
India's Grand Nuclear Strategy: A Road Towards Deployment of Ballistic Missile Defence System

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Introduction

Since its announcement in the famous 'Star Wars' speech of the former president Ronald Reagan in 1982, the US has been heavily investing on the development and deployment of Ballistic Missile Defence (BMD) system both within the US and in Europe and Asia to protect its allies and partners from, what the US would call, the incoming rogue missiles from the so-called rogue states. The US development and extension of the BMD would certainly make China and Russia worry about their deterrence force credibility though. With the growing security concerns, both China and Russia would feel vulnerable unless the US tries hard to diplomatically convince the two strategic counterparts that these deployed defences are not developed against them. In the meantime, the US extended this partnership to India as part of the growing India-US strategic partnership. It would not only increase India's power potential in the South Asian region, but would also drift it away from its classic nuclear strategy and diplomacy conceptualized by its leadership earlier. In addition, it would dramatically change the security dynamics of South Asia in terms of increasing one state's security at the expense of the other. Moreover, India's deployed defences would become part of its grand nuclear strategy.

The advocates of the BMD argue that it would serve India's doctrinal posture in the following ways:

- It would enhance the credibility of its deterrent forces;
- It would make it secure and more confident to protect its major cities and strategic assets from the incoming missiles;
- India could also expect it to blunt Pakistan's declaratory doctrinal posture of first use of nuclear weapons;

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- The deployed defences could assure its security against terrorism and/or the threat of rogue missiles;
- The deployed defences would convince India about achieving its arms control and disarmament objectives in the region;
- It could support the credibility of India's massive retaliation; and
- The shield could make India look defensive and strengthen its no-first-use posture.

Conceptually, this article mainly argues that all of these assumptions are flawed as part of India's grand nuclear strategy in terms of what the deployed defences of India would expect to achieve.

This research paper argues that India's deployed defences would have diverse strategic effects in South Asia, and would not achieve what many proponents of the BMD argue. In addition to analyzing a few important works on India's deployed defences, this paper crafts a conceptual demonstration that would critically analyze the proposals that proponents of India's BMD present. There is little or no conceptual work that substantially demonstrates the flaws of the proponents of India's deployed defences. This paper conceptually treats these essential arguments and substantially elaborates how and why the proponents of India's deployed defences may not be too convincing and how this could emit diverse strategic repercussions in the South Asian region.

It begins with a brief discussion on India's development and deployment of the BMD system. It then analyzes the debate between BMD pessimism and BMD optimism in order to understand the central assertion: how and why the arguments presented by the proponents of India's deployed defences are unconvincing and flawed?

A road towards development and deployment of the BMD system

India initiated various missile developments in its broader missile technological programme dubbed as the Integrated Guided Missile Development Programme (IGMDP) in 1983 just when President Reagan delivered the 'Star Wars' speech to formally commence the Strategic Defence Initiative (SDI). The conceptualization for formally initiating India's indigenous BMD system by its Defence Research and Development Organization (DRDO) came in the 1990s though. The full scale development and deployment of the BMD began after India ultimately agreed to a broader strategic framework that would include US assistance to India for building its BMD system. Besides the French, Russian, and Israeli strategic partnership with India, the US assistance in this broader strategic domain gave it greater confidence to exploit the strategic opportunities available from all corners of the world. In possession of nuclear weapons, India's missile defence system becomes part of its grand nuclear strategy, which goes beyond the security orientation to a grandiose power projection in the South Asian region.

India has been actively pursuing a two-tiered missile defence shield:

- Prithvi Air Defence missile (PAD) to intercept the high altitude (exo-atmospheric) missiles;
- Ashwin Advanced Air Defence (AAD) to intercept the low altitude (endo-atmospheric) missiles.

It is estimated that this two-shield BMD system is supposed to intercept any incoming missile launched from 5,000 km away. India has been continuously conducting various PAD and AAD missile defence tests to enhance their credibility and meet the range requirements of the two missile defence systems for successful interception of incoming missiles. For example, PAD could intercept incoming missiles at the altitude of 50-80 km and AAD could intercept the incoming missiles at the altitude of up to 30 km. In support of these two missile defence layers, India requires various technological equipments such as radar systems, satellites, a number of launch vehicles, and launch control and mission control centres to help successfully deploy its BMD. India has acquired Green Pine radar from Israel as it failed to obtain Arrow-2 system because of Missile Technology Control Regime requirements. In addition to a successful development of fire control system and Swordfish tracking in collaboration with France and Israel, India is seriously working on obtaining Israel's Iron Dome missile system.¹ Furthermore, the DRDO has ambitious plans to integrate its BMD system with an array of geostationary satellites in order to monitor missile activities within a radius of 6,000 km.²

As India advances to mature its BMD system with greater assistance from the US and other countries such as Israel, Russia, and France, it claims to have successfully conducted various ballistic missile tests intercepting a variety of ranges of incoming missiles. Although India's claims are tall, it is yet to deploy and successfully operationalize a BMD mechanism to protect all of India and its strategic assets from incoming missiles. It is not completely clear whether or not India has really achieved such a magnificent BMD system that could 'hit to kill' all types of missiles, and protect all its major cities. Currently, India claims to protect only two important cities, i.e., New Delhi where India's political leadership sits, and Mumbai, India's economic nerve on which its commercial and economic activities depend.

However, there is a difference between the favourable simulation conditions during peacetime and the real crisis time where India's BMD could confront different and more challenging conditions.³ One malfunction could put the expensive defensive mechanism in jeopardy. The consequences could be unacceptable for India in general and for regional peace and strategic stability in particular. This fear pushes India to work hard on integrating innovative technologies with its BMD system to avoid malfunctions and failures, notwithstanding the costs. Sumit Ganguly argues, "India is still quite far from being able to deploy them in battlefield circumstances or during crisis conditions. Furthermore, it is not entirely clear whether India intends to develop its BMD capabilities to protect its major population centres, key installations, or other sites of strategic significance."⁴ This is discussed later. First, it is important to know the arrival of BMD in India and its ultimate acceptance for its defence. The following section would talk about the BMD system in India with

reference to the debate between BMD optimism and BMD pessimism. This is important to elaborate in order to understand the central argument of this paper, which follows this section.

The arrival of the BMD system: debating the optimism and pessimism

With the arrival of missile defence system in India, it seems to depart away from the classical Gandhian and Nehruvian principles of non-alignment, and arms control and disarmament. The need for missile defence system divided Indian experts into two camps: BMD pessimists and BMD optimists.

The BMD pessimism

The BMD pessimism calls attention towards the negative implications of the proposed BMD deployment for India, such as an arms race in the region, increase in India's security spending, strategic pressures on both China and Pakistan to counter its effects on their security, and driving India away from the normative principles of global arms control and disarmament its earlier leaders conceptualized. When the United States announced its SDI as a long-term programme for erecting missile shield for protecting its homeland, India opposed it as it disapproved of the various combinations of nuclear strategies the US and the Soviet Union crafted and played out during the Cold War. For India, the US National Missile Defence Programme would promote the "continuing arms race between the superpowers; a further movement away from the ideals of disarmament; increased pressure on its superpower patron, the Soviet Union; a potentially expanded nuclear threat from its key Asian rival China; and a threatening shift towards uni-polarity."⁵

India's earlier strategy clearly reflected its opposition to the BMD system of the US, but it continued to work on the military development of nuclear weapons. Despite India's efforts to correct its strategic partnership with the US that would gradually drift India away from the Non-Aligned Movement, Indian leadership opposed the US SDI programme in the 1980s. For example, the then Indian prime minister Indira Gandhi opposed the US SDI at the Thirty-Eighth Session of the United Nations General Assembly in 1983.⁶ The then Indian minister for external affairs P.V. Narasimha Rao was extremely blunt in expressing India's opposition to such framework of missile shield. He stated, "the extension of arms buildup to outer space would mean a permanent goodbye to disarmament and peace and [would] plunge mankind into a perpetual nightmare."⁷ In a similar context, the then Indian ambassador to the Conference on Disarmament, Muchkund Dubey, opposed the US president's proposed SDI and urged for negotiations on the prevention of an arms race in the outer space (PAROS). A decade later, PAROS became one of the essential elements of the Shannon Mandate proposing a framework for the Fissile Material Cut-off Treaty (FMCT).⁸ Ironically, India currently does not agree to what Shannon framed in 1995, i.e., an agreement on the existing fissile material that need to be eliminated.⁹

Even after India had acquired nuclear weapons and tested this capability in May 1998 in addition to its 1974 nuclear weapons test—which India proclaims to be a Peaceful Nuclear Explosion (PNE)¹⁰—the BMD pessimism continued in India attempting to reject the formal US assistance for developing India's missile defence shield. Through the lens of international opposition to the unilateral US attempt to abrogate the Anti-Ballistic Missile (ABM) Treaty¹¹ by deploying missile defence shield, many in India opposed what was going to be greater India-US strategic partnership, particularly introducing the missile defence shield in India. The US BMD was seen by many in India as a unilateral, reckless, and patent disregard for the international endeavours for a universal arms control and complete disarmament.¹² The US BMD was also seen as expensive, ineffective, and de-stabilizing for the region, as it would weaken the credibility of Russian and Chinese deterrence forces. Despite the sharp opposition to the emerging India-US strategic partnership on missile defence shield both within India and abroad, the new Indian leadership embraced the BMD framework after some initial confusion to facilitate India's drift away from the earlier normative principles of arms control and disarmament. So the BMD optimism prevailed in India as it ultimately committed to broader strategic partnership with the US on missile defence shield.

The BMD optimism

India's preference for an allied status, starting in 2000s, gradually helped India shed its baggage of the Non-Aligned Movement. This would prove to be a great shift in India's foreign policy. The BMD optimists argued that it would provide India security, enhance its deterrence stability, and help the arms control process in South Asia. The central argument of this camp was that India would benefit from striking strategic initiatives with developed countries, including the US, to build a defence shield that would secure India from incoming missiles and ultimately make India part of the would-be Global Missile Shield.

Former US presidents, Bill Clinton and George Bush, were interested in taking India on-board both to seek India's support for the US missile defence programme internationally and to provide an incentive to it for commencing its BMD system in the region. In the early 2000s, the US administration encouraged India on the initiation of this hallmark India-US strategic partnership. During former US president Bill Clinton's visit to India in March 2000, the then Indian prime minister Atal Bihari Vajpayee remarked that the two countries "have all the potential to become natural allies."¹³ This shift also reflected that India would be least bothered about the US abrogation of the ABM treaty in 2002. The then Indian defence minister Jaswant Singh's special adviser Arun Singh also expressed his support for the US strategic partnership on facilitating Indian BMD system for increasing strategic cooperation and technology transfer, which the so-called ABM treaty hindered. This strategic partnership would include India in the category of the 'legitimate nuclear weapons states'.¹⁴ Therefore, India realized that it was not to lose much from the

US departure from the ABM treaty; rather many Indians considered it an opportunity in the shape of the US recognition of India's nuclear legitimacy and its role in the increasingly globalized world. It was India's departure from its earlier conceptualization of a nuclear order.¹⁵ It would provide India "advanced military technology development, opening the door for joint technological development and data sharing."¹⁶ Moreover, many Indians ambitiously thought of the growing US-India strategic partnership in terms of assisting India to secure a permanent seat at the United Nations Security Council.¹⁷

To summarize: India's leadership, that initially opposed the US missile defence shield programme and its ultimate abrogation of the ABM treaty, later realized the importance of the US-India strategic partnership that would provide India incentives to meet its economic, political, and strategic goals. This is not merely a shift from India's traditional policy of Non-Aligned Movement based on the older nuclear order that called for arms control and disarmament between the major nuclear weapons states, but also reflects a shift in India's nuclear strategy in terms of embracing the missile defence system. The arrival of the BMD system in India—with its sophisticated cutting-edge technology—depicted India's grand nuclear strategy, which aspires to make India look bigger in terms of its security, prestige, and power projection in the South Asian region. But India's road towards deployment of both limited and extensive ballistic missile defence shield will have a greater strategic impact in the region. It is important to analyze why India actually pursues the BMD system. Do these dynamics—driving India towards a more extensive BMD programme—justify what India strategically conceptualizes? How could this logically and rationally embed within India's security parameters?

Conceptualizing the essential dynamics of India's BMD

There are several strategic dynamics that drive India to acquire the missile defence shield. The mere technological and organizational calculus with regard to one of India's most influential organizations—the DRDO—is not enough to explain why India goes for the BMD. Many Indians link the development and deployment of the BMD to strategic dilemma factors. Others think that with the deployment of the BMD, India would defend itself from incoming missiles, enhance its security, and strengthen its retaliatory nuclear strategy. They may also conceptualize that the BMD system would strategically support India's motives of arms control and disarmament both at the international and regional levels. Additionally, they argue that this could help India's traditional nuclear doctrinal posture of no-first-use, which in turn would blunt Pakistan's first-use nuclear option that it follows because of a growing conventional asymmetry between India and Pakistan. Some of these dynamics of India's missile defence are conceptualized next.

India's deployment of the BMD against accidental and unauthorized use, and terrorist attacks

It is argued that India's development and deployment of the BMD would protect its territory, and partially its strategic assets, against the accidental or unauthorized use and terrorist attacks when and if deterrence fails and India confronts a worst-case scenario. Many would think that it would be able to reduce the damage if any one of these eventualities takes place against India. For example, Rajesh Basrur opines that one of these attacks might come from Pakistan and its territory and India's BMD system would be able to reduce, if not completely eliminate, the danger.¹⁸

The importance of these arguments coming largely from India, however, would depend on the likelihood of such attacks, that is, these attacks might not take place against India from the Pakistani territory in the first place. There is no evidence that Pakistan has either lost control of its strategic assets or the terrorists have used its deterrence forces against India. Even the relative probability of such scenarios is extremely speculative with no empirical evidence. The terrorist attacks that occurred in India in the past were from within India, which it could have prevented by taking certain proactive counter-terrorism measures rather than necessarily erecting missile shield that may not forcefully address the complex issue of terrorism. The stringent export control measures and robust and centralized command and control of Pakistan's deterrence forces have further reduced such possibilities that India fears about. The international community actually acknowledges Pakistan's rigorous institutional and organizational measures in terms of safety and security of its forces.

There is also a lesser possibility that these scenarios might occur from China. Since the short 1962 China-India border war, both the countries have been trying to resolve their border issues amicably and improve economic ties. In fact, economic integration between India and China is growing today, which in turn reduces the chances of these speculative scenarios. The commonalities within their nuclear strategies such as the no-first-use official doctrinal posture, massive retaliation, and credible minimum deterrence further avert such possibilities. But the deployment of India's BMD system could create complications between China and India at some point in future.

Therefore, the argument that India's deployment of the BMD system is against these scenarios does not hold, since the probabilities of such attacks are slim. In this context, India's BMD system would not make significant difference. The lower the possibility of such attacks on India in the absence of BMD, the smaller is the need for such a shield to protect it. What India could do is to revisit its normative posture of universal arms control and disarmament to address such issues.

India's deployment of BMD could ease its past frustrations and blunt Pakistan's first-use nuclear option

Being frustrated both in the Kargil episode in 1999, as well as in the 2002-03 standoff because of the fear of nuclear escalation, some Indians would

want BMD to decrease the likelihood of the repeat of such strategic frustrations. Many in India think of the arrival of the BMD as an incentive to revitalize India's possibility of waging a limited war, as it would blunt Pakistan's declaratory nuclear strategy of first-use.¹⁹ In other words, India's BMD could strengthen India's proactive military strategy dubbed as the Cold Start Doctrine (CSD)²⁰ aiming at conducting a limited surgical attack against Pakistan.²¹ Thus, India would have both the sword to fight and shield to protect.

These arguments make India look more competitive, offensive, and assertive. It is understandable that India's deployment of BMD could possibly strengthen its CSD in terms of providing incentive to strike first with the confidence to defend with its shield. But it is not clear how India's deployment of BMD would help Pakistan understand that the integration of the BMD with the CSD could possibly blunt Pakistan's first-use nuclear option. This confusion could have the following strategic repercussions:

1. It could complicate the strategic balance between the two states;
2. It could increase Pakistan's reliance on nuclear weapons;
3. It could further widen the conventional asymmetry in the South Asian region; and
4. It could increase the risk of a nuclear catastrophe in South Asia.

Pakistan has developed a short-range (60 km) ballistic missile (Nasr) in response to India's military development and deployment of the CSD closer to Pakistani border to plug the missing gap at the tactical level and counter India's military motives for surgical strikes against Pakistan. Although there are worries with regard to the deployment of the non-strategic weapons such as 'lose and use', 'pre-delegation', and 'pre-emption', these worries can be averted if Pakistan continues to practise the principles of centralized command and control mechanism.²² Arguably, these strategic worries largely existed during the Cold War era between the Soviet Union and the US. With the centralized command and control of the battlefield weapons, Pakistan may not only avert these strategic worries associated with the non-strategic weapons, but it could also potentially deter India's proactive military strategy designed for waging a limited war. However, attempts for integrating the BMD with the CSD in terms of neutralizing Pakistan's nuclear capability of first-use could undermine Pakistan's deterrence credibility, providing incentives for India to wage a limited war at its own choosing. This could put greater strategic pressure on Pakistan.

To prevent the erosion of strategic balance in South Asia, the CSD combined with the BMD would entice Pakistan to opt for certain options. In this context, India could expect the following from Pakistan:

1. It could strengthen its reliance on battlefield nuclear weapons, but under the centralized command and control system to avoid the worries of preemption, pre-delegation, and lose and use strategic dilemma.

2. It could clearly communicate to the adversary that although Pakistan considers its nuclear weapons for deterrence purposes and it, in no way, considers them as military tools, it *could* use them if *absolutely* needed for its ultimate survival.²³ Presumably, Pakistan may not convey its red lines, i.e., when, how, and where Pakistan might use nuclear weapons. Ambiguity, that serves Pakistan's deterrence purposes and suits the broader contours of its nuclear strategy, could play a central role in this domain. This is to manipulate the mindset of its adversary and ensure the credibility of its deterrence forces for the purpose they are developed. The strategic motive is to prevent both conventional and nuclear wars.
3. More important, India's CSD bolstered by deployed BMD could not only help Pakistan increase its reliance on deterrence forces, but could possibly encourage it to proportionally increase the warheads to meet the changed strategic demands prevailing between India and Pakistan.

The argument that India's BMD deployment integrated with the CSD could blunt Pakistan's nuclear strategy of first-use is flawed. It could possibly strengthen the CSD in some way, but it may not blunt Pakistan's option of first-use. Also, Pakistan's increasing reliance on and the proportional increase of its deterrence forces vis-à-vis its adversary's CSD/BMD deployment may gradually make India realize the weaknesses and complexities of its warlike doctrinal posture in the presence of nuclear weapons.

India's deployment of BMD is defensive

Another argument in favour of India's deployment of BMD is that it is not offensive: not for territorial gains. It is asserted that BMD is only for defensive purposes to protect India's major cities and its strategic assets, and not to intimidate or threaten Pakistan.²⁴ Apparently, India repeats a rationale similar to that of the US with respect to its strategic rivals Russia and China. The US asserts that its abrogation of ABM treaty in 2002, and plans to deploy missile defence shield both in Europe and Asia do not necessarily aim to intimidate the Russians and Chinese, but are against the possible incoming missiles of Iran, North Korea, and Iraq (for instance, during Saddam's regime). The Chinese and the Russians are not fully convinced through. They still have serious reservations on the consistent US development and deployment of BMD.²⁵

India could expect a similar kind of response from Pakistan. The Indian argument, that its missile defence system is only for defensive purposes and not necessarily to intimidate Pakistan, is weak. India's power potential and its growing strategic partnership with the developed countries including the US aim at increasing its security. It falls within the classic sense of strategic security dilemma, i.e., the increase of one state's security would intentionally or unintentionally decrease the security of the other state. India's deployment of defences would not only increase India's security thereby largely undermining the security of Pakistan, but would also increase the strategic competition

between the two states. Charles Glaser argued about US BMD, "Deploying defenses will almost certainly increase the competition: Soviet deployment of BMD will increase US leaders' doubt about the adequacy of their offence, and vice versa. As a result, the current competition in offensive forces would be exacerbated; and, of course, a new full-fledged competition in defenses would likely be set in motion."²⁶

In a similar context, security dilemma and strategic competition become part of deployed defences either for defensive or offensive purposes. Although India's deployment of defences would make it look defensive and unthreatening, its adversary, Pakistan or China, would perceive India from a different strategic lens. For example, since Pakistan would perceive India to be offensive, India's offensive assertion will pull Pakistan into a classic security and strategic competition. Moreover, India's DRDO is making efforts to achieve the escalation dominance in terms of developing multiple independently targetable reentry vehicles (MIRVs) for some of India's Agni missiles in conjunction with a layered BMD system. This could be interpreted as India's strategic endeavour to achieve first strike capability.²⁷ The deployed defences would provide it strategic advantage to strike first with the confidence to shield the attacks of incoming missiles of various ranges, which in turn pushes up India into the escalation ladder, driving it for a massive retaliation. This escalatory scenario could make Pakistan worry about the adequacy of its forces, thereby, pushing it towards what Glaser conceptualized: increasing the size of the attack to overcome the defence.²⁸

Therefore, the argument that India's BMD is for defensive purposes is flawed. Pakistan may expect India to convincingly assure it that its BMD is not to intimidate Pakistan and strike first. Currently, the US practises these diplomatic assurances through the language of nuclear diplomacy to assuage the worries of China and Russia that its BMD system is not necessarily to undermine the credibility of the offensive forces of both the countries, but to address the contemporary complex issues of nuclear terrorism or incoming rogue missiles. But as the US continuously fails to convince both the Chinese and Russians, India could be unable to convince both Pakistan and China on the aims of its deployed defences.

India's BMD to support arms control process and encourage the offensive reduction

The US strongly believed in the 1980s that deployment of defences would help reduce the offensive forces between the two superpowers of the time (the US and the Soviet Union), and at the same time, the BMD system would encourage the two sides for an arms control process. For instance, former US president Ronald Reagan stated, "[the BMD] could pave the way for arms control measures to eliminate the weapons themselves."²⁹ This was along the lines of the logic that the BMD system would reduce the utility of the offensive forces and convince the adversaries about not building more. The proponents of the BMD arguing in favour of the deployment of the defences said, "if the cost of building offenses to defeat defenses is greater than the cost of building

defenses, (i.e., the 'cost-exchange ratio' favoring the defense), then the US deployment of defense might essentially force the Soviet Union (Russia) to give up its offensive capability."³⁰ In a similar context, the proponents of the BMD in India would claim that the deployment of the defences would provide incentives for strategic stability and counter-proliferation of the ballistic missiles with weapons of mass destruction.³¹

The BMD pessimists, however, convincingly argue that the BMD deployment would not encourage arms control process, particularly if the BMD reduces and/or significantly undermines the adversary's offensive capability.³² For instance, the US estimated during the Cold War that if the US BMD deployment would reduce the Soviet offensive force capability by erecting the shield, it would be hard for the US to get the Soviet Union on board for an arms control process. Rather, the US would expect an increase of the Soviet's force size and penetrability.³³ Similarly, the opponents of the defences deployment in South Asia would critique the idea that defences would support arms control process and force reduction. They would argue that the so-called defences could undermine the offensive forces of the adversary, thus encouraging it to enhance its force size and penetrability to offset the defences. If India's defence deployment creates difficulties for Pakistan's minimum deterrence forces that are meant for counter-value and counterforce missions, the utility of nuclear weapons would remain high and Pakistan could react to these defences with increasing the lethality, manoeuvrability, accuracy, and penetrability of both its ballistic and cruise missiles in order to defeat the defences. This could also include the force size increase to equal or surpass the estimated numbers of the adversary's interceptors for obtaining a considerable hedge against the deployed defences. India's BMD deployment as part of its grand nuclear strategy and Pakistan's likely responses could in turn change the contours of credible minimum deterrence in South Asia. It could make it hard to define the minimum in the South Asian context. Minimum deterrence would bear different interpretations and would likely get framed in accordance with the changed strategic environment.

One may argue that if both India and Pakistan develop and deploy defence forces, then this could negate both the adversaries' capabilities to undermine the deterrence forces of each other. That said, if India's deployed defences undermine the utility of Pakistan's nuclear weapons, Pakistan could also frustrate India's motives by striking first to significantly undermine India's nuclear strategy of retaliation through its deployed defences. Whether or not the defence would favour the offence would then depend on the credibility of the deployed defences though. If defence becomes more expensive than offence, then a state could highly rely on offence, not necessarily erecting the shield. In this case, the deployed defences become more costly as "they are asked to perform more demanding missions since they must be able to defeat the full range of offensive countermeasures, which in turn makes the cost-exchange ratio more favorable to the offense."³⁴ Both the development and deployment of the BMD system would consume lots of India's economy, which in turn would put economic pressure on Pakistan's annual defence expenditure. India's gradual

hike in its defence expenditure would affect the economic health of South Asia. Nevertheless, neither the US nor the Soviet Union would be in a position to protect many of their major cities through their deployed defences during the Cold War period, and even today. In a similar vein, it might not be possible for India to protect all of its cities and strategic assets by its BMD system. India still lags far behind in achieving its BMD perfection.

India, through its deployed defences, should not expect Pakistan to accept its logic for it that Pakistani deterrence force capabilities have become redundant and not worth spending on. India should expect Pakistan to work hard to find ways to defeat the defences. One may not assume that Pakistan would reach to a conclusion of considering its deterrence forces worthless before India's deployed forces. After all, it was Soviet Union's deployed defences during the Cold War period that spurred the US to develop MIRVs and other missile capabilities that could perform well in defeating the Soviet missile defence system. China has developed anti-satellite missiles with the capability to destroy the satellite system supporting the missile defence shield in Asia, which makes the US deployed defences in Asia vulnerable to the Chinese force development. Similarly, Pakistan could also produce certain types of capabilities to undermine India's missile defence mechanism. India might intercept some of the incoming missiles for some of the cities and/or strategic assets, but India might not be able to protect all the cities and all the strategic assets, thereby, demonstrating the vulnerabilities of the deployed defences.

Therefore, the argument that India's deployed defences could ease the arms race and provide incentives for offensive reduction is flawed. Deployed defences would rather encourage the other side to increase the size of the attack and penetrability to defeat the missile defence system. Arguably, although India's deployed defence may increase India's security and defences, these forces decrease the security of China in general and Pakistan's in particular. The deployed defences of one state would have strategic effect on the other state.

Conclusion

India is fast developing its missile defence system in order to protect its major cities and strategic assets. In addition to securing cutting-edge technological assistance from developed states, especially the US, India remains confident to integrate these ingredients indigenously in relation to its plans for deployed defences. However, India still lags far behind from achieving such a perfect integration that could ensure the protection of its major cities and many other population centres, including strategic assets, in a real crisis situation. India's deployed defences would spur an arms race by undermining the deterrence credibility of Pakistan, weakening its deterrence posture, and discounting the efforts aimed at both the conventional and nuclear confidence building measures in South Asia.

Although India's deployed forces could provide India the strategic confidence to increase its security, its missile defence system could also decrease India's security in the following ways:

- It could pull Pakistan into an unending arms race, even though Pakistan may not necessarily desire to indulge in it;
- It could decrease Pakistan's security in particular and China in general;
- It would challenge the credibility of both Pakistan's and China's deterrence forces;
- It would increase nuclear risks;
- It would not be able to protect all of India's major cities and strategic assets; and
- It would provide incentive to its adversaries to rely on their nuclear weapons to offset India's deployed defences.

The more India works on its deployed defences, the more it decreases its own security, because the higher the strategic pressure on Pakistan, the greater the risk of war.

The arguments that India's deployed defence would stop arms race, strengthen India's no-first-use doctrinal posture, reduce the offensive forces in South Asia, control the complex issues of terrorism, blunt Pakistan's nuclear weapons, improve India's defences, and ease its past strategic frustrations are flawed. Therefore, India's deployment of missile defence system, which undermines the strategic balance and deterrence stability in South Asia, is not in the greater security interest of India. Furthermore, this will not be consistent with India's nuclear doctrinal posture it earlier conceptualized. In fact, India's deployed defences would be an immediate departure from what it earlier pursued in favour of its recently developed grand nuclear strategy.

This grand nuclear strategy includes India's gradual shift in its nuclear draft policy, proactive military strategy (the CSD) aimed at waging a limited war in the presence of a nuclear overhang, the development and deployment of inter-continental ballistic missiles, MIRVs, nuclear submarines, special wavier by the NSG in terms of securing advanced nuclear technology to be able to produce more fissile material to suffice the credibility of modernized deterrent forces, and last but not least, the missile defence system. Apparently, all of these ingredients become an essential part of India's evolving nuclear doctrinal posture, which in turn makes India look assertive.

India continues to treat the essentials of its credible minimum deterrence differently, diverging from the language of minimum and coherent nuclear diplomacy. Its deployed defences could significantly undermine the deterrence stability in South Asia. It needs to return to what it earlier conceived, following the principles of the minimum and coherent nuclear diplomacy to avoid the danger of an arms race, strategic instability, and nuclear war in South Asia.

Notes and References

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- ³ Ganguly, "India's Pursuit of Ballistic Missile Defense," p.374.
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- ⁵ Ashley J. Tellis, "The Evolution of US-Indian Ties: Missile Defense in an Emerging Strategic Relationship," *International Security*, (spring 2006), 30(4), p.119.
- ⁶ Indian Prime Minister Indira Gandhi's speech to the UN General Assembly, 38th Session, 9th Plenary, 28 September 1983, accessed at: <<https://www.pminewyork.org/adminpart/uploadpdf/73201lms32.pdf>>.
- ⁷ "Rao Wars of Arms Race in Outer Space," *Strategic Digest*, 14(3), (March 1984), p.232.
- ⁸ A Canadian ambassador, Gerald Shannon, who helped secure a mandate for an ad hoc committee of the Conference on Disarmament (CD) to negotiate the FMCT, which was later, named the "Shannon Mandate." The Shannon Mandate called for an "internationally and effectively verifiable treaty." For detail, see Robert J. Einhorn "Controlling Fissile Materials World Wide: A Fissile Material Cut-off Treaty and Beyond," <http://media.hoover.org/sites/default/files/documents/9780817949211_ch8.pdf>, (accessed 24 March 2013).
- ⁹ I have heard many academics and retired Pakistani ambassadors highlighting on this point in various national and international conferences in Islamabad.
- ¹⁰ For interesting contemporary account on India's nuclear development programme, see Andrew B. Kennedy, "India's Nuclear Odyssey: Implicit Umbrellas, Diplomatic Disappointment, and the Bombs," *International Security*, (Fall 2011), 36(2), pp.120-153; Gaurav Kampani, "New Delhi's Long Nuclear Journey: How Secrecy and Institutional Roadblocks Delayed India's Weaponization," *International Security*, (Spring 2014), 38(4), pp.79-114.
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