Can North Korea Catch Two Rabbits at Once: Nuke and Economy?  
One Year of the Byungjin Line in North Korea and Its Future

Tak Sung Han and Jeon Kyung Joo*

Korea Institute for Defense Analyses, Seoul, Republic of Korea

North Korea claims the Byungjin Line is indeed the “treasured sword” with which it can achieve both economic development and defense reinforcement to speed up the construction of a strong and prosperous socialist nation. Aiming at evaluating its prospects, this study seeks to capture the main features, goals and tasks of the Byungjin Line envisioned by the Kim regime and then assess if its empirical records over the first year of Byungjin go in the right direction as planned. While the Byungjin Line pays more attention to the civilian economy unlike the North’s preceding policies, it has made only marginal progress short of innovation in its economy but strengthened the national defense industry reinforcing its conventional warfare capacity as well as nuclear arsenal. Without making any dramatic changes, the Byungjin Line is unsustainable in the long term, deepening international sanctions and prolonging the country’s economic isolation. South Korea should follow policies encouraging North Korea prioritize economy in its own policy, reducing the North’s economic dependence on China, and adopt a pragmatic approach to the North’s nuclear ambitions.

Key words: North Korea, Byungjin Line, defense, nuclear program, North Korean economy

Introduction

A year has passed since North Korea officially adopted its so-called “Byungjin Line,” centered on the two pillars of economic development and nuclear program, at the Central Party Committee’s Plenary Session on March 31, 2013. The Plenary Session introduced the Byungjin Line as “the most revolutionary and popular” policy line for national success, involving the strengthening of both its nuclear arsenal, to be used for national defense, and economic development with the goal of creating “a strong and prosperous nation.” The New Year’s Address, read by Kim Jong Un himself, in January 2014, declared the year of 2013 as “the year in which North Koreans triumphed in their two-pronged battle to build a strong nation and guard socialism, with the help of the Byungjin Line.” As these declarations indicate, the nuclear program stands at
the center of the Kim regime’s economic and defense development strategy, which effectively aims to make North Korea not only socialist but also strong and prosperous.

In her address to the U.S. Congress in May 2013, however, President Park Geun-hye of South Korea dismissed the sustainability of North Korea’s Byungjin Line, emphasizing, “You cannot have your cake and eat it too.” Any meaningful economic growth in North Korea will be possible only with the cooperation and support of the international community. North Korea’s insistence on a nuclear program, however, will only serve to further alienate the nation from the international community, leading to the continuation of the already severe economic sanctions. The international community agrees with Park on North Korea’s Byungjin Line. There is a significant gap between North Korea’s confidence in its strategy and the international assessment of that strategy.

This study begins by questioning whether the Byungjin Line is indeed an effective strategy to create “a strong and prosperous nation,” as the Kim regime claims. This is a familiar question that appears again and again in the great number of studies that have been published to date dealing with the Byungjin Line. However, the majority of these studies derive their conclusions from deductive thinking and speculation. This study, by contrast, assesses the empirical records related to the Byungjin Line in North Korea over the past year, and makes an inductive attempt at predicting its future.

To this end, this study first seeks to capture main features of the Byungjin Line, as envisioned by the Kim regime, and identifies the tasks that must be fulfilled in order for the strategy to succeed. This study then analyzes the policies that North Korea has enacted, and other actions that it has taken, since it officially adopted the Byungjin Line, and attempts to determine, based on that analysis, whether the Byungjin Line has led to the progress that the Kim regime expects.

On the basis of the foregoing, this study attempts to determine, at least provisionally, whether the Byungjin Line is indeed the “treasured sword” with which North Korea can achieve both economic development and defense reinforcement, or whether it will lead them on a self-destructive path of popular delusion and self-contradiction. This study will wrap up its conclusion with suggestions for proper responses and steps that the South Korean government should take toward the North.

**Main Features and Tasks of the Byungjin Line**

**Main Features**

Kim Jong Un’s New Year’s Address to the public in 2013 suggested that the ideal of the “strong and prosperous nation” that North Korea aspired to become required a focus on economic development.1 Approximately one month later, on February 12, 2013, the Kim regime proceeded to launch its third nuclear test. The Central Party Committee’s Plenary Session, on March 31, 2013, officially adopted the Byungjin Line, aiming to pursue “economic development and nuclear program simultaneously.” According to the Kim regime, the Byungjin Line is a strategy that “reinforces and expands North Korea’s nuclear arsenal against the constant threat of nuclear attack and invasion, while also empowering the country’s efforts toward economic development.”2 Stressing that the Byungjin Line is not a one-time pill, but “a strategic path that
North Koreans ought to follow permanently,” the Kim regime indicated that the Byungjin Line would be a defining long-term strategy.3

In his declaration, Kim describes the new strategy as entailing the following:4

First, the Byungjin Line inherits and expands upon the simultaneous pursuit of economic prosperity and defense capability that Kim Il Sung and Kim Jong Il have exhaustively worked for. Second, by focusing on economic development while also boosting national security, the strategy of the Byungjin Line aspires to create a strong and prosperous nation in which “the people can enjoy the riches and glories of socialism to the fullest.” Third, the Byungjin Line is a legitimate means to achieving “a strong and prosperous nation,” as it will significantly reinforce North Korea’s capacity for deterrence and also act as a catalyst for economic development. Fourth, the Byungjin Line is a “treasured sword” that accelerates the development of a strong and prosperous nation and expedites the national reunification process, as well as being the banner for safeguarding the autonomy and dignity of the North Korean people. Fifth, it is the manifestation of the Party’s firm belief and will to complete the revolutionary cause of Juche through a path of self-reliance, military-first, and socialism. Sixth, the Byungjin Line is a pragmatic guideline to maximize the efficiency of economic development and strengthen national defense in accordance to the state of affairs. Seventh, the Byungjin Line will help promote economic construction and raise living standards of the people while strengthening national defense capabilities at low cost, i.e., without increasing the defense budget. Eighth, the Byungjin Line is deemed a rational approach to enhance North Korea’s nuclear capacity as well as to improve the country’s power-supply based on its Juche-oriented nuclear energy industry.

The Central Party Committee’s Plenary Session also listed a number of specific goals and measures involved in implementing the Byungjin Line. The Byungjin Line, specifically, aims to achieve the following goals: (1) Maximizing economic output by boosting the basic manufacturing sector and concentrating national resources on agriculture and light industry; (2) achieving self-sufficient nuclear energy for industrialization, and launching a number of light-water reactor projects; (3) improving the state of aeronautical science and technology in North Korea, culminating in the launching of more satellites into space; (4) converting the national economy into a knowledge-based economy by further diversifying trading partners and attracting greater foreign investment; (5) making fundamental improvements to the economic structure, and ultimately developing the superior, “our-style economic management method.”

Regarding the nuclear program, the Byungjin Line aims “to consolidate the legal grounds for the presence of a nuclear arsenal in North Korea, and to continue to expand and improve both quality and quantity of the country’s nuclear weapons until such time when the entire world is rid of nuclear weapons.” As part of this effort, the People’s Army is to “elevate nuclear weapons to a central position in its strategies for deterrence and warfare,” so as to “prepare the country’s nuclear weapons for application to ordinary combat situations.” Along with the Byungjin Line, the Kim regime also vowed to “make active efforts, as a responsible nuclear state, to prevent nuclear proliferation; uphold the peace and security of Asia and the world; and also achieve global denuclearization.”

In summary, the Byungjin Line not only justifies North Korea’s possession of nuclear weapons, but also effectively establishes those weapons as major components
of the country’s military strategies for wartime and peacetime policies.\textsuperscript{5} It reflects Pyongyang’s growing need to reduce the financial burden of maintaining conventional weapons and strategies and channel the freed financial resources into agriculture and the national economy, directly improving the people’s livelihood. The Byungjin Line, in other words, is not only about re-allocating the national budget. According to the Kim regime, it expresses North Korea’s hope to secure peace through nuclear deterrence, so that it may streamline, normalize, and rationalize its economic management and planning.\textsuperscript{6}

**Tasks of the Byungjin Line**

The success of the Byungjin Line will depend on its achievement of a number of specific policy goals and aims. Table 1 summarizes such goals and tasks of the Byungjin Line.

First, in order to strengthen its national defense industry and nuclear capacity, North Korea will need to ensure continuous research, development, and advancement

<table>
<thead>
<tr>
<th>Goals</th>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Strengthen the national defense industry (reinforcing nuclear arsenal)</td>
<td>Secure the technical and financial resources necessary to reinforce nuclear capacity and continue nuclear tests</td>
</tr>
<tr>
<td>(2) Focus on economic growth while boosting national security</td>
<td>Develop sources for the growth of the domestic market (foster agriculture and light industry, and overcome problems such as power shortages)</td>
</tr>
<tr>
<td>(3) Reinforce defense capability without increasing costs</td>
<td>Increase efficiency of conventional and nuclear defense (minimizing cost while maximizing defense)</td>
</tr>
<tr>
<td>(4) Solve power (energy) problems</td>
<td>Improve nuclear power technology and efficiency of existing power plants, and build new power plants</td>
</tr>
<tr>
<td>(5) Develop agriculture</td>
<td>Develop new farming techniques and secure sufficient supplies of fertilizers</td>
</tr>
<tr>
<td>(6) Develop light industry</td>
<td>Establish infrastructure, develop new sources of growth, and enhance export prospects</td>
</tr>
<tr>
<td>(7) Develop aeronautical technology and satellites</td>
<td>Enhance missile development capacity (through continued launch tests)</td>
</tr>
<tr>
<td>(8) Diversify trading partners</td>
<td>Find new trading partners and regions outside China</td>
</tr>
<tr>
<td>(9) Attract foreign investment</td>
<td>Encourage investment in special economic zones</td>
</tr>
<tr>
<td>(10) Perfect “our-style economic management method”</td>
<td>Ensure and expand early successes of economic development</td>
</tr>
</tbody>
</table>
of its own nuclear technology while also securing steady supplies of the necessary nuclear materials and continuing with its additional nuclear and missile-launch tests. North Korea will also need a reliable source of funding to support its nuclear development, but its current state of isolation from the rest of the world will make it difficult for North Korea to find such a source.

Second, in order to focus on economic development while also boosting national security, North Korea will need a strong domestic market and industrial basis. The Kim regime appears to be aware, from the North’s past experience, that military buildup without concomitant progress in the civilian economy may well turn out to be detrimental to the national economy on the whole. Yet the regime has failed to formulate clear and specific measures to promote the domestic market.

Third, in order to enhance its national defense capacity without increasing defense spending, North Korea will need to increase the efficiency and impact of its military assets, for increasing efficiency is vital to cost reduction. North Korea seems intent on continuing to focus on the expansion of its nuclear arsenal so as to avoid the burden of increasing investment in conventional weaponry.

Fourth, overcoming the chronic power shortage problem will require improving its nuclear power technology, enhancing the efficiency of existing power plants, and building new ones. Although North Korea has suffered from chronic power and energy shortages for decades, the regime has consistently failed to solve this problem. Therefore, we need to wait and see if the Byungjin Line will actually bring about any improvements in North Korea’s power supply.

Fifth, agricultural development in North Korea will require various new initiatives, especially such as improving farming technologies, securing sufficient supplies of fertilizers, and enhancing the efficiency of land usage. Agricultural output in North Korea is still very much subject to weather, pestilence, and other environmental conditions of any given year. The North Korean regime therefore needs to develop a better system to prepare for these natural disasters in order to ensure the stability of its agricultural output.

Finally, North Korea will need to expand the range of its trading partners to include countries and regions other than China. It will also need to work harder to attract foreign investment in its special economic zones and ensure the early success of its June 28 Economic Improvement Measures.

In order for North Korea to achieve the intended benefits of the Byungjin Line, it will first need to achieve systematic, thorough, and ongoing transformations of almost all aspects of its society, including the military, economy, finance, technology, energy, and trade. The Kim regime seems to be aware of the crucial importance of enhancing economic and social support in legitimizing its ongoing efforts to build up and expand the military. As already mentioned, however, it is doubtful that North Korea will be able to achieve economic development, diversify its trading partners, and attract greater foreign investment while maintaining its insistence on nuclear development, which continues to invite international sanctions.

Keeping in mind these specific tasks that need to be achieved in order to ensure the success of the Byungjin Line in North Korea, this paper shall examine the actual conditions and trajectory of the Byungjin Line over the past year.
First Year of Pursuing the Byungjin Line

Enhancing Nuclear Capacity

Since making its Byungjin Line official, the Kim regime has been pursuing an ambitious nuclear development policy. The Supreme People’s Assembly, which met on April 1, 2013, passed a bill titled “On Reinforcing North Korea’s Position as a Nuclear State for Self-Defense,” thus endorsing its policy of nuclear deterrence. The new law, consisting of a total of ten articles, marks the first official nuclear legislation in North Korea’s history. It states that, so long as other countries in the world possess nuclear weapons, North Korea will never give up its nuclear arsenal. However, it will not use nuclear weapons for preemptive strikes, but as a deterrent or for retaliatory purposes only. The legislation also states North Korea’s willingness to cooperate with international efforts toward nuclear nonproliferation and disarmament. Notwithstanding the contradictory aims the legislation seems to espouse, North Korea has begun to consolidate legal grounds for its nuclear program, thus sealing off any possibility for negotiations on its possession of a nuclear arsenal.

Having legislated its nuclear program, North Korea has indicated, on numerous occasions, its plan to deepen its dependency on nuclear development. In his New Year’s Address in January 2014, Kim Jong Un called the strengthening of the North’s defense capabilities “the most important of all national matters,” and announced a plan “to increase the production of modern weapons that are lighter, more intelligent, and more precise,” as part of his pursuit of the Byungjin Line. The wording thinly conceals the Kim regime’s ambition to modernize its weapons of mass destruction (WMD) including its nuclear arsenal. In other words, the North Korean leader himself confirmed the international community’s year-long suspicions regarding the country’s plans for nuclear development.

For almost a year leading up to the official declaration of the Byungjin Line, North Korea showed off its expanding WMD to audiences worldwide. For instance, on March 29, 2013, the Korean Central News Agency broadcasted photographs of Kim Jong Un visiting the North’s Strategic Rocket Command with an operational chart in the background bearing the title “Plan for Strategic Strikes against the United States Mainland.” Also, North Korea’s military parade in April revealed six Hwasong-13 road-mobile, intercontinental ballistic missiles (ICBMs) loaded onto six transport erector launchers (TELs). These missiles have a range that covers almost the entire U.S. mainland. In addition, during the 2014 ROK-U.S. combined military exercises, North Korea launched four Scud-B ballistic missiles on February 27, two additional ballistic missiles (Scud-D or ER) on March 3, and two more projectiles resembling Rodong missiles on March 26, all into the East Sea.

On April 2, 2013, the day after passing the first legislation supporting nuclear program, the head of the General Department of Nuclear Energy (GDNE) announced a plan to repair and reactivate all the nuclear facilities and the uranium enrichment program at Yongbyon, as well as the 5MWe graphite-moderated reactor that had been suspended and neutralized since the Six-Party Talks in October 2007. A few days later, North Korea followed through with its promise by adding the new Ministry of Nuclear Industry (MNI) to its Cabinet. The MNI is an expansion and rearrangement of the GDNE, which had formerly overseen all the nuclear development projects in North Korea, including those for military purposes. In September 2013, Kim Jong
Can North Korea Catch Two Rabbits at Once? 139

Un also held a meeting with the nuclear specialists in the Supreme Military Command, the Central Military Commission, and the National Defense Commission, where he instructed them to complete the installation of new moderated reactors and light-water reactors at Yongbyon by October 10, 2015. Accordingly, North Korea is believed to be speeding up the construction of a new graphite moderated reactor.

Furthermore, the ceremony, which was held in front of the Kumsusan Palace of the Sun on April 25, 2013, in celebration of the 81st anniversary of the establishment of the Korean People’s Army (KPA), provided an occasion for articulating the specifics of a new, nuclear-centered warfare strategy. Vice Admiral Kim Myong Sik, the KPA Navy Commander, declared that its nuclear weapons would allow North Korea to destroy the United States’ super-sized aircraft carriers and nuclear-powered submarines. The KPA Air and anti-Air Commander, Gen. Ri Pyong Chol also threatened to destroy the home bases of the enemy in kamikaze-style, when ordered, with planes loaded with nuclear bombs instead of fuel for a return trip. Lt. Gen. Kim Rak Gyom, the Strategic Rocket Commander, also promised to devastate the United States with Intercontinental Ballistic Missiles (ICBMs) should the United States ever launch a preemptive strike against North Korea.10

The North Korean Ministry of Foreign Affairs mentioned the possibility of “conducting a new kind of nuclear test” on March 30, 2014, warning the world of another additional nuclear test. North Korea has traditionally followed a cycle consisting of first launching long-range missiles, which, in turn, provokes the United Nations Security Council to issue statements denouncing North Korea or resolutions imposing sanctions, the North Korean Foreign Ministry then makes an announcement, and then the cycle culminates in a nuclear test within a month or so following the statements. This time, however, North Korea did launch mid-range (Rodong) missiles instead of long-range missiles. In addition, whereas North Korea waited three years between each of its first three nuclear test, this time it did not wait so long to announce the fourth test. Therefore, it is likely that North Korea will increase the frequency of test in commitment to the Byungjin Line, or that it will diversify the kind of its nuclear tests as the Ministry mentioned earlier.

In other words, North Korea has dedicated the past year to consolidate its preparations for its nuclear program, and appears to be faithfully implementing the Byungjin Line, at least as far as nuclear expansion is concerned. In particular, North Korea’s pursuit of nuclear weapons over the past year clearly manifests one defining political purpose: namely, deterring possible military attacks from the United States. These nuclear threats, in other words, posit the United States as the chief military threat, and are steadfastly targeted at the audience in Washington.

Expanding Conventional Military Capacity

Since 2000, North Korea seems to have switched its focus from expanding the quantity and range of its conventional weaponry—which has already reached a saturation point—to improving the performance of its current weapons, adopting GPS jammers and other digital devices, and enhancing the efficiency of weapons for asymmetrical warfare, such as nuclear weapons and missiles.11 Most of North Korea’s current conventional weapons were made in the Soviet Union, and are therefore seriously outdated. Weapons that require fuel, such as armored tanks, have been kept off the field for years due to fuel shortages. Almost 35 percent of North Korea’s troops are
malnourished, lack the zeal and morale of typical soldiers, and are exposed to the market and the temptations of money.

Some believe, however, that North Korea has actually maintained or even expanded some aspects of its conventional warfare capacity since Kim Jong Il’s death. The U.S. Department of Defense’s March 2014 report on the North Korean military concluded that North Korea has continued to upgrade its large arsenal of conventional weapons despite economic hardships. As the weapons of the Army, new tanks, artillery, and armored vehicles were observed at the last military parades. The North Korean Air Force showed launching exercises involving new unmanned aerial vehicles (UAVs) in March 2013, and again disclosed these vehicles at the military parade in April that year, indicating that North Korea has invested and succeeded in developing UAVs. The North Korean Air Force is also believed to be in the process of modernizing some of its ships and smaller submarines. Particularly noteworthy in this regard are the increase in long-range guns (multiple rocket launchers, or MRLs) and arrangement of UAVs along the demilitarized zone (DMZ). North Korea fired six test shots from its new 300-millimeter MRLs in May 2013, and another eight shots from KN-09 MRLs, on February 21 and March 4, 2014, respectively, into the East Sea. The new MRLs have a range of about 180 kilometers at maximum, capable of striking the South Korean air bases in Pyeongtaek and Osan, as well as the bases in Suwon, Chungju, Seosan, and even the vicinity of Daejeon. North Korea was also found to have deployed unmanned surveillance vehicles, albeit of a poor quality, into South Korea in April 2014, confirming the suspicion that North Korea has indeed been supplementing its military capacity by developing new unmanned vehicles.

In other words, North Korea appears to have consistently pursued the expansion of its conventional military capacity, all the while outwardly declaring and pursuing its Byungjin Line. Nuclear weapons supplement, rather than replace, conventional weaponry. No nation in the world is capable of ensuring its security with nuclear weapons alone. In order to deploy nuclear weapons in effect, missile launchers and other weapon systems are required. Also, the development and deployment of additional weapon systems that can protect nuclear weapons or operate alongside them are crucial to the actual use of nuclear weapons. According to a study by Seong Chae-gi (2013), only about 10 percent of the nuclear development budget is spent on developing the actual nuclear weapons themselves. About 50 percent is spent on acquiring launching devices, and 25 percent on acquiring various command, information, and communication devices.

An increase in the national defense budget for 2014, which was reported in the Supreme People’s Assembly in 2014, also indirectly attests to the continuing reinforcement of North Korea’s conventional arms. The report on spending in 2013 and the budget for 2014 indicate that North Korea’s defense budget increased by approximately four percent, amounting to KPW6.1 billion. This significantly contrasts with the earlier claim made by North Korea that its pursuit of the Byungjin Line will help the country strengthen its security at no additional defense spending. The budget data show that, in 2013 and 2014, the Kim regime invested considerably in expanding its conventional arms as well as in its nuclear program, making no difference compared to the past.
Efforts to Improve the Economy and the Livelihood of the People

Since announcing the Byungjin Line, the Kim regime has launched various new measures intended to improve the North's standard of living. In the Central Party Committee's Plenary Session, Kim Jong Un promoted Pak Pong Ju, an economic policymaker and formerly the Party's head of light industry, to be a member of the Politburo. On April 1, 2013, in the Seventh Meeting of the 12th Supreme People's Assembly, Pak was also appointed as the new Premier. Pak is a reformist who stressed, “Improving socialist economic planning can no longer be postponed in our project for revitalizing the national economy.” The fact that figures like Pak are endowed with much greater political power indicates that Kim is committed to economic reform and development. Pak's term was renewed at the First Meeting of the 13th Supreme People’s Assembly, held on April 10, 2014.

The emphasis on economic reform and recovery as one of the two central pillars of the Byungjin Line appears again in the New Year’s Address for 2014. The address called 2014 “a year for a great leap forward toward the creation of a socialist, strong and prosperous nation.” Almost three-fourths of the address was dedicated to improving living standards of the people and its vision of a strong and prosperous nation, suggesting that Kim's attention has shifted from external relations to power consolidation and economic development on the domestic front. In the address, Kim identified agriculture, construction, and science/technology as the three top-priority tasks for his economic policy, particularly emphasizing agriculture as the main target of reform. This emphasis was already echoed in the New Year’s Addresses in 2013. The difference between the New Year’s Addresses in 2013 and 2014 is that the latter placed more emphasis on science and technology, thus relegating light industry to a lower position on the list of priorities.

In 2013, North Korea concentrated its spending and policy on the more practical and pressing matters of agriculture and light industry, allocated its resources more to modifying and increasing the efficiency of existing equipment than to acquiring new equipment. This helped to increase the grain output by 4.5 percent between 2013 and 2014 from the previous year, and also to increase the amount of grain harvested per unit area by 6.4 percent as well. Considering that agriculture makes up one-fourth of North Korea’s gross domestic product (GDP) and the country’s average annual growth rate has consistently remained below one percent since 2000, this increase in agricultural output is indeed remarkable. The World Food Program (WFP) thus announced in February 2014 that food rationing by the North Korean authorities, amounting to 420 grams per person, set the highest record over the previous 12 months.

As for manufacturing, the North revived the National Light Industry Competition on March 19, 2013, a national event that had disappeared around 2003. The regime also increased the budget for light industry by 5.1 percent from the previous year, urging the normalization and development of the light industry nationwide. The so-called “Four Priorities” — namely, electricity, coal, metal, and railway infrastructure to deliver raw and subsidiary materials to light industry — also received a budget 7.2 percent higher than that of the previous year. The National Light Industry Competition encouraged participants to work harder to advance the light industry, and stressed the need to localize the production of raw and subsidiary materials to achieve that goal. The North Korean regime has used even chemical factories such as the Namheung

Can North Korea Catch Two Rabbits at Once?
Youth Chemical Factory and the 2.8 Vinalon Complex in order to increase the production of subsidiary materials for light industry. Rodong Shinmun has dedicated exceptional amounts of coverage to the progress made in food processing, textiles, and apparel production.22

Such focus on agriculture and light industry is quite encouraging, especially as these two areas of the economy are most closely related to the people’s livelihood. These short-term successes, however, were made possible with increases in human and material investment, and did not entail any fundamental transformations of North Korea’s economic structure. In fact, the decisive factors in the larger agricultural output last year were the increase in the amounts of imported fertilizers used, favorable weather conditions, and a decrease in the occurrence of agricultural pestilence.23 Agricultural reforms could not take place in 2013 due to the lack of food supplies for the military and resistance from local bureaucrats. In other words, the regime may decide to push for economic reforms, but without much support or impetus at the practical level.24 The same applies to light industry. As of yet, there are no signs promising the realization of the proposed goal of “perfecting our-style economic management method.”

Meanwhile, the Kim regime’s emphasis on construction merits some comment. The 2014 New Year’s Address also stressed construction as one of the three top-priority economic tasks, along with agriculture and science/technology. And Rodong Shinmun’s recent articles attest to the seriousness of the regime’s intent to show off construction as the first visible, positive result of the Byungjin Line. In an editorial on April 7, 2014, the newspaper stated, “Our only goal now is to consolidate, expand, and reinforce our nuclear arsenal,” while North Koreans “have become happy beneficiaries of the new additions to civilization, such as the Munsu Water Theme Park, the Mirim Equestrian Riding Club, and the Masikryong Ski Resort.” The editorial described all these as “the evidence of the prosperity brought by the Byungjin Line.”25 The 2014 New Year’s Address also mentioned a number of new major construction projects that are currently in the planning phase, including civil engineering works, housing and dormitory projects, and educational facilities, which would visibly improve the people’s standard of living in a relatively short span of time.

The Kim regime also set out to diversify its trading partners as well as its sources of foreign investment in 2013, based on the economic development plan announced in 2011. The Supreme People’s Assembly enacted Standing Committee Order No. 3129 on May 29, 2013, to designate special economic development zones. In October, the General Department of National Economic Development was elevated to the status of the National Economic Development Commission (NEDC). One Special Economic Zone (SEZ) and 13 Economic Development Zones (EDZ) were announced in November, with the target amount of foreign investment for each zone ranging from US$70 million to US$240 million. The EDZs provide various tax benefits for foreign investors, and encourage North Korean businesses to compete with one another as well as foreign companies in their bids to participate in the development of those zones. Despite these relatively reformist measures, the 2014 New Year’s Address made no mention of any plan to open its economy to the outside world, suggesting a lack of confidence in the EDZ projects.
Assessment of the Byungjin Line and Its Future

Comparison to Past Strategies

Both Kim Il Sung and Kim Jong Il pursued strategies similar to the Byungjin Line. The two former leaders’ strategies, however, envisioned economic development by means of the defense industry, which they expected to play an active role in raising domestic demand. This mistaken belief led the two Kims to neglect the importance of the domestic market and concentrate all available resources on the military buildup, leading to the pervasive inefficiency throughout North Korean industries and setting the country on a path of long-term recession and decline unprecedented in other developing countries.

The economic policies North Korea pursued prior to adopting the Byungjin Line included the simultaneous pursuit of economic development and defense; the simultaneous development of light industry and agriculture with the goal of creating a basis for heavy industry; and the development of a self-sufficient national economy.

First, the policy of simultaneously pursuing economic development and defense originated in 1966, and translated, in practice, into an almost exclusive focus on building and strengthening the national defense capability. Facing the postwar challenges of the 1960s, North Korea sought to establish a basis for the defense industry as a matter of both economic and military importance, and succeeded in securing 1.2 million troops and a sizable arsenal. This huge military success, however, turned out to be detrimental to social and economic development.

Second, the policy of simultaneous development of light industry and agriculture, with the goal of creating a basis for heavy industry, formed the strategic backbone of North Korea’s plan to increase military spending and expedite economic growth during strong ideological competition with South Korea. The policy therefore prioritized the interests of heavy industry first and foremost, with the rhetoric of “the development of agriculture and light industry” playing merely a secondary role. The prices of grains and manufactured goods, as well as the tax system (1957), were all controlled and fixed so that industry benefited at the expense of agriculture, and heavy industry benefited at the expense of light industry. Thanks to this policy, North Korea did succeed in achieving rapid economic growth in the 1950s and early 1960s, becoming a model of development for the Third World. However, the North Korean economy failed to grow since then, resulting the decline of light industry and the low growth of agriculture.

Third, there was also the policy aimed at developing “a self-sufficient national economy.” This phrase referred, in effect, to “the inward-looking, import substitution strategy” that sought to achieve industrialization and rapid economic growth not with the help of trade or foreign capital, but by mobilizing all available domestic resources. The North Korean regime pushed this policy throughout the 1940s and 1950s, particularly as an alternative to the legacy of the Japanese colonial economy. The policy gained another impetus in the late 1950s amid the escalating conflict with the Soviet Union and the failure to attract investment from the Eastern Bloc. While its import substitution policy did render the North Korean economy less vulnerable to external shocks, the protracted pursuit of that policy led to deep isolation from the rest of the world, prolonging the country’s economic struggle as a result.

How does the Byungjin Line differ from these three main economic policies that
have shaped the North Korean economy since the 1960s? Does the Byungjin Line have only negative aspects? Table 2 provides a summary of the main features of the economic policies that the North Korean regime has pursued so far. Unlike its predecessors, the Byungjin Line has some positive aspects.

First, unlike the past, the Byungjin Line pays more attention to the significance of the civilian economy encompassing light industry and agriculture, which are more closely related to the people’s livelihood. Although the past economic policies nominally mentioned the need to foster these people-friendly industries, such words were more rhetorical than substantive. Second, although the Byungjin Line inherits from its predecessors the tendency to prioritize the defense industry, it does not necessarily see nuclear development as the only impetus for economic growth. The current Kim regime appears to pursue nuclear development primarily for the purpose of defense and the survival of the regime rather than for economic reasons. Third, the Byungjin Line recognizes, at least to a limited extent, the need for reform and openness, and puts an emphasis on trade, foreign development, and a new economic management.

Table 2. Byungjin Line in Comparison to the Three Preceding Economic Policies

<table>
<thead>
<tr>
<th>Three Preceding Economic Policies (since the 1960s)</th>
<th>Byungjin Line (since 2013)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy objective</td>
<td>Actual effect</td>
<td></td>
</tr>
<tr>
<td>Simultaneous pursuit of economic development and defense</td>
<td>Defense industry prioritized</td>
<td>Priority remaining on defense industry</td>
</tr>
<tr>
<td>Simultaneous development of light industry and agriculture, with the goal of developing heavy industry</td>
<td>Conventional weaponry manufactured and modernized</td>
<td>Nuclear missile technology advanced</td>
</tr>
<tr>
<td>Simultaneous development of light industry and agriculture, with the goal of developing heavy industry</td>
<td>Arms trade (export) touted as source of economic growth</td>
<td>No mention of nuclear weapons as a source of economic growth</td>
</tr>
<tr>
<td>Development of self-sufficient national economy</td>
<td>Heavy industry prioritized</td>
<td>Real focus on light industry and agriculture</td>
</tr>
<tr>
<td></td>
<td>Infrastructure for arms industry established</td>
<td></td>
</tr>
<tr>
<td>Policy Orientation</td>
<td>Isolationist, import substitution policy</td>
<td>Partial reform/openness promoted</td>
</tr>
<tr>
<td>Summary</td>
<td>Heavy industry prioritized and import substitution</td>
<td>Selective prioritization of nuclear technology</td>
</tr>
<tr>
<td></td>
<td>Excessive funding on defense</td>
<td>Continuing emphasis on light industry and agriculture</td>
</tr>
<tr>
<td></td>
<td>Partial reform and openness</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>Chronic low growth due to lack of jobs, inefficiency, and poor performance</td>
<td>Yet to be seen</td>
</tr>
</tbody>
</table>

Tak Sung Han and Jeon Kyung Joo
Can North Korea Catch Two Rabbits at Once?

method that was absent in its predecessors. Fourth, the North’s decision to focus its attention on nuclear development is rational, given the comparative advantage that North Korea holds in that regard.

Of course, the Byungjin Line is not without problems. First, its insistence on the priority of nuclear development and the defense industry compromises prospects for productive investment and job creation. Second, the goal of nuclear development is likely to clash with other goals and tasks that the Byungjin Line aims to accomplish. Most importantly, will North Korea be able to diversify its trading partners and attract much greater foreign investment than usual while still insisting on expanding its nuclear arsenal? Third, North Korea will need to improve its relations with neighboring states to ensure its survival, but the international community appears poised to continue its sanctions against the Kim Jong Un regime.

On the surface, the Byungjin Line appears to represent significant progress over the traditional economic policies that North Korea has pursued over the past half century. The focus on heavy industry and import substitution, which North Korea has maintained before the Byungjin Line, is frequently blamed for the “lost decade,” the economic crisis of Latin American states in the 1980s. The Byungjin Line attempts to overcome this trap by explicitly endorsing limited reform and openness while emphasizing the importance of light industry and agriculture. Nevertheless, it still lacks the innovation to outgrow the decades-old tendency to prioritize defense over the economy. Furthermore, it is plagued with the irreconcilable contradiction between nuclear development and economic goals and tasks.

Evaluation on the First Year of Byungjin Line from North Korea’s Perspectives

On March 31, 2014, Rodong Shinmun ran articles highly praising the Byungjin Line, claiming that the strategy itself demonstrated its “legitimacy and sustainability” last year. The editorial in the newspaper stated, “The legalization of the Byungjin Line has allowed North Korea to continue to enhance its efforts to build a strong and prosperous nation, thanks to the strengthened deterrence capacity that can withstand sudden changes in the state of affairs outside North Korea.” Some media outlets in South Korea, on the other hand, maintained a campaign against North Korea and the Byungjin Line, criticizing, that the Byungjin Line has deepened the dilemma North Korea faces and increased its isolation from the rest of the world without producing any tangible economic benefits.

Table 3 summarizes this study’s evaluation of the Byungjin Line. The Byungjin Line appears to have carried out and achieved a number of its stated tasks and goals, including prioritizing the defense industry and strengthening nuclear capacity, developing agriculture, and developing aeronautical technology and science (including that required to launch missiles). However, it has yet to show significant progress towards goals such as enhancing national security without increasing defense spending, attracting greater foreign investment, and perfecting its “our-style economic management method” that combines elements of reform and openness. The Byungjin Line did make limited progress towards achieving some goals, such as overcoming power shortages, developing light industry, and diversifying trading partners.

In summary, the Byungjin Line did make some progress in terms of reinforcing the North’s nuclear and missile capabilities and developing a few sectors of the civilian economy, including agriculture. However, it has yet to produce tangible results in
terms of economic reform and openness. While a year is too short a time span to make a reliable assessment of a major policy like the Byungjin Line, it needs a more concrete ground for the future projection.

### Evaluation on the First Year of Byungjin Line from International Perspectives

The most obvious repercussion of the Byungjin Line is that its insistence on nuclear development continues to deepen North Korea’s isolation from the rest of the world, inviting economic sanctions and increasing criticism. North Korea has already forced the United Nations and the international community to resort to a whole gamut of economic sanctions with its repeated nuclear and missile tests. Since the Byungjin Line perpetuates the vicious and self-contradictory cycle of nuclear development leading to economic isolation, which then leads to a lack of funds for nuclear development, the policy is unlikely to be sustained for long.

Nevertheless, since the economic sanctions of 2006, North Korea has attempted to break this cycle by deepening its dependence on China. Since the May 24 Measures of 2010 that the South Korean government decided to impose in response to North Korea’s sinking of the ROK Navy corvette Cheonan, North Korea has sought to offset the losses in revenue by increasing trade with China. In just a year, between 2012 and 2013, the volume of North Korea’s exports to China increased by 17.2 percent, imports from China by 5.4 percent, and overall trade volume by 10.4 percent (amounting to approximately US$6.5 billion). Making up around 90 per cent of North Korea’s
total international trade, these are record-breaking figures.\textsuperscript{31} The pattern noted in the immediate aftermath of the May 24 Measures, i.e., an increase in North Korea’s mineral exports to China, again emerged in 2013, making China the destination of 63.3 percent of North Korea’s overall mineral exports in 2013.

When Pyongyang proceeded with its third nuclear test in February 2013, Beijing expressed its strong discontent and objection via its foreign ministry. A recent report of the Chinese Academy of Social Sciences, one of the government-supported policy research institutes in China, discusses the probability of Beijing cutting its ties with Pyongyang. These outward renunciations led the international community to expect a dramatic change in China’s attitude toward North Korea after the third nuclear test. However, the trade statistics from 2013 tell a different story. North Korea’s exports and imports dropped significantly in the first half of the year due to the impact of the nuclear test, but they increased dramatically in the latter half of the year.\textsuperscript{32} The overall trade volume between the two countries even managed to increase by 5.4 percent from the previous year, with the most significant increases occurring in the areas of trade which had traditionally been areas of contention in South-North economic relations.\textsuperscript{33}

However, the abrupt execution of Jang Song Thaek in December 2013 is likely to affect relations between North Korea and China.\textsuperscript{34} According to the Korea International Trade Association (KITA), the trade volume between the two countries in the period of January-March 2014 has dropped by 7.4 percent from the same period of the previous year.\textsuperscript{35} In particular, North Korea’s grain imports from China decreased by more than 50 percent and its coal exports to China decreased by 10 percent in the first quarter from a year earlier.\textsuperscript{36} Also, the Korea Trade and Investment Promotion Agency (KOTRA) reported that China did not export any crude oil to North Korea in the first three consecutive months of this year, which is unprecedented.\textsuperscript{37} This recent record is at odds with the fact that Beijing characterized the execution as a domestic affair and emphasized the need to maintain practical cooperation with Pyongyang in trade and other areas.\textsuperscript{38} Moreover, it turned out that Chinese companies have failed to lease piers at the Rason port of North Korea’s free trade zone, raising speculations that the execution might have soured their cooperation on a number of major projects in the North’s Special Economic Zones.\textsuperscript{39}

In the meantime, relations between the two Koreas steadily deteriorated throughout 2013, with the trade volume between them dropping by 42.5 percent, amounting to only one-sixth of the trade between North Korea and China. The May 24 Measures eliminated almost all forms of economic cooperation between the two countries, with the Kaesong Industrial Complex shutdown for six months from April through September.\textsuperscript{40} North Korea ceased operations at the Kaesong Industrial Complex in April 2013, after its third nuclear test, raising the tension on the Korean Peninsula. It was an act intended to send a strong message to the new Park Geun-hye administration, and allowing the North to assume the lead regarding North-South relations.\textsuperscript{51} Nevertheless, the tactic was a complete failure, and the Kaesong Industrial Park resumed operations after the dialogue held on June 6, at the proposal of Pyongyang, regarding the Park’s operations and tourism at Mt. Kumgang.

Pyongyang is continuing its search to find new trading partners other than China. For instance, North Korea’s exports to Russia increased dramatically in 2013 by 48.65 percent. This change appears to reflect Russia’s participation in the development of ports and harbors in North Korea.\textsuperscript{42} North Korea also issued a major proposal in an address to Seoul on January 16, 2014, calling for a cease to the threats, insults, and
military hostilities with one another, as well as for mutual cooperation on preventing nuclear disasters. Interestingly, North Korea emphasized, as many as four times, the sincerity of the proposal, thus indicating a strong desire to improve relations with the South. In his 2014 New Year’s Address, Kim stressed the need for “all Koreans” to work together to improve the relationship between the two Koreas.

**Sustainability of the Byungjin Line**

How will the Byungjin Line fare in the long term? The historical and empirical rule is that North Korea’s continued insistence on pursuing its nuclear program only serves to provoke and sustain economic sanctions imposed by the international community, thus prolonging the country’s economic isolation and interfering with its search to find new sources of funding to continue with nuclear projects. It is this self-contradictory characteristic of the Byungjin Line that makes it unsustainable in the long term. Table 4 summarizes the conclusion this study has reached regarding whether the means and methods of pursuing the two contradictory objectives of the Byungjin Line will remain viable in the future. As the table shows, we expect that nuclear program will invite and deepen international economic sanctions, and the resulting economic recession in North Korea will make it impossible to find sufficient funds for further

<table>
<thead>
<tr>
<th>Main Goals of Byungjin Line</th>
<th>Mid- to long-term prospects</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Strengthen national defense industry (reinforcing nuclear arsenal)</td>
<td>△</td>
<td>Difficulty finding funds to continue nuclear development due to sanctions and economic recession</td>
</tr>
<tr>
<td>(2) Focus on economic growth while boosting national security</td>
<td>△</td>
<td>Likely to falter in the long term</td>
</tr>
<tr>
<td>(3) Reinforce defense capability without increasing cost</td>
<td>×</td>
<td>Increasing demand for budget for nuclear and conventional weapons alike</td>
</tr>
<tr>
<td>(4) Solve power (energy) problems</td>
<td>△</td>
<td>Fundamentally unsolvable</td>
</tr>
<tr>
<td>(5) Develop agriculture</td>
<td>○ / △</td>
<td>Subject to variables other than Byungjin Line (e.g., weather conditions, etc.)</td>
</tr>
<tr>
<td>(6) Develop light industry</td>
<td>△</td>
<td>Limited prospects due to sanctions</td>
</tr>
<tr>
<td>(7) Develop aeronautical technology and satellites</td>
<td>△</td>
<td>Difficulty finding funds for research and development due to sanctions and economic recession</td>
</tr>
<tr>
<td>(8) Diversify trading partners</td>
<td>×</td>
<td></td>
</tr>
<tr>
<td>(9) Attract foreign investment</td>
<td>×</td>
<td>Likely to falter due to continuing sanctions against nuclear program</td>
</tr>
<tr>
<td>(10) Perfect “our-style economic management method”</td>
<td>×</td>
<td></td>
</tr>
</tbody>
</table>

Very good ⋄ / Good ○ / Insignificant △ / Failed ×
nuclear and missile development. As a result, Pyongyang may attempt to break free of this vicious cycle by resorting to illicit activities. In the meantime, North Korea’s agriculture is a sector subject to international supplies of fertilizers and favorable weather conditions, independent of the Byungjin Line.

**Conclusion**

**Are Economic Development and a Nuclear Program Really Compatible?**

This study has analyzed the main features and tasks of North Korea’s Byungjin Line, and delineates its successes and limitations in comparison to the country’s three preceding economic policies. This study has also reviewed the trajectory that the Byungjin Line has followed over the past year or so, and evaluates the progress North Korea has made with respect to the proposed goals and tasks. The analysis reveals that the Byungjin Line did achieve significant improvement in terms of nuclear and missile development and other elements of the civilian economy, including agriculture. The Byungjin Line, however, has not lived up to the ideals of economic reform and openness.

Moreover, it will be impossible to sustain the Byungjin Line for very long into the future, due to the vicious cycle of nuclear armament, leading economic sanction, which in turn result economic isolation, and thereby weak economy to support nuclear development. Most of the stated policy objectives, goals, and means, except those concerning agriculture, will grind to a halt in the long term for budget reason, which may force Pyongyang to increase its engagement in illicit activities to fund its nuclear ambitions.

**South Korea’s Response**

The Byungjin Line will form the core strategy for the survival of the Kim regime, exerting a far-reaching influence on its policies, both domestic and foreign. Therefore, South Korea must ensure that the Byungjin Line, during its duration, and the related policies, will benefit South Korea rather than harm.

To this end, Seoul needs to maintain open dialogue with Pyongyang and help the Kim regime boost the economic components of the Byungjin Line, allowing South Korea to find new strategic opportunities through such components. The Byungjin Line may not succeed in the long run, but South Korea should appreciate the fact that the Byungjin Line is the first instance where the economy became the primary concern of North Korea’s national strategy. Criticizing and denouncing the Byungjin Line as doomed to failure may force North Korea to diminish its pro-economic stance and raise unnecessary tension with Pyongyang. There exists no positive outcome for South Korea should the North’s Byungjin Line completely fail and its economy sink to a new low. Although our goal is to have North Korea give up its nuclear ambitions, we must find hope in the fact that the nuclear program is no longer the only focus of North Korean policymakers. The core objective of a new North Korea policy of the Park administration should be encouraging the prioritization of the North’s economy in its own policy. For instance, presenting projected economic benefits from the development of the DMZ World Peace Park to the North or encouraging South...
Korean businesses’ to invest in North Korea’s special economic zones, is certainly compatible with South Korea’s policy of pressuring North Korea into abandoning its nuclear projects.

Furthermore, South Korean policymakers need to analyze the areas and priorities of North Korea’s trade with China, and strive to replace some of them with increasing trade and aid from South Korea. No good can come of North Korea’s deepening economic dependence on China. North Korea is a card seldom played by Chinese diplomats in their dealings with the outside world, but allowing the North’s economic dependence on China to grow unchecked will only encourage China to use its enormous leverage over North Korea at decisive diplomatic moments, e.g., when the Korean reunification is about to come true. For instance, the quality fertilizers that North Korea imports in bulk from China are unlikely to be used for military purposes, so it can be replaced with fertilizer supplies from South Korea. For Korean textiles, apparel, and electronics may also influence North Koreans’ perception of the outside world in their daily lives, South Korean companies may need to find legal means by which to reach a greater portion of the North Korean public.

Last, but not least, is the need for South Korea to adopt a strategic and pragmatic approach to North Korea’s nuclear ambitions. There is growing support for the rather pessimistic view that the denuclearization of North Korea will be impossible. The fact that Pyongyang has implemented the Byungjin Line, even after years of uncompromising economic sanctions, may attest to the depth and extent of North Korea’s commitment to possessing nuclear weapons. This, of course, does not mean that South Korea should abandon all its denuclearization efforts. Seoul should work with the international community to limit North Korea’s options, and also gather as much information on North Korea’s nuclear facilities and capacity so long as it possesses them. This is necessary not only to counter potential nuclear threats from North Korea, but also to prepare for possible national reunification in the future. The absence of information on North Korea’s nuclear capacity may turn out to be disastrous for South Korea in case of contingencies such as all-out war on the Peninsula or sudden changes in North Korea.

Notes
Can North Korea Catch Two Rabbits at Once?

1. Can North Korea Catch Two Rabbits at Once?

8. The reactivation of the 5MWe graphite-moderated reactor will allow North Korea to extract plutonium from the closed fuel rods.
9. Lee Je-son became the head of the GDNE in 1987 and the head of the MNI on April 10, 2014. He is a subject to UN sanctions.
15. KPW is the code of the official currency of North Korea. North Korea no longer announces the detailed amounts of its defense budget items. Instead, it announces the defense budget’s proportion of the total budget. The First Session of the Supreme People’s Assembly in 2014 announced that government revenue increased by 4.3 percent from the previous year, while the proportion of the defense budget remained more or less the same (16.0 percent in 2013 and 15.9 percent in 2014). It was according to these claims that the amount and rate of increase in the North Korean defense budget were calculated and cited here.
20. The increase in agricultural output stems primarily from the reduced prevalence of agricultural pestilence and natural disasters. See Koh (2014), 17–19.
21. The per-capita food ration in North Korea remained at 400 grams from January through May 2013, before taking a slight dip to 390 grams in June and July, and shrinking further to 310 grams in September. The amount, however, increased back to 390 grams in October, and returned to 400 grams from November through January 2014. While the amount falls far below the regime’s goal of 573 grams, the upward pattern does attest to the increasing agricultural output of North Korea. “WFP Says North Korea’s February Food Ration Is Record-High in Last 12 Months,” Voice of America, March 5, 2014.
23. Ibid., 96–97.
32. KOTRA, 2014.
33. For instance, as the proportion of oil and processed food imports from South Korea decreased by about 60 percent, North Korea had to increase its reliance on Chinese imports by 84.2 percent. See Seong and Yang, 2014.
34. While the second-most powerful person and the uncle of Kim Jong-un, Jang had been considered an advocate of Chinese-style economic reforms and was in charge of a number of business projects with China. He was accused of selling “coal and other precious underground resources at random” and “selling off the land of the Rason economic and trade zone to a foreign country for a period of five decades under the pretext of paying those debts.” “N. Korean official says no piers for China at special trade zone,” Global Post, May 2, 2014.
36. “China didn’t export crude oil to N. Korea in Q1,” Voice of America (Korea), April 25, 2014; and “N. Korea’s grain imports from China halve in Q1,” Global Post, April 27, 2014.
37. “China didn’t export crude oil to N. Korea in Q1.” The crude oil from China to North Korea made up 16 percent of the total exports volume in 2013, the largest as a single item. For more details on the trade record, refer to Seong and Yang (2014), 14.
39. “N. Korean official says no piers for China at special trade zone.”
Can North Korea Catch Two Rabbits at Once?  153

Notes on Contributors

Tak Sung Han (Ph. D. in Political Economy and Public Policy at the University of Southern California, 2003) is Research Fellow at the Korea Institute for Defense Analyses (KIDA). Since he joined the Institute in June 1991, he has worked on various issues on security and national defense such as defense budget, defense economics, environmental problems, and defense burden sharing. Currently, he is a member of the North Korea Military Research Division in KIDA and his research areas are North Korea’s military economy, inter-Korean economic cooperation, and North Korea’s defense industry.

Jeon Kyung Joo is a researcher working for the North Korea Military Studies Division, Center for Security & Strategy, KIDA. She was a member of the policy advisory committee for Crisis Management, Office of the President from 2011 to 2012. She received her M.Sc. with merit in Comparative Politics (Conflict Studies) from London School of Economics and Political Science. She authored Preparing for the Possibility of Sudden Change in North Korea (2012).