARY INSTRUMENTS

- M1 Formal Bilateral Military Engagements
- M2 Shared Informal/Multilateral Military Engagements
- M3 Defense/Security Pacts and Agreements

ECONOMIC INSTRUMENTS

- E1 Arms Transfers
- E2 Technology-Sharing and Joint Production Agreements
- E3 Trade and Cooperation in Strategic Commodities/Sectors

M-DIME analysis is based on qualitative assessments of Benefactor influence in Recipient countries along each of the 12 M-DIME instruments of influence. These assessments are made for the Benefactor's **Current Influence** (assessed as Very High, High, Medium, Low, Very Low, or Unobserved) and **Projected Influence** (assessed as Increasing, Steady, Decreasing, or Unknown). Current assessments are made based on activities from 2012 to the present, while future assessments are three-year forecasts.

The bulk of activities considered in the M-DIME Research Project involve members of the armed forces or defense sector personnel in both Benefactor and Recipient countries. Such activities include formal and informal military-to-military diplomacy, security cooperation engagements, and arms transfers. However, the M-DIME Research Project also tracks and analyzes Chinese and Russian activities that employ non-military instruments of influence but ultimately bear on the decisionmaking and capabilities of the Recipient country's armed forces. Such activities include Chinese and Russian collaboration with Benefactor states in media, communications technology, and strategic sectors.

The M-DIME Research Project's findings are derived from open-source research. Each M-DIME product is produced with the collaboration of analysts from across FMSO, frequently with the assistance of non-Department of Defense subject matter experts coming from academia, think tanks, and the private sector. Given its basis in open-source research, the M-DIME Research Project has an inherent limitation. It cannot track Chinese and Russian military influence activities that are deliberately kept secret. Consequently, assessments of Chinese and Russian influence based on instruments for which secrecy is important or where information would typically be classified by the Benefactor or Recipient countries—for instance, military-technology sharing or intelligence collaboration—are acknowledged to be made with low confidence. Assessments of

Projected Influence, unless otherwise stated, are also made with low confidence given pervasive information gaps and the potential for bilateral dynamics to quickly shift. In certain cases, assessments are not made where open-source data is considered inconclusive

In sum, the M-DIME Research Project is a tool for U.S. Army and U.S. Government personnel to better understand the instruments of national power employed by China and Russia to gain global military influence and the impact these activities have on U.S. national security interests. Over time, FMSO will expand the body of research and assessments based on this framework, increasing its comparative value across Benefactor and Recipient countries.

KEY ASSESSMENTS














| DIPLOMATIC / INFORMATION | | | MILITARY / ECONOMIC | | | |
|---|-----------|---|---------------------|---|--------------------------------------|--|
|  | D1 | Defense-Related Diplomacy | | | M1 | Formal Bilateral Military Engagements |
|  | D2 | International Military Education and Training | | | M2 | Shared Informal/Multilateral Military Engagements |
|  | D3 | Soft Power Activities | |  | M3 | Defense/Security Pacts and Agreements |
|  | I1 | Cultural/Media Outreach, Collaboration, Alignment | |  | E1 | Arms Transfers |
|  | I2 | Information/Communications Technology Support | |  | E2 | Technology-Sharing, Joint Production Agreements |
|  | I3 | Cooperation in Military Intelligence/Communications | |  | E3 | Trade/Cooperation in Strategic Commodities/Sectors |
| CURRENT DEGREE OF INFLUENCE | | | | | PROJECTED FUTURE DEGREE OF INFLUENCE | |
| Very High | High | Medium | Low | Very Low | None/ Unobserved | Increasing  Steady  Decreasing  |

Figure 1. M-DIME Overview

China's current M-DIME influence in North Korea is assessed as Medium. Some of the most important instruments contributing to China's current military influence in North Korea include:

- Defense/Security Pacts and Agreements (M3).** China's only bilateral defense pact is the 1961 Sino-North Korea Treaty of Friendship, Cooperation, and Mutual Assistance. It is crucial to both countries' national security, underpinning their military relations despite the lack of substantive military-to-military engagements in recent years.
- Trade and Cooperation in Strategic Commodities/Sectors (E3).** China and North Korea have shared a decades-long economic relationship, with China now accounting for nearly all North Korea's total imports and exports, including in rare earth/critical minerals and energy.
- Information and Communications Technology Support (I2).** China provided most of the hardware and ICT infrastructure necessary to build North Korea's digital network and mobile devices, which has made North Korea highly dependent on China's networking and communications technologies.

China's projected M-DIME influence in North Korea is assessed as Steady. Some of the most dynamic instruments informing China's projected military influence in North Korea include:

- Trade and Cooperation in Strategic Commodities/Sectors (E3).** North Korea's strict COVID-19 border closures enabled China to exert a very high degree of economic influence in North Korea, and this cooperation is highly likely to increase in the next three years due to Russia's veto of the UN Security Council (UNSC) sanctions regime.
- Technology-Sharing and Joint Production Agreements (E2).** North Korea's domestic manufacturers use tools and hardware produced by Chinese original equipment manufacturers despite the absence of public technology-sharing or joint production agreements, indicating the likelihood that unofficial and subnational cooperation will continue at a steady rate.



Soft Power Activities (D3). China and North Korea have not held any public high-level exchanges since Russia and North Korea signed their Comprehensive Strategic Partnership treaty in June 2024. Despite the absence of public engagements, China will likely increase its coercive soft power activities to curtail North Korea's strategic posturing and prevent it from jeopardizing China's interests on the Korean peninsula.

INTRODUCTION TO CHINA-NORTH KOREA RELATIONS

China-North Korea military relations have historically been shaped by a mix of ideological alignment, strategic necessity, and periods of tension, with China maintaining a cautious, status quo-oriented approach that prioritizes regional stability over deep military cooperation. Bilateral relations predate the official founding of both the Democratic People's Republic of Korea (DPRK) in 1948 and the People's Republic of China (PRC) in 1949 and were warm but strained throughout the Cold War era. China and North Korea aligned during the early Sino-Soviet split in the late 1950s to early 1960s, signing the 1961 Sino-North Korea Treaty of Friendship, Cooperation, and Mutual Assistance, which was renewed in 2021 for another 20 years.¹ China nonetheless rejected North Korea's request for assistance to develop nuclear weapons in 1964 and reportedly never provided the same level of nuclear assistance as it did for Pakistan's and Iran's programs in the 1990s.² After the Soviet Union officially dissolved in 1991, North Korea lost a significant source of aid and over 90 percent of its total trade with Russia.³ During this time, China's economic influence in the country substantially increased.

Upon rising to power in 2011, Kim Jong Un targeted pro-Chinese Communist Party (CCP) officials within the Workers' Party of Korea (WPK) structure to consolidate his power.⁴ As a result, Chinese General Secretary Xi Jinping did not meet his North Korean counterpart until a series of five summits in 2018-19 following North Korea's summit diplomacy with the United States and South Korea.⁵ Xi and Kim jointly declared 2024 as the "year of China-North Korea friendship" to mark the 75th anniversary of the bilateral ties between the two countries.⁶ However, there have been

no public high-level exchanges between China and North Korea after the latter signed a Comprehensive Strategic Partnership treaty with Russia.

The United States and North Korea do not maintain official diplomatic relations. However, according to the U.S. Department of State, "Peace and prosperity on the Korean Peninsula is the ultimate goal for the United States in its relationship with the Democratic People's Republic of Korea."⁷ The United States has sought to engage North Korea in order to mitigate the risks of its nuclear weapons and missile development programs.⁸ U.S. foreign policy towards North Korea remains a point of strong bipartisan consensus among American legislators, focusing on denuclearization, deterrence, and human rights.⁹ China has long considered North Korea's stability key to its national security. For Beijing, maintaining the status quo on the Korean peninsula not only serves as a buffer against forward-deployed U.S. forces but also avoids a refugee crisis in China's economically disadvantaged northeastern provinces.¹⁰

| NORTH KOREA AT A GLANCE | |
|---------------------------------|---|
| Capital | Pyongyang ¹¹ |
| Population | 26,298,666 (2024 est.) ¹² |
| GDP per Capita | \$1,700 (2015 est.) ¹³ |
| Head of Government | Choe Ryong Hae (최룡해) ¹⁴ |
| Head of State | Kim Jong Un (김정은) ¹⁵ |
| Minister of Defense | No Kwang-chol (노광철) ¹⁶ |
| Chief of General Staff | Ri Yong-gil (리영길) ¹⁷ |
| Military Expenditure (total) | \$1,604,440,000 (as of 2016) ¹⁸ ; Estimated \$7 billion to \$11 billion between 2010 and 2020 ¹⁹ |
| Military Expenditure (% of GDP) | 16% goal (State announcement for 2023 expenditures); Estimated 20-30% between 2010 and 2020 ²⁰ |
| Armed Service Branches | Korean People's Army (KPA): KPA Ground Forces, KPA Navy, KPA Air Force and Air Defense Forces, KPA Strategic Forces (missile forces), KPA Special Forces (special operations forces); Security Guard Command; Military Security Command ²¹ |
| Active Armed Forces Personnel | Estimated 1-1.2 million active-duty troops; Estimated 200,000 internal security forces (as of 2023) ²² |

Figure 2. North Korea at a Glance.

D - Diplomatic Instruments

China and North Korea maintain regular low-level diplomatic exchanges but visits at the head-of-state and ministerial level have generally only occurred during periods of major geopolitical tensions on the Korean Peninsula. Despite the announcement of 2024 as the year of China-North Korea friendship, there have been limited high-level exchanges, with almost none involving senior defense officials. China appears to have frozen its public exchanges with North Korea after it signed a Comprehensive Strategic Partnership treaty with Russia. China's long-term diplomatic approach to North Korea will likely be influenced by the new Trump administration's approach to the broader Indo-Pacific region."Therefore, China will likely maintain its use of diplomatic instruments in North Korea over the next three years.



D1: Defense-Related Diplomacy

Current Influence: Medium

Projected Influence: Steady

- ***There have been nearly a dozen defense delegations exchanged between China and North Korea since 2012, but these have centered around periods when major geopolitical developments impacted China's security interests on the Korean peninsula. After the death of Kim Jong Il in 2011, a round of diplomacy occurred to shore up China-North Korea bilateral relations.***
 - » High-level North Korean delegations visited China in April 2012,²³ July 2012,²⁴ May 2013,²⁵ and September 2013.²⁶
- ***Another round of diplomacy occurred from 2016 to 2019, when North Korea made significant advancements in its nuclear weapons development, conducting intercontinental ballistic missile launches and a nuclear test in 2017.***
 - » Between 2018 and 2019, Xi and Kim met a total of five times, coinciding with summits held by the United States and South Korea with North Korea.²⁷ Xi visited North Korea in June 2019, his first since assuming power in 2012, and the first by a Chinese head of state in 14 years.²⁸
 - » High-level North Korean military delegations visited China regularly throughout 2019.²⁹
- ***The latest round of diplomacy is framed by 2024 being the "Year of China-North Korea Friendship." However, high-level exchanges between the two countries in 2024 have been limited and appear to have stalled after the Putin-Kim summit in June 2024.***
 - » Military and high-level diplomacy has been limited in 2023 and 2024, and despite the diplomatic significance of the 75th anniversary year, China's Foreign Minister Wang Yi has not visited North Korea since 2019.³⁰
- ***China's diplomatic approach towards North Korea tends to be crisis-oriented to ensure it secures its geopolitical interests on the Korean peninsula, a pattern which aligns with its broader policies regarding its border region. Pending significant advancements in the United States-Japan-South Korea trilateral security cooperation, China is unlikely to increase its defense diplomacy in the next three years.***



D2: International Military Education and Training Programs

Current Influence: Very Low

Projected Influence: Steady

- ***There is no publicly available evidence that any military academy exchanges between China and North Korea have occurred in recent years, despite North Korea being China's only treaty ally and China's hosting of events such as the International Army Cadets Week.***³¹
 - » China has allegedly provided ad hoc public security training to North Korean officials.³²
- ***China has significantly limited its bilateral military relations with North Korea in compliance with the sanctions regime and to avoid heightening provocations on the Korean peninsula. Considering the threat perception that the Russia-North Korea Comprehensive Strategic Partnership treaty has generated among the U.S. and its allies, China is highly unlikely to increase its military education and training programs with North Korea in the next three years.***



D3: Soft Power Activities

Current Influence: Medium

Projected Influence: Increasing

- ***China and North Korea occasionally exchange delegations and host special events to commemorate historic milestones, emphasizing shared political and ideological ties.***
 - » In 2018, North Korea held a memorial at the Friendship Tower in Pyongyang attended by Kim Jong Un to commemorate fallen soldiers of the Chinese People's Volunteer Army in the Korean War on the 65th anniversary of the armistice.³³
 - » In 2019, the PLA Art Delegation visited North Korea to perform in celebration of the 70th anniversary of the establishment of diplomatic relations.³⁴
 - » The Chinese and North Korean embassies have jointly held a Spring Festival celebration in Cuba.³⁵
- ***North Korea has participated in the 8th, 9th, and 10th Beijing Xiangshan Defense Forums.***
 - » At the 8th forum in 2018, North Korean Vice-Minister of Defense Kim Hyong Rong made a speech addressing the progress of the peace process on the Korean peninsula and emphasized that North Korea had shifted its focus to economic development.³⁶ He briefly met with the South Korean Vice-Minister of Defense.³⁷
 - » At the 9th forum in 2019, Vice-Minister Kim made a keynote speech on Asia-Pacific security risk management.³⁸
 - » Only the North Korean embassy's defense attaches attended the 10th Forum in 2023.³⁹
- ***China has scaled back public diplomacy to convey its dissatisfaction with the Russia-North Korea Comprehensive Strategic Partnership treaty, which was signed in June 2024, although there are signs of improvements in early 2025.***
 - » In the summer of 2024, Beijing took several symbolic measures to express its disagreement with the treaty.⁴⁰
 - » From September 2023 to April 2024, China repatriated over 700 North Korean escapees.^{41 42}

- » No high-level officials attended July 2024 events to mark the 63rd anniversary of the 1961 Sino-North Korea treaty at the two countries' respective embassies.⁴³
 - » In September 2024, China denied visa renewals for North Korean athletes to participate in China's domestic leagues.⁴⁴ However, North Korea sent figure skaters to participate in the 2025 Asian Winter Games in Harbin, China.⁴⁵
 - » On 30 December 2024, North Korean state media reported that representatives from several Chinese companies sent floral baskets to the statues of Kim Il Sung and Kim Jong Il, suggesting some degree of business interest in North Korea.⁴⁶ A North Korean tour company hosted Chinese businessmen and investors in March 2025, and North Korea's Mansudae Art Studio sold 265 original pieces of artwork to China in the beginning of 2025.⁴⁷
- ***China and North Korea share many historical experiences that can be leveraged for soft power. However, as in the case of defense-related diplomacy, this instrument entails high-level involvement in conjunction with other major geopolitical developments and crises on the Korean peninsula. Over the second half of 2024, such soft power activities have taken on an increasingly coercive nature, seemingly meant to signal China's dissatisfaction with North Korea's alliance with Russia. Therefore, China is likely to maintain its current level of soft power activities in the next three years, but such activities will probably become more coercive.***

I - Informational Instruments

China and North Korea do not currently collaborate extensively in the information space, primarily due to North Korea's strictly controlled media and information environment. Despite the strains in China and North Korea's political relations, much of their bilateral relations are conducted via organs of the CCP and WPK and the exchange of cultural delegations. China will likely maintain its influence via informational instruments in the next three years to ensure access to information within the country and dissuade North Korea from pursuing disruptive behavior that runs counter to China's security interests on the Korean peninsula.

I1: Cultural and Media Outreach, Collaboration, and Alignment



Current Influence: Medium

Projected Influence: Steady

- ***China and North Korea do not share any active media cooperation agreements. Interactions between their state media have varied depending on the political environment.***
 - » In 2017, Chinese state-backed news outlets and North Korean state media published commentaries critical of each other's foreign policies.⁴⁸
 - » In June 2019, North Korea's official newspaper, Rodong Sinmun, published Xi's article, "Let us continuously engrave a new chapter of the era inheriting the friendship of China and the North Korea," on the front page in preparation for his two-day state visit to North Korea.⁴⁹
 - » Chinese journalists from CCTV and People's Daily returned to North Korea for the first time in five years in February 2025.⁵⁰
- ***China and North Korea regularly conduct art, culture, and educational exchanges, many of which are focused on the historic ties between the CCP and WPK. These exchanges must be approved at high levels within the North Korean government due to the tight control of its citizens freedom of movement, particularly their ability to travel abroad and interact with foreign nationals.***⁵¹
 - » The cultural exchanges are governed by the 1953 Agreement on Economic and Cultural Cooperation and the 1959 Cultural Cooperation Agreement, which have been renewed several times over the decades and remain in effect.⁵²
 - » China's Embassy in North Korea's website states that 400 North Korean government-sponsored higher education students' study in China each year. Over 5,000 total North Korean students have studied in China.⁵³
 - » North Korea's Mansudae Art Studio employs about 4,000 people, 800 to 900 of whom are North Korea's most talented artists, and produces most of the Kim regime's propaganda art and sculptures.⁵⁴ The studio's only overseas branch, open since May 2008, is located in Beijing's 798 Art District and operates as a joint venture with Beijing Jixichang Culture.⁵⁵

- **North Korea is seeking to limit China’s cultural influence in the country following its deepening of ties with Russia.**
 - » In late May and early June 2024, the North Korean government circulated an updated list of prohibited “impure recordings.” These updates included several Hong Kong and Chinese films that were widely popular in North Korea.⁵⁶ The list of prohibited media also included lectures that discuss China’s “Northeast Project,” which claims the ancient Goguryeo Kingdom was a regional government of an ethnic minority in China that contradicts Korean historical accounts.⁵⁷
- **Cultural collaborations are not limited by UNSC sanctions, and the two countries’ economic and cultural agreements have been in force without interruption for several decades. However, the limiting factor in this informational instrument is North Korea’s strictly controlled media and information environment. Additionally, North Korea has taken steps to limit China’s cultural and media influence in the country through the second half of 2024. Combined with the subtle tensions that have emerged in the bilateral relationship following North Korea’s increasing ties with Russia, China’s influence in this instrument is likely to decrease in the next three years.**

12: Information and Communications Technology (ICT) Support



Current Influence: Very High

Projected Influence: Decreasing

- **There is substantial evidence that Chinese entities have provided North Korea support for its satellite and ballistic missile development programs.**
 - » North Korean engineers have received technical education organized by the Chinese Satellite Control Center in Hebei Province.⁵⁸
 - » North Korean trainees have attended several trainings and meetings at the China Meteorological Administration, related to remote sensing and satellite navigation and positioning capabilities.⁵⁹
- **Chinese government organizations have provided limited specialized training and conducted small-scale knowledge transfers of dual-use technologies since 2012.**
 - » There is evidence that North Korean AI and machine learning experts have collaborated with Chinese scholars.⁶⁰
 - » In October 2020, a North Korean state TV broadcast of a military parade showed camera drones that closely resembled those produced by Shenzhen-based DJI Mavic, the import of which is prohibited by UNSC Resolutions 2397 and 1718.⁶¹
- **China has provided extensive support to build North Korea’s ICT infrastructure, particularly Huawei’s development of North Korea’s 3G wireless network via Chinese state-owned Panda Group.**⁶²
 - » Panda International Information Technology Co. Ltd. served as the conduit for Huawei to provide base stations, antennas, and other equipment to Koryolink, North Korea’s wireless telecommunications provider.

- » In November 2023, an anonymous Daily NK source reported that North Korea began importing second-hand Huawei telecommunications devices to replace base transceiver station equipment.⁶³ The installation of this equipment will introduce 4G to North Korea.⁶⁴
- ***North Korea began expanding its domestic cellphone production in the late 2010s, and Chinese original equipment manufacturers (OEM) have provided North Korea with the hardware to develop domestic equivalents.***⁶⁵
 - » There are several China-North Korea joint ventures that have produced North Korea's domestic devices.⁶⁶
 - » Several domestically produced models of North Korean cell phones have been linked to or bear extensive similarities to Chinese OEM handsets.⁶⁷
- ***China has been the primary provider of North Korea's global internet access, but Russia has increasingly expanded its share in recent years.***
 - » North Korea's internet consists of four IP ranges which are connected to Chinese internet service providers through physical connections on the China-North Korea border.⁶⁸
 - » In 2017, a Russian state-owned satellite company called SatGate provided North Korea backup access to the global internet through an assigned range which resolves to the company's location in Lebanon.⁶⁹
 - » In July 2024, North Korea also switched its transmission of state TV broadcasts from the Chinese ChinaSat12 satellite to the Russian Express 103 satellite.⁷⁰
- ***China has exported over 100,000 surveillance cameras to North Korea, where poor electricity supply and network connectivity have historically limited digital surveillance.***
 - » According to Chinese customs data, North Korea imported over 100,000 surveillance cameras between 2009 and 2012.⁷¹
 - » Chinese state-owned Hikvision, one of the world's largest suppliers of surveillance cameras, has been one of North Korea's key suppliers for several years.⁷²
- ***For many years, China maintained a near-total monopoly as North Korea's sole supplier of computer hardware, ICT infrastructure, and global Internet access. However, Russia has increasingly penetrated this market and is likely to continue doing so following the signing of the 2024 Russia-North Korea Comprehensive Strategic Partnership treaty. While China will still exert influence in North Korea via this instrument, its dominance is likely to decrease in the next three years.***



13: Cooperation in Military Intelligence and Communications

Current Influence: Low

Projected Influence: Steady

- ***Despite the several standing agreements between China and North Korea, the two countries have not publicly announced any cooperation in military intelligence and communications.***
- ***North Korean Ministry of State Security personnel frequently operate in China's northeastern provinces, but primarily for the purpose of monitoring North Koreans abroad and tracking North Korean escapees.***
 - » North Korean Ministry of State Security agents have been trained to infiltrate groups of North Korean escapees in China to control and report on them,⁷³ they have targeted North Korean trade officials in China for ideological review,⁷⁴ and they have been dispatched to cities in Chinese border provinces to kidnap and forcibly return North Korean escapees and South Korean citizens who helped them.⁷⁵
- ***North Korean cyber operatives frequently operate from within China, primarily to steal cryptocurrency to evade sanctions and fund the regime's nuclear weapons development and other priorities.***
 - » According to one estimate, there were about 1,700 North Korean hackers and supporting agents active in China.⁷⁶ There have also been several firsthand accounts,⁷⁷ criminal charges/indictments,⁷⁸ and research reports⁷⁹ documenting North Korean cybercriminals' collaboration with Chinese nationals.
- ***Although China's intervention in the Korean War and the PLA's subsequent stationing of troops in North Korea until 1958 would seem to provide a stronger foundation for military-to-military relations with North Korea, the two countries' military relations have been limited for years. While it is probable that China would provide military intelligence support to North Korea, its involvement cannot be verified in the open source, and it would likely be crisis-oriented in the same manner as its defense diplomacy. China's support of military intelligence-adjacent activities, particularly those involving business, cyber operations, and sanctions evasion, will likely remain steady in the next three years.***

M - Military Instruments

Although North Korea is China's only treaty ally with a formal security commitment, the PLA and KPA do not conduct joint training or publicly cooperate outside of occasional ceremonial settings. The mutual defense pact of the 1961 Sino-North Korea treaty will remain the cornerstone of China's military influence in North Korea and a key component of China's national security in Northeast Asia, but it is unlikely that China will significantly increase the use of military instruments of influence in North Korea in the next three years.



M1: Formal Bilateral Military Engagements

Current Influence: Unobserved

Projected Influence: Unknown

- ***There is no publicly available evidence of China and North Korea conducting any joint bilateral military exercises. China's consistent policy on the Korean peninsula has been to maintain the status quo, and it does not favor a nuclear-armed North Korea.***⁸⁰
- ***China prioritizes stability on the Korean peninsula as the most important component of its bilateral relationship with North Korea. Accordingly, China has prepared for contingencies that may require it to use force to stabilize its border regions.***
 - » In 2015, the PLA stationed troops in the border area near the Tumen River to crack down on North Korean defectors, who are a major point of concern in the event of a contingency on the Korean peninsula.⁸¹
 - » In August 2015, the PLA deployed a mechanized brigade in the Yanbian Korean Autonomous Prefecture, which borders North Korea.⁸²
- ***North Korea has advocated for increased military exchanges with both China and Russia in recent years, likely due to the shift in its threat perception initiated by the U.S.-Japan-South Korea trilateral security cooperation.***
 - » On the 95th anniversary of the PLA's founding, then-KPA Minister of Defense Ri Yong Gil stated to PLA Minister of Defense Wei Fenghe that "the KPA would closely wage strategic and tactical coordinated operations with the Chinese PLA in order to jointly guard peace and stability in the Korean peninsula and the rest of the world." However, analysts note that the Korean term used for coordinated operations (협동작전) is distinct from the term that North Korean state media generally uses to refer to joint military exercises.⁸³
- ***China prioritizes the status quo in its approach to security on the Korean peninsula, and the 2024 Russia-North Korea Comprehensive Strategic Partnership treaty signed during the "Year of China-North Korea Friendship" has likely been interpreted as a slight to China's foreign policy toward North Korea. This Russia-North Korea alliance could alter the geopolitical balance in Northeast Asia by introducing the possibility of direct Russian military intervention on the Korean Peninsula, and China will likely attempt to maintain the status quo by limiting its bilateral military engagements with North Korea.***



M2: Shared Informal/Multilateral Military Engagements

Current Influence: Unobserved

Projected Influence: Unknown

- *There have been no public multilateral military engagements involving China and North Korea since 2012. In 2017-2018, China and Russia held a few joint military exercises that were assumed to be focused on responding to U.S.-led military operations on the Korean peninsula. North Korea may have sent officials to observe these exercises.*
- *Russia reportedly proposed trilateral military drills with China and North Korea directly to Kim in July 2023, followed by a series of ministerial-level visits in the following year.*
 - » Seoul's National Intelligence Service (NIS) shared an assessment in September 2023 that then-Russian Defense Minister Sergei Shoigu likely proposed trilateral military drills with China and North Korea during his visit to Pyongyang in July 2023.⁸⁴
 - » China provided a muted response to this proposal as Chinese Foreign Ministry Spokesman Mao Ning said at a press briefing that she did not have any information regarding the proposed naval drill with Russia and North Korea.⁸⁵
- *China's lack of a substantive response to the 2024 Russia-North Korea Comprehensive Strategic Partnership treaty indicates that it is unlikely to approve or participate in any multilateral military engagements with North Korea in the next three years, pending a substantial increase in the U.S.-Japan-South Korea trilateral security cooperation that China would consider as destabilizing.*



M3: Defense/Security Pacts and Agreements

Current Influence: Very High

Projected Influence: Steady

- *North Korea is China's only treaty ally with a formal security commitment, and the 1961 Sino-North Korea treaty includes a mutual defense pact.⁸⁶*
 - » Article II provides for mutual defense by stating that in the event of an "armed attack by any state or several states jointly and thus being involved in a state of war, the other Contracting Party shall immediately render military and other assistance by all means at its disposal." In 2017, China's foreign-facing state media, Global Times, published an article stating that China would stay neutral in a Korean peninsula conflict if North Korea initiated hostilities.⁸⁷
 - » Article III states, "Neither Contracting Party shall conclude any alliance directed against the other Contracting Party or take part in any bloc or in any action or measure directed against the other Contracting Party."
 - » China and North Korea reaffirmed their treaty in 1981, 2001, and 2021, despite debate among Chinese scholars whether North Korea breached the treaty when it declared itself a nuclear power without consulting Beijing.⁸⁸
- *China and North Korea signed the "Mutual Cooperation Protocol for the Work of Maintaining National Security and Social Order in the Border Areas" in 1986.⁸⁹*
 - » This agreement provides for cooperation in protecting national and residential property in the border areas, cooperation in border area patrols, border passage security, and the prevention of illegal border crossings and the handling of criminals.⁹⁰

- ***China and North Korea signed the “Border Defense Agreement Between the Ministry of National Defense of the People’s Republic of China and the Ministry of People’s Armed Forces of the Democratic People’s Republic of Korea” in 2004 to enhance cooperation and management of the two countries’ shared border.***⁹¹
 - » This agreement transferred the border defense mission to the PLA Border Defense Force.⁹² It was last amended in 2011 and provides for joint patrols and other coordinated actions in the border areas to prevent illegal border crossings and other unlawful activities, information sharing to facilitate timely communication of border security information and strengthened border management by both sides.⁹³
- ***Since 2000, North Korea has participated in the ASEAN Regional Forum along with China, Russia, and the United States. The ARF’s objective is “to foster constructive dialogue and consultation on political and security issues of common interest and concern; and to make significant contributions to efforts towards confidence-building and preventive diplomacy in the Asia-Pacific region.”***⁹⁴
 - » Since Thailand led the effort to invite North Korea to the ARF in 2000, North Korea has participated in most of the 22 ARF meetings held since. However, North Korea has not sent its foreign minister to attend the forum since 2019, instead sending its Ambassador to Indonesia, An Kwang Il.⁹⁵
- ***China and North Korea share an array of treaties and agreements stipulating mutual defense and border security cooperation that remain in force. However, the rapid developments in North Korea’s national security strategy, primarily the abandonment of its reunification policy and the signing of the 2024 Russia-North Korea Comprehensive Strategic Partnership treaty, suggest that China’s and North Korea’s interpretations of security cooperation have moved in different directions. Therefore, China will seek to secure its influence in North Korea via its existing agreements, amending as necessary, but is unlikely to sign new ones in the next three years.***

E - Economic Instruments

China exercises near-total dominance of North Korea's trade, resulting in the North Korean economy's dependence on China as its primary benefactor. The 2024 Russia-North Korea Comprehensive Strategic Partnership treaty will likely increase Russia's share in North Korea's trade, and its stated purpose of eroding the North Korean sanctions regime along with Russia's veto of the UN Panel of Experts enables China to pursue a broader array of economic activities with reduced sanctions enforcement. Despite the emergence of political tensions in the bilateral relationship, China is highly likely to increase its low-level economic activities in North Korea, particularly among subnational entities, in the next three years.



E1: Arms Transfers

Current Influence: Very Low

Projected Influence: Steady

- ***Since 2012, China has conducted small-scale transfers of military equipment to and from North Korea, including serving as a transshipment point, despite its public statements of compliance with the sanctions.***
 - » Following an April 2012 North Korean military parade, Chinese bloggers identified the North Korean transporter-erector-launchers on display as Chinese-made. Chinese officials confirmed to the UN Panel of Experts that the Wanshan Special Vehicle Company had exported six chassis to North Korea in 2011, and they claimed Pyongyang had cited the reason for purchase as logging.⁹⁶
 - » In May 2022, Chinese-flagged vessels conducted three shipments of 10 cargo-sized vehicles to North Korea. North Korea received illicit transfers of Chinese WS51200 that were adapted as transporter erector launcher (TEL) vehicles.⁹⁷
- ***Although small-scale arms and dual-use technology have occurred, there is no publicly available evidence that such transfers occurred under the direct guidance of the Chinese central government. Instead, intermediaries and subnational entities have conducted most activities. Given the geopolitical impact of the Russia-North Korea alignment in 2024, it is unlikely China will increase arms transfers in the next three years to avoid escalating regional tensions.***



E2: Technology-Sharing and Joint Production Agreements

Current Influence: Low

Projected Influence: Steady

- ***There is no publicly available evidence that China and North Korea have any active technology-sharing or joint production agreements pertaining to military equipment. However, there are several instances of Chinese-made equipment on display in North Korean state media and at trade fairs in the country.***
 - » In May 2024, Kim visited the former inter-Korean Pyeonghwa Motors manufacturing plant, which has been converted into a munitions factory. Experts identified robot arms as made by the Chinese firm Borunte.⁹⁸
 - » Korean Central News Agency published photos of Kim Jong Un's visit to a weapons factory in North Korea's Jagang Province in July 2024 that showed several Chinese-made computers

numerically controlled (CNC) machines, and a printed circuit board (PCB) quality control machine.⁹⁹

- ***China and North Korea have consistently exchanged delegations pertaining to science, technology, and the economy despite the developments in their political tensions and the geopolitical situation, although public announcements on the official website of the Chinese Embassy in North Korea ceased in 2016.***
 - » North Korean delegations focused on science and technology research visited their Chinese counterparts in April 2015,¹⁰⁰ May-June 2015,¹⁰¹ September 2015,¹⁰² and June-July 2016.¹⁰³
- ***In addition to these instances of Chinese machinery and equipment appearing in North Korea, China also has consistently provided training to North Korean engineers on satellite technologies under the guise of meteorological operations as previously mentioned under Information and Communications Technology Support (I2). Recent activity by Chinese businessmen and investors in North Korea indicate that Chinese companies will likely expand their business in North Korea over the next three years, but such cooperation will likely remain at the subnational level rather than translate into official technology-sharing and joint production agreements between national governments.***



E3: Trade and Cooperation in Strategic Commodities/Sectors

Current Influence: Very High

Projected Influence: Increasing

- ***China is North Korea’s largest trade benefactor, with North Korea’s imports from China totaling \$3.25 billion and its exports totaling \$1.59 billion in 2022.¹⁰⁴ While these totals represent an increase in trade since 2021 during the COVID-19 pandemic, North Korea’s imports from China totaled \$2.6 billion in 2019.¹⁰⁵***
 - » Trade with China accounts for over 90 to 95 percent of North Korea’s total trade and equaled \$684.6 million in the first four months of 2023.¹⁰⁶
 - » China-North Korea trade is based on a one-way dependency in which North Korea provides China critical minerals in exchange for necessities.¹⁰⁷
 - » There are indicators that China-North Korea trade and commercial activities increased in 2024, with reports that working-level discussions on a loan agreement for China to provide raw materials and food to North Korea have been held.¹⁰⁸ North Korea has also been encouraging Chinese businesspeople to resume business activities in North Korea as part of its “20x10 regional development policy.”¹⁰⁹
- ***While China-North Korea trade spans several sectors, there is substantial evidence that North Korea depends on China’s provision of strategic materials and its consumption of energy.***
 - » China and North Korea jointly operate four hydroelectric power plants on the Yalu River, which account for around 17 percent of North Korea’s total electricity production in 2013.¹¹⁰
 - » North Korea’s illicit maritime transfers enable North Korea to obtain refined petroleum products in excess of seven times the permissible amount under UNSC Resolution 2397.¹¹¹

- » In late 2019, China and North Korea reportedly discussed a deal to grant mining rights in North Korea to Chinese companies in exchange for China's \$2.5 billion investment in a solar plant to provide 2.5 million kilowatts per day.¹¹²
- » In 2021, an unnamed member state of the UN Panel of Experts identified a representative from the North Korean company Korea Machinery General Trading who arranged multiple orders of specialized industrial materials, including 78 tons of 1Cr18Ni9Ti austenite steel, a superalloy used in liquid-propelled missile engines and nuclear weapons casing that is uniquely made in China.¹¹³
- ***China has played a key facilitating role in North Korea's sanctions evasion since key UNSC sanctions on North Korea's nuclear and ICBM testing were implemented in 2006 and 2017.***
 - » There are hundreds of instances of China and North Korea conducting ship-to-ship transfers, which is banned by UNSC Resolution 2375.¹¹⁴ In December 2020, Deputy Assistant Secretary for North Korea in the U.S. Department of State's Bureau of East Asian and Pacific Affairs, Alex Wong, stated that the United States had observed 555 instances of Chinese ships carrying coal and other prohibited goods to North Korea in that year alone.¹¹⁵
 - » In July 2023, a letter was signed by the G7 members, Australia, New Zealand, South Korea, and the EU, urging China to stop enabling North Korea's sanctions evasion through ship-to-ship transfers in China's territorial waters. They revealed satellite images confirming Chinese vessels conducted such operations in 2022-23.¹¹⁶
- ***North Korea has created several special economic zones (SEZs) along its border with China to varying degrees of success, the most important of which is the Rason SEZ due to its geographic position at the mouth of the Tumen River.***
 - » The Rason SEZ was established in 1991 near North Korea's borders with China and Russia. It offers an ice-free port that can connect China's northeastern provinces.¹¹⁷
 - » There are several other economic zones along the China-North Korea border.¹¹⁸ Despite a long-term lack of progress on certain zones, North Korea continues to prioritize these efforts, with satellite imagery showing a resumption of Chinese-led construction early in the COVID-19 pandemic.¹¹⁹

- ***China has expressed interest in negotiating an agreement with Russia and North Korea to provide Chinese vessels navigation access to the Tumen River.***¹²⁰
 - » A joint statement revealed Xi and Russian President Vladimir Putin discussed opening a “constructive dialogue” with North Korea about the waterway.¹²¹
 - » The low riverbed and vertical clearance of the Korea-Russia Friendship Bridge built in the 1950s prevent large Chinese vessels from accessing the Sea of Japan via the river, instead forcing them to sail around the Korean peninsula.¹²²
- ***China has been North Korea’s most important trading partner, and China continues to account for over 95 percent of North Korea’s total trade. As China and Russia cooperate to erode the North Korea sanctions regime, China is highly likely to increase its trade with and foreign investment in North Korea over the next three years. A crucial indicator of China’s stance towards future cooperation with North Korea will be whether it officially includes North Korea as a Belt and Road Initiative member state in the future.***

CONCLUSIONS

China's current M-DIME influence in North Korea is assessed as Medium. China relies on all four types of instruments to gain military influence in North Korea. Until recently it has maintained a relatively outsized influence in all four instruments compared to other countries. The 1961 Sino-North Korea Treaty of Friendship, Cooperation, and Mutual Assistance remains the foundation of their security relationship, underscoring China's commitment to North Korea's stability while serving as a strategic buffer against U.S. and allied military presence in the region (M3). However, China exerts its most significant leverage through economic means, particularly its near-total dominance over North Korea's trade, including strategic commodities and sectors (E3). This economic dependency enables Beijing to shape Pyongyang's decisionmaking without resorting to overt military support. Additionally, China's provision of critical ICT infrastructure and technology has made North Korea reliant on Chinese networking and communications systems, further embedding China's influence within North Korea's security and governance structures (I2). Despite these entrenched forms of influence, China's ability to shape North Korea's military decisionmaking remains constrained by deep-seated historical tensions and Pyongyang's pursuit of strategic autonomy.

China's projected M-DIME influence in North Korea is assessed as Steady. China primarily employs economic tools for influence over North Korea and is expected to increase the use of some instruments while keeping most at current levels. Beijing remains Pyongyang's dominant trade partner and primary source of strategic commodities, particularly in energy and critical minerals (E3). The erosion of UN sanctions enforcement, facilitated by China and Russia, will likely enable greater economic cooperation through both official and unofficial channels. Technology-sharing and joint production agreements are projected to remain steady. However, cooperation in this area through subnational organizations, rather than

direct agreements at the central government level, could continue to increase (E2). Similarly, soft power activities are expected to increase with a coercive character, as Beijing seeks to counterbalance Russia's expanding influence in North Korea while ensuring Pyongyang remains aligned with Chinese interests on the Korean Peninsula (D3).

- 1 However, a series of events led to strained relations, including a border clash around Mt. Paektu in 1969, the Chinese Red Guard's attacks on Kim during the Cultural Revolution. 沈, 最后的“天朝”, 447, 476; Chin O. Chung, *P'yŏngyang Between Peking and Moscow: North Korea's Involvement in the Sino-Soviet Dispute, 1958-1975* (Tuscaloosa: The University of Alabama Press, 1978), 27-30; 陈峰君、王传剑, *亚太大国与朝鲜半岛* (Beijing: Beijing University Press, 2002), 304; Clara Fong and Eleanor Albert, “The China-North Korea Relationship,” Council on Foreign Relations, Updated 7 March 2024, <https://www.cfr.org/backgrounder/china-north-korea-relationship>.
- 2 Lee Jae-Bong, “US Deployment Of Nuclear Weapons In 1950s South Korea & North Korea's Nuclear Development: Toward Denuclearization Of The Korean Peninsula,” *Asia-Pacific Journal* Vol. 7, No. 8 (2009), <https://apjif.org/lee-jae-bong/3053/article>.
- 3 See: Frohman, Rafaelof, and Dale-Huang, “The China-North Korea Strategic Rift,” 6-7.
- 4 Frohman, Rafaelof, and Dale-Huang, “The China-North Korea Strategic Rift,” 8. Victor Cha and Ellen Kim, “The Demise of Jang Song Thaek,” *CSIS*, 13 December 2013, <https://www.csis.org/analysis/demise-jang-song-thaek>.
- 5 Fong and Albert, “The China-North Korea Relationship.”; Evans J.R. Revere, “Lips and teeth: Repairing China-North Korea relations,” *Brookings*, November 2019, <https://www.brookings.edu/articles/lips-and-teeth-repairing-china-north-korea-relations/>.
- 6 Xinhua, “Xi, Kim jointly designate 2024 as China-DPRK Friendship Year,” *The State Council of the People's Republic of China*, 1 January 2024, https://english.www.gov.cn/news/202401/01/content_WS65925662c6d0868f4e8e2af1.html.
- 7 Bureau of East Asian and Pacific Affairs, “U.S. Relations With the Democratic People's Republic of Korea,” U.S. Department of State, 23 August 2021, <https://www.state.gov/u-s-relations-with-north-korea/>.
- 8 “Agreed Framework Between the United States of America and the Democratic People's Republic of Korea,” *The Korean Peninsula Energy Development Organization*, 21 October 1994, <https://www.ncnk.org/sites/default/files/content/resources/publications/AgreedFrameworkText.pdf>. Kelsey Davenport, “The U.S.-North Korean Agreed Framework at a Glance,” *Arms Control Association*, February 2022, <https://www.armscontrol.org/factsheets/us-north-korean-agreed-framework-glance>; “North Korean Nuclear Negotiations,” Council on Foreign Relations, 2024, <https://www.cfr.org/timeline/north-korean-nuclear-negotiations>.
- 9 117th Congress (2021-2022), “S.4216 - North Korean Human Rights Reauthorization Act of 2022,” Congress. Gov, n.d. <https://www.congress.gov/bill/117th-congress/senate-bill/4216>; “Rep. Young Kim's North Korean Human Rights Reauthorization Act Passes Committee,” *Young Kim: California's 40th District*, 16 May 2024, <https://youngkim.house.gov/2024/05/16/rep-young-kims-north-korean-human-rights-reauthorization-act-passes-committee/>; Mark E. Manyin, Mary Beth D. Nikitin, and Dianne E. Rennack, “U.S.-North Korea Relations,” Congressional Research Service, updated 26 March 2024, <https://crsreports.congress.gov/product/pdf/IF/IF10246>.
- 10 Fong and Albert, “The China-North Korea Relationship.”; 潘昌, “论我国入境难民的管理,” *【管理纵横】* (2015), 51-52.
- 11 Central Intelligence Agency, “North Korea,” *The World Factbook*, <https://www.cia.gov/the-world-factbook/countries/korea-north/#government>.
- 12 Central Intelligence Agency, “North Korea,” *The World Factbook*, <https://www.cia.gov/the-world-factbook/countries/korea-north/#government>.
- 13 Central Intelligence Agency, “North Korea,” *The World Factbook*, <https://www.cia.gov/the-world-factbook/countries/korea-north/#government>.
- 14 Dennis P. Halpin, “Welcome to North Korea's Game of Thrones,” *The National Interest*, 23 April 2024, <https://nationalinterest.org/feature/welcome-north-koreas-game-thrones-10298>. Central Intelligence Agency, “North Korea,” *The World Factbook*, <https://www.cia.gov/the-world-factbook/countries/korea-north/#government>.
- 15 Central Intelligence Agency, “North Korea,” *The World Factbook*, <https://www.cia.gov/the-world-factbook/countries/korea-north/#government>.
- 16 Colin Zwirko, “Deciphering the return of No Kwang Chol as North Korea's minister of defense,” *NK Pro*, 17 October 2024, <https://www.nknews.org/pro/deciphering-the-return-of-no-kwang-chol-as-north-koreas-minister-of-defense/>.
- 17 박수윤, “北군부 1인자 박정천 해임·처형설 리영길 임명... 문책성인듯” *연합뉴스*, 1 January 2023, <https://www.yna.co.kr/view/AKR20230101012000504>.
- 18 “SIPRI Military Expenditure Database,” SIPRI, n.d. <https://milex.sipri.org/sipri>.
- 19 Central Intelligence Agency, “North Korea,” *The World Factbook*, <https://www.cia.gov/the-world-factbook/countries/korea-north/#government>.
- 20 Central Intelligence Agency, “North Korea,” *The World Factbook*, <https://www.cia.gov/the-world-factbook/countries/korea-north/#government>.
- 21 Central Intelligence Agency, “North Korea,” *The World Factbook*, <https://www.cia.gov/the-world-factbook/countries/korea-north/#government>.
- 22 Central Intelligence Agency, “North Korea,” *The World Factbook*, <https://www.cia.gov/the-world-factbook/countries/korea-north/#government>.
- 23 “State Council of China on Sino-DPRK Friendship,” *Korean News*, 23 April 2012, <http://www.kcna.co.jp/item/2012/201204/news23/20120423-08ee.html>. On the same day, Kim Jong Un responded to former President Hu Jintao's congratulatory message for his election to WPK First Secretary. See: “Kim Jong Un Sends Reply Message to Hu Jintao,” *Korean News*, 23 April 2012, <http://www.kcna.co.jp/item/2012/201204/news23/20120423-50ee.html>.
- 24 “China Will Boost Friendship with DPRK: Senior Chinese Official,” *Korean News*, 24 July 2012, <http://www.kcna.co.jp/item/2012/201207/news24/20120724-32ee.html>. “Talks between Security Delegations of DPRK, China

- Held,” Korean News, 24 July 2012, <http://www.kcna.co.jp/item/2012/201207/news24/20120724-31ee.html>.
- 25 “Kim Jong Un’s Special Envoy Arrives in Beijing,” Korean News, 22 May 2013, <http://www.kcna.co.jp/item/2013/201305/news22/20130522-15ee.html>; 刘云山会见金正恩特使崔龙海, 外交部, 23 May 2013, https://www.mfa.gov.cn/web/zyxw/201305/t20130523_322958.shtml. “DPRK Delegation Leaves for China,” Korean News, 2 September 2015, <http://www.kcna.co.jp/item/2015/201509/news02/20150902-17ee.html>. “Choe Ryong Hae Visits Beijing Economic, Technological Development District,” Korean News, 23 May 2013, <http://www.kcna.co.jp/item/2013/201305/news23/20130523-20ee.html>; “Choe Ryong Hae (Ch’oe Ryong-hae),” North Korea Leadership Watch, n.d. <https://www.nkleadershipwatch.org/leadership-biographies/choe-ryong-hae/>; 习近平会见金正恩特使崔龙海, 外交部, 24 May 2013, https://www.mfa.gov.cn/web/zyxw/201305/t20130524_322986.shtml
 - 26 “Kim Kye Gwan Visits China,” Korean News, 20 September 2013, <http://www.kcna.co.jp/item/2013/201309/news20/20130920-06ee.html>.
 - 27 “Kim Jong Un Pays Unofficial Visit to China,” Korean News, 28 March 2018, <http://kcna.co.jp/item/2018/201803/news28/20180328-05ee.html>; “Kim Jong Un Meets Xi Jinping Again,” Korean News, 8 May 2018, <http://kcna.co.jp/item/2018/201805/news08/20180508-17ee.html>; “习近平同朝鲜劳动党委员长金正恩在大连举行会晤,” 中华人民共和国国防部, 8 May 2018, <http://www.mod.gov.cn/gfbw/qwfb/4813062.html>; “习近平同朝鲜劳动党委员长金正恩举行会谈,” 中华人民共和国国防部, 19 June 2018, <http://www.mod.gov.cn/gfbw/gc/4817832.html>; “Supreme Leader Kim Jong Un Leaves Pyongyang for China,” Korean News, 8 January 2019, <http://kcna.co.jp/item/2019/201901/news08/20190108-01ee.html>; “习近平同朝鲜劳动党委员长金正恩举行会谈,” 中华人民共和国国防部, 10 January 2019, <http://www.mod.gov.cn/gfbw/qwfb/4834368.html>;
 - 28 Lee Jeong-ho, “Xi Jinping lands in North Korea for first visit by a Chinese leader in 14 years,” South China Morning Post, 20 June 2019, <https://www.scmp.com/news/china/diplomacy/article/3015307/xi-jinping-lands-north-korea-first-visit-chinese-leader-14>.
 - 29 “China Focus: China to mark 70th navy anniversary with multinational naval events,” Xinhua, 20 April 2019, http://www.xinhuanet.com/english/2019-04/20/c_137993338.htm; Adam Cathcart, “Red Tide: China-North Korea Naval Cooperation,” The Diplomat, 25 June 2019, <https://thediplomat.com/2019/06/red-tide-china-north-korea-naval-cooperation/>; Colin Zwirko, “Delegation of North Korea’s Ministry of People’s Security visiting China: KCNA,” The Diplomat, 10 July 2019, <https://www.nknews.org/2019/07/delegation-of-north-koreas-ministry-of-peoples-security-visiting-china-kcna/>; “Friendly Delegation of Ministry of People’s Security Meets Chinese Minister of Public Security,” Korean News, 11 July 2019, <http://kcna.co.jp/item/2019/201907/news11/20190711-21ee.html>; Colin Zwirko, “China’s top law enforcement envoy led delegation in Pyongyang this week: embassy,” The Diplomat, 27 December 2019, <https://www.nknews.org/2019/12/chinas-top-law-enforcement-envoy-led-delegation-in-pyongyang-this-week-embassy/>. Yin Hang and Zhang Xiaoyu, “张又侠会见朝鲜人民军总政治局局长,” Ministry of National Defense of the People’s Republic of China, 17 August 2019, <http://www.mod.gov.cn/gfbw/qwfb/4848392.html>; Dagyum Ji, “Top North Korean official commits to bolstering military ties with China,” The Diplomat, 19 August 2019, <https://www.nknews.org/2019/08/top-north-korean-official-commits-to-bolstering-military-ties-with-china/?t=1722090439>. Wang Hongjie, “朝鲜劳动党中央副委员长、国际部部长李洙墉会见苗华,” Ministry of National Defense of the People’s Republic of China, 16 October 2019, http://www.mod.gov.cn/gfbw/gc/mh/2019_213384/4853091.html.
 - 30 “Respected Comrade Kim Jong Un Receives Greetings from Xi Jinping,” Rodong Sinmun, 1 January 2024, <http://rodong.rep.kp/en/index>. “Opening Ceremony of ‘Year of DPRK-China Friendship’ Held,” Rodong Sinmun, 14 April 2024, <http://rodong.rep.kp/en/index>.
 - 31 Li Weichao, “10th International Army Cadets Week kicks off in Nanjing,” China Military Online, 7 November 2023, http://eng.chinamil.com.cn/CHINA_209163/TopStories_209189/16265209.html.
 - 32 Seulkee Jang, “North Korea’s Ministry of Social Security receives training from China’s Ministry of Public Security,” Daily NK, 4 August 2021, <https://www.dailynk.com/english/north-korea-ministry-social-security-receives-training-china-ministry-public-security/>.
 - 33 “朝鲜举行祭奠中国人民志愿军烈士活动,” Ministry of National Defense of the People’s Republic of China, 27 July 2018, http://www.mod.gov.cn/gfbw/gfjy_index/4820913.html; “Kim Jong Un Visits CPV Martyrs Cemetery,” Korean News, 27 July 2018, <http://kcna.co.jp/item/2018/201807/news27/20180727-03ee.html>.
 - 34 Liu Yanxia, “中国人民解放军文书代表团访问朝鲜并演出,” Ministry of National Defense of the People’s Republic of China, 22 April 2019, <http://www.mod.gov.cn/gfbw/qwfb/4840042.html>.
 - 35 “中国驻古巴使馆与朝鲜驻古巴使馆共同举办春节庆祝活动,” Embassy of the People’s Republic of China in the Republic of Cuba, 5 February 2024, https://cu.china-embassy.gov.cn/tpxw/202402/t20240207_11241911.htm.
 - 36 “第八届北京香山论坛上多国防长赞赏中国贡献,” Beijing Xiangshan Forum, 28 October 2018, <https://xiangshanforum.org.cn/news.html?newcode=67A0734Dg2ghf8gC>; Ben Blanchard, “North Korean general gets warm welcome in China as ties improve,” Reuters, 25 October 2018, <https://www.reuters.com/article/world/north-korean-general-gets-warm-welcome-in-china-as-ties-improve-idUSKCN1MZ1AB/>.
 - 37 Song Sang-ho, “Koreas’ vice defense ministers meet on margins of military forum in China,” Yonhap News Agency, 25 October 2018, <https://en.yna.co.kr/view/AEN20181025005900315>; Dagyum Ji, “Mine sweeping efforts unearth South’s first set of DMZ Korean War remains,” The Diplomat, 25 October 2018, <https://www.nknews.org/2018/10/mine-sweeping-efforts-unearth-souths-first-set-of-dmz-korean-war-remains/>.

- 38 “香山论坛 | 今年有何看点？规模历届之最，朝鲜将军再次参会,” Beijing Xiangshan Forum, 21 October 2019, <https://xiangshanforum.org.cn/news.html?newcode=7D5eAee2K85AB5CD>;
- 39 “List of Delegations,” The 10th Beijing Xiangshan Forum, <https://xiangshanforum.cn/delegationList.html>.
- 40 Jeong Yeonggyo, “[단독] ‘북·중 밀월 징표’ 김정은 발자국 동판, 중국서 사라졌다,” JoongAng Ilbo, 10 June 2024, <https://www.joongang.co.kr/article/25255484>. “‘김정은 발자국’ 지우고 북중 정상회담 사진 내리고... 북·중 ‘이상 기류,’” KBS News, 12 June 2024, <https://news.kbs.co.kr/news/pc/view/view.do?ncd=7985513>.
- 41 Lina Yoon, “China Forcibly Returns 60 Refugees to North Korea,” Human Rights Watch, 8 May 2024, <https://www.hrw.org/news/2024/05/08/china-forcibly-returns-60-refugees-north-korea>. Ifang Bremer, “China rejects calls to protect North Korean refugees in UN human rights review,” NK News, 8 July 2024, <https://www.nknews.org/2024/07/china-rejects-calls-to-protect-north-korean-refugees-in-un-human-rights-review/>.
- 42 Lee Chae Eun, “Chinese police intensify threats of repatriation toward N. Korean defectors,” Daily NK, 13 June 2024, <https://www.dailynk.com/english/chinese-police-intensify-threats-of-repatriation-toward-n-korean-defectors/>.
- 43 “No senior N. Korean officials attend banquet hosted by Chinese envoy in Pyongyang,” The Korea Times, 12 July 2024, https://www.koreatimes.co.kr/www/nation/2024/12/103_378521.html.
- 44 Jo Sangjin, “중국, ‘북한 농구 선수 귀국’ 보도에 ‘대북제재’ 언급... ‘이례적 경고 메시지’ 해석도,” Voice of America, 3 September 2024, <https://www.voakorea.com/a/7768794.html>. This move appears to signal reversal of a China-North Korea sports exchange protocol that was signed in January 2024. See: Yukio Tajima, “China and North Korea deepen sports ties,” Nikkei Asia, 31 January 2024, <https://asia.nikkei.com/Politics/International-relations/China-and-North-Korea-deepen-sports-ties>.
- 45 Seung-Yeon Chung, “North Korean figure skaters head to Harbin for Asian Winter Games,” NK Pro, 7 February 2025, <https://www.nknews-org/pro/north-korean-figure-skaters-head-to-harbin-for-asian-winter-games/>.
- 46 “Floral Baskets Sent to Statues of Great Leaders from Abroad,” Rodong Sinmun, 30 December 2024, <http://www.rodong.rep.kp/en/index>
- 47 Seulkee Jang, “N. Korea reopens to Chinese investors, prioritizing industrial and mineral sectors,” Daily NK, 17 March 2025, <https://www.dailynk.com/english/n-korea-reopens-to-chinese-investors-prioritizing-industrial-and-mineral-sectors/>. Anton Sokolin, “North Korea sells \$3K in art to China, while continuing lucrative wig trade,” NK Pro, 20 March 2025, <https://www.nknews.org/pro/north-korea-sells-3k-in-art-to-china-while-continuing-lucrative-wig-trade/>.
- 48 “China must be ready for worsened NK ties,” Global Times, 28 April 2017, <https://www.globaltimes.cn/page/201704/1044553.shtml>; “Chinese Media’s Shameless and Impudent Acts Blasted,” Korean News, 22 September 2017, <http://www.kcna.co.jp/item/2017/201709/news22/20170922-06ee.html>; Shaquille James, “Comradely criticism: a brief history of Chinese-North Korean media spats,” NK News, 5 October 2017, <https://www.nknews.org/2017/10/comradely-criticism-a-brief-history-of-chinese-north-korean-media-spats/>; Dagyum Ji, “North Korean media accuses China of ‘crossing red line,’” NK News, 3 May 2017, <https://www.nknews.org/2017/05/north-korean-media-accuses-china-of-crossing-red-line/>; “Is China-North Korea friendship treaty outdated?,” Global Times, 4 May 2017, <https://www.globaltimes.cn/page/201705/1045313.shtml>; Simon Denyer and Amanda Erickson, “China warns North Korea: You’re on your own if you go after the U.S.,” Washington Post, 11 August 2017, https://www.washingtonpost.com/world/china-warns-north-korea-youre-on-your-own-if-you-go-after-the-us/2017/08/11/a01a4396-7e68-11e7-9026-4a0a64977c92_story.html; Dagyum Ji, “Chinese newspapers interfering in N. Korean domestic affairs: state media,” NK News, 22 September 2017, <https://www.nknews.org/2017/09/chinese-newspapers-interfering-in-n-korean-domestic-affairs-state-media/>;
- 49 Dagyum Ji, “In rare article for N. Korean party daily, Xi offers ‘grand plan’ for peninsula,” NK News, 19 June 2019, <https://www.nknews.org/2019/06/in-rare-article-for-n-korean-party-daily-xi-promises-grand-plan-for-peninsula/>; “조선 노동신문에 발표한 시진핑 주석 기고문,” Rodong Sinmun, reprinted in People’s Daily, 20 June 2019, <http://kr.people.com.cn/n3/2019/0620/c203278-9589955.html>.
- 50 Taejun Kang, “Chinese journalists return to North Korea after 5 years: South Korean ministry,” Radio Free Asia, 10 March 2025, <https://www.rfa.org/english/korea/2025/03/10/china-north-korea-journalist/>.
- 51 Joshua H. Pollack and Scott LaFoy, “North Korea’s International Scientific Collaborations: Their Scope, Scale, and Potential Dual-Use and Military Significance,” James Martin Center for Nonproliferation Studies, 2018, <https://nonproliferation.org/wp-content/uploads/2018/12/op43-dprk-international-scientific-collaborations.pdf>.
- 52 “China Commemorated the 60th Anniversary of the Signing of China-DPRK Agreements on Economic and Cultural Cooperation in Beijing,” Ministry of Commerce of the People’s Republic of China, 3 December 2013, <http://english.mofcom.gov.cn/article/newsrelease/significantnews/201312/20131200410625.shtml>; S.B. Thomas, “The Chinese Communists’ Economic and Cultural Agreement with North Korea,” Pacific Affairs Vol. 27, No. 1 (1954), 61-65; “中国同朝鲜的关系,” 中华人民共和国驻朝鲜民主主义人民共和国大使馆, 23 February 2024, http://kp.china-embassy.gov.cn/chn/zcgx/zcgxgk/202402/t20240223_11249116.htm.
- 53 “中朝教育交流简况,” Embassy of the People’s Republic of China in the Democratic People’s Republic of Korea, <http://kp.china-embassy.gov.cn/zcgx/yjyl1/yjyljk/>.

- 54 Amy Qin, "An Art Powerhouse From North Korea," *The New York Times*, 25 January 2016, <https://www.nytimes.com/2016/01/26/arts/design/cambodias-new-angkor-museum-created-by-a-north-korean-art-factory.html>.
- 55 Chen Xi, "N.Korean artworks shine at Beijing's Mansudae Art Museum," *Global Times*, 17 October 2019, <https://www.globaltimes.cn/content/1167183.shtml>.
- 56 Youngnam Kim, "North Korea expands media ban to include Chinese films for the first time amid strained relations," *The Korea Daily*, 29 August 2024, <https://www.koreadailyus.com/north-korea-expands-media-ban-to-include-chinese-films-for-the-first-time-amid-strained-relations/>.
- 57 Chelsea Toczauser, "North Korea Expands Media Ban to Include Chinese Films," *The Diplomat*, 5 September 2024, <https://thediplomat.com/2024/09/north-korea-expands-media-ban-to-include-chinese-films/>.
- 58 "韩媒称朝鲜在中国集中研究学习卫星导航技术," *The Global Times*, reprinted in *Xinhua*, 4 August 2014, http://www.xinhuanet.com/world/2014-08/04/c_126827583.htm; Martyn Williams, "North Koreans learn about China's Beidou satellite navigation system," *North Korea Tech*, 31 July 2014, <https://www.northkoreatech.org/2014/07/31/north-koreans-learn-about-chinas-beidou-satellite-navigation-system/>.
- 59 Jake Rinaldi, "China-North Korea Arms Trade from the Perspective of Chinese Scholars," *Asia Policy* Vol. 19, No. 2 (2024), 193.
- 60 Josh Smith and Hyunsu Yim, "North Korea's AI development raises concerns, report says," *Reuters*, 24 January 2024, <https://www.reuters.com/technology/north-koreas-ai-development-raises-sanctions-concerns-report-says-2024-01-23/>.
- 61 Min Chao Choy, "North Korea likely violated sanctions with military parade drone from China," *NK Pro*, 26 October 2020, <https://www.nknews.org/pro/north-korea-likely-violated-sanctions-with-military-parade-drone-from-china/>.
- 62 Ellen Nakashima, Gerry Shih, and John Hudson, "Leaked documents reveal Huawei's secret operations to build North Korea's wireless network," *The Washington Post*, 22 July 2019, https://www.washingtonpost.com/world/national-security/leaked-documents-reveal-huaweis-secret-operations-to-build-north-koreas-wireless-network/2019/07/22/583430fe-8d12-11e9-adf3-f70f78c156e8_story.html; "Huawei and North Korea," *The Washington Post*, 22 July 2019, https://www.washingtonpost.com/context/huawei-and-north-korea/0ec3fe66-92e4-459a-8e27-4a44d31a18a1/?utm_term=.7473671fd7e6&itid=lk_inline_manual_3.
- 63 Jeong Tae Joo, "N. Korea imports second-hand Huawei devices to modernize telecommunications network," *Daily NK*, 3 November 2023, <https://www.dailynk.com/english/north-korea-imports-second-hand-huawei-devices-modernize-telecommunications-network/>.
- 64 Martyn Williams, "Is 4G on the Horizon for North Korea?" *North Korea Tech*, 4 November 2023, <https://www.northkoreatech.org/2023/11/04/is-4g-on-the-horizon-for-north-korea/>.
- 65 Yonho Kim, "Cell Phones in North Korea: Has North Korea Entered the Telecommunications Revolution?" *US-Korea Institute at SAIS*, 2014, <https://www.38north.org/wp-content/uploads/2014/03/Kim-Yonho-Cell-Phones-in-North-Korea.pdf>, 17-18; Martyn Williams and Niklaus Schiess, "Project Reveal: Reference Section," *Lumen*, 27 April 2022, <https://static1.squarespace.com/static/5f9c9107b640f54d876484cd/t/626832f8109c925a6aa19413/1650995963183/Reveal+-+Martyn+Williams+and+Niklaus+Schiess+-+Reference+Section.pdf>.
- 66 "North Korea – Characteristics of Joint Ventures With Foreign Partners, 2004-2011," *Open Source Center*, 1 March 2012, <https://info.publicintelligence.net/OSC-NorthKorea-ForeignJointVentures.pdf>.
- 67 Kazuteru Tamura, "北朝鮮の携帯電話事情 (2) - 端末ラインナップ," *WirelessWire News*, 14 February 2024, <https://wirelesswire.jp/2014/02/17559/>; Kazuteru Tamura, "北朝鮮の携帯電話事情 (6) - 中朝国境には闇業者が存在," *WirelessWire News*, 29 October 2014, <https://wirelesswire.jp/2014/10/20938/>; Kazuteru Tamura, "北朝鮮の携帯電話事情 (7) - Arirang Pyongyangの新型スマートフォンが登場," *WirelessWire News*, November 7, 2014, <https://wirelesswire.jp/2014/11/20939/>; Williams, *The origins of the Pyongyang 2423.*; Martyn Williams and Niklaus Schiess, "Project Reveal: Reference Section," *Lumen*, 27 April 2022, <https://static1.squarespace.com/static/5f9c9107b640f54d876484cd/t/626832f8109c925a6aa19413/1650995963183/Reveal+-+Martyn+Williams+and+Niklaus+Schiess+-+Reference+Section.pdf>; Martyn Williams, "New Arirang smartphone caught on camera," *North Korea Tech*, 25 November 2014, <https://www.northkoreatech.org/2014/11/25/new-arirang-smartphone-caught-on-camera/>; Martyn Williams, "Arirang 171 smartphone unveiled," *North Korea Tech*, 20 March 2018, <https://www.northkoreatech.org/2018/03/20/arirang-171-smartphone-unveiled/>; Martyn Williams, "North Korea's newest smartphone might be made in China," *North Korea Tech*, 10 June 2018. Mun Dong Hui, "N. Korea's new Chollyong 201 phone was made in China," *Daily NK*, 8 July 2020, <https://www.dailynk.com/english/north-koreas-new-chollyong-201-phone-made-china/>; Mun Dong Hui, "The Jindallae 7 phone was manufactured in China," *Daily NK*, 23 July 2020, <https://www.dailynk.com/english/jindallae-7-phone-manufactured-china/>; Martyn Williams, "The origins of the Pyongyang 2423 smartphone," *North Korea Tech*, 5 February 2019, <https://www.northkoreatech.org/2019/02/05/the-origins-of-the-pyongyang-2423-smartphone/>; Mun Dong Hui, "North Korea's latest smartphone made by Chinese manufacturer," *Daily NK*, 19 June 2019, <https://www.dailynk.com/english/the-pyongyang-2425s-real-manufacturer-is-in-china/>. Colin Zwirko, "Chinese company offering 'custom order' North Korean smartphones at Pyongyang fair," *NK News*, 24 September 2019, <https://www.nknews.org/2019/09/chinese-company-offering-custom-order-north-korean-smartphones-at-pyongyang-fair/>.

- 68 INSIKT GROUP, “North Korea’s Ruling Elite Are Not Isolated,” Recorded Future, 25 July 2017, <https://www.recordedfuture.com/blog/north-korea-internet-activity>; Vladimir Kropotov, Philippe Lin, Fyodor Yarochkin, and Feike Hacquebord, “A Closer Look at North Korea’s Internet,” Trend Micro, 17 October 2017, https://www.trendmicro.com/en_us/research/17/j/a-closer-look-at-north-koreas-internet.html; nknetobserver, “./ Your Friendly North Korean Network Observer,” Github, 9 April 2020, <https://github.com/nknetobserver?tab=repositories>; Martyn Williams, “China is key to North Korean Internet, but maybe not hackers,” Computer World, 23 December 2014, <https://www.computerworld.com/article/1490324/china-is-key-to-north-korean-internet-but-maybe-not-hackers-3.html>.
- 69 The mentioned range is 77.94.35.0/24. INSIKT GROUP, “North Korea’s Ruling Elite Are Not Isolated,” Recorded Future, 25 July 2017, <https://www.recordedfuture.com/blog/north-korea-internet-activity>; nknetobserver, “North Korea Military Power: A Growing Regional and Global Threat,” Defense Intelligence Agency, 15 October 2021, https://www.dia.mil/Portals/110/Documents/News/North_Korea_Military_Power.pdf.
- 70 Daewoung Kim and Ju-min Park, “North Korea switches TV transmission to Russia satellite from Chinese,” Reuters, 1 July 2024, <https://www.reuters.com/world/asia-pacific/north-korea-switches-tv-transmission-russia-satellite-chinese-2024-07-01/>.
- 71 “Chinese Cameras Help N. Korean Regime’s Surveillance,” The Chosun Daily, 14 January 2013, <https://www.chosun.com/english/national-en/2013/01/14/QA32WPGK62LEMW4XXJ736BV4NQ/>.
- 72 Martyn Williams and Natalia Slavney, “Digital Surveillance in North Korea: Moving Toward a Panopticon State,” 38 North, 16 April 2024, <https://www.38north.org/reports/2024/04/digital-surveillance-in-north-korea-moving-toward-a-digital-panopticon-state/>. Colin Zwirko, “Chinese surveillance software in use across range of N. Korean facilities: photos,” NK News, 12 July 2019, <https://www.nknews.org/2019/07/chinese-surveillance-software-in-use-across-range-of-n-korean-facilities-photos/?t=1723745314>.
- 73 Kim Jeong Yoon, “The tragic story of a North Korean ‘defector hunter,’” Daily NK, 7 February 2024, <https://www.dailynk.com/english/tragic-story-north-korean-defector-hunter/>.
- 74 Kim Jeong Yoon, “Lifting the veil on a Ministry of State Security crackdown on China-based trading officials,” Daily NK, 27 April 2023, <https://www.dailynk.com/english/lifting-veil-ministry-state-security-crackdown-china-based-trading-officials/>.
- 75 “China deported ‘large number’ of N Korean defectors - Seoul,” BBC, 13 October 2023, <https://www.bbc.com/news/world-asia-67098453>.
- 76 Daniel Schearf, “North Korea’s ‘World Class’ Cyber Attacks Coming from China,” Voice of America, 21 November 2013, <https://www.voanews.com/a/north-koreas-world-class-cyber-attacks-coming-from-china/1795349.html>.
- 77 Dave Lee and Nick Kwek, “North Korean hackers ‘could kill,’ warns key defector,” BBC, 29 May 2015, <https://www.bbc.com/news/technology-32925495>; Will Ripley, “North Korean defector: ‘Bureau 121’ hackers operating in China,” CNN, 7 January 2015, <https://www.cnn.com/2015/01/06/asia/north-korea-hackers-shenyang/index.html>.
- 78 “Two Chinese Nationals Charged with Laundering Over \$100 Million in Cryptocurrency From Exchange Hack,” U.S. Department of Justice Office of Public Affairs, 2 March 2020, <https://www.justice.gov/opa/pr/two-chinese-nationals-charged-laundering-over-100-million-cryptocurrency-exchange-hack>; “Senior U.S. official accuses China of aiding North Korea cyber thefts,” Reuters, 22 October 2020, <https://www.reuters.com/article/world/senior-us-official-accuses-china-of-aiding-north-korea-cyber-thefts-idUSKBN2772SR/>. “North Korean Government Hacker Charged for Involvement in Ransomware Attacks Targeting U.S. Hospitals and Health Care Providers,” U.S. Department of Justice Office of Public Affairs, 25 July 2024, <https://www.justice.gov/opa/pr/north-korean-government-hacker-charged-involvement-ransomware-attacks-targeting-us-hospitals>; James Pearson and Sarah N. Lynch, “North Korean hackers stealing military secrets, say US and allies,” Reuters, 25 July 2024, <https://www.reuters.com/world/north-korean-hackers-are-stealing-military-secrets-us-allies-say-2024-07-25/>.
- 79 Michelle Nichols, “Exclusive: Record-breaking 2022 for North Korea crypto theft,” Reuters, 6 February 2023, <https://www.reuters.com/technology/record-breaking-2022-north-korea-crypto-theft-un-report-2023-02-06/>.
- 80 “Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2023,” Department of Defense, 19 October 2023, <https://media.defense.gov/2023/Oct/19/2003323409/-1/-1/1/2023-MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA.PDF>.
- 81 Rob York, “Chinese troops deployed to counter North Korean border incursions: Report,” NK News, 18 June 2015, <https://www.nknews.org/2015/06/chinese-troops-deployed-to-counter-north-korean-border-incursions/>; 정영, “중국군 북중 국경지역에 전격 배치,” Radio Free Asia, 17 June 2015, https://www.rfa.org/korean/in_focus/nk_nuclear_talks/chinesearmy-06172015144309.html.
- 82 JH Ahn, “Significant military movements spotted near China-N. Korea border,” NK News, 24 August 2015, <https://www.nknews.org/2015/08/significant-military-movements-spotted-near-china-n-korea-border/>.
- 83 Colin Zwirko, “North Korean military pursuing ‘coordinated operations’ with China: State media,” NK News, 1 August 2022, <https://www.nknews.org/2022/08/north-korean-military-pursuing-coordinated-operations-with-china-state-media/>.
- 84 Jeongmin Kim, “Russia likely proposed military drills with North Korea and China, NIS says,” NK News, 5 September 2023, <https://www.nknews.org/2023/09/russia-likely-proposed-military-drills-with-north-korea-and-china-nis-says/?t=1718086023>; Станислав

- Варивода, “Посол РФ в КНДР: санкции никоим образом не влияют на отношения Москвы и Пхеньяна,” TASS, 2 September 2023, <https://tass.ru/interviews/18634669>.
- 85 Christy Lee, “Proposed Naval Drills Signal Closer Military Cooperation Among Moscow, Beijing, Pyongyang,” Voice of America, 7 September 2023, <https://www.voanews.com/a/proposed-naval-drills-signal-closer-military-cooperation-among-moscow-beijing-pyongyang-/7259027.html>.
 - 86 “Treaty of Friendship, Co-operation, and Mutual Assistance Between the People’s Republic of China and the Democratic People’s Republic of Korea,” Peking Review Vol. 4, No. 28, Chinese Communism Subjects Archive, 11 July 1961, https://www.marxists.org/subject/china/documents/china_dprk.htm; Vu, “Why China and North Korea.”
 - 87 Ankit Panda, “China and North Korea Have a Mutual Defense Treaty, But When Would It Apply?” The Diplomat, 14 August 2017, <https://thediplomat.com/2017/08/china-and-north-korea-have-a-mutual-defense-treaty-but-when-would-it-apply/>.
 - 88 Vu, “Why China and North Korea.”; Hyung-Jin Kim, “Leaders of North Korea, China vow to strengthen ties,” AP, 11 July 2021, <https://apnews.com/article/health-china-coronavirus-pandemic-north-korea-8fc7a269318c481035c43b030754cbf0>.
 - 89 Democratic People’s Republic of Korea Ministry of State Security and People’s Republic of China Ministry of Public Security, “Mutual Cooperation Protocol for the Work of Maintaining National Security and Social Order in the Border Areas,” North Korea Freedom Coalition, https://www.nkfreedom.org/UploadedDocuments/NK-China-bilateral_treaty.pdf.
 - 90 “习近平主持召开新时代推动东北全面振兴座谈会强调：牢牢把握东北的重要使命 奋力谱写东北全面振兴新篇章,” Xinhua, reprinted in The Government of the People’s Republic of China, 9 September 2023, https://www.gov.cn/yaowen/liebiao/202309/content_6903072.htm.
 - 91 “中华人民共和国国防部和朝鲜民主主义人民共和国国防委员会人民武装力量部队防务合作协议,” People’s Republic of China Treaty Database, <http://treaty.mfa.gov.cn/Treaty/web/detail1.jsp?objid=1531876977686>.
 - 92 People’s Liberation Army News, “中朝两国军方签署《边防合作协议》,” reprinted in Sina, 30 June 2004, <https://news.sina.com.cn/c/2004-06-30/08522946419s.shtml>.
 - 93 “中华人民共和国陆地国界法,” Ministry of Foreign Affairs, 23 October 2021, entered into force January 1, 2022, https://www.mfa.gov.cn/web/wjlb_673085/zjzg_673183/bjhysws_674671/bhflfg/ldfxzhxf/202303/P020230313533924391693.pdf.
 - 94 “ASEAN Regional Forum,” ASEAN Regional Forum, <https://aseanregionalforum.asean.org/about-arf/>; Ho Shawn and Seksan Anantasirikiat, “What North Korea gains from participating in the ASEAN Regional Forum,” NK News, 27 August 2021, <https://www.nknews.org/2021/08/what-north-korea-gains-from-participating-in-the-asean-regional-forum/>.
 - 95 Shawn and Anantasirikiat, “What North Korea gains.”; Jeongmin Kim, “Top officials of the two Koreas and US virtually attend ASEAN Regional Forum,” NK News, 12 September 2020, <https://www.nknews.org/2020/09/top-officials-of-the-two-koreas-and-us-all-virtually-attend-asean-regional-forum/>; Ethan Jewell, “North Korean envoy joins ASEAN forum, meets ROK foreign minister,” NK News, 5 August 2022, <https://www.nknews.org/2022/08/north-korean-envoy-joins-asean-forum-meets-rok-foreign-minister/>; Kim Seung-yeon, “Foreign ministry condemns N.K.’s missile provocations ahead of ARF,” Yonhap News Agency, 14 June 2023, <https://en.yna.co.kr/view/AEN20230614009100320>.
 - 96 Jeffrey Lewis, Melissa Hanham, and Amber Lee, “That Ain’t My Truck: Where North Korea Assembled Its Chinese Transporter-Erector-Launchers,” 38 North, 3 February 2014, https://www.38north.org/2014/02/jlewis020314/#_ftn13.
 - 97 Chad O’Carroll, “North Korean and Chinese ships delivered sanctioned vehicles to Nampo: UN report,” NK News, 3 April 2023, <https://www.nknews.org/2023/04/north-korean-and-chinese-ships-delivered-sanctioned-vehicles-to-nampo-un-report/>; Ethan Jewell, “North Korea may have more mobile launchers for its ICBMs than previously known,” NK News, 27 April 2022, https://www.nknews.org/2022/04/north-korea-may-have-more-mobile-launchers-for-its-icbms-than-previously-known/?pk_vid=856b654deb4c00fd172383041548a647.
 - 98 Shreyas Reddy, “North Korea appears to repurpose defunct car factory to produce rocket launchers,” NK Pro, 14 May 2024, <https://www.nknews.org/pro/north-korea-appears-to-repurpose-defunct-car-factory-to-produce-rocket-launchers/>; Dr. Jeffrey Lewis (@ArmsControlWonk), “Someone doesn’t want us to identify his imported Chinese robot arms,” X, 13 May 2024, <https://x.com/ArmsControlWonk/status/1790040554413125849>.
 - 99 Colin Zwirko, “North Korea using Chinese machines to make weapons at new factory, photos show,” NK Pro, 5 July 2024, <https://www.nknews.org/pro/north-korea-using-chinese-machines-to-make-weapons-at-new-factory-photos-show/>.
 - 100 “朝鲜科技总联盟技术人员访华,” Embassy of the People’s Republic of China in the Democratic People’s Republic of Korea, 16 November 2015, http://kp.china-embassy.gov.cn/chn/zcgx/zckjll/201511/t20151116_1336898.htm.
 - 101 “贵州省、四川省科协代表团访问朝鲜,” Embassy of the People’s Republic of China in the Democratic People’s Republic of Korea, 17 November 2015, http://kp.china-embassy.gov.cn/chn/zcgx/zckjll/201511/t20151117_1336904.htm.
 - 102 “朝鲜自然能源科技代表团访华,” Embassy of the People’s Republic of China in the Democratic People’s Republic of Korea, 17 November 2015, http://kp.china-embassy.gov.cn/chn/zcgx/zckjll/201511/t20151117_1336913.htm.

- 103 “朝鲜科技总联盟代表团访华,” Embassy of the People’s Republic of China in the Democratic People’s Republic of Korea, 7 July 2016, http://kp.china-embassy.gov.cn/chn/zcgx/zckjil/201607/t20160707_1336925.htm.
- 104 “China/North Korea,” OEC, May 2024, <https://oec.world/en/profile/bilateral-country/chn/partner/prk?subnationalTimeSelector=timeYear>.
- 105 Troy Stangarone, “North Korea Mines New Revenue Sources in Its Trade With China,” *The Diplomat*, 26 January 2023, <https://thediplomat.com/2023/01/north-korea-mines-new-revenue-sources-in-its-trade-with-china/>.
- 106 Shin Watanabe, “From wigs to seafood, North Korea scrambles for China trade,” *Nikkei Asia*, 25 May 2023, <https://asia.nikkei.com/Spotlight/N-Korea-at-crossroads/From-wigs-to-seafood-North-Korea-scrambles-for-China-trade>; Stephen Haggard and Liuya Zhang, “China-DPRK Trade: What Do We Know?,” *The National Committee on North Korea*, July 2024, <https://ncnk.org/resources/briefing-papers/all-briefing-papers/china-dprk-trade-what-do-we-know>.
- 107 OEC, “China/North Korea.”
- 108 Seulkee Jang, “China in talks with N. Korea about providing raw materials and food,” *Daily NK*, 3 May 2024, <https://www.dailynk.com/english/china-in-talks-with-n-korea-about-providing-raw-materials-and-food/>.
- 109 Seulkee Jang, “N. Korea encourages Chinese businesspeople to resume commercial activities,” *Daily NK*, 24 April 2024, <https://www.dailynk.com/english/north-korea-encourages-chinese-businesspeople-resume-commercial-activities/>.
- 110 Curtis Melvin and Joseph S. Bermudez Jr., “Chinese and North Korean Energy Cooperation Expanding, With Hiccups,” *38 North*, 13 June 2017, <https://www.38north.org/2017/06/yaludams06131/>.
- 111 Leo Byrne, “OFAC designates two Chinese companies for North Korea trade,” *NK News*, 21 March 2019, <https://www.nknews.org/2019/03/ofac-designates-two-chinese-companies-for-north-korea-trade/>; “S/RES/2397 (2017),” United Nations Security Council, 22 December 2017, <https://main.un.org/securitycouncil/en/s/res/2397-%282017%29>.
- 112 Jaewon Chung, “The Mineral Industry of North Korea,” U.S. Geological Survey, June 2023, <https://pubs.usgs.gov/myb/vol3/2019/myb3-2019-north-korea.pdf>, 14.2; Hyemin Son, translated by Eugene Whong, “North Korea Trades Rare Earth Mine Rights to China for Investment in Solar Plants,” *Radio Free Asia*, 21 October 2019, <https://www.rfa.org/english/news/korea/nk-rare-earth-solar-10212019133544.html>; Tom Daly, “China could tap North Korea rare earth mine in exchange for solar investment: report,” *Reuters*, 24 October 2019, <https://www.reuters.com/article/business/environment/china-could-tap-north-korea-rare-earth-mine-in-exchange-for-solar-investment-re-idUSKBN1X30KY/>.
- 113 Ethan Jewell, “North Korean company may have acquired superalloy used in nukes, missiles: PoE,” *NK Pro*, 21 September 2021, <https://www.nknews.org/pro/north-korean-company-may-have-acquired-superalloy-used-in-nukes-missiles-poe/>.
- 114 “[White Paper] A North Korean Sanctions Evasion Typology: Use of Complex Ownership Structures,” *Kharon*, April 2022, https://insights.crdfglobal.org/hubfs/Whitepapers/Kharon_DPRK_2022%20Whitepaper.pdf, 8.
- 115 David Brunnstrom, “U.S. accuses China of ‘flagrant’ North Korea violations, offers \$5 million reward,” *Reuters*, 2 December 2020, <https://www.reuters.com/article/world/us-accuses-china-of-flagrant-north-korea-violations-offers-5-million-reward-idUSKBN28B54H/>.
- 116 Michelle Nichols, “Exclusive: G7, others ask China to stop North Korea sanctions evasion in its waters,” *Reuters*, 21 July 2023, <https://www.reuters.com/world/asia-pacific/g7-others-ask-china-stop-north-korea-sanctions-evasion-its-waters-2023-07-21/>.
- 117 Daniel Wertz, updated by Troy Stangarone, “Special Economic Zones in the DPRK,” *The National Committee on North Korea*, April 2024, <https://ncnk.org/resources/briefing-papers/all-briefing-papers/special-economic-zones-dprk>. Bradley O. Babson, “Will North Korea’s Plans for Foreign Investment Make It a More Prosperous Nation?,” *38 North*, 2 May 2012, https://www.38north.org/2012/05/bbabson050212/#_ftn3; “田宝珍总领事出席中朝罗先经济贸易区管理委员会挂牌等仪式,” Embassy of the People’s Republic of China in the Democratic People’s Republic of Korea, 30 October 2012, http://kp.china-embassy.gov.cn/chn/zcgx/jmhz/201210/t20121030_1336799.htm. “China likely to provide power to N.K.’s Rason economic zone,” *Yonhap News Agency*, 3 November 2016, <https://en.yna.co.kr/view/AEN20161103007400315>.
- 118 Andray Abrahamian and Curtis Melvin, “North Korea’s Special Economic Zones: Plans vs. Progress,” *38 North*, 23 November 2015, https://www.38north.org/wp-content/uploads/pdf/2015-11-23_North-Koreas-SEZ-Plans-vs-Progress.pdf; Théo Clément, “Between Economic Reform and Support of an ‘Independent National Economy’: Special Economic Zones in North Korea,” *North Korean Review* Vol. 16, No. 1 (2020), 31-32.
- 119 Wertz, “Special Economic Zones in the DPRK.”; Martyn Williams and 38 North, “Recent Chinese Construction Suggests Expectations for Broader Trade,” *38 North*, 19 May 2023, <https://www.38north.org/2023/05/recent-chinese-construction-suggests-expectations-for-broader-trade/>.
- 120 “中华人民共和国和俄罗斯联邦在两国建交75周年之际关于深化新时代全面战略协作伙伴关系的联合声明 (全文),” Ministry of Foreign Affairs, 16 May 2024, https://www.mfa.gov.cn/zyxw/202405/t20240516_11305860.shtml.
- 121 Micah McCartney, “Map Shows Russia Border River Eyed by China,” *Newsweek*, 22 June 2024, <https://www.newsweek.com/map-shows-russian-territory-eyed-china-1915298>.

- 122 Ifang Bremer, “Why China wants North Korea and Russia’s help in gaining access to the sea,” NK News, <https://www.nknews.org/2024/05/why-china-wants-north-korea-and-russias-help-in-gaining-access-to-the-sea/>.

Authors

a. **Mr. Lucas Winter** is Senior Analyst, Middle East/North Africa, at the Foreign Military Studies Office. He has an M.A. in International Relations from Johns Hopkins SAIS and was an Arabic Language Flagship Fellow in Damascus, Syria in 2006-2007.

b. **Dr. Jason Warner** is Director of Research and Senior Analyst, Africa and Terrorism/Transnational Crime, at the Foreign Military Studies Office. He is the author of two books, and dozens of peer-reviewed articles and reports on African security and international affairs. He holds a Ph.D. from Harvard in African Studies.

c. **Michael Donmoyer** earned a Certificate in Chinese and American Studies at the Hopkins-Nanjing Center and is pursuing a M.A. in International Relations at Johns Hopkins School of Advanced International Studies. He holds a B.S. in International Relations from the United States Military Academy and served as a U.S. Army field artillery officer. Following his military service, he worked as a management consultant specializing in supply chain and operations. He also worked as a Research Fellow at the Congressional-Executive Commission on China.

The Foreign Military Studies Office (FMSO)

U.S. Army Training and Doctrine Command (TRADOC G-2)
Ft. Leavenworth, KS 66027

[HTTPS://FMSO.TRADOC.ARMY.MIL](https://fmso.tradoc.army.mil)

The Foreign Military Studies Office (FMSO) at Fort Leavenworth, Kansas, is part of the US Army Training and Doctrine Command G-2, whose mission is to understand, describe, assess and deliver the conditions of the operational environment. For over 30 years, FMSO has conducted open-source research on foreign perspectives of the operational environment, emphasizing those topics that are understudied or unconsidered. FMSO’s products are integral to critical thinking in the Army’s leadership, analytic communities, and military education, and wherever there is a professional interest in what “they think they think.”