

## North Korean Nuclear Strategy: A Deterrence Quagmire for Korean Peninsula

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### Abstract

*Although North Korea has already tested nuclear weapons capability for four times and plans to do more as it passes through the embryonic stages of its nuclear weapons development program, not much is known about North Korea's nuclear strategy. It is shrouded with greater ambiguity as ambiguity rules and plays a central role in its nuclear weapons program. In the absence of North Korea's policy document and institutionalization of its nuclear policy, it is not clear what nuclear strategy North Korea would opt for and why. Therefore, one expects many speculative interpretations on the evolving nuclear strategy of North Korea. This article attempts to predict the conceptual essentials of minimum deterrence that North Korea would follow. But under the pretext of minimum deterrence it would have multiple options to opt for one or more than one type of nuclear strategies. However, each of these nuclear strategies would have strategic implications for North Korea in general and the Korean peninsula in particular. Conceptually, the essentials of minimum deterrence predict that if North Korea retains the modest number, curbs on more nuclear weapons tests, stays defensive and restrains from using*

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*Its deterrent forces, then this could be consistent with minimum deterrence perceived here. However, if North Korea, in its embryonic stages of deterrent force development, increases its deterrent forces, miniaturizes nuclear weapons, develops sophisticated delivery systems, acquires an assured second-strike capability (nuclear submarine) and appears to be more offensive, then this may not be consistent with what is conceptualized here as minimum deterrence. Apparently, as the article concludes, North Korea is in active pursuit of the latter than the former and it might cross the essential contours of minimum deterrence conceived here, which in turn would have dire security implications for the Korean Peninsula.*

**Key words:** North Korea, Essentials of Minimum Deterrence, Nuclear Strategy, Korean Peninsula

## **Introduction**

It has been more than two decades that the North Korean nuclear quagmire continues to persist. In the early 1990s, the Democratic People's Republic of Korea (DPRK) threatened to withdraw from the Non-Proliferation Treaty (NPT) to address their self-proclaimed "a legitimate self-defence measure"<sup>1</sup>. North Korea withdrew from the NPT in 2003 indicating that it had already given a three month advanced notice a decade ago putting a greater pressure on the non-proliferation regime. This remains a challenge for the NPT observing North Korea quitting the NPT without a particular mechanism for punishment which in turn shows the weakness within the existing structure of the NPT despite its life-time extension in 1995 and increasing membership up to 190 states. The US and other major powers, party to the NPT and at the same time party to a Six-Party Talk failed to stop North Korea from acquiring nuclear weapons capability which North Korea tested in 2006,

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<sup>1</sup>The Korean Central News Agency (KCNA), January 10, 2003.

2009, 2013 and very recently in 2016 that North Korea claims it to be the test of Hydrogen Bomb.<sup>2</sup>

In addition to these successful nuclear weapons tests, North Korea also plans to increase the number of nuclear weapons. With the increased number of nuclear weapons, North Korea would require to test various combinations of delivery systems, which could include short, medium and long ranges of missiles. North Korea claims to have acquired missile capability that could not only hit the US bases in the East Asian region, but could also threaten to hit the US homeland. North Korea claims to have conducted a long range missile that it has been testing for long.<sup>3</sup>

Besides these strategic force developments, the DPRK is rapidly obtaining other deterrence capabilities such as the KN-08 Transporter Erector Launcher, anti-ship cruise missile modelled on the Russian KH-35 Uran, the Nodong MRBMs build on SCUD technology, deterrence force miniaturization, Submarine Launched Ballistic Missile (SLBM) for second strike capability, Inter-Continental Ballistic Missile (ICBM) and cyber technology.<sup>4</sup>

Although the DPRK is in the embryonic stages of its strategic force development program, the deterrence force acquisition seems rapid and assertive. North Korean acquisition of nuclear weapons along with its increasing missile capabilities could have greater security implications on the Korean Peninsula. As the DPRK continues to threaten to use nuclear weapons, the Korean Peninsula remains a nuclear “flash-point”<sup>5</sup>. Both the US and its close ally the Republic of

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<sup>2</sup>BBC News: “North Korea Nuclear: State Claim first Hydrogen Bomb Test,” *BBC News*, January 06, 2016, accessed at: <http://www.bbc.com/news/world-asia-35240012> (April 05, 2016).

<sup>3</sup>“North Korea's Missile Program,” *BBC News*, February 07, 2016, accessed at: <http://www.bbc.com/news/world-asia-17399847> (April 5, 2016).

<sup>4</sup>Richard Weiz, “The South Korean-US Nuclear Alliance: Steadfast and Changing,” *The Korean Journal of Defense Analysis*, 27(3), (September 2015), pp. 401-402.

<sup>5</sup>The phrase “nuclear flash point” is used by the US President Bill Clinton in 2000 during in the context of India-Pakistan inter-state strategic rivalry over the Kashmir issue after the nuclear weapons tests in 1998. See, Jubith Miller & James Risen, “A Nuclear War Feared Possible over Kashmir,” *The New York Times*, (August 08,

Korea (ROK) are expected to understand the evolving nuclear strategy of the DPRK in order to prevent the nuclear Armageddon. On the one hand, it is important to understand what kind of nuclear strategy the DPRK would opt for and why, but on the other hand it is equally essential to understand its broad based nuclear policy after its nuclear weapons tests to comprehend better the DPRK's nuclear related issues and the challenges they may pose to the security and strategic stability of the Korean Peninsula.

The DPRK's nuclear strategy is shrouded deeply by ambiguity. There is no North Korean official documentation that could explain substantially its nuclear policy. It is not clear whether or not the DPRK would opt for minimum deterrence by keeping its strategic forces small; whether these deterrence forces would be used for political or military purposes; how, where and when they could use nuclear weapons; whether they opt for the First Use (FU) or No-First Use (NFU) doctrinal option; what would be their deterrence operational force posture – that is, will the DPRK choose for counter-value or counter-force targeting; will they rely on the third party role at the time of conflict or they could increase over-reliance on their own nuclear weapons; and whether these deterrence forces are for defensive purposes or they could be deployed forward for offensive strategy. These are some of the important questions with regard to broader contours of nuclear strategy a nuclear weapons state needs to strategize in order to prevent accidental or inadvertent nuclear weapons use.

Despite the DPRK open testing of nuclear weapons in four different times and years, there is an absence of substantial clarity on its nuclear strategy. It may not be wrong to presume that the DPRK does have nuclear strategy. Despite the level of ambiguity it practices when it comes to its evolving nuclear strategy, it does not mean the DPRK would not have command and control system and a strategy for its deterrence forces. The Waltzian logic on the developing states is that the states in possession of nuclear weapons would be rational and responsible

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2000), accessed at: <http://partners.nytimes.com/library/world/global/080800india-pakistan.html> (September 29, 2015).

towards taking good care of their weapons given the nuclear learning from the predecessors during the classic nuclear age between the Soviet Union (Russia) and the US and they would not let lose their nuclear weapons either to fall in the wrong hands or be accidentally used during the conflict. However, the Saganian conceptual logic casts quite a pessimistic picture that these developing states in possession of nuclear weapons may not be much more rational and responsible and there exists a danger of the nuclear weapons use during both peace and conflict time.<sup>6</sup>

Until the DPRK officially declares its nuclear policy, the contemporary scholarship would have different interpretations. Some would argue that it acquired nuclear weapons for protection of the regime; others may presume that North Korea would strategize use of its nuclear weapons for blackmailing purposes and materialize them as a bargaining chip for diplomatic and economic gains; still others would say that the DPRK could opt for a *catalytic* nuclear strategy in which it could use the third party to resolve the issue because of the fear of the use of nuclear weapons and/or it could opt for an *asymmetric* nuclear strategy where North Korea due to increasing conventional force asymmetry between the DPRK and ROK-US could possibly opt for a first use doctrinal posture to deter the conventional stronger side. Each of these possible options for nuclear strategy would have their own strategic implications for the Korean Peninsula.

In addition to a brief discussion of various nuclear policy options available for North Korea after it acquired and tested its nuclear weapons capability, this paper particularly focuses on the implications of North Korean strategic capabilities on the Northeast Asian region where North Korea confronts South Korea, Japan and the US forces. As North Korea borders with the two established nuclear weapons states; that is, China and Russia, North Korean evolving strategic capabilities would have implications for both nuclear and non-nuclear weapons states.

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<sup>6</sup>For interesting analysis on this unwinnable debate see, Scott D. Sagan and Kenneth N. Waltz, “*The Spread of Nuclear Weapons: A Debate Renewed*,” (New York: W.W. Norton & Company, 2003).

The US and its allies and partners would be very carefully and diligently dealing with North Korea's increasing strategic capabilities. They would need to craft a strategy to convince both China and Russia to play crucial role in terms of making the North understand the value and danger associated with nuclear weapons. Also, they would try to prevent the possibility of low intensity war escalating to a nuclear level. Force in any way may not be a viable solution in this regard. Alternative strategies would need to be implemented to avert the possibility of accidental wars in the Korean Peninsula. Before we analyze the implications of North Korea evolving strategic force capabilities, it is important to understand North Korea's options for various combinations of nuclear strategy it would opt for and why. Moreover, why could each of these nuclear strategy options have strategic implications for North Korea in general and for the Korean Peninsula in particular?

### **North Korea's Options for Nuclear Strategy**

There is no hard and fast deliberation that one nuclear weapon state gets strictly follows to one particular nuclear strategy while ignores others. Nuclear weapon states adopt various combinations of nuclear strategies in accordance with the changed strategic environment. During the Cold War period, the US adopted a series of alternative nuclear strategies such as massive retaliation and flexible response from time to time, though the central theme of deterrence remained intact. Other smaller nuclear weapons states practiced various sets of nuclear strategies depending on the strategic circumstances they faced. As part of nuclear learning, North Korea may not necessarily adopt any single form of nuclear strategy, but it could have more than one sets of nuclear strategy to begin with. However, the basic ingredients of these nuclear strategies could stay the same. For example, North Korea might pose its nuclear weapons for war-fighting/military purposes (offensive strategy) showing itself to be irrational and that it could threaten to use nuclear weapons any time of its own choosing in order to meet its economic and diplomatic goals, but it could revert and use its nuclear weapons for political purposes (defensive strategy) without endangering the strategic stability of the Korean Peninsula. The types of nuclear strategies North Korea might adopt depends on if the strategic

demanding a concessionary nuclear strategy, catalytic strategy, asymmetric strategy, or strategy based on assured retaliation. However, each one could have its own strategic repercussions for North Korea.

### **Concessionary Nuclear Strategy**

In a severe economic crisis, with Russian and Chinese no longer interested in providing a greater economic assistance in the way the DPRK could expect, the increase of military muscles and desire for the acquisition of nuclear weapons would prove to be a political tool kit for the North Korean regime for its masses in order to gain domestic concession which in turn would aim at survival of the DPRK's political regime. The concessionary strategy associated with the acquisition of nuclear weapons at the domestic front is to please and satisfy the masses with the power-muscles of nuclear weapons. The message to the North Koreans was clear that the nuclear weapons would protect them from a complete disaster, though they could starve and not eat three times a day. Ultimately, the strategy at the domestic level was to ensure the survivability of the regime.<sup>7</sup>

Given the success of concessionary nuclear strategy at the domestic level, the DPRK's nuclear leadership may formulate the similar type of strategy at the regional level to seek economic benefits. Therefore, North Korea would craft a concessionary nuclear strategy to extract food, aid and energy requirements for its starving masses that have already suffered because of the international economic sanctions. North Korea could show its irrationality and present bellicose rhetoric to use nuclear weapons against the US and its close allies and partners in the Northeast region. While using nuclear weapons as a bargaining chip, North Korea has become quite successful in this type of strategy extracting economic assistance for its masses and regime survival. As long as this strategy works, North Korea would continue to act irresponsibly without necessarily using its nuclear weapons. For success of this strategy, someone has to listen to the North Koreans in terms of meeting its economic demands.

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<sup>7</sup>See, Mun Suk Ahn, "What is the Root Cause of the North Korean Nuclear Program," *Asian Affairs: An American Review*, 38(4), pp. 175-187.

to make someone listen to North Korea for concessionary purposes as part of its nuclear strategy, North Korea would communicate and deliver the message clearly across the Korean Peninsula that it would either conduct missile or go for another nuclear weapon test.

In addition, North Korea would use its nuclear weapons as a bargaining chip to gain strategic benefits from the US, e.g., trade. The DPRK would demand the US to disengage its security commitment in East Asian region; remove its nuclear umbrella from South Korea; withdraw its military forces from the Korean Peninsula; and develop a US-DPRK strategic relationship as an equalizer to ROK-US alliance<sup>8</sup>. Also, North Korea would demand the light water nuclear reactors as part of the DPRK's concessionary strategy. The ROK-US would have two options. One, they could either ignore what North Korean signals. Second, they could put severe economic sanctions and pursue China to play its diplomatic and political role in prohibiting North Korea from conducting more missile and nuclear tests. Concessionary nuclear strategy may provide North Korea some short term economic and political benefits, but it can prove to be dangerous in the long term as the major powers may get weary of North Korean madness strategy and provide no more concessions. Failure of which could cause the DPRK's over reliance on the third party intervention, which Vipin Narang names it "catalytic nuclear strategy"<sup>9</sup>. However, this type of nuclear strategy has got implications for North Korea.

### **Catalytic Nuclear Strategy/the third party option**

Catalytic nuclear strategy would require a third party intervention in order to avert the nuclear crisis and meet the demands of the states that practice this type of strategy. A nuclear weapon state in practice of catalytic strategy would threaten to use its nuclear weapons against the adversary in order to draw attention of a third party whose interest in that particular region is sufficiently very high, which in turn would desire

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<sup>8</sup>For an interesting piece on this perspective see, Jonathan D. Pollack, "North Korea's Nuclear Weapons Development: Implications for Future Policy," (Spring 2010), Proliferation Paper, Security Studies Center.

<sup>9</sup>Vipin Narang, "*Nuclear Strategy in the Modern Era: Regional Powers and International Conflict*," (Princeton: Princeton University Press, 2014), pp. 13-54.

the de-escalation<sup>10</sup>. A third party with greater economic and strategic interests would likely to intervene in order to de-escalate the crisis. It may be argued that a state practicing catalytic nuclear strategy might never gamble if it were sure that the third party would not intervene. Arguably, the state in practice of this type of strategy believes that the third party's stake in the region is high and it would intervene timely to avert the crisis designed for seeking economic and political objectives.

A few nuclear weapons would suffice to attract the third party attention to the crisis because of the fear of a conflict escalating to nuclear levels<sup>11</sup>. North Korea has practiced this type of strategy in terms of materializing the Chinese patronage to intervene, believing that nuclear escalation would not be in the security and economic interest of China and that China would intervene to assist the DPRK stay alive. Narang states, "One possible North Korean strategy, therefore, is the catalytic posture, whereby it employs the threat of further nuclear breakout to ensure the patronage of Beijing against (particularly) the United States."<sup>12</sup> While playing out the catalytic nuclear strategy, North Korea secures high confidence against the stronger opposition in the form of ROK-US alliance. North Korea keeps a strong belief that "catalytic strategy is necessary to ensure that Beijing protects it – at least diplomatically – against the United States."<sup>13</sup> However, there is no guarantee that the third party would make a timely intervention to the interest of North Korea and the absence of the assured patronage

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<sup>10</sup>For interesting analysis on this see, Vipin Narang, "Nuclear Strategies of Emerging Nuclear Powers: North Korea and Iran," *Washington Quarterly*, 38(1), (Spring 2015), pp. 75-77. For more details see, Narang, "*Nuclear Strategy in the Modern Era: Regional Powers and International Conflict*," (Princeton: Princeton University Press, 2014).

<sup>11</sup>Shane Smith, "North Korea's Evolving Nuclear Strategy," (August 2015), US-Korea Institute at SAIS, accessed at <http://38north.org/2015/08/nukefuture082415/> (September 20, 2015).

<sup>12</sup>Narang, "Nuclear Strategies of Emerging Nuclear Powers: North Korea and Iran", p. 84.

<sup>13</sup>*Ibid.*, p. 84.

intervention at the time of crisis would make this strategy risky. This could increase the chances of inadvertent use of nuclear weapons.<sup>14</sup>

### **Asymmetric Nuclear Strategy/the First Use of Nuclear Weapons**

Nuclear weapon states adopt this type of nuclear strategy to offset the conventional superiority of their adversary in terms of using their nuclear weapons without waiting for their enemy to use nuclear weapon first. It is basically to avert the conventional imbalance with the increasing reliance on nuclear weapons. Being frustrated by the sheer absence of the third party patronage, North Korea could adopt the asymmetric strategy to be the first to use nuclear weapons. North Korea could become more assertive when this type of strategy would make North Korea rely on nuclear weapons use as a war-fighting instrument. With this type of nuclear strategy, North Korea would confront certain challenges. One, this would make North Korea increase the number of its warheads along with the delivery systems, which in turn would put tremendous pressure on the centralized command and control system important for both safety and security of nuclear weapons and deterrence stability. Two, given the increasing pressure on the command and control system, North Korea would opt for pre-delegation of their deterrent forces which could increase the chances of an accidental nuclear use causing dire security implications on the Korean Peninsula. Three, this type of strategy may not become consistent with the minimum deterrence that initially could be conceptualized by North Korea since it would go for more warheads and delivery systems as it finds itself frustrated and deprived of the third party patronage. Four, this could ultimately increase the chances of arms race in the East Asian region. In addition, this strategy would need North Korea to make stronger and complex command and control system, which may not be

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<sup>14</sup>See, Paul Kapur, *“Dangerous Deterrence: Nuclear Weapons Proliferation and Conflict in South Asia,”* (California: Stanford University Press, 2007).

For a speculative but interesting analysis see, Peter Hayes & Roger Cavazos, “North Korea's Nuclear Force Roadmap: Hard Choices,” NAUTILUS Institute for Security and Sustainability, March 2015, accessed at: <http://nautilus.org/napsnet/napsnet-special-reports/north-koreas-nuclear-force-roadmap-hard-choices/> (September 28, 2015).

completely possible for North Korea given its economic and technological backwardness. In order to make its asymmetric deterrence forces credible, it would need to acquire second-strike capability, which would be more expensive and that in turn would encourage North Korea to use nuclear weapons at the early stages of conflict.<sup>16</sup> However, it is not clear how, where and when North Korea would use nuclear weapons. North Korea's security leadership has yet to be transparent on the use of nuclear weapons for first strike especially when it chooses to adopt the asymmetric nuclear strategy.

There could be some possible scenarios that North Korea could use nuclear weapons, though each of these presumed scenarios may hold ambiguities. The drastic domestic upheaval, a radical deteriorating relationship between China and the DPRK, and the creation and spread of rebel forces within North Korea that could not only threaten the regime, but also the safety and security of nuclear weapons; North Korea expects the ROK-US forces exploiting this chaotic situation and getting hold of the North Korean nuclear weapons before they fall in the wrong hands. In such a scenario, North Korea would be in tremendous strategic pressure to use nuclear weapons in the early stages of the conflict.<sup>17</sup> If North Korea faces disadvantages with this type of strategy with potential implications for the survivability of its regime in general and peace and security of the Korean Peninsula in particular, then North Korea could opt for an assured retaliation nuclear strategy.

### **Assured Retaliation Nuclear Strategy/the option to strike after**

The assured retaliation strategy demands that nuclear weapon states likely not opt for first use option, but to strike after it is hit. It has direct deterring effects against the threats of nuclear attacks and coercions.<sup>18</sup> However, it is not clear whether or not a nuclear weapon

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<sup>16</sup>Smith, "North Korea's Evolving Nuclear Strategy," pp.11-12.

<sup>17</sup>For interesting analysis see, Hyeongpil Ham & Jaehak Lee, "North Korea's Nuclear Decision-making and Plausible Scenarios," *The Korean Journal of Defense Analysis*, 25(3), (September 2013), pp. 399-413.

<sup>18</sup>Narang, "Nuclear Strategies of Emerging Nuclear Powers: North Korea and Iran", p. 77.

state in practice of assured retaliation would retaliate with nuclear weapons after being hit by advanced conventional forces.<sup>19</sup> For example, the US advanced conventional force capability has created a dilemma for nuclear weapon states, say; China and North Korea whether they could sustain this type of strategy that supports the no-first use nuclear strategy. Despite the debate in China in practice of retaliatory nuclear strategy that they would at some point depart from no-first use nuclear option,<sup>20</sup> Chinese official White Paper still claims to have NFU option supporting assured retaliation strategy.<sup>21</sup> India also follows assured retaliation strategy claiming minimum deterrence after it tested nuclear weapons in 1998.<sup>22</sup> It may not be necessary that a nuclear weapons state practicing nuclear retaliatory strategy would follow the NFU option. The United States followed Massive Retaliation nuclear strategy during the early stages of Cold War against its adversary. It continued to keep the

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<sup>19</sup>Andrew Futter & Benjamin Zala, “Advanced US Conventional Weapons and Nuclear Advancement: Why the Obama Plan Won't Work,” *The Non-Proliferation Review*, 20(1), pp. 107-122.

<sup>20</sup>General Pan proposed some hypothetical possibilities China could use nuclear weapons: 1) if Washington uses tactical nuclear bomb against China's military assets in conflict at Taiwan; 2) If Washington uses conventional weapons to attack China's Inter-Continental Ballistic Missile (ICBM) silos or its nuclear infrastructure; and 3) if Washington successfully launches a limited nuclear attack against China. See, Pan Zhenqiang, “On China's No-First Use of Nuclear Weapons,” *Pugwash Online*, November 26, 2002.

<sup>21</sup>See China's Official White Paper on China's Military Strategy, The State Council Information Office of the People's Republic of China (May 2015), [http://www.chinadaily.com.cn/china/2015-05/26/content\\_20820628.htm](http://www.chinadaily.com.cn/china/2015-05/26/content_20820628.htm) (accessed June 25, 2015).

<sup>22</sup>Swaran Singh, “India's Nuclear Doctrine: Ten Years since the Kargil Conflict,” in Bhumitra Chakma (ed.), “*The Politics of Nuclear Weapons in South Asia*,” (Aldershot: Ashgate, 2011), pp. 57-74. For other interesting readings on India's nuclear policy see, Ashley Tellis, “*India's Emerging Nuclear Posture: Between Recessed Deterrent and Ready Arsenal*,” (Santa Monica: RAND, 2001); George Perkovich, “*India's Nuclear Bomb: The Impact on Global Proliferation*”, (Berkeley, CA: University of California Press, 1999); Rajesh Basrur, “*Minimum Deterrence and India's Nuclear Security*”, (California: Stanford University Press, 2006); Bharat Karnad, *India's Nuclear Policy*, (Westport CT: Praeger, 2008); K. Sundarji, “*Blind Men of Hindustan: India-Pak Nuclear War*”, (New Delhi: UBS Publishers, 1993).

first use nuclear option, but it required the US to acquire multiple types of warheads and delivery systems.<sup>23</sup>

The assured retaliation nuclear strategy would require North Korea to acquire a second-strike capability. The credibility and survivability of nuclear forces are important as part of this type of nuclear posture. The acquisition of second-strike capability can be in two forms. One, a nuclear weapons state acquires a sea-based deterrence (nuclear submarine) for achieving a classic form of assured retaliatory capability. Two, it could practice strategies of concealment, dispersal, hardening of silos, deception etc. in order to achieve survivability of its deterrence forces to strike back. North Korea in practices of these tactics for survivability of its nuclear forces could seek a second-strike capability without necessarily going for a nuclear submarine. North Korea may largely be practicing these deterrent tactics for survivability of its forces most possibly at its North side of the country so that the ROK-US may not hit these forces because of the fear of its adverse effects on Russia and China bordering with North Korea.<sup>24</sup>

### **Implications of North Korean Strategic Capabilities**

North Korea could adopt these important nuclear strategies gradually as it matures its nuclear weapons program. It can also have the combination of one or two types of nuclear strategies to meet its political and diplomatic goals. In addition to these strategic implications of each nuclear strategy North Korea adopts, it would expect a ROK-US strategic response. First, the increased number of North Korean deterrent forces with various delivery systems would put a strategic pressure on the South Korea to counter the emerging threat emitting out of the North Korean missiles productions. South Korea would have two options. One, withdraw from the NPT and go nuclear because of the serious threats from North Korean deterrent forces. Two, to rely on the

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<sup>23</sup>For an excellent historical reading on nuclear strategy see, Freedman, “*The Evolution of Nuclear Strategy*”, pp. 79-86.

<sup>24</sup>Smith, “North Korea's Evolving Nuclear Strategy”, p. 20. However, there is not concrete evidence to this in terms of satellite images.

consistent nuclear security guarantee the US provides as part of its broader strategy of extended deterrence. On the first point, the US would urge South Korea not to acquire nuclear weapons as other US allies and partners would follow suit to meet their security interests, which in turn could affect the US extended deterrence policy and its broader perspective of international non-proliferation efforts as part of the NPT. On the second point, the US would be pleased to provide South Korea with defensive conventional force capability. Also, the US would continue to station its military forces in South Korea for deterrence purposes as part of its security commitment to South Korea.

Second, although South Korea has been developing the Korean Air and Missile Defense (KAMD) as part of Ballistic Missile Defense system, this may not be sufficiently controlled by the South Koreans alone.<sup>25</sup> The US involvement and assistantship would be required for making the BMD system successful. In addition to this, the US has also emplaced Aegis Missile Defense System to protect South Korea from incoming North Korean cruise missiles. Also, the ROK-US discuss on the possible deployment of the US Terminal High Altitude Area Defense (THAAD) system which could intercept the short, medium and intermediate ballistic missiles during the terminal stages.<sup>26</sup> However, North Korea, Russia, and China have already pressed South Korea not to accept THAAD as this BMD system would particularly threaten the Chinese and Russian security interests. Although the US has already deployed THAAD in Hawaii and Guam Islands to intercept the incoming North Korean missiles possibly tipped with both conventional and nuclear warheads, THAAD system has the 'hit and kill' capability through sophisticated 'kinetic energy'

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<sup>25</sup>Richard Weitz, "The South Korean-US Nuclear Alliance: Steadfast and Chancing", *The Korean Journal of Defense Analysis*, 27 (3), September 2015, pp. 401-415.

<sup>26</sup>Ibid. p. 407.

<sup>27</sup>See, John Power, "Russia: Korean THAAD Deployment is a Security Threat,": *The Diplomat*, April 02, 2015, accessed at: <http://thediplomat.com/2015/04/russia-korean-thaad-deployment-is-a-security-threat/> (28 September 2015); Clint Richard, "X-Band and THAAD as Good as Anti-China Trilateral Defense Agreement?", *The Diplomat*, October 24, 2014, accessed at: <http://thediplomat.com/2014/10/x-band-and-thaad-as-good-as-anti-china-trilateral-defense-agreement/> (28 September 2015).

mechanism which could hit and kill the incoming short, medium and intermediate range ballistic missiles without creating the danger of exploding the warheads in the air risking contamination. The recent North Korean nuclear and missile tests have made the US and South Korea to revisit the possibility of ultimately deploying the THAAD system in South Korea to intercept the incoming North Korean ballistic missiles.

Third, there are increased ROK-US joint military exercises from time to time to provide a deterring signalling to North Korea. After the recent North Korean nuclear and missile tests, both the US and South Korea conducted a huge military exercise. These exercises included advanced and modernized conventional forces to deter the possible low-intensity threats. But, North Korea has already exploited 'the gray areas' such as the episode of the sinking of the South Korea's *Cheonan* warship and the DPRK border shelling, which in turn undermines the ROK-US deterrence credibility.<sup>28</sup> To counter the emerging threats emitting at the low-intensity conflict, the US would keenly be interested to strengthen its extended deterrence for its allies and partners in Asia. The US continues to assist South Korea with modernized conventional forces to deter North Korea's missile threats. Very recently, there has been a three-day discussion on Table-Top Exercise (TTX) and they have conducted Track 1.5 deterrence dialogue.<sup>29</sup> Along with these drills, there are proposals for the production of Electromagnetic Pulse (EMP) weapons and other sophisticated conventional forces to contain the low-intensity conflict at the Korean-Peninsula.<sup>30</sup>

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<sup>28</sup>See, “Van Jackson, “Raindrops Keep Falling on My Nuclear Umbrella”, *Foreign Policy*, May 18, 2015, accessed at, <http://foreignpolicy.com/2015/05/18/raindrops-keep-falling-on-my-nuclear-umbrella-us-japan-south-north-korea/> (28 September 2015).

<sup>29</sup>Oh Seok-min, “S. Korea, US to Stage Deterrence Drill against N. Korea,” *Yonhap News*, February 10, 2015, <http://english.yonhapnews.co.kr/national/2015/02/10/25/0301000000AEN20150210002500315F.html> (September 28, 2015).

<sup>30</sup>Patrick M. Cronin, “Time to Actively Deter North Korea”, *The Diplomat*, June 25, 2014, accessed at: <http://thediplomat.com/2014/06/time-to-actively-deter-north-korea/> (September 28, 2015).

The implications of North Korea going nuclear and its adoption of various combinations of nuclear strategies are huge on the security architecture of Korean Peninsula.

## **Conclusion**

Since very little is known about North Korean nuclear strategy in the wake of its nuclear weapons tests in multiple times, we would expect many speculative interpretations to predict about North Korea's adoption of various combinations of nuclear strategies. However, it can be argued that North Korea may not adopt such a policy that has not been practiced by either the major or smaller nuclear weapons states. There is a lot of nuclear learning for North Korea to opt for the strategy it chooses to do so depending much on the prevailing strategic environment. Each of these nuclear strategies, North Korea opts for, would have implications for North Korea in general and the Korean

Since North Korea has tested its nuclear weapons for four times, it is essential to institutionalize its nuclear weapons with stronger command and control to avoid the accidental use of nuclear weapons. Proper institutionalization of North Korean nuclear weapons program would prevent their deterrence forces and their related materials from falling in the wrong hands. Both China and Russia are close allies of North Korea and can assist North Korea towards this essential part of nuclear development program. Institutionalization of nuclear weapons program would help North Korea craft a better strategy in terms of using its nuclear weapons for political rather than military purposes. One can then predict well the kind of nuclear strategy North Korea would opt for and why. North Korea has the option to follow minimum deterrence and declare its program for defensive rather than offensive purposes.

The essentials of minimum deterrence predict that if North Korea retains the modest number, curbs on more nuclear weapons tests, stays defensive and restrains from using its deterrent forces, then this could be consistent with minimum deterrence. However, if North Korea, in its embryonic stages of deterrent force development, increases its deterrent forces, miniaturizes nuclear weapons, develops sophisticated

delivery systems, acquires an assured second-strike capability (nuclear submarine) and appears to be more offensive, then this may go beyond the general conceptualization of minimum deterrence. Apparently, North Korea is in active pursuit of the latter than the former and it might cross the essential contours of minimum deterrence, which in turn would have dire security implications for the Korean Peninsula.

As part of strategic implications of North Korean evolving nuclear capabilities, North Korea would put strategic pressures on South Korea and Japan to rethink their legitimate security interest in the region. That said, they could think of acquiring their own nuclear weapons for deterrence purposes. Given the increasing threats of North Korea with its missiles and nuclear weapons tests, it appears that it would trigger arms race in the region. Both South Korea and Japan, for example, could desire to acquire their own nuclear weapons capabilities since both of these states have the economic and technological wherewithal. They can quickly acquire nuclear weapons in a short period of time. However, the US as a patronage of nuclear security umbrella on its allies and partners may not allow both South Korea and Japan to acquire their own nuclear weapons as this would challenge the US self-proclaimed normative posture towards international non-proliferation regime. Also, the US would desire to maintain its own power projection being a superpower, thereby, would not allow its close allies and partners to acquire their own nuclear weapons which in turn may affect the spirit of the US extended deterrence. In addition, there can be more military exercises between the US and its Asian allies to provide a deterrence signalling to the North so that it does not pursue the offensive strategy and likely remains deterred. The US has recently conducted huge military exercises with the South Korea. The US conducts such types of military and naval exercises as part of its deterrence signalling strategy to deter the North from even taking the low-intensity aggression.