

Aligning South Korea's Defense Strategy and Capabilities

April 2021 | Josh Chang, Regan Copple, Madison Creery, Jack Bianchi, and Evan Braden Montgomery

Changing security dynamics on the Korean Peninsula are prompting the Republic of Korea (ROK) to reexamine its defense strategy and adjust its military capabilities and investment priorities. North Korea's growing missile arsenal and asymmetric defense strategy, along with China's rapid military modernization, present unique challenges to South Korean and American efforts to maintain stability on the Korean Peninsula and in the broader region. To identify how the ROK can best align its defense strategy and capabilities, and to clarify the alliance division of labor between the ROK and the United States, the Center for Strategic and Budgetary Assessments (CSBA) hosted a virtual roundtable discussion and decision-making exercise. The event, held on March 18-19, 2021, convened U.S. and South Korean defense analysts to debate the scenarios and objectives that should most influence Seoul's defense planning, capability and capacity requirements, and investment decisions over the next decade.

South Korean Defense Strategy and Defense Reform 2.0

South Korea has formulated new defense plans to address evolving threats from North Korea. Specifically, Pyongyang's continued investment in cruise and ballistic missile capabilities has prompted Seoul to establish a three-tier defense initiative consisting of "Strategic Target Strike," "Korea-style Missile Defense," and "Overwhelming Response." Strategic Target Strike seeks to employ long-range precision fires to neutralize North Korean missiles before they are launched. Korea-style Missile Defense relies on a layered network of interceptors, sensors, and short-range air defenses (SHORAD) to detect and destroy North Korean missiles before they reach their targets. Overwhelming Response aims to harness precision fires to execute decapitation strikes against the Democratic People's Republic of Korea (DPRK) leadership once ROK defenses successfully blunt a North Korean attack.

Seoul has also adopted a force modernization program, known as Defense Reform 2.0, which is intended to complement its defense strategy by limiting South Korea's dependence on foreign defense imports, improving its defense-industrial base, and creating a more robust force that better incorporates emerging technologies. The program prioritizes the acquisition of technologically advanced systems built by Korean companies, including ground-based missile defenses, fighter aircraft, and a light aircraft carrier.¹ Defense Reform 2.0 also aims to increase the well-being of military personnel and to develop capabilities to address non-traditional threats, from cyberwarfare to chemical and biological weapons.

Event Overview

CSBA's event focused on assessing whether and to what extent this collection of efforts is suited to the threats Seoul is likely to confront. The event also addressed whether Seoul's efforts are aligned with U.S. plans to support Korea's defense, enhance the U.S. military's regional posture, and uphold U.S. extended deterrence commitments.

The roundtable featured a structured discussion on South Korea's major strategic and operational-level defense challenges. Participants considered issues including: strategy and war aims during a conflict with North Korea; the growing threat posed

by China's defense modernization efforts; the division of labor within the U.S.-ROK alliance; and overall force readiness. The roundtable was followed by a Strategic Choices Exercise (SCE) in which participants could rebalance South Korea's projected force structure and modernization spending to create an alternative 2031 ROK military force structure. This exercise employed CSBA's Strategic Choices Tool (SCT), which enables users to reallocate a country's projected force structure and modernization spending under a predetermined resource constraint over a coming ten-year period. Within the SCT, users can quickly evaluate tradeoffs among various capabilities and units, identify areas for investment or divestment, shift the distribution of resources across different budget categories, and devote resources to hypothetical but plausible military options.

Major Discussion Themes

The roundtable discussions, briefings, and SCE highlighted three recurring topics that are likely to influence future ROK defense strategy and investment decisions: whether South Korean war aims need to be narrow or expansive; the extent to which the U.S. military could feasibly support ROK forces in various scenarios; and the virtues of foundational capabilities versus exquisite capabilities.

Expansive War Aims May Require Extensive Investments

Seoul's interest in peninsular reunification following DPRK regime collapse shaped discussions on the scope of ROK war aims and the investments required to support them. Specifically, some participants expressed concern that a future conflict on the peninsula could trigger intervention by China's People's Liberation Army (PLA), either to stabilize the area adjacent to its border or to secure broader areas in the DPRK. If so, the ROK might look to prevent PLA involvement in two ways: quickly defeating DPRK armed forces and establishing wide area control over territory in the north, and fielding capabilities that could threaten PLA forces if they began to intervene. That, in turn, could require investments in a variety of capabilities, such as new ground vehicles to conduct rapid maneuver operations to reach the Yalu River and extended-range precision fires to hold at risk targets along the China-DPRK border, respectively. These aims and investments would place added burdens on ROK armed forces, especially in concert with the ongoing demands to defend South Korean territory from a North Korean attack.

Feasible Expectations of the United States in ROK Defense Planning

The event featured extensive discussions on potential capacity limitations that might constrain U.S. support to its ROK allies during a conflict and how those constraints should shape Seoul's force planning decisions. South Korean defense modernization is partially driven by concerns that ongoing U.S. global commitments—and the possibility of a simultaneous crisis or conflict in another part of the world—might consume available U.S. reinforcements. If these concerns continue to increase, South Korea would likely require capability increases in multiple areas, including logistics to sustain forces in a protracted conflict and personnel to conduct post-conflict stabilization operations. In addition, South Korea's pursuit of independent military capabilities through Defense Reform 2.0 is an indication of its desire to hedge against abandonment and maximize its own operational flexibility. Nevertheless, the United States and South Korea have yet to engage in adequate discussions regarding alliance division of labor issues, which are poised to become more important as Seoul moves forward with its current defense initiatives.

Fundamental Defense Needs vs. Exquisite Capabilities

In potential DPRK contingencies, Seoul faces serious capacity limitations in certain fundamental capability areas. For instance, the ROK military would need to expand its logistics capabilities to support ground forces in a protracted conflict and increase the end strength of its ground forces to conduct post-conflict stabilization operations, as noted above. Seoul might also need to invest in new ground vehicles to enable its forces to rapidly move up through the DPRK to the Chinese border. Finally, given demographic challenges that constrain end strength increases, the ROK military could find itself investing more

in unmanned aerial and ground vehicles. Given these pressing needs, South Korea's pursuit of technologically "exquisite" platforms –such as a light aircraft carrier and perhaps even nuclear-powered attack submarines (SSN) – could impose significant opportunity costs. That, in turn, is raising questions among analysts over the necessity of these high-end assets. On the one hand, a light carrier could provide help to compensate for threats to ROK airbases, while SSNs could contribute to sea denial operations. Yet, these platforms could consume substantial resources, to the detriment of other capabilities that could potentially better achieve mission objectives.

Strategic Choices Exercise

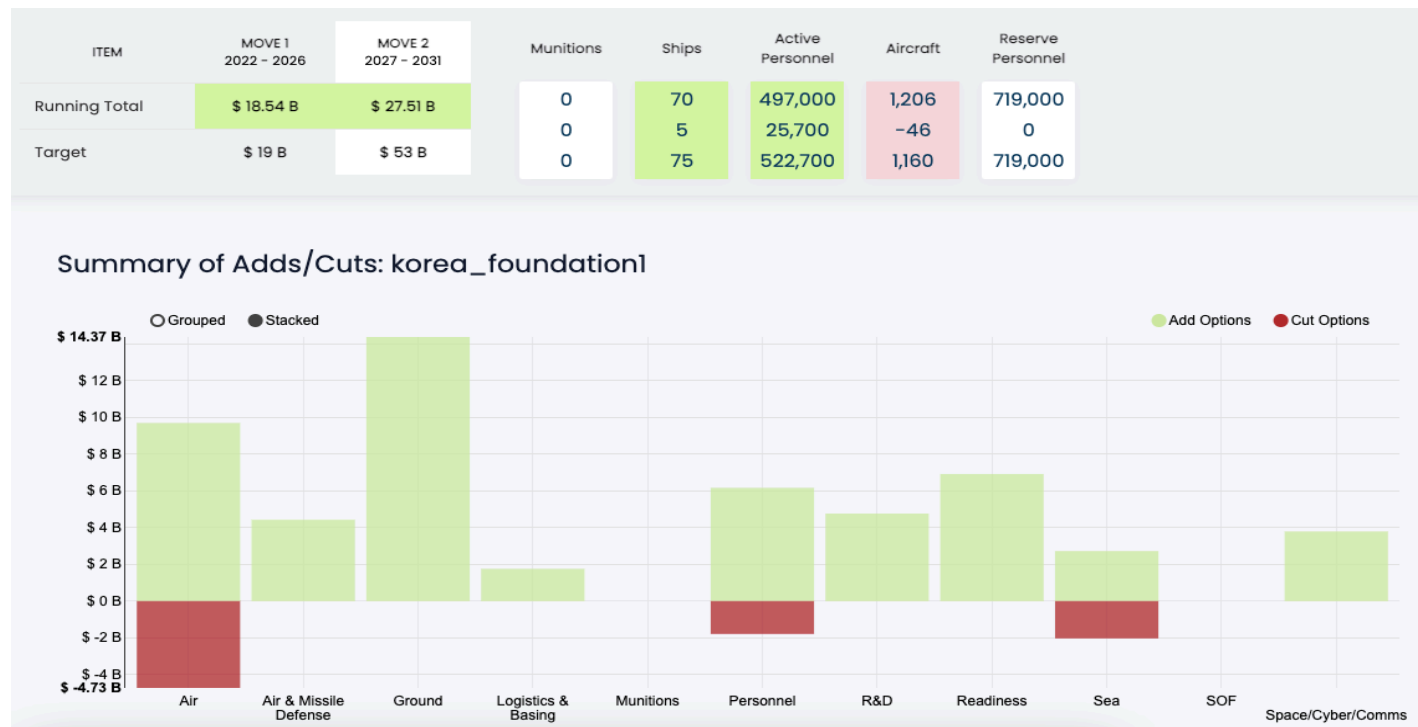
During the Strategic Choices Exercise, event participants were divided into two teams, each of which was asked to reach a consensus on South Korea's strategic goals, military requirements, and the necessary capabilities.¹ The teams then used the SCT to operationalize their views and implement their ROK military investment priorities over the 2022-2031 timeframe. After rebalancing Korea's defense spending in the tool, the teams reconvened to summarize their major rebalancing decisions, the rationale for these changes, and any issues that generated significant dissent.

Team One Decisions

Team One prioritized North Korea as the principal strategic threat to Seoul and chose to focus on increasing asymmetric attack capabilities, command-and-control (C2), and information, surveillance, and reconnaissance (ISR) assets to deter and defeat a DPRK attack, with the assumption that South Korea would have to prepare to do so independently. The group emphasized the threat posed by DPRK missiles and invested in resources to detect and intercept them, protect military bases, and preserve ROK communications and logistics in rear areas. This overarching approach saw Team One's rebalancing efforts in both moves increase investment broadly across the spending categories of ground, readiness, research and development, air/missile defense, logistics and basing, and space/cyber/communications (Figure 1). The team's three principal areas of divestment included fifth-generation air platforms, the light carrier, and related air and sea active-duty personnel.

¹ The exercise featured two rounds of gameplay, each corresponding to a five-year period of spending and specific budget target. Move 1 coincided with the period from 2022-2026 and involved a budget target of \$19 billion, while Move 2's period spanned 2027 to 2031 and involved a budget target of \$53 billion. Budget targets were derived from open-source data on future South Korean defense spending.

FIGURE 3: TEAM 1 ADD/CUT SUMMARY

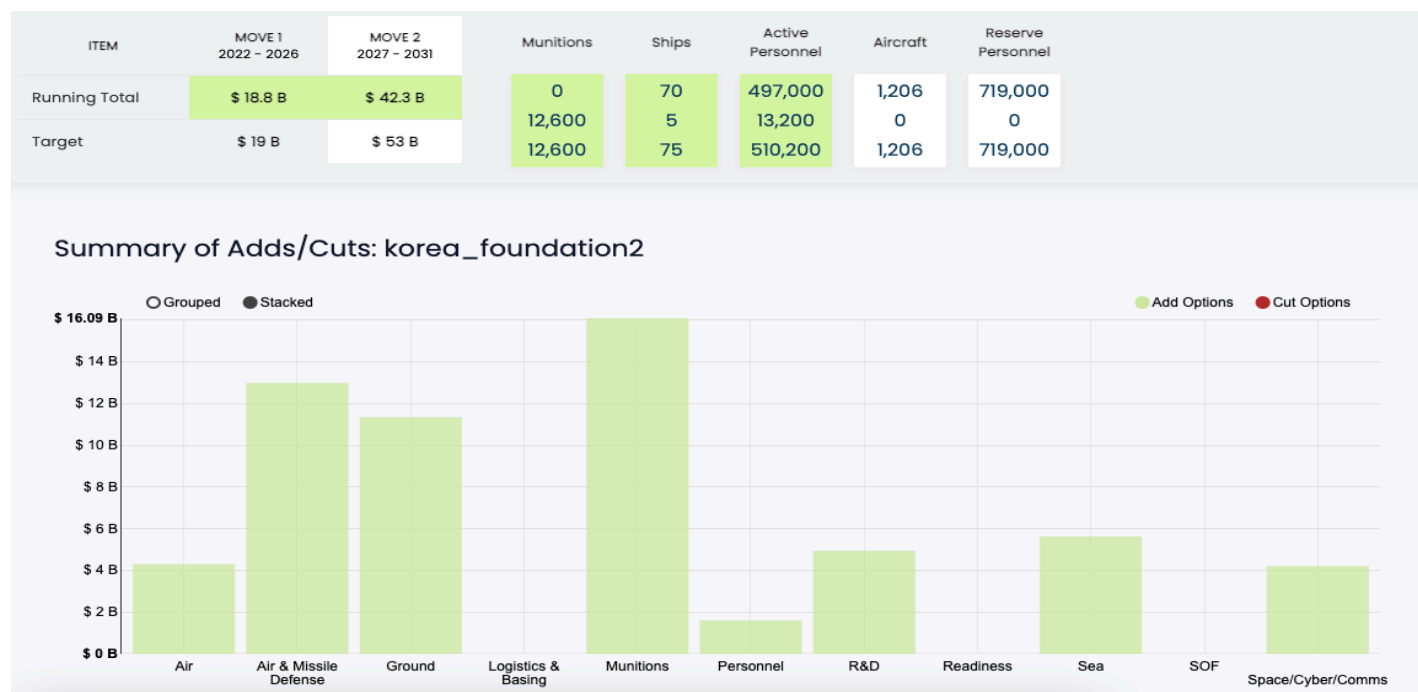


Team One’s priority of countering Pyongyang’s asymmetric warfighting approach manifested in its missiles and cyber capabilities, translated into increased investment in research and development on force-wide missile defense, cyber, directed energy (DE), and electronic warfare to develop both offensive and defensive capabilities. Due to the threat posed by North Korean missile forces, Team One purchased missile interception and air defense assets such as a high-power laser air and missile defense battery, DE-SHORAD battery, high-power air and missile defense microwave battery, and eight national advanced surface-to-air missile systems (NASAMS). To counter DPRK conventional artillery, Team One also added five army artillery brigades and two counter-artillery brigades.

Team One also invested heavily in basing infrastructure and logistics, increasing funding for facilities maintenance, hardened communications nodes, and rapid runway repair capacities to enhance the resilience of military installations against DPRK missile attacks. The group also invested in a wide assortment of ISR platforms and C2 equipment such as expendable unmanned aerial systems, force-wide joint tactical data link systems, protected SATCOM terminals, and transportable tactical command communications.

Team One’s major divestments included reductions in the purchase of fifth-generation fighter platforms, reflecting the group’s belief that the ROK military would secure air superiority easily over the peninsula due to the DPRK’s qualitatively inferior air force. Reductions in air force personnel also accompanied these drawdowns in air platforms. The team also chose to cancel the Navy’s planned Light Aircraft Carrier program.

FIGURE 4: TEAM 2 ADD/CUT SUMMARY



SCE Results: Team Two

Team Two also prioritized the DPRK threat and focused on assets that could blunt a missile attack from Pyongyang and preserve situational awareness and communications during a crisis. Unlike Team One, Team Two was also concerned about the prospect of Chinese military intervention if conflict broke out on the peninsula. Consequently, Team Two invested in capabilities that would allow the ROK armed forces to quickly advance north, occupy large swaths of territory, and avoid the type of prolonged n that might trigger Chinese intervention. Some of these capabilities, such as long-range missiles and armored vehicles, would also be expected to apply to both the North Korean and Chinese threats. Compared to Team One, Team Two did not make any major divestments. The group’s rebalancing approach saw notable investments in the areas of Air & Missile Defense, Ground, and Munitions (seen in Figure 2), with smaller increases across the other categories.

Operationally, Team Two prioritized missile defense capabilities and resilient, redundant command-and-control systems. The group procured assets such as directed energy short-range air defenses, surface-to-air missile batteries, and microwave weapons as part of its missile defense portfolio and invested in tactical command posts, fiber optic cables, and information-sharing systems. Team Two also expanded the ROK military’s munitions stockpiles in anti-air missiles, air-to-ground missiles, and ground-based long-range precision fires. Team members believed these capabilities could counter threats from Pyongyang and deter intervention by Beijing, given standoff fires’ ability to target armored units. As part of its focus on rapid maneuver and wide area control, the team invested in infantry fighting vehicles and unmanned ground vehicles to increase the ROK ground force mobility. The team also increased the number of active-duty combat personnel to meet the manpower requirements of stabilization operations throughout the DPRK. By contrast, Team Two’s naval procurements were heavily influenced by long-term threats from China, which the group sought to counter with conventional attack submarines and underwater autonomous vehicles.

Overall, both teams found common ground in areas of investment such as air/missile defense, chemical/biological weapons defense, and resilient communications. Yet, they also diverged in several areas. Team Two's concerns about China led it to invest heavily in ground assets such as armored vehicles and long-range precision fires, as well as naval assets such as conventional attack submarines. Team One scaled back its air investments based on the assumption that air superiority was all but guaranteed in a conflict with Pyongyang and canceled the light carrier program, while Team Two chose not to terminate any major platforms in development.

Conclusion

South Korea faces difficult force modernization tradeoffs as it responds to both military developments in the DPRK and China's rapid military modernization efforts. The discussion and debate above highlight how the ROK military may face substantial demands from South Korean policymakers in response to a contingency on the peninsula. In a future conflict with the DPRK, ROK forces would not only need to counter the DPRK threat but could also attempt to move rapidly up the peninsula to preempt any Chinese intervention. ROK forces would also face severe logistical demands in a protracted DPRK conflict and would need a force large enough to conduct post-conflict stabilization operations throughout the DPRK. The U.S. military can be expected to provide only limited amounts of combat and logistical support in a conflict, with the resulting burden falling on the ROK military. Finally, the ROK has glaring needs in several fundamental capability areas, which potentially merit funding over high-end projects that might provide limited operational utility in likely conflict scenarios. Given Seoul's expected operational challenges and projected defense spending levels, South Korean political and military leaders face stark force structure tradeoffs in the years ahead.

Looking forward, CSBA will continue to use its newly developed South Korea SCT in future events, workshops, and wargames to contribute to the ongoing policy debate on South Korean national security efforts. As demonstrated by the discussion and debate above, events such as these are a unique opportunity for experts on Korean security issues to more concretely link ROK defense strategy, operational challenges, and capabilities. The South Korea SCT can inform policymakers and experts on the dynamics of ROK defense policy, sharpen analysis on South Korea's force planning tradeoffs, and deepen the U.S. defense community's understanding of the ROK's defense strategy, operational challenges, and force modernization.

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