

China's Uneven Response to THAAD and its Coercive Strategy Aimed at the ROK: Implications for the U.S.-ROK Alliance

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Abstract

The United States-Republic of Korea Alliance has arrived at a critical juncture. In July 2016, the countries jointly decided to deploy the U.S. Terminal High Altitude Area Defense (THAAD) ballistic missile defense system to the Korean Peninsula to defend against North Korea's accelerating nuclear and ballistic missile programs. China has long opposed an American-led, regional missile defense system, persistently warning South Korea against deploying THAAD. Since the deciding to deploy THAAD, the political landscapes in the U.S. and the ROK have changed dramatically. The new Donald J. Trump administration has signaled a change from the previous administration's "strategic patience" policy, but details of the new approach have yet to emerge. North Korea, meanwhile, continues to aggressively test ballistic missiles and promote its nuclear weapons program. In South Korea, the impeachment and subsequent removal of Park Geun-hye triggered the need for a snap election, and a left-leaning candidate, Moon Jae-in, is leading in the polls. The election could mark a return of previous liberal administration policies that favored cooperation with North Korea. Additionally, Moon has signaled his opposition to THAAD. Nonetheless, the U.S. began deploying THAAD to South Korea in March 2017. China retaliated, implementing a series of economic, political, and military measures to pressure South Korea. This paper provides background on THAAD, analyzes the decision by Washington and Seoul to deploy the system to Korea, and examines Beijing's concerns and coercive counterstrategy.

Keywords: Ballistic Missile Defense System, Terminal High Altitude Area Defense, THAAD, AN/TPY-2, X-band phased array radar, U.S.-ROK Alliance, USFK, ballistic missile, theater missile defense, Curtis Scaparrotti, James Thurman, Seongju, Lotte, Geng Shuang, Wang Yi, Song Zhongping

Introduction

Three months after the events of September 11, President George W. Bush issued National Security Presidential Directive 23. The December 2002 directive presented new ballistic missile defense policy to correspond to the emerging threats of that time. It also warned of the North Korean threat:

Some states, such as North Korea, are aggressively pursuing the development of weapons of mass destruction and long-range missiles as a means of coercing the United States and our allies. To deter such threats, we must devalue missiles as tools of extortion and aggression...although missile defenses are not a replacement for an offensive response capability, they are an added and critical dimension of contemporary deterrence. Missile defenses will also help to assure allies and friends, and to dissuade countries from pursuing ballistic missiles in the first instance by undermining their military utility.¹

The Terminal High Altitude Area Defense (THAAD) ballistic missile defense program (originally, “Theater” High Altitude Area Defense) grew out of the 1980’s Strategic Defense Initiative. After years of development, failed tests, Congressional budget battles and program realignment, THAAD emerged as a viable missile defense system by the mid-2000s with THAAD battery activation beginning at Fort Bliss, Texas, in 2008. In 2011, U.S. Forces Korea (USFK) Commander, General James Thurman, told Congress that THAAD would be the best system “to provide layered defense and also improve early warning for the Korean Peninsula as well as enhance Ballistic Missile Defense (BMD) early warning in the region.”² By 2013, a Fort Bliss THAAD battery was deployed to Guam in response to growing North Korean nuclear and ballistic missile threats. The following year, USFK Commander General Curtis Scaparrotti publicly recommended THAAD to the ROK government to defend against the North Korean threat. After long and careful consideration, the ROK government agreed in 2016 to provide land to facilitate the installation of a THAAD battery at a location within South Korea. By March 2017, the first shipment of the THAAD system arrived in the ROK.

The THAAD deployment comes at a critical juncture for the U.S.-ROK Alliance. China continues to exert pressure during a time of unique political change in both the U.S. and ROK. The Trump administration's North Korea policy has yet to take shape, as North Korea continues to aggressively test its ballistic missiles and promote its nuclear weapons program. A snap presidential election will be held in the ROK in May to fill the void left when Park Geun-hye was removed, and left-leaning candidate, Moon Jae-in, is the front-runner. A Moon victory could revive previous liberal policies that impact how the next administration works to repair relations with China while balancing the defense needs of the U.S.-ROK Alliance.

THAAD Deploys to the ROK

On the evening of March 6, 2017, cameras followed a U.S. Air Force C-17 as it slowly descended and landed at Osan Air Base. After the cargo aircraft taxied and parked, the massive rear cargo door opened upward and two large mobile launchers rolled down the aircraft's offloading ramp. The THAAD deployment to the ROK had begun.³ Predictably, China reacted scathingly and consistently with the increased warnings the country had been leveling at the Park administration since the ROK-U.S. joint agreement was made in July 2016 to deploy the system.

Park Geun-hye was impeached in December, and despite domestic opposition to THAAD, the agreement to deploy the system remained intact. In February 2017, the ROK Ministry of National Defense made plans to acquire land to facilitate the installation of a THAAD battery, and announced that the deployment was expected to begin between May and July of 2017.⁴ However, THAAD began deploying earlier than expected—four days prior to Park Geun-hye's constitutional removal from office.⁵ Directly thereafter, Moon Jae-in, the progressive presidential candidate sitting comfortably ahead in the election polls, pushed back on THAAD, questioning the rationale and timing of the deployment.⁶ Previously, after the original July 2016 decision to deploy THAAD, he pressed for a suspension of the deployment, favoring instead a resumption of diplomatic efforts to denuclearize North Korea.⁷ Surrogates in Moon's camp blamed the Park administration's "rush" to deploy THAAD as the reason for Beijing's retaliation.⁸ In actuality, the THAAD decision had culminated after years of threat assessments, planning, programming, budgeting, and U.S.-ROK consultations.

THAAD—Part of an Integrated, “Layered” Architecture

The U.S. Ballistic Missile Defense System (BMDS) is composed of an integrated "layered" architecture made up of networked sensors, radars, interceptor missiles, and communications links. The system is designed to counter all ranges of ballistic missiles—short, medium, intermediate, and long. The layered architecture provides the system with multiple opportunities to destroy enemy missiles and their warheads before they reach their targets.⁹ Within the architecture, missile defense systems are layered to defend against hostile missiles in each phase of flight—boost, midcourse, and terminal.

The boost phase begins at launch and is the most difficult phase at which to engage a missile since the intercept "window" is from only one to five minutes. The midcourse phase begins after the booster on the enemy missile burns out and can last as long as 20 minutes while the missile coasts in space towards its target. During this phase, there are several opportunities to destroy the enemy ballistic missile while it is still outside of the earth's atmosphere, allowing any debris that remains after the intercept to burn up as it enters the atmosphere. The terminal phase represents the last opportunity to intercept an enemy missile before its warhead reaches its target. Since this phase begins once the missile is reentering the atmosphere and is very short in duration, there is little margin for error. Terminal phase missile defense systems are operated by the U.S. Navy and Army, and include the sea-based Aegis, the Patriot Advanced Capability-3 (PAC-3), and THAAD.¹⁰ The PAC-3 complements THAAD to provide an integrated, multi-tiered defense against enemy missiles in the terminal phase of flight.¹¹ These mobile, terminal phase systems are built to defend against enemy short-and medium-range ballistic missiles.¹²

The THAAD System

The THAAD system is made up of four primary components: a launcher, interceptors, a radar, and a fire control capability. The launcher is mounted to the trailer of a modified military vehicle, providing a stable platform from which interceptors can be fired and rapidly reloaded. Instead of carrying warheads, interceptors are fired from the launcher using “hit-to-kill” technology in the form of kinetic energy to destroy incoming enemy warheads.¹³ Within the missile defense community, this is often referred to as “hitting a bullet with a bullet.” For its radar, THAAD uses the Army Navy/Transportable Radar Surveillance and

Control Model 2, (AN/TPY-2). The AN/TPY-2 can track all classes of ballistic missiles. It functions by searching, tracking, and discriminating objects from long distances and then providing updated tracking data back to the interceptor. The radar operates in two modes.

In the “terminal mode,” the radar tracks enemy ballistic missiles in the “terminal,” or descent phase of flight, and guides the interceptor to the target. In “forward-based mode,” it acts as a forward based sensor for the BMDS by acquiring ballistic missiles in the boost, or ascent phase of flight, shortly after launch. Critical tracking and threat discrimination data is then passed on to decision makers.¹⁴ THAAD’s fire control performs as the communication and data-management backbone for the system, linking THAAD components as well as linking the system’s communications to external command and control nodes, including the entire BMDS.¹⁵

The THAAD system is configured to be globally transportable and rapidly deployable via air, rail, land and sea, and can be set up within four hours of its arrival.¹⁶ As an operational capability, a THAAD battery is scalable but is typically comprised of six truck-mounted launchers¹⁷ and 48 interceptors (eight per launcher).¹⁸ With its AN/TPY-2 radar in terminal mode, the system searches, tracks, and discriminates objects at a range of up to 1,000 kilometers (km).¹⁹ If a terminal-phase enemy missile threat is detected, a missile interceptor is launched and the radar provides tracking data to the interceptor, guiding it to the enemy missile target.²⁰ With an interceptor range of 200 km at altitudes of up to 150 km, THAAD integrates with the PAC-3 to provide the “upper tier” portion of multi-tiered defense against enemy missiles in the terminal phase of flight.²¹ THAAD’s ability to conduct high-altitude intercepts mitigates the effects of enemy weapons of mass destruction before they reach the ground.²²

THAAD Program Development

The THAAD program grew out of the Strategic Defense Initiative (SDI), the program started under President Ronald Reagan, and famously dubbed “...a reckless Star Wars scheme” by Senator Edward M. Kennedy.²³ The U.S. and Soviet Union (USSR) had agreed to terms set in the 1972 Anti-Ballistic Missile (ABM) Treaty that mandated a prohibition against deployment of a national anti-ballistic missile defense system by each party, leaving both sides exposed to the threat of nuclear ballistic missiles. This institutionalized the doctrine of mutually assured

destruction, which paradoxically required that in order to protect the nation's people from nuclear attack they would have to be left unprotected.²⁴ President Reagan changed that trajectory in March 1983, when he delivered what would come to be known as the "Star Wars" SDI speech:

Tonight, consistent with our obligations of the ABM treaty and recognizing the need for closer consultation with our allies, I'm taking an important first step. I am directing a comprehensive and intensive effort to define a long-term research and development program to begin to achieve our ultimate goal of eliminating the threat posed by strategic nuclear missiles.²⁵

Following a year of studies, the Department of Defense (DoD) chartered the Strategic Defense Initiative Organization (SDIO) in April 1984²⁶ and the THAAD program began as a technology demonstration program by the late 1980s.²⁷ One problem with the ABM Treaty, which the U.S. would eventually abrogate during the George W. Bush administration, was that it fixated only on the U.S. and USSR—the thinking was that limiting ABM systems would curb the nuclear arms race between the two countries and decrease the risk of a catastrophic, all-out war. What wasn't envisioned or understood at the time was the global proliferation of ballistic missiles and the rise of new nuclear weapons states that would intensify through the 1980s and 1990s, and the requirement to expand the deployment of theater missile defenses against a range of ballistic threats.²⁸ The Gulf War would provide the venue to showcase the Patriot missile's capabilities and help galvanize support for U.S. theater missile defense efforts, at home and among U.S. allies.

The Gulf War was arguably the first round-the-clock, globally televised "live war." Complete with vivid, 24-hour cable news coverage that showcased the latest advancements in military technology and provided detailed assessments from experts, viewers from around the world were exposed to real-time battlefield successes and failures. One of the weapon systems showcased was the PAC-2 Patriot missile defense system. After Iraq invaded Kuwait in August 1990, the U.S. Army deployed the Patriot to Southwest Asia to defend against the Iraqi-modified Scud missile, the Al-Hussein.²⁹ Although the Army would later significantly revise reports of the Patriot's effectiveness against incoming

Scuds fired toward Saudi Arabia and Israel during the Gulf War,³⁰ the performance of the Patriot sharpened Congressional interest in developing advanced theater ballistic missile defense.

In his State of the Union Address on January 29, 1991, just 12 days after Operation Desert Storm kicked off Gulf War combat operations, President George H. W. Bush acknowledged the threat from tactical missiles and the need to streamline efforts, while touting the success of the Patriot system:

Now, with remarkable technological advances like the Patriot missile, we can defend against ballistic missile attacks aimed at innocent civilians. Looking forward, I have directed that the SDI program be refocused on providing protection from limited ballistic missile strikes, whatever their source. Let us pursue an SDI program that can deal with any future threat to the United States, to our forces overseas, and to our friends and allies.³¹

After the Gulf War, in December 1991, President Bush signed into law the Missile Defense Act of 1991, which helped to propel theater missile defense programs forward. Included as part of the missile defense goal of the U.S. was to "...provide highly effective theater missile defenses (TMDs) to forward-deployed and expeditionary elements of the Armed Forces of the United States and to friends and allies of the United States."³² It required the Secretary of Defense to "...aggressively pursue the development of advanced theater missile defense systems, with the objective of down-selecting and deploying such systems by the mid-1990s."³³

Due to the stringent timing, the Act put pressure on the THAAD program, which was still in concept development. Concerned that a traditional acquisition strategy could not be expedited to fulfill the timing of the legislative mandate, planners conceived the User Operational Evaluation System (UOES) strategy to develop THAAD. This strategy and its failures ultimately led to the delayed fielding of THAAD.³⁴ By 1992, the THAAD UOES program awarded demonstration/validation contracts to build a system with full-scale production by 2002.³⁵ However, by March 1999, the system had failed in its first six consecutive attempts to intercept a target.³⁶ The General Accounting Office determined that the UOES strategy was the cause of the

program's problems because it required the program to use parallel testing to save time rather than use best practices, which ultimately hurt interceptor design and testing.³⁷ Then, in June and August 1999, there were back-to-back successful interceptor flight tests. Not long after, THAAD entered the Engineering and Manufacturing Development phase of its acquisition cycle in late June 2000.³⁸

The events of September 11, 2001 signified a changed security environment that included growing threats from weapons of mass destruction, ranging from terrorism to ballistic missiles. On December 13, 2001, President Bush gave Russia a six-month notice of intent for the U.S. to withdraw from the 1972 ABM Treaty and this became effective on June 13, 2002.³⁹ Subsequently, on December 16, he issued new policy on ballistic missile defense that "eliminated the artificial distinction between 'national' and 'theater' missile defenses."⁴⁰ It also directed the DOD to execute plans to deploy an initial set of missile defense capabilities beginning in 2004.⁴¹ After several successful tests, Lockheed Martin was awarded a contract in January 2007 for the first two THAAD production systems.⁴²

THAAD Fielding and Activation

The U.S. Army has identified a missile defense requirement for nine total THAAD batteries, but only seven are currently authorized in the defense budget.⁴³ There are currently six activated THAAD batteries in the Army's inventory—five are assigned to Fort Bliss⁴⁴, in El Paso, Texas. Of those batteries, one has been forward deployed to Guam since 2013. After a North Korean nuclear test in February 2013 and subsequent threats by North Korea to attack American military bases located in Japan and Guam⁴⁵, the U.S. deployed one of its three THAAD batteries from Fort Bliss in April 2013 as a precaution against the North Korean ballistic missile threat.⁴⁶ Reports claimed that North Korea had moved an unspecified number of Musudan missiles to its east coast. As an intermediate-range ballistic missile with a suspected range of 3,500 km, the Musudan was considered to be a threat to the island.⁴⁷ This was the Army's first operational deployment of a THAAD battery.⁴⁸ Rotational deployments to support a temporary THAAD mission in Guam have been ongoing, and the Army has considered installing a permanent mission there.⁴⁹ In addition to the five THAAD batteries assigned to Fort Bliss, a sixth battery was activated at Fort Hood, Texas in December

2016.⁵⁰ A seventh battery is scheduled to be activated at there, likely in 2017.⁵¹

Why is THAAD being Deployed to Korea?

North Korea has a very large and diverse inventory of ballistic missiles whose origins span decades of development. Beginning in the 1960s, the North Korean government had organized a fledgling missile program with help from the Soviet Union and China, and by 1984 was testing its own version of a SCUD-B ballistic missile.⁵² North Korea's current ballistic missile program portfolio has expanded to include over 1,000 short-, medium-, intermediate-, and intercontinental-range ballistic missiles that are either fully operational or in some stage of development.⁵³

Of the operational missiles, the short-range SCUDs are the most technologically mature—tested, deployed, and proliferated—and represent the greatest number and variety within North Korea's ballistic missile fleet. The Hwasong-5 (SCUD-B) and Hwasong-6 (SCUD-C), have ranges of 300 km and 500 km respectively.⁵⁴ The Hwasong-7 is a modified Hwasong-6 with decreased payload in favor of an increased range of between 800-1,000 km.⁵⁵ The next most technologically mature operational missile is the medium-range Nodong. The Nodong was built based on a SCUD design and has a range of 1,000-1,500 km.⁵⁶ Less proven is the intermediate-range ballistic missile known as the Musudan. The Musudan's range is estimated to be between 2,500-4,000 km.⁵⁷ cursory examination of North Korea's capabilities shows that, in addition to the ROK, Japan and the island of Guam are within North Korea's operational ballistic missile range envelope. Thus, in terms of a packaged offensive capability, North Korea's ballistic missile program has succeeded in putting not only the U.S.-ROK Alliance at risk, but also U.S. Forces stationed throughout the Pacific.

When North Korea's ballistic missile program is viewed alongside its ever-expanding stockpile of nuclear, chemical and biological weapons of mass destruction (WMD), the magnitude of the threat becomes clear. North Korea has conducted an unprecedented number of ballistic missile and nuclear tests since 2016, including short-range, medium-range, intermediate-range, long-range, and submarine-launched ballistic missile (SLBM) launches, as well as its fourth and fifth nuclear tests.⁵⁸

For over two decades, the ROK and U.S. have tried different strategies, including dialogue and negotiations, to curb North Korean

missile development and freeze its nuclear program, but to no avail. As Angelo State University Professor and North Korea expert Dr. Bruce Bechtol stated, North Korea

...has no intention of ever giving up its nuclear weapons or its long-range ballistic missiles. The reasons for this are clear: 1) Kim Jong-un needs these weapons in order to maintain the credibility of his regime and to consolidate his power from a position of military strength; and 2) these weapons, once proliferated, serve to bring in billions of dollars in badly needed revenue for (North Korea).⁵⁹

Thus, with previous attempts at negotiation and dialogue to curb North Korea's nuclear and ballistic missile programs having shown little value, and owing to the likelihood that the country has no plan to ever relinquish its programs, a bolstered TMD system appears to be the only logical option for the U.S.-ROK Alliance.

Establishment of Lower Tier U.S. Patriot Systems in the ROK

In March 1994, as the North Korean nuclear crisis was heating up due to the country's noncompliance with international nuclear inspections, the U.S. began deploying a Patriot missile battalion to defend strategic areas of the ROK against the SCUD missile threat.⁶⁰ At the same time, U.S. officials were attempting to elicit the ROK government's interest in procuring the Patriot missile defense system. John Deutch, the Pentagon's Under Secretary for Acquisition and Technology at the time, proposed that South Korea join the U.S. in TMD development efforts. The ROK government was lukewarm to the idea, however. Russia's state-run weapons export company had approached ROK government officials with an offer to sell the S-300 air defense system. At the time, Russia owed South Korea \$1.5 billion; selling the S-300 system to Seoul would reduce the outstanding debt. Also, the ROK government was considering the development of an indigenous missile defense project, the SAM-X. Thus, the Russian offer was tempting, both in terms of the potential technology transfer and as a means of reducing Moscow's debt to Seoul.⁶¹

The ROK government eventually dropped the idea of acquiring the Russian S-300 system, citing interoperability concerns with the U.S.

Patriot missile defense systems in South Korea. By 2004, the U.S. Army had completed the deployment of an additional Patriot missile battalion, bringing its strength in Korea to a full brigade.⁶² Finally, in 2008, the ROK Air Force (ROKAF) received its first batch of used Patriot missiles from Germany.⁶³ While the ROKAF has taken steps to fully operationalize the Patriot system, it is concurrently developing three indigenous programs to provide missile defense to South Korea, as well as deter the North Korean threat: the Kill Chain, Korean Air and Missile Defense (KAMD) and the Korea Massive Punishment and Retaliation (KMPR) plan.

ROK Indigenous Missile Defense Programs

Kill Chain is a preemptive strike system that targets North Korean nuclear and missile facilities. The system, the core of which is comprised of surveillance assets including reconnaissance satellites, would be used if the ROK were faced with an imminent threat. The KAMD will include anti-ballistic missile early warning radar systems and domestically produced “L-SAM” long-range surface-to-air missiles to trace and shoot down North Korean ballistic missiles heading for South Korea. The KMPR would use indigenously developed Hyunmoo surface-to-surface ballistic and cruise missiles to punish and retaliate against North Korea if it strikes South Korea. The ROK government was initially planning on deploying the three systems at some point during the mid-2020s, but may accelerate the plan due to advancements in North Korea’s nuclear weapons and ballistic missile programs.⁶⁴ Nonetheless, considering the steady, incremental advancements of North Korea’s scientists and engineers, it is difficult not to question the timeline and feasibility of the indigenous South Korean programs, which are likely seven to 10 years away from being fielded.

The Need for a “Layered Defense”

North Korea claims the ability to integrate a nuclear warhead with its ballistic missiles through miniaturization—claims that are taken seriously by the American and South Korean intelligence officials—underscores the need for effective, near-term missile defense solutions.⁶⁵ The Patriot system is helpful, but it can’t cover the entire threat, as it is meant for local defense of U.S. and allied forces. Ballistic missiles carrying WMD, even if intercepted by Patriot missiles, could cause substantial harm. THAAD integrates with the Patriot system to provide

“upper tier” defense against enemy missiles in the terminal flight phase. THAAD is able to track and intercept enemy missiles at greater ranges and higher altitudes, which mitigates the effects of WMD. The complementary arrangement of lower-tier Patriots and upper-tier THAAD provides “layered” coverage of incoming ballistic missiles. Successive USFK commanders have articulated the need for the layered coverage provided by THAAD on the Korean Peninsula.

General James Thurman summed up the near-term missile defense requirement. Responding to advance questions at his confirmation hearing before the Senate Armed Services Committee in June 2011, the USFK Commander wrote:

One of the basic tenants of air and missile defense is the employment principle of “layered defense.” Layered defense allows different missile defense systems to engage an inbound ballistic missile at different points in its trajectory...The U.S. and ROK militaries both have Patriot systems which conduct engagements in the terminal phase of a missiles flight (the current version of the ROK Patriot systems provide a very limited Theater Ballistic Missile [TBM] defense capability) The system that would best support the layered defense employment principle is a Terminal High Altitude Air Defense (THAAD) system which can engage inbound TBMs at either the terminal or mid-course phase of flight.⁶⁶

In July 2013, then-Lieutenant General Curtis Scaparrotti echoed General Thurman’s earlier points regarding the need for THAAD at his confirmation hearing.⁶⁷ However, General Scaparrotti added an important point that underscored an additional need for THAAD to be deployed in Korea, while calling into question the effectiveness of the THAAD system deployed to Guam.⁶⁸

Our ballistic missile defense needs an organic Upper Tier ballistic missile defense capability such as Terminal High Altitude Area Defense (THAAD) or Theater Ballistic Missile capable Aegis ships in order to fully address the North Korean missile threat. While THAAD’s temporary

deployment to Guam bolsters the PACOM AOR overall ballistic missile defenses, it does not specifically address the ballistic missile defense shortfalls for the Korean Theater of Operations.⁶⁹

The Decision to Deploy THAAD

The agreement to deploy THAAD was not an easy decision for the ROK government due to concerns over China's reaction. The possibility of deploying THAAD to the Korean peninsula initially gained media traction in June 2014, when General Scaparrotti announced his recommendation to Seoul that THAAD be deployed to counter the North Korean threat.⁷⁰ However, at the time, China and South Korea's relations were warming and Seoul maintained a "three No's" position on THAAD—there was no official request, no consultation and therefore, no decision.⁷¹ It wasn't until January 2016 that the ROK government began to hint at possible plans to deploy THAAD. A week after North Korea claimed it had successfully tested a hydrogen bomb, President Park Geun-hye indicated that the ROK government would review USFK plans to deploy THAAD, factoring in North Korea's nuclear and missile threats.⁷² The pace of deliberations picked up—on March 4, the Washington and Seoul launched a joint working group to begin official discussions, and on July 8, the countries agreed to deploy THAAD to counter the North Korean threat.⁷³ Military planners needed to choose a location for the system next.

Air defense experts initially chose a ROKAF Hawk missile site in Seongju (west of Daegu, North Gyeongsang Province) as the location to deploy the U.S. THAAD battery.⁷⁴ This decision was reversed due to protests from local residents over health and environmental concerns associated with the electromagnetic waves emitted by the THAAD system's AN/TPY-2 radar. By November, a new location in Seongju was being considered—a golf course owned by the Lotte Group. In exchange for the golf course, the ROK Ministry of National Defense (MND) would provide military land located northwest of Seoul.⁷⁵ Conscious of its revenue stream from the numerous Lotte stores located in China, the conglomerate was in no hurry to sign over the golf course. Discussions between MND and the Lotte Group finally wrapped up on February 27, when Lotte approved the land exchange plan, paving the way for the deployment and installation of a THAAD battery.⁷⁶ A week later, the first THAAD shipments began arriving at Osan Air Base.

China's Reaction to THAAD

China's reaction to the THAAD deployment has gradually escalated, moving from a long-held policy grounded in opposition to U.S. ballistic missile defense to overt pressure on the ROK government in the form of specific warnings, and finally to the tactical implementation of various political, economic and, to an extent, military harassment of South Korea. In its white paper published in 2000, China's MND called for the U.S. to "stop the development and deployment of missile defense systems that may undermine global strategic stability."⁷⁷ In the same section of the white paper, China expressed concern over TMD collaboration between the U.S. and Japan, and the potential for incorporating Taiwan into a TMD system. There was no mention of South Korea, even though Patriots were deployed there, and the U.S. was openly seeking TMD collaboration with the ROK government. The white paper's language directed at U.S.-Japan TMD efforts foreshadowed what would foreshadow China's reaction to THAAD in Korea.⁷⁸

The joint research and development of the theater missile defense (TMD) system by the United States and Japan with a view to deploying it in East Asia will enhance the overall offensive and defensive capability of the US-Japan military alliance to an unprecedented level, which will also far exceed the defensive needs of Japan. This will touch off a regional arms race and jeopardize security and stability in the Asia-Pacific region.⁷⁹

After General Scaparrotti's recommendation to deploy THAAD in 2014, China began warning the ROK. In July 2014, at a summit held in Seoul between ROK President Park Geun-hye and Chinese President Xi Jinping, President Xi warned President Park to "tread carefully over the issue of the THAAD deployment (to South Korea)."⁸⁰ After the U.S. and ROK launched the joint working group in March 2016 to begin official discussions on deploying THAAD, China weighed in again. After a meeting with his South Korean counterpart Lee Kyung-soo in Seoul, Chinese Assistant Minister of Foreign Affairs Liu Jianchao urged South Korea and the U.S. to "make an 'appropriate' decision," saying, "It would be appreciated if Seoul takes account of China's concerns and worries."⁸¹ Finally, after the U.S. and ROK announced the joint

agreement to deploy THAAD to Seongju in July 2016, China submitted a joint statement with Russia to the United Nations opposing the THAAD deployment to South Korea. Chinese President Xi Jinping and Russian President Vladimir Putin signed the statement.⁸² In a stunning omission of the existence of North Korea's nuclear and ballistic missile threats, the strongly worded statement read (*italics added*),

It is worth noting that outside forces often use conjectural pretexts for the deployment of the “Aegis Ashore” system in Europe and the Terminal High Altitude Area Defence (THAAD) system in the Asia-Pacific region, as well as the planned deployment of that system in Northeast Asia. *These deployments are totally unrelated to the real challenges and threats being faced in the field of missile proliferation*, are clearly inconsistent with their stated objectives, and seriously damage the national strategic security interests of countries in the region, including China and Russia. China and Russia strongly oppose them.⁸³

Immediately following the statement submission to the U.N., China began to implement retaliatory tactics against South Korea—beginning with Korean television and pop music, or *K-pop*. Events in China featuring Korean music and television stars began getting canceled following the July THAAD announcement.⁸⁴ Additional unofficial trade sanctions continued to intensify in the months leading up to President Park's impeachment in December, beginning with tax investigations and safety inspections targeting Korean businesses, and extending to bans on imported Korean cosmetics and food items, disallowing charter plane travel to South Korea, and expanding anti-dumping tariffs.⁸⁵ After the Lotte Group signed the land swap deal with the ROK MND in late February 2017, China increased pressure on the company. Fire authorities suspended Lotte Mart's operations in China's northeastern city of Dandong, and protests were held in front of Lotte Department store in Shenyang.⁸⁶ By March 19, 79 of Lotte's 99 stores in China were temporarily shut down.⁸⁷

In addition to pressure aimed at the ROK economy, China applied military pressure. On January 9, 2017, several Chinese military aircraft, including six Xian H-6 bombers, repeatedly entered the Korean Air

Defense Identification Zone (KADIZ) near Ieodo, a submerged rock located in the waters of the Yellow Sea off the southern coast of Jeju Island. This prompted the ROKAF to scramble 10 F-15 and F-16 fighter aircraft to respond to the incursion.⁸⁸ While Chinese encroachment into the KADIZ is not unprecedented, it was widely interpreted that the action was related to the THAAD decision. When the aircraft were spotted, South Korea attempted to contact China using a military hotline, but the Chinese were slow to respond. It took China nearly 15 minutes to respond to South Korea's hotline request.⁸⁹ Additionally, there were reports insinuating China had previously canceled several bilateral military exchanges, violating the spirit and intent of a 2011 agreement to step up bilateral military cooperation, as well as a 2015 agreement to establish the hotline between the ROK and Chinese defense ministers.⁹⁰

Reasons for China's Anger

Until the ROK government began hinting at the possibility of a THAAD deployment in early 2016, the China-ROK relationship was warming considerably. By all appearances, the ROK was steadily moving into China's orbit of influence, and China looked like it was moving away from North Korea. In September 2015, President Park attended a celebration—a massive military parade—in Beijing to commemorate the 70th anniversary of the end to World War II. During the event, she stood prominently alongside President Xi Jinping and Russian President Vladimir Putin. Absent from the commemoration was North Korea's leader, Kim Jong-un.⁹¹ Prior to the event, in June 2015, South Korea and China signed a historic bilateral free trade agreement.⁹² Earlier, in March 2015, South Korea decided to join the Chinese-led Asian Infrastructure Investment Bank, generally regarded as a Chinese effort to bolster its economic influence by creating a counterbalance to the American-led Asia Development Bank.⁹³ Before that, in July 2014, President Xi traveled to South Korea for a two-day state visit, in what was regarded as a snub to North Korea since it was the first time a Chinese president visited South Korea before traveling to North Korea since 1992 when the two countries normalized diplomatic relations.⁹⁴

In the months leading up to the agreement to deploy THAAD, China's official position has consistently been 'firmly opposed' to a THAAD deployment (this has not changed since the deployment). High-ranking Chinese government officials and their spokespeople have presented this position, using mostly diplomatic language, to explain

where China's THAAD concerns lie. The view of these officials is explained in more detail by commentators—research institutes, academics, and retired military officials.⁹⁵ In February 2017, after reports that the Lotte Group was considering the land swap with the ROK government, China's Foreign Ministry Spokesperson Geng Shuang made comments that generally sum up China's official position:

The THAAD deployment in the ROK by the U.S. and the ROK will severely disrupt regional strategic balance, gravely jeopardize the strategic security interests of relevant countries in this region including China, and is not conducive to peace and stability on the Korean Peninsula. The Chinese side has stressed repeatedly that we understand the legitimate concerns of relevant parties in safeguarding their security, however, one country's security cannot be pursued at the expense of other country's security. Regrettably, ignoring China's interests and concerns, the ROK insisted on working with the US to accelerate the deployment process. China is firmly opposed to and strongly dissatisfied with that."⁹⁶

China's most specific, pressing concern about THAAD has to do with the AN/TPY-2's high resolution, X-band phased array radar. The X-band's shorter wavelengths allow for higher resolution imagery for target identification and discrimination.⁹⁷ In February 2016, after President Park indicated the ROK government would review USFK plans to deploy THAAD, China's Foreign Minister, Wang Yi, explained China's grave concerns regarding the radar:

The coverage of the THAAD missile defense system, especially the monitoring scope of its X-Band radar, goes far beyond the defense need of the Korean Peninsula. It will reach deep into the hinterland of Asia, which will not only directly damage China's strategic security interests, but also do harm to the security interests of other countries in this region.⁹⁸

Song Zhongping, a military expert, describes the X-band radar as the main threat since it can monitor China's "military deployment and

missile-launch, which will seriously undermine China's nuclear deterrence.”⁹⁹ Li Bin, a professor at Tsinghua University, explains that the radar, when positioned in Korea, is powerful enough to track some Chinese missiles during flight, undermining China’s nuclear deterrence in two ways by collecting data on Chinese nuclear warheads. First, THAAD can be used to monitor missile tests launched from the northeast part of China toward the West, yielding defense countermeasure data and thus helping to understand the characteristics of the warheads and decoys released by Chinese missiles. Second, in a wartime scenario where an ICBM is launched from central China in retaliation against an American first strike, THAAD could track the missile in its early stages and transfer its trajectory data to the U.S. ballistic missile defense system, giving U.S. missile defense a better chance at intercepting the Chinese warhead.¹⁰⁰ This is a plausible concern, since the radar can operate either in the “terminal mode” to track enemy ballistic missiles in the descent phase of flight, or the “forward-based mode” to monitor ballistic missiles in the boost phase of flight. However, THAAD’s mission on the Korean Peninsula is designed around countering the ballistic missile and nuclear threats posed by North Korea—a “terminal mode” operation. Additionally, as Troy University lecturer Dr. Daniel Pinkston points out, the U.S. already has two X-Band radars deployed in Japan, ship-borne radars in the region and space-based assets that can detect a Chinese ICBM after launch.¹⁰¹ Arguably, it would be a functional misallocation for the ROK-deployed THAAD system to have a primary mission that is fixated on China. The “forward-based mode” capability that China is concerned would monitor their missile activity seems to be, at best, an ancillary capability for a THAAD system based in South Korea. Even so, considering North Korea’s relentless testing, which includes ICBMs that could threaten the U.S., THAAD’s “forward-based” monitoring mode becomes justified under the U.S.-ROK Mutual Defense Treaty. China chooses to overlook the growing North Korean threat and instead personalizes THAAD as a counter to China only.

Conclusion

THAAD grew out of the 1980’s Strategic Defense Initiative as a counter to theater ballistic missiles. As the U.S. was working to untether itself from the tenets of the ABM Treaty and the concept of mutually assured destruction, THAAD was being designed as the upper tier of a two-layer concept to engage enemy missiles at longer ranges and higher

altitudes with hit-to-kill technology to mitigate the damages from falling nuclear, chemical or biological debris.

North Korea has been developing ballistic missiles for decades. Pyongyang has expanded its inventory to include over 1,000 short-, medium-, intermediate-, and intercontinental-range ballistic missiles that are either fully operational or advancing toward maturity. In addition to the ROK, Japan and Guam are within range of these missiles, putting American armed forces throughout the Pacific at risk. During 2016, North Korea accelerated its missile and nuclear weapons programs by conducting an unprecedented number of ballistic missile and nuclear tests, including submarine-launched ballistic missile launches and two nuclear tests. In light of its rapidly advancing ballistic missile and nuclear programs, and owing to the likelihood that North Korea has no plan to ever relinquish its programs, THAAD fills the requirement for a bolstered theater missile defense for the U.S.-ROK Alliance to counter the North Korean threat.

The establishment of ballistic missile defense in Korea has incrementally evolved over two decades, beginning with the first U.S. Patriot deployment in 1994. South Korea has shown reluctance at joining U.S.-led cooperative ballistic missile defense programs, preferring instead to develop its own indigenous programs. Only after careful and lengthy consideration, and in conjunction with accelerated threats from North Korea, has the ROK agreed to combined missile defense efforts with its U.S. partner. The decision to finally deploy THAAD to South Korea comes nearly six years after General James Thurman outlined the need for layered ballistic missile defense on the Korean Peninsula, and nearly three years after General Scaparrotti recommended THAAD be deployed to counter the North Korean threat.

In reaction to the THAAD deployment, China has taken its anger out on the ROK by applying mostly diplomatic and economic pressure using unofficial forms of harassment. South Korea is vulnerable both economically and politically. China is the country's largest trade partner and South Korea has put tremendous stock at home in the development of its free economic zones and tourism to accommodate Chinese spending and investment. Politically, the THAAD deployment comes at a critical juncture for the U.S.-ROK Alliance. China's campaign of pressure is occurring in conjunction with domestic political changes in both the U.S. and ROK. China's strategy of harassment is undoubtedly

being carried out with the knowledge that a May election win by Moon Jae-in could spell a reversal on the THAAD decision.

China explains that its opposition to THAAD is rooted in concerns that a system positioned in South Korea disrupts the regional strategic balance, jeopardizes China's strategic security interests, and destabilizes the Korean Peninsula. This, Beijing says, is why it is steadfastly opposed to THAAD, despite North Korea's rapidly advancing ballistic missile and nuclear weapons programs that have repeatedly violated international agreements and U.N. sanctions. Through this lopsided lens, China has presented its concerns. China's issues with THAAD can be categorically simplified as both a strategic and regional problem for the country.

Strategically, a THAAD system on the Korean Peninsula represents a strengthening and expanding U.S. integrated ballistic missile defense capability on land that is contiguous with China's territory. While the system's AN/TPY-2 high-resolution, X-band phased array radar will be configured in "terminal mode" to counter North Korean nuclear and ballistic missile threats, it is capable of being utilized in "forward-based mode" in which case it could be used to monitor Chinese missile tests or in an attack, it could track Chinese missiles in early flight stages and transfer trajectory data to the U.S. ballistic missile defense system for the purpose of intercepting the Chinese warhead. However, the system positioned in Korea will operate in "terminal" mode to counter the North Korean threat.

Regionally, THAAD undermines China's influence. China's parallel strategy with the two Koreas since the early 1990s has focused on economic engagement with South Korea on the one hand, and tacit acceptance of North Korea's illicit weapons programs on the other. China and South Korea appeared to be making historic diplomatic strides through the engagement efforts of Presidents Xi Jinping and Park Geun-hye. China even appeared to begin favoring South Korea over North Korea. However, when the decision to deploy THAAD was made, China's influence over South Korea was undermined and China threw the engagement process in reverse. China purports that it does not approve of North Korea's nuclear and ballistic missile programs and sluggishly supports U.N. sanctions against the country. Yet, when North Korea launches a missile or tests a nuclear weapon, China consistently avoids tough action—certainly nowhere near the action it has taken against the ROK—preferring instead to call on other countries to show

restraint. In other words, stand by and do nothing that could provoke North Korea. THAAD undermines this position as well, since it strengthens the U.S.-ROK Alliance. Thus, from a regional perspective, THAAD challenges, frustrates and questions the effectiveness of China's parallel strategy to manage relations with the two Koreas.

Moving forward, if leading ROK presidential candidate Moon Jae-in is elected in May, platforms from previous liberal administrations favoring cooperative policies with North Korea will likely be revived. In addition, at the top of the next ROK administration's agenda will be finding a way to restore healthy economic and diplomatic relations with China while balancing the defense needs of the U.S.-ROK Alliance. THAAD will be at the center of this balancing act.

Notes:

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⁶⁷ “Nominations before the Senate Armed Services Committee, First Session, 113th Congress,” Government Publishing Office, July 30, 2013, page 1139, accessed April 5, 2017, <https://www.gpo.gov/fdsys/pkg/CHRG-113shrg87878/pdf/CHRG-113shrg87878.pdf>

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