

## **North Korea's Evolving Nuclear Strategy under the Pretext of Minimum Deterrence: Implications for the Korean Peninsula**

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Little is known about North Korea's nuclear strategy. It is shrouded with greater ambiguity, which 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 under the conceptual essentials of minimum deterrence that North Korea would follow minimum deterrence. But under the pretext of minimum deterrence, it would have multiple options to opt for one or more types of nuclear strategies. However, each of these nuclear strategies would have strategic implications for North Korea in general and the Korean Peninsula in particular.

**Keywords:** North Korea, essentials of minimum deterrence, nuclear strategy, ROK-U.S., Korean Peninsula

### **Introduction**

Along with a factor of regime survival, North Korea went nuclear to deter the security threats Pyongyang thinks emanate from the U.S. and its nuclear security guarantee to South Korea. Security factor for North Korea going nuclear remains a predominant factor. In the early 1950s, Kim Il-sung stated, "Although the U.S. is threatening our country with nuclear bombs, it does not affect our people's will to fight the U.S. for retaining freedom and independence."<sup>1</sup> Pyongyang

also considers the U.S. nuclear umbrella over South Korea a nuclear threat.<sup>2</sup> In addition to this, the 2002 U.S. Nuclear Posture Review (NPR) clearly indicated North Korea as an “axis of evil” along with Iran and Iraq, which gave the U.S. a pretext for preemptive strikes. These instances indicate that North Korea perceived a serious security threat, which motivated Pyongyang to develop nuclear weapons.

It has been more than two decades that North Korea nuclear drama has persisted. 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 “legitimate self-defense measure.”<sup>3</sup> North Korea withdrew from the NPT in 2003 indicating that it had already given a three-month advanced notice a decade before, and 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 countries. The U.S. and other major parties to the NPT and the six-party talks failed to stop North Korea from acquiring nuclear weapons capability, which North Korea tested in 2006, 2009 and 2013.

In addition to these successful nuclear 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 range missiles. North Korea claims to have acquired missile capabilities that could not only hit the U.S. bases in the East Asian region, but could also threaten to hit U.S. homeland. Besides these

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1. Kim Il-sung, “Report for the 6th Anniversary for the Liberation (August 14, 1951),” *Kim Jong-il Seonjip* [Kim Il-sung Works], vol. 6 (Pyongyang: Workers Party of Korea Publishing, 1980), p. 429.
  2. Kwon Hyuk-chul, “Paradox of Extended Deterrence,” *The Hankyoreh*, June 17, 2009.
  3. “Statement of DPRK Government on Its withdrawal from NPT,” Korean Central News Agency (KCNA), January 10, 2003.

strategic force developments, the DPRK is rapidly obtaining other deterrence capabilities such as the KN-08 Transporter Erector Launcher, anti-ship cruise missile modeled on the Russian KH-35 Uran, the Rodong mid-range ballistic missiles build on scud technology, deterrence force miniaturization, submarine-launched ballistic missile (SLBM) for a 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 U.S. and its close ally, the Republic of 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 better comprehend 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 deeply shrouded by ambiguity. There is no North Korean official documentation that substantially explains 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

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4. Richard Weitz, “The South Korean-U.S. Nuclear Alliance: Steadfast and Changing,” *The Korean Journal of Defense Analysis* 27, no. 3 (2015), pp. 401-402.
  5. The U.S. President Bill Clinton used the phrase “nuclear flash point” 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 and James Risen, “A Nuclear War Feared Possible over Kashmir,” *The New York Times*, August 8, 2000.

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 counter-value or counter-force targeting; will they rely on the third party role at the time of conflict or they could increase overreliance 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 conceptual and structural ingredients with regard to broader contours of nuclear strategy a nuclear weapons state needs to strategize in order to prevent accidental or inadvertent use of nuclear weapons.

Despite the DPRK's open testing of three nuclear weapons in three different 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 encompasses when it comes to its evolving nuclear strategy, it does not mean the DPRK would not have a command and control system or strategy for its deterrence forces. The Waltzian logic on the developing states is that these states in possession of nuclear weapons would be rational and responsible towards taking good care of their weapons preventing them from either falling into the wrong hands or being accidentally used during the conflict given the nuclear learning from the predecessors during the classic nuclear age between the Soviet Union (Russia) and the U.S. However, the Saganian conceptual logic casts quite a pessimistic picture that these developing states in possession of nuclear weapons may not be rational and responsible and there exists a danger of the nuclear weapons use during both peace and conflict time.<sup>6</sup> This unending debate continues.

Until the DPRK officially declares its nuclear policy substantially, the contemporary scholarship would have different interpretations on its nuclear strategy. Some would argue that it acquired nuclear

weapons for the protection of the regime; others may presume that North Korea would strategize to use its nuclear weapons for blackmailing purposes and materialize them as a bargaining chip for diplomatic and economic gains; still, others would state that the DPRK could opt for a *catalytic* nuclear strategy in which it could enjoy the third party patronage 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-U.S. 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. None of these essential readings have tested the theoretical framework on the essentials of minimum deterrence that could predict well the DPRK's evolving nuclear strategy.

All these proposed nuclear strategies could fall within the broader contours of minimum deterrence the DPRK might declare as its nuclear policy to be. Based on these essential readings, this article goes beyond and predicts that the DPRK would follow minimum deterrence. However, the North Korean regime may not define what minimum would stand for, how many it would need, and how many it could suffice for its security purposes. Under the pretext of minimum deterrence, the DPRK would increase its deterrence forces and make its deterrence much more broad based, pretending to meet the challenges of changed security environment. The DPRK's evolving nuclear strategy under the minimum deterrence would still remain ambiguous, which in turn would bring security challenges for the Korean Peninsula. To understand North Korea's evolving nuclear strategy under the pretext of minimum deterrence, it is important to revisit the conceptual essentials of minimum deterrence the North Koreans might look and opt for.

6. 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).

### Essentials of Minimum Deterrence<sup>7</sup>

The concept of minimum deterrence was developed during the Cold War period when on the one hand, the U.S. and the former Soviet Union/Russia were rapidly expanding their deterrent forces to inflict unacceptable damage against each other, but on the other hand, the world of critics established an idea of minimum which revolves around a few survivable nuclear forces.<sup>8</sup> These lowest numbers of nuclear forces could inflict unacceptable damage. Few went further to note that the use of one nuclear weapon could be unacceptable to the adversary. The minimum provided an idea that the adversary's attacks could be prevented with the fewest number of nuclear weapons possible. In other words, minimum could deter and there was absolutely no need for building more. Indeed, force structure build-ups, the operationalization and declaratory policy orientation of deterrent forces are required at the minimum level. Minimum deterrence is a complex conceptual phenomenon. The minimum based on "the lowest level of damage ... with the fewest number of nuclear weapons"<sup>9</sup> permits a number of interpretations regarding the precise nature of that particular level of damage and/or number of warheads. A long-forgotten concept of minimum deterrence existed

7. For interesting and detailed account on essentials of minimum deterrence, see, Rajesh Basrur, *Minimum Deterrence and India's Nuclear Security* (California: Stanford University Press, 2006); also, see, Zafar Khan, *Pakistan's Nuclear Policy: A Minimum Credible Deterrence* (London: Routledge, 2015).

8. For interesting account on this perspective, see, Patrick Blackett, "A Critique of Defence Thinking," *Survival* 3, no. 3 (1961), pp. 126-134; Patrick Blackett, *Studies of War: Nuclear and Conventional* (London: Oliver & Boyd Publications, 1962); Anthony Buzzard, "Massive Retaliation and Graduated Deterrence," *World Politics* 8, no. 2 (1956), pp. 228-237; Anthony Buzzard, "Defence, Disarmament and Christian Decision," *Survival* 3, no. 5 (1961), pp. 207-219; Anthony Buzzard, John Slessor, and Richard Lowenthal, "The H-Bomb: Massive Retaliation or Graduated Deterrence," *International Affairs* 32, no. 2 (1956), pp. 148-165.

9. Peter Gizewski, *Minimum Nuclear Deterrence in a New World Order*, Aurora Papers 24 (Ottawa: Canadian Centre for Global Security, 1994), p. 2.

in the U.S. during the early stages of the Cold War when the U.S. Navy claimed to destroy "all of Russia" with 45 submarines and 720 warheads<sup>10</sup> and this may still be interpreted as minimum compared with the hundreds and thousands built in the later phases of the Cold War. British, French, and Chinese notions of minimum deterrence remain modest.<sup>11</sup> Both India and Pakistan also officially declare credible minimum deterrence. Despite the simplicity of the term minimum deterrence, these nuclear states find it hard to define what it means by minimum. Given the complexity, how best can the basics of minimum explain the minimum deterrence?

First, after the use of nuclear weapons in Hiroshima and Nagasaki, nuclear weapons states learnt a lesson from the military use of nuclear weapons. Given the destructive characteristics of nuclear weapons, it was decided that these are other types of weapons and they must never be used militarily in the event of a crisis. Therefore, the political aspect was prioritized which supports the minimalist nature of deterrence to achieve the political objectives. The political aspect entails: the less the deterrent forces and the less we rely on them, the better.

Second, the idea behind a political priority of deterrent forces was that these forces could cause an unacceptable destruction. Risk is the starting point in elaborating the basics of minimum deterrence, which remains central to nuclear deterrence. The fear and risk of the nuclear weapons use deter the adversary from starting a war. At the minimalist level, risk centrally focuses on the idea that there is no "probability of victory" and rather the adversaries may confront the "possibility of annihilation." Minimum highlights that risk is associated with the use of nuclear weapons and it would cause more damage than create benefit. Central to fear and risk of the nuclear weapons use, states are deterred from waging a war. Risk and the fear associated

10. Ibid, pp. 2-3.

11. Avery Goldstein, *Deterrence and Security in the 21st Century: China, Britain, France, and the Enduring Legacy of the Nuclear Revolution* (Stanford: Stanford University Press, 2000); John C. Hopkins and Hu Weixing eds., *Strategic Views from the Second Tier: The Nuclear Weapons Policies of France, Britain, and China* (London: New Brunswick, 1995).

with the nuclear weapons use have a close link with the “existential deterrence” where the mere existence of nuclear weapons could deter the adversary from waging a war in the first place.

Third, if risk is the starting point to elaborate the basics of minimum deterrence, then a few, not more, are enough to deter. The phenomenon associated with the “few” or “small” deterrent forces can be interpreted as that few can deter. Powerful nuclear weapon states with bigger and sophisticated delivery systems have been deterred by smaller nuclear weapon states. The U.S. in the Cuban Missile crisis in 1962 and the former Soviet Union (now Russia) in the Sino-Soviet border conflict were deterred by small nuclear forces.<sup>12</sup> Similarly, the smaller numbers of nuclear forces of Pakistan and India deterred each other from waging a full-scale war during both the Kargil crisis in 1999 and the 2001-2002 border confrontation.<sup>13</sup>

Fourth, although the Cold War-type deterrence was based on bigger sizes, technological sophistication, and greater number, these are discouraged at the minimalist level. Since it is viewed that nuclear weapons are not used for war-fighting purposes and, therefore, should not be militarily prioritized, bigger sizes and expensive technological sophistication are discouraged by the basics of minimum deterrence. The bigger sizes and larger number of deterrent forces matter little at the minimalist level, but the survivability of a small number of forces can be deterring which may help build a second-strike capability in an exchange for a Triad (strategic bombers, ICBMs, and SLBMs). The bigger sizes and large number of nuclear forces encourage arms competition between the two adversaries and create difficulty in the command and control posture. The smaller the nuclear weapons, the easier they can be hidden, and the quicker it can be assembled if it absolutely needed to ensure the credibility of

12. Rajesh Rajagopalan, *Second Strike: Arguments about Nuclear War in South Asia* (New Delhi: Viking, 2005), pp. 89-106.

13. Rajesh Basrur, *Minimum Deterrence and India's Nuclear Security*; Rajesh Basrur, “Nuclear Deterrence Thinking in Pakistan,” in *International Relations Theory and South Asia*, vol. II, E. Sridharan (ed.) (New Delhi: Oxford University Press, 2011), p. 107.

nuclear deterrence. The bigger the sizes of deterrent forces, the harder the command and control system would be, and the more difficult it becomes to conceal and disperse.

Fifth, minimum deterrence requires, recalling the always/never taxonomy, that deterrent forces should never be used when they are not needed and should always be under the command and instructions of the political leaders when absolutely needed in order to induce the credibility and survivability of nuclear weapons from an accidental use of nuclear weapons. However, the essence of minimum deterrence prioritizes the political aspect of nuclear deterrence. It encourages the dispersal and concealment of nuclear forces. The deployment at the forward-edged position is discouraged which permits the risk of pre-delegation and force protection. Delegation of launch authority is critiqued. Minimum deterrence encourages a centralized command and control to avoid these worries of deterrent forces. Minimum also urges that deterrent forces be kept at the disassembled state to avert the misuse of nuclear weapons.

Sixth, the essence of minimum deterrence urges the arms control and disarmament process to reduce the danger of arms race and the possibility of nuclear weapons use. At the minimalist level, the process of arms control and disarmament discourages the salience of nuclear weapons and helps reduce the risk of military escalation to the nuclear level.

In summary, minimum deterrence requires little to deter. A few survivable numbers of deterrent forces have deterred states with bigger number and larger and sophisticated delivery sizes during the Cold War period. There is no reason why it may not deter in the present era. The mere existence and the centrality of the risk and fear associated with the nuclear weapons use induce the credibility and prioritize the political and psychological prospect of deterrent forces. This brief theoretical explanation helps elaborate whether or not the presumed DPRK's policy of minimum deterrence, if it chooses to do so, and its salient features bolstered with the strategic force increase are consistent with minimum deterrence conceived in this article. Under this conceptual theoretical framework, it examines North Korea's emerging

strategic force architecture and its consistency with the minimum deterrence conceptualized in this article. The following section examines various deterrence policy options available for the DPRK, and amongst these policies options it attempts to find out what North Korea would opt for and why.

### **Deterrence Policy Options for North Korea**

There are various deterrence policy options North Korea might opt for, which in turn would assist its doctrinal posture it chooses. It may vary from one particular strategic situation to another depending on where the North Koreans find themselves. North Korea could adopt the flexible approach — that is, opting for either one or multiple deterrence policy choices to meet its strategic and political goals. It would be interesting to observe closely as to what policy options the North Korean would opt for and why. More research work need to elaborate further on this aspect, but ambiguity would rule within these possible options and each one would have strategic implications for the East Asian region in general and the Korean Peninsula in particular.

#### ***Deterrence via Assured Destruction***

This particular deterrence option remains very expensive and expansive for North Korea given its lack of technological wherewithal and staggering economic condition. It would require a bigger and larger number of strategic, conventional, and tactical forces that would put extreme pressure on the DPRK's command and control mechanism and leadership. It would require many personnel loyal to the DPRK's leadership; it would demand many delivery systems; it could provide incentive for a first strike capability to an immature Pyongyang's nuclear leadership which in turn could increase the risk of an accidental use of nuclear weapons; and it could endanger the DPRK's regime survival as lots of public funds could then be diverted for the maintenance

of North Korea's enlarging strategic forces with many delivery systems. Only two states during the peak of the Cold War (i.e., the Soviet Union and the U.S.) possessed the technological and economic capacity to uphold such a deterrence policy option, but later they started to realize that it was a mad and unnecessary "overkill" strategy with which no power could win and/or sustain forever. The strategy based on mutual assured destruction turned to a dead end of nuclear strategy during the Cold War era.<sup>14</sup> Given all these risks associated with this policy option, North Korea would not possibly opt for this kind of overkill strategy which could result in a spillover on its deterrence forces.

#### ***Limited Deterrence***

North Korea could opt for this policy option, as this remains "affordable," but it would still cost North Korea a lot, given the poor economic condition, economic sanctions and lack of technological advancement. China may be considered a classic case in practice of limited deterrence.<sup>15</sup> Limited deterrence would "require sufficient counterforce and counter-value tactical, theatre, and strategic nuclear forces to deter the escalation of conventional or nuclear war. If deterrence fails, this capability should be sufficient to control escalation and to compel the enemy to back down."<sup>16</sup> This may be termed as a restricted version of assured destruction that tends toward the sufficiency of deterrence forces covering all essential areas of force structure.<sup>17</sup> However, the operationalization of this deterrence concept may require some configuration of ballistic missile defense system and effective space-based early warning capabilities.<sup>18</sup> North Korea in the embryonic stages

14. Lawrence Freedman, *The Evolution of Nuclear Strategy* (London: Palgrave, 2003), pp. 331-334.

15. Alastair Iain Johnston, "China's New Old Thinking: the Concept of Limited Deterrence," *International Security* 20, no. 3 (1995/1996), pp. 5-42.

16. *Ibid.*, p.1.

17. Basrur, *Minimum Deterrence and India's Nuclear Security*, pp. 26-27.

18. Johnston, "China's New Old Thinking," p. 20.

may acquire some of these strategic forces. However, it has not yet obtained other sophisticated deterrence force capabilities the Chinese could have already developed. Idealistically, this policy option might be affordable for the North Koreans, but Pyongyang may not opt for this at its initial stages of nuclear development program.

### **Virtual Deterrence**

North Korea may no longer fall in this type of deterrence as it has already acquired nuclear weapons capability and tested this capability by conducting three nuclear weapons tests. However, North Korea could have practiced this type of deterrence in the early 2000s when it could have achieved nuclear capability, but was not ready to test. Both recessed and non-weaponized deterrence fall within the ambit of virtual deterrence — that is, state either has acquired nuclear weapons and/or has the technological and economic capacity to acquire nuclear weapons quickly, but there is an absence of nuclear weapons tests. Both India and Pakistan practiced virtual nuclear deterrence in the 1980s. Japan is a classic example as a state in practice of virtual deterrence because it has the economic and technological wherewithal to acquire nuclear weapons quickly.

### **Opaque Deterrence**

Under this particular policy of deterrence, state does not officially declare that it possesses and deploys nuclear weapons even though it could have already achieved the nuclear capability. In this type of deterrence, state does not announce that it has nuclear weapons; it does not deploy its nuclear weapons; it does not test; and it does not declare any official statement on the possession of deterrence forces. Things remain shrouded deep in secrecy with no public debate on the deterrence forces. Israel is a classic example in practice of nuclear opacity.<sup>19</sup> Although North Korea has already tested its nuclear

19. See, Bradley A. Thayer, "The Causes of Nuclear Proliferation and the Utility

weapons capability and many ingredients with regard to its nuclear strategy are not yet clear, it no longer stays in opaque deterrence. In other words, North Korea is no longer an opaque nuclear weapon state despite the greater and increasing amount of ambiguity around its nuclear weapons program and the policy it could opt for.

### **Primary Deterrence**

Primary deterrence is a policy option where a nuclear weapons state protects its own homeland by projecting its deterrence power capabilities. It is different from the extended deterrence the U.S. largely practiced and is still practicing to deter the aggressions of other adversaries by means of protecting its allies and partners. However, many in Europe questioned the nuclear guarantee under the banner of extended deterrence whether or not the U.S. could sacrifice Washington or California for London or Paris. Therefore, both France and Britain went nuclear to avert their suspicion of nuclear umbrella erected on them. Each nuclear weapons state basically practices primary deterrence. North Korea is a state in practice of primary deterrence believing that its nuclear weapons could protect Pyongyang's political regime. Based on this assumption, Pyongyang could use nuclear weapons if it is attacked.<sup>20</sup>

### **Minimum Deterrence**

The concept of this policy option existed during the peak of the Cold War where on the one hand, both the Soviet Union (Russia) and the

of the Nuclear Non-Proliferation Regime," *Security Studies* 4, no. 3 (1995), pp. 463-519; Avner Cohen, *Israel and the Bomb* (New York: Columbia University Press, 1998).

20. For interesting analysis on this see, Terence Roehrig, "North Korea's Nuclear Weapons Program: Motivations, Strategy and Doctrine," in *Strategy in the Second Nuclear Age: Power, Ambition, and the Ultimate Weapon*, Toshi Yoshihara and James R. Holmes (eds.) (Washington: Georgetown University Press, 2012), pp. 81-98.

U.S. acquired a number of nuclear forces along with sophisticated delivery systems, but on the other hand, the critics provided an alternative policy option, which was to propose minimum deterrence that could have deterring effects, too. It is observed if few could deter, why to go for more. China, France, and Britain follow the modest number of deterrence forces. India and Pakistan also practice minimum deterrence and they elaborate through their official statements every now and then that they practice minimum deterrence. Also, both the U.S. and Russia have long been getting away from the Cold War mad race in terms of reducing their numbers. But the minimum deterrence and/or the modest number of each powerful nuclear weapons state may not be applicable, say, on South Asia. The minimum practiced by one state may differ from the minimum practiced by other state. The language of minimum is simple, but the treatment is complex. Although there is no substantial official declaration that North Korea practices minimum deterrence, it can be observed that North Korea possesses a modest number of deterrence forces. North Korea may claim to follow minimum deterrence,<sup>21</sup> but under the pretext of minimum deterrence it could keep bigger ambiguity and complexity by going for more nuclear weapons, conventional forces and low-yield nuclear weapons bolstered with various types of delivery systems, which in turn could change the contours of minimum deterrence in the East Asian region.

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21. The word minimum is very simple to pronounce, but it gets complex when a scholarship is required to define the term. The treatment of the minimum may differ from one nuclear weapons state to another. However, the more one gets for a definition, the more complex it becomes to define and the harder it becomes to understand the language of minimum. The least possible answer to this could be that minimum does not remain fixed; it is not a fixed entity; it is an open and flexible term; and it changes in accordance with the changed strategic environment.

### The Pretext of Minimum Deterrence

Amongst many deterrence policy options available to North Korea, it could follow minimum deterrence as a broader contour of its nuclear policy, though ambiguity would play a central role within this and the North Korean security establishment could never define the parameters of minimum deterrence nor they could be able to treat the language of minimum well.

The best conceptual interpretation the DPRK could have regarding the concept of minimum deterrence would be: 1) minimum deters. Minimum is better. Minimum is safer; 2) Also, minimum does not remain static; 3) it is not a fixed term; 4) it changes in accordance with the changed strategic circumstances; 4) today's minimum, may not be the minimum for tomorrow; 5) the minimum deterrence forces vary from one nuclear weapons state to another depending on the threat perception one carries; 6) the minimum one holds could be affected by the minimum of other. In other words, it may be directly proportional to what the other side is strategizing and why; and 7) the concept of minimum, though simple, cannot tell how much is enough and why many more within the imperatives of minimum may be needed to survive and sustain the credibility of deterrent forces.

North Korea's policy option of minimum deterrence would be vague, ambiguous and complex. Nevertheless, North Korea could then have multiple options to practice nuclear strategy within the broader contours of minimum deterrence. The following section will have a look at various alternative options North Korea might adopt under the broader context of minimum deterrence and find out whether or not each of these nuclear strategies would remain consistent with the essentials of minimum deterrence perceived here.

### Alternative Nuclear Strategies under the Minimum Deterrence

Nuclear weapons states adopt various combinations of nuclear strategies in accordance with the changed strategic environment. During the Cold War period, the U.S. 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 lived in.

As part of nuclear learning, North Korea may not necessarily adopt any single form of nuclear strategy, but it could have more than one set 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) pretending itself to be a mad country that could threaten to use nuclear weapons at any time with means of its own choice, 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 depend much on the strategic environment. These could be concessionary nuclear strategy, catalytic strategy, asymmetric strategy, and 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 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 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 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>22</sup>

Given the success of concessionary nuclear strategy at the domestic level, the DPRK's nuclear leadership would materialize the similar type of strategy at the regional level to seek economic benefits. After North Korea's nuclear weapons tests, the trade volume and maximum economic trade attraction between the rival Korean states have further increased from USD 140.5 million in 2008 to USD 165.6 million in 2010.<sup>23</sup> 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.<sup>24</sup> Despite the economic sanctions by the U.S., the humanitarian assistance continues to flow. North Korea successfully attracts the humanitarian aid from both the U.S. and South Korea despite North Korea going nuclear. This trade volume tends to increase up to USD 14 million. Besides, North Korea also seeks energy assistance from countries such as Russia, China, Japan, South Korea and the U.S.<sup>25</sup> North Korea would show its madness and present bellicose rhetoric to use nuclear weapons against South Korea. 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 madly without necessarily using its

22. See, Ahn Mun Suk, "What is the Root Cause of the North Korean Nuclear Program," *Asian Affairs: An American Review* 38, no. 4 (2011), pp. 175-187.

23. See, Lee Dong Sun, "Causes of North Korean Belligerence," *Australian Journal of International Affairs* 66, no. 2 (2012), p. 114.

24. For a brief, but crisp account see, "In focus: North Korea's Nuclear Threats," *The New York Times*, April 16, 2013.

25. See, Mark E. Manyin and Mary Beth D. Nikitin, "Foreign Assistance to North Korea," (Congressional Research Service, April 2, 2014), pp. 3-6.

nuclear weapons. For success of this strategy, someone has to listen to the North Koreans in terms of meeting its economic demands. 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 test-fires or go for another nuclear test.

In addition, North Korea would use its nuclear weapons as a bargaining chip to strategically negotiate with the U.S. The DPRK would demand of the U.S. to disengage its security commitment in North-east Asia; remove its nuclear umbrella from South Korea; withdraw its military forces from the Korean Peninsula; and develop a U.S.-DPRK strategic relationship to the level of the ROK-U.S. alliance.<sup>26</sup> Also, North Korea would demand the light water nuclear reactors as part of the DPRK's concessionary strategy. The ROK-U.S. would have two options. One, they could ignore what the North Koreans signal. Second, they could put severe economic sanctions and encourage China to play its diplomatic and political role in prohibiting North Korea from conducting more missile and nuclear tests. China has recently stated that it would put economic sanctions if North Korea conducts another missile and/or nuclear weapons test.<sup>27</sup>

Although China is considered a close ally of the DPRK, China could play an important role for two important reasons: one, it does not desire a conflict at the Korean Peninsula which in turn could threaten its own economic and security interests. Second, being a rising regional economic power and as an essential part of the six-party talks towards Korean nuclear issue, the international community would expect China to keep a closer eye on North Korea's assertiveness and deter North Korea from initiating a conflict. Concessionary nuclear strategy may provide North Korea with short-term economic and political benefits, but it can prove to be dangerous in the long term as

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

27. See, Christopher Bodeen, "China to Respond Firmly to Any North Korea Nuclear Test," *Army Times*, September 18, 2015.

the major powers may get weary of North Korea's insane strategy and provide no more concessions. Its failure could cause the DPRK's over-reliance on the third party intervention, which Vipin Narang names "catalytic nuclear strategy."<sup>28</sup> However, this type of nuclear strategy has got implications for North Korea.

### **Catalytic Nuclear Strategy**

Catalytic nuclear strategy would require a third party intervention in order to avert a nuclear crisis and meet the demands of the states practicing this type of strategy. A nuclear weapons state practicing catalytic strategy would threaten to use its nuclear weapons against the adversary in order to draw the attention of the third party whose interest in that particular region is sufficiently very high, and who, in turn, would desire the effect of de-escalation.<sup>29</sup> A third party with greater economic and strategic interests is likely to intervene 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 practicing 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 economic and political purposes. Narang's thesis identifies at least three states that practiced catalytic strategy — that is, South Africa and Pakistan during the 1980s and Israel from 1967 through to 1991.<sup>30</sup>

This type of nuclear strategy remains consistent with the minimum deterrence, as this does not require a greater number of nuclear forces along with the sophisticated delivery systems. Few nuclear weapons would suffice to attract the third party attention to the crisis because of the fear of a conflict transforming to nuclear escalation.<sup>31</sup>

28. Vipin Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict* (Princeton: Princeton University Press, 2014), pp. 13-54.

29. For interesting analysis on this see, Vipin Narang, "Nuclear Strategies of Emerging Nuclear Powers: North Korea and Iran," *Washington Quarterly* 38, no. 1 (2015), pp. 75-77.

30. *Ibid.*, p. 77.

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 in staying alive. Narang states, "One possible North Korea 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>32</sup> While playing out the catalytic nuclear strategy, North Korea secures high confidence against the stronger opposition in the form of ROK-U.S. alliance. North Korea keeps a strong belief that "catalytic strategy is necessary to ensure Beijing protects it — at least diplomatically — against the United States."<sup>33</sup> China intervened and urged both the ROK-U.S. and North Korea to show restraint after the *Cheonan* and *Yeonpyeong* incidents.<sup>34</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 intervention at the time of crisis would make this strategy risky. This could increase the chances of inadvertent use of nuclear weapons.<sup>35</sup> Therefore, China, because of its own security dilemma, could warn Pyongyang not to carry out *Cheonan*- and *Yeonpyeong*-like adventurism, which could have spillover effects on China.<sup>36</sup>

Since minimum deterrence does not remain consistent and fixed, North Korea practicing catalytic nuclear strategy consistent with the minimum deterrence may not consider this type of nuclear strategy a fixed entity. It could change depending on the patronage mode of relationship. First, as long as North Korea remains successful in

31. Shane Smith, "North Korea's Evolving Nuclear Strategy," (US-Korea Institute at SAIS, August 2015).

32. Narang, "Nuclear Strategies of Emerging Nuclear Powers," p. 84.

33. Ibid. p. 84.

34. Nam Jong-ho, Choo Jae-woo, and Lee Jang-won, "China's Dilemma on the Korean Peninsula: Not an Alliance but a Security Dilemma," *Korean Journal of Defense Analysis* 25, no. 3 (2013), p. 391.

35. See, Paul Kapur, *Dangerous Deterrence: Nuclear Weapons Proliferation and Conflict in South Asia* (Stanford: Stanford University Press, 2007).

36. Nam, Choo, and Lee, "China's Dilemma on the Korean Peninsula," p. 395.

ensuring the Chinese patronage during the crisis for its economic and political gains, the DPRK's may not go for more nuclear weapons and missile tests. Second, the Chinese abandonment of North Koreans could encourage the DPRK to increase its deterrence forces bolstered with sophisticated delivery systems, which in turn would cause greater security implications on the Korean Peninsula. Therefore, the U.S. would desire China to play a significant role in terms of putting strategic pressure on North Korea to show restraint.<sup>37</sup> The current intention of North Korea for more nuclear weapons test and plans for acquiring sophisticated delivery systems such as ICBMs, nuclear submarine, and miniaturization of nuclear weapons indicate a shift in North Korea's nuclear strategy, which would drive it for first use of nuclear weapons (over reliance on deterrence forces) Narang calls the "asymmetric escalation." Adopting this type of strategy would make North Korea more aggressive against the ROK-U.S. conventionally stronger side and this would make Korean Peninsula scarier. Will North Korea opt for an asymmetric strategy willing to use its nuclear weapons first in the early stages of war?

### **Asymmetric Nuclear Strategy**

Nuclear weapons states adopt this type of nuclear strategy to offset the conventional superiority of the adversary in terms of using their nuclear weapons 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.<sup>38</sup> North Korea has already expressed that it

37. "North Korea: U.S. Urges China to Help End Crisis," *The Sky News*, April 14, 2013.

38. For a speculative but interesting analysis see, Peter Hayes and Roger Cavazos, "North Korea's Nuclear Force Roadmap: Hard Choices" (Nautilus Institute for Security and Sustainability, March 2015).

would not only go for more nuclear and missile tests, but also use them if necessary to deter the U.S. In March 2015, DPRK Foreign Minister Ri Su-yong declared that Pyongyang has the capability to deter the “ever increasing nuclear threats” of the U.S.<sup>39</sup> Also, in September 2015, the director of North Korea’s Atomic Energy Institute said the country was ready to deter the U.S. hostility with “nuclear weapons any time.”<sup>40</sup>

With this type of nuclear strategy, North Korea confronts certain challenges. One, this would make North Korea increase its warheads along with the delivery system, 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, casting dire security implications on the Korean Peninsula. Three, this type of strategy that may not become consistent with the minimum deterrence 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. Very recently, North Korea has expressed that it had successfully tested the submarine launched ballistic missile (SLBM) that would provide Pyongyang with the incentives for asymmetric attack options and assured second-strike capability. Also, it expressed that it has already acquired the technology to miniaturize nuclear weapons.<sup>41</sup>

In addition, this strategy would need North Korea to make a stronger and complex command and control system, which may not be completely possible for North Korea given its economic and technological backwardness. In order to make its asymmetric deterrence

39. Reuters, “N. Korea Says has Power to Deter U.S. Nuclear Threat,” *Voice of America*, March 3, 2015.

40. Chris Irvine, “North Korea Threatens the U.S. with Nuclear Attacks,” *The Daily Mail*, September 15, 2015.

41. Weitz, “The South Korean-US Nuclear Alliance,” p. 403.

forces credible, it would need to acquire second-strike capability. It becomes more expensive for North Korea to achieve an assured second-strike capability, which in turn would encourage North Korea to use nuclear weapons at the early stages of conflict.<sup>42</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 first use of nuclear weapons especially when it chooses to adopt the asymmetric nuclear strategy.

There could be some possible scenarios in which North Korea could use nuclear weapons, though they may have ambiguities — that is, the drastic domestic upheaval, a radically deteriorating relationship between China and the DPRK, and the creation and spread of rebel forces within North Korea could not only threaten the survival of the DPRK’s regime, but also the safety and security of North Korea’s nuclear weapons. North Korea would then expect the ROK-U.S. forces to confront this chaotic situation and to get hold of the North Korean nuclear weapons before they fall in the wrong hands. In such a scenario, North Korea would be under tremendous strategic pressure to use nuclear weapons in the early stages of conflict.<sup>43</sup> Ham and Lee presume that since the survival of the Kim Jong-un regime becomes important for North Korea — for whose survival North Korea acquired nuclear weapons capability — it could use nuclear weapons against the domestic uprising, the rebel forces within North Korea, and/or targets. This is not a convincing argument.<sup>44</sup>

Each of these possible scenarios holds great ambiguity, which in turn complicates asymmetric nuclear strategy North Korea opts for. One, any use of nuclear weapons against the rebel forces within North Korea could not even ensure the regime’s survival as this type of war-fighting scenario would largely affect the North Koreans themselves including the credibility of its conventional forces that

42. Smith, “North Korea’s Evolving Nuclear Strategy,” pp.11-12.

43. For interesting analysis see, Ham Hyeongpil and Lee Jaehak, “North Korea’s Nuclear Decision-making and Plausible Scenarios,” *The Korean Journal of Defense Analysis* 25, no. 3 (2013), pp. 399-413.

44. *Ibid.*, pp. 405-406.

could have some deterring effects. Two, the possible scenario in which North Korea could use nuclear weapons in the early stages of war at the Korean Peninsula may not be a convincing argument because this could cause a sharp ROK-U.S. retaliation, which in turn may not be acceptable for North Korea. Nuclear weapons are not conventional weapons and they need not to be used for military purposes — that is, the very essence of minimum deterrence conceived here. North Korea could expect some form of the ROK-U.S. retaliation to cause unacceptable damages to North Korea and its regime if it uses nuclear weapons for military purposes. However, it could avoid such retaliation if North Korea does not threaten to use nuclear weapons, follow minimum deterrence and consider nuclear weapons as a political weapon for deterrence rather than for war-fighting purposes. North Korea may have learnt from vast strategic experiences of the Cold War era between the U.S. and the Soviet Union (Russia) where both sides did not use nuclear weapons although both sides were trying to acquire first strike capabilities and assign targets to their different categories of deterrent forces.

In addition, no nuclear weapons state sets fixed parameters for the use of nuclear weapons. The least possible reply one could get from nuclear weapons states is that these weapons could be used as a “last resort” and/or for security and deterrence purposes. There may be amalgamation of both military and political elements when it comes to nuclear weapons use, but the essentials of minimum deterrence teach North Korea not to consider these weapons as a war-fighting instrument. It is also not clear that nuclear weapons states with the first use option would necessarily use nuclear weapons in the early stages of war and/or strike first.<sup>45</sup> Therefore, it is not clear whether or not North Korea following the asymmetric strategy would use nuclear weapons in the early stages of war. It could have the incentive, but may not use nuclear weapons, which in turn could

45. For an engaging discussion on this see, Zafar Khan, “Pakistan’s Nuclear First Use Doctrine: Obsessions and Obstacles,” *Contemporary Security Policy* 36, no. 1 (2015), pp. 149-170.

invite a bigger military response by the ROK-U.S. This could then have broader strategic implications on other major powers bordering with North Korea such as China and Russia who may not desire a military escalation to nuclear level. 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 assured retaliation strategy demands that nuclear weapons states are unlikely to 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>46</sup> However, it is not clear whether or not a nuclear weapons state practicing assured retaliation would retaliate with nuclear weapons after being hit by advanced conventional forces.<sup>47</sup> For example, the U.S. advanced conventional force capability has created a dilemma for nuclear weapon states such as 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 practicing retaliatory nuclear strategy that they would at some point depart from no-first use nuclear option,<sup>48</sup> Chinese official White Paper still claims

46. Narang, “Nuclear Strategies of Emerging Nuclear Powers,” p. 77. Basically, this nuclear strategy guides a nuclear weapons state to opt for no-first use option; that is, it would retaliate after it is hit with nuclear weapons.

47. Andrew Futter and Benjamin Zala, “Advanced US Conventional Weapons and Nuclear Advancement: Why the Obama Plan Won’t Work,” *The Non-Proliferation Review* 20, no. 1 (2013), pp. 107-122.

48. 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.

to have NFU option supporting assured retaliation strategy.<sup>49</sup> India also follows assured retaliation strategy claiming minimum deterrence after it tested nuclear weapons in 1998.<sup>50</sup> It may not be necessary for a nuclear weapons state practicing nuclear retaliatory strategy to follow the NFU option. The United States followed strategy of massive retaliation during the early stages of Cold War against its adversary. It continued to keep the first use nuclear option, but this option required the U.S. to acquire multiple types of warheads and delivery systems.<sup>51</sup>

Even this type of nuclear strategy would require North Korea to increase its deterrence forces. For example, the International Atomic Energy Agency (IAEA) has observed the increased nuclear activities within North Korea nuclear site. This development comes after the North Korean leader Kim Jong-un asked the country to increase its deterrent forces despite the U.S. sanctions.<sup>52</sup> The assured retaliation nuclear strategy would require North Korea to acquire a second-strike capability, or at least some form of capability to strike back. 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

49. See China's Official White Paper on China's Military Strategy, The State Council Information Office of the People's Republic of China, May 26, 2015.

50. Swaran Singh, "India's Nuclear Doctrine: Ten Years since the Kargil Conflict," in *The Politics of Nuclear Weapons in South Asia*, Bhumitra Chakma (ed.) (London: 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); Basur, *Minimum Deterrence and India's Nuclear Security*; 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).

51. For an excellent historical reading on nuclear strategy see, Freedman, *The Evolution of Nuclear Strategy*, pp. 79-86.

52. Sneha Shankar, "IAEA Finds Increased Activity at North Korea Nuclear Reactor While Kim Jong Un Calls for More Nuclear Arsenal," *International Business Times*, October 6, 2015.

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 practicing these tactics for survivability of its nuclear forces under the umbrella of minimum deterrence could seek a second-strike capability without necessarily going for a nuclear submarine.

For example, Pakistan has deterred India in the past with its minimum deterrent forces in terms of practicing concealment and dispersal tactics without having a nuclear submarine (the assured second-strike capability).<sup>53</sup> 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-U.S. may not hit these forces because of the fear of its adverse effects on Russia and China bordering with North Korea.<sup>54</sup> If North Korea follows the assured retaliation strategy and keeps the first use option like the U.S. did during the peak of the Cold War, it would become extremely expensive for the DPRK to sustain. Besides, this type of amalgamated nuclear strategy would make North Korea appear aggressive and offensive, which in turn may not remain consistent with the minimum deterrence conceived here. However, if North Korea follows various tactics of survivability of its deterrent forces without necessarily going for an assured second-strike capability in the form of nuclear submarine, then this may appear defensive and support the essentials of minimum deterrence conceptualized here.

### Multiple Nuclear Strategies: Implications for the Korean Peninsula

Conceptually, every nuclear weapons state developed their nuclear weapons program with the minimum deterrence, which they could

53. Khan, *Pakistan's Nuclear Policy*, pp. 44-47.

54. Smith, "North Korea's Evolving Nuclear Strategy," p. 20. However, there is no concrete evidence to this in terms of satellite images.

not sustain later because of the complexity associated with the simple language of minimum. Amongst these recognized nuclear weapons states, China, France, and Britain self-proclaim to possess a modest number of deterrent forces. India and Pakistan also officially declare to follow minimum deterrence. Both the U.S. and Russia have been reducing the number of warheads and could at some point follow the context of minimum deterrence.<sup>55</sup> However, the minimum for these nuclear weapons states may differ from each other as each of these nuclear weapons states falls in a distinct strategic environment.<sup>56</sup> As part of a broader nuclear policy, North Korea could also claim to follow minimum deterrence, but could increase its deterrent forces gradually along with sophisticated delivery systems depending on the strategic environment. North Korea may not sustain minimum deterrence for too long and soon it would find itself within the changing contours of minimum deterrence demanding for more. "How much is enough?" is a complex question and may become difficult for North Korea to define particularly when it is in the embryonic stages of nuclear development program as it strives to acquire more.

Under the pretext of minimum deterrence, North Korea would have multiple options for practicing nuclear strategies, but each of these available nuclear strategies could have implications for North Korea in general and on the Korea peninsula in particular. One, although concessionary nuclear strategy makes sure the survival of the DPRK's political regime, this could result in a strategic spill over the regime itself when and if this type of strategy turns to be complex where North Korea military forces could use nuclear forces against the home-grown rebels before North Korea expects the U.S. and its allies to get hold of nuclear weapons.

Two, catalytic nuclear strategy may attract North Korea to practice

55. For an interesting analysis on the proposed minimum deterrence for the U.S. to adopt see, Keith B. Payne and James Schlesinger, "Minimum Deterrence: Examining the Evidence," *Comparative Strategy* 33, no. 1 (2014), pp. 2-103.

56. See, Keith B. Payne and John S. Foster Jr., "Nuclear Force Adaptability for Deterrence and Assurance: A Prudent Alternative to Minimum Deterrence," *Comparative Strategy* 34, no. 3 (2015), pp. 247-309.

for quite some time, having the strategic confidence in China to intervene as its close patronage to assist it in terms of achieving its political and diplomatic goals. Pessimistically, the third party intervention may not be guaranteed and as a result, North Korea could suffer by the credibility of its deterrence force being undermined, and it could threaten the security of the Korean Peninsula.

Three, the absence of a third party intervention makes North Korea adopt asymmetric nuclear strategy to use its nuclear weapons first at the time of conflict, but this is a scary strategy that makes North Korea rely on its deterrent forces and could openly threaten to use nuclear weapons in and across the Korean Peninsula. However, ambiguity would prevail and become the central part of North Korea strategy. Despite the asymmetric strategy, it would not be clear when, where, and how North Korea would exactly use its nuclear weapons. It would require transparency, but North Korea, like China and may other nuclear weapons states, may not display transparency and openness for obvious reasons.

Finally, following the assured retaliation strategy, North Korea would ensure the survivability of its deterrent forces by following the tactics of dispersal and concealment or it could acquire nuclear submarine. The strides for nuclear submarine for an assured second-strike capability would become expensive as this could require more warheads and it would encourage North Korea to first use nuclear weapons, though it may have the option to use nuclear weapons for retaliatory purposes, similar to what China and India officially maintain. Under the pretext of minimum deterrence, 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, North Korea would expect a ROK-U.S. strategic response.

First, the increased number of North Korea deterrent forces with various delivery systems would put a strategic pressure on South Korea to counter the emerging threat emanating out of North Korea

missiles productions. South Korea would have two options. One, it could withdraw from the NPT and go nuclear because of the serious threats from North Korea deterrent forces. Two, it may continue to rely on the consistent nuclear security guarantee the U.S. provides as part of its broader strategy of extended deterrence. On the first point, the U.S. would urge South Korea not to acquire nuclear weapons as other U.S. allies and partners would follow suit to meet their security interests, which in turn could affect the U.S. extended deterrence policy and its broader perspective of international non-proliferation efforts as part of the NPT. On the second point, the U.S. would be pleased to provide South Korea with defensive conventional force capability. Also, the U.S. 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>57</sup> The U.S. involvement and assistantship would be required to make the ballistic missile defense (BMD) system successful. In addition to this, the U.S. has also emplaced Aegis missile defense system to protect South Korea from incoming North Korean cruise missiles. Also, the ROK and the U.S. discuss the possible deployment of the U.S. Terminal High Altitude Area Defense (THAAD) system which could intercept the short, medium and intermediate ballistic missiles during the terminal stages.<sup>58</sup> 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.<sup>59</sup>

Third, there are increased ROK-U.S. joint military exercises from time to time to provide a deterring signaling to North Korea. These

57. Weitz, "The South Korean-US Nuclear Alliance," pp. 401-415.

58. Ibid. p. 407.

59. See, John Power, "Russia: Korean THAAD Deployment is a Security Threat," *The Diplomat*, April 2, 2015; Clint Richard, "X-Band and THAAD as Good as Anti-China Trilateral Defense Agreement?" *The Diplomat*, October 24, 2014.

exercises include advanced and modernized conventional forces to deter the possible low-intensity threats. North Korea has already exploited "the gray areas" such as the episode of the sinking of South Korea's *Cheonan* warship and the DPRK border shelling, which undermine the ROK-U.S. deterrence credibility.<sup>60</sup> To counter emerging threats at the low-intensity conflict, the U.S. would keenly be interested to strengthen its extended deterrence for its allies and partners in Asia. The U.S. 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 tabletop exercise (TTX) and South Korea and the U.S. have conducted 1.5-Track deterrence dialogue.<sup>61</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 on the Korean Peninsula.<sup>62</sup> The implications of North Korea going nuclear and its adoption of various combinations of nuclear strategies under the pretext of minimum deterrence are huge on the security architecture of Korean Peninsula. This could go worse amid the growing North Korea's nuclear ambiguity and absence of its nuclear institutionalization.

## Conclusion

Little is known about North Korea's nuclear policy and the operational strategy it would adopt as part of broader and increasing nuclear development program of the DPRK. Therefore, we would expect many speculative interpretations to predict 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

60. For interesting analysis, see, Van Jackson, "Raindrops Keep Falling on My Nuclear Umbrella," *Foreign Policy*, May 18, 2015.

61. Oh Seok-min, "S. Korea, U.S. to Stage Deterrence Drill Against N. Korea," Yonhap News Agency, February 10, 2015.

62. Patrick M. Cronin, "Time to Actively Deter North Korea," *The Diplomat*, June 25, 2014.

not been practiced by either major or smaller nuclear weapons states. There are lots of historical precedents on nuclear strategy for North Korea to opt for and refer to depending much on the prevailing strategic environment. With different perspective, this article has elaborated on the fact that North Korea could opt for a minimum deterrence as a broad-based nuclear policy and under the pretext of minimum deterrence, it would have multiple options to opt for to meet its security goals. We may not expect the North Korean security establishment to define what minimum would stand for and how many nuclear weapons would suffice North Korea's deterrence capability. Ambiguity will rule and play a central part within North Korea's evolving nuclear strategy. Each of these nuclear strategies North Korea opts for would have implications for North Korea in general and the Korean Peninsula in particular.

Since North Korea has tested its nuclear weapons three times, it is essential to institutionalize its nuclear weapons with stronger command and control mechanism to avoid the accidental use of nuclear weapons. Proper institutionalization of North Korea's nuclear weapons program would prevent their deterrence forces and related materials from falling in the wrong hands. Both China and Russia that are close allies of North Korea can assist North Korea with 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 lead us to predict that if North Korea retains the modest number of weapons, curbs on more nuclear tests, stays defensive and restrains from using 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 remain consistent with what is conceptualized here. Apparently, North Korea is in active pursuit of the latter rather than the former and it might encroach the essential contours of minimum deterrence conceived here, which would have dire security implications for the Korean Peninsula.

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