

POLITICAL DRIVERS OF INDIA'S BALLISTIC MISSILE DEFENCE PROGRAMME AND IMPLICATIONS FOR SOUTH ASIAN SECURITY

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Abstract

The reasons for the birth and continuation of India's BMD programme argue for security concerns. However, those are not reflected in on-ground realities. The paper explores said gap and the resulting security implications and highlights defence policy options. The drivers behind India's BMD programme can be analysed by considering the external and internal political drivers that shape India's security interests. India's BMD programme started before formally declaring itself a nuclear weapon state. It grew parallel with the Indo-US strategic partnership to build India's political and military standing as part of the US-led Indo-Pacific strategy. An increase in India's military potential will likely have severe repercussions for security and strategic stability between two nuclear neighbours, India and Pakistan. BMDs could lead to a false sense of protection for the possessor state and provide an incentive for launching a 'first strike' against the adversary. In response, Pakistan can contemplate several options without embroiling itself in a BMD race. Pakistan has already developed several versions of air, land, and sea-launched cruise missiles and is expanding its MIRVs that can sufficiently evade and penetrate India's BMD systems. Additionally, indigenously built UAVs could counter India's BMD system and disrupt or degrade associated ISR through electronic warfare and jamming capabilities.

Keywords: Ballistic Missile Defence, Political Drivers, Indo-US Strategic Partnership, Strategic Stability, Countermeasures.

Introduction

Faced with the threat of ballistic missiles during the Cold War, the United States (US) and the former Soviet Union started their Ballistic Missile Defence (BMD) programmes with the stated intention to defend their territories by deterring or countering the threat posed by an incoming ballistic missile.¹ Traditionally, strategic stability is founded on mutual vulnerability. Neither state can identify any incentive to use nuclear weapons against the other due to the knowledge that there will be an

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equally devastating response.² When a BMD system reduces this mutual vulnerability, it could lead to a false sense of security, incentivising the BMD possessor state to launch a pre-emptive strike against the adversary. Even after the Cold War ended and the nature of threats changed, states possessing BMD systems justified retaining and, in some cases, modernising their missile defences. Notably, the US argued in favour of deploying new strategies to counter threats to the homeland and protect its allies.³ To this effect, North Korea and Iran were cited as the two main threats that could damage the US interests and its troops stationed in various parts of the world.⁴

While the discourse around the efficacy of a missile defence system amongst nuclear adversaries remains inconclusive, one of the main reasons states embarked upon this costly venture is its use for power projection and, in some cases, deterrence.⁵ However, India's BMD programme is due to the threats it perceives from its neighbours, Pakistan and China. The argument given by India is that China's BMD programme and its close strategic partnership with Pakistan are the primary threats.⁶ These two elements are seen as problematic and are used as the rationale for justifying India's move towards BMDs. However, this logic is shaky when timelines are considered, making the acquisition more political and resulting from inherent power maximisation interests. China started its BMD programme in the 1960s and received momentum in the 1980s.⁷ On the other hand, India's efforts into a BMD programme began two years before it became an overt nuclear state when it acquired a Long-Range Tracking Radar (LRTR) in 1996 from Israel with the capability to detect missile launches from a range of 300 km for interception.⁸

If the Pakistan factor in India's rationale is considered, Pakistan had not conducted nuclear tests, and there was no strategic threat being faced by India where it would perceive the need for a BMD system. Furthermore, India and China experienced good ties at the time. President Jiang Zemin visited India in 1996. Both countries even signed the "Agreement Between the Government of the Republic of India and the Government of the People's Republic of China on Confidence-Building Measures in the Military Field Along the Line of Actual Control in the India-China Border Areas."⁹ Keeping such developments and timelines in mind, drivers behind the Indian BMD programme do not fall along the line of simple threat perceptions about Pakistan and China.

Nevertheless, India's programme continued and tested its indigenous BMD system in 2006.¹⁰ Moreover, it recently acquired the Russian-made S-400 anti-missile system to integrate it into its three-layered national missile defence shield.¹¹ With these developments, the ongoing debate on India's 'No First Use' stance,¹² and the operationalisation of its BMD systems, there is a likelihood that the Indian decision-

makers in a future crisis with Pakistan could be tempted to contemplate launching a pre-emptive 'First Strike.' It could lead to a nuclear conflict with severe consequences for the region and beyond.

Based on the discussion above, there appears to be a gap in the drivers at the core of India's BMD programme and officially stated reasons for its development. Therefore, the paper seeks to explore said gap primarily and discusses the question of what political drivers have contributed to India's BMD programme and how they have contributed to its development. The early stages of the BMD programme are analysed along with the most impactful political drivers and factors that have aided the programme since its birth. In addition, security implications may likely stem from the programme's core drivers and the mere presence of BMDs in the region that require analyses to discuss possible options for Pakistan. To this effect, the paper explores the resulting security implications for South Asian strategic stability. Relatedly, the available options for Pakistan to deal with this threat are examined to inform defence policy regarding which technologies to focus on for future investments.

External Political Drivers of India's BMD Programme

From the early stage of India's BMD programme, the political dimensions show visible signs of being a more significant factor. Since the first term of President George W. Bush, the US and India have been on the same page about BMDs.¹³ India was the first to publicly voice its support when the US withdrew the Anti-Ballistic Missile (ABM) Treaty.¹⁴ India maximised what it could get in return, resulting in the emerging strategic partnership where India received cooperation for its BMD programme from the US. The 2004 Indo-US Next Steps in Strategic Partnership (NSSP) initiative marked a cornerstone of their relations and comprised expanded cooperation in civilian nuclear and space programmes and high-technology trade.¹⁵ Removing Indian Space Research Organization (ISRO) from the US Department of Commerce Entity List was critical. It allowed for high-technology trade and transfer, and given the close association of BMD programmes and space-related development, the NSSP was instrumental in India's BMD programme.

Indo-US ties grew and reached a new high through the 2005 Indo-US nuclear deal.¹⁶ In addition to the deal's specifics, India received increased political legitimacy. Resultantly, its political channels of cooperation with other countries opened up. That legitimacy aided India's BMD programme via an open ground to cooperate in various defence production and acquisition areas. Only a year after the Indo-US nuclear deal, India conducted its first BMD test in 2006.¹⁷ The growth of the Indo-US strategic partnership is primarily based on a strategic convergence of

viewing China as a threat.¹⁸ While the language that explicitly identifies China as a strategic threat to the US came at later stages, such perceptions had existed before.¹⁹ The Obama administration's rebalancing to the Asia-Pacific region clarified how the US views China as a primary concern and what role India can play in supporting US interests.²⁰

In the US-led Asia-Pacific strategy, India has been given the dual role of becoming the region's economic anchor and security provider.²¹ These developments were further strengthened in 2016 with a US official's statement that the US will aid India in shoring up its defence capabilities to effectively become a net security provider in the region.²² This trend continued into the next administration of President Trump through the 2018 Asia Reassurance Initiative Act (ARIA),²³ the 2018 US National Defence Strategy (NDS),²⁴ and then in the Biden Administration through the 2022 NDS and Indo-Pacific Strategy.²⁵ Consequently, India's BMD programme has grown alongside the growth in the Indo-US strategic partnership.

After being designated as the security provider for the region, India has secured central defence-related cooperation agreements as part of its 2+2 dialogue with the US. The first dialogue produced the Communications Compatibility and Security Agreement (COMCASA), giving India access to advanced defence systems and optimising its US-based defence platforms.²⁶ It involves sharing and access to high-level communications technology immune to cyber-attacks. In addition, it can provide real-time operational encrypted data such as satellite imagery and movement of military deployments. COMCASA is coupled with the Logistics Exchange Memorandum of Agreement (LEMOA), signed in 2016, which works towards simplification of logistics exchanges between the militaries.

Furthermore, India and US signed the Basic Exchange and Cooperation Agreement (BECA) in 2020, allowing the sharing of geospatial information, geomagnetic data, and aeronautical charts, among other things. The most recent addition to this growing partnership and cooperation that aids a BMD programme is the Space Situational Awareness (SSA) agreement.²⁷ Such levels of collaboration and political alignment have driven India's BMD programme.

CAATSA Waiver for India

Considering the growth of US-China rivalry alongside the strengthening Indo-US strategic partnership and the role India has been given in US perceptions vis a vis China, the external political factor behind India's BMD systems becomes more evident. It is made most apparent through the debate and developments surrounding India's acquisition of the Russian S-400 triumph system and the

possibility of US sanctions. The Countering American Adversaries Through Sanctions Act (CAATSA) was signed into law in 2017 and introduced new sanctions on Iran, North Korea, and Russia.²⁸ Those who powerfully trade with these countries and specific sectors are also exposed to sanctions. When Turkey decided to acquire the S-400 Triumph system from Russia, a debate was started on whether it will face sanctions. Turkey and India's case of the S-400 acquisition, considered in parallel, is helpful to draw out the differences in treatment and the reasons behind it.

Initially, it was believed that Turkey might receive a CAATSA waiver, given its significance as a North Atlantic Treaty Organization (NATO) member.²⁹ Arguably, banking on this perception and national security requirements, Turkey went through with its S-400 Triumph acquisition, even though it did receive warnings from the US that it may face sanctions and removal from the F-35 stealth fighter jet programme. However, the outcome differed from expectations and Turkey was sanctioned under the CAATSA.³⁰ When India decided to move forward with its purchase of the S-400 Triumph system, its situation was comparable to that of Turkey in terms of relations with the US, with one significant difference of India being a critical state in balancing against China.³¹ India enjoys strong ties with the US, but it still received warnings of possible CAATSA sanctions when it started looking into acquiring the S-400 Triumph system and when it signed the multi-billion dollar deal. At the same time, debates about the possibility of a waiver and lobbying for that purpose continued.³² Regardless of the warnings, India continued its acquisition with no final word on whether it would receive a release or be sanctioned.

The dynamics of a CAATSA waiver for India and its acquisition of Russian-origin S-400 Triumph became more complicated after the 2022 Russia-Ukraine conflict. India received even more pressure from the US, in straightforward terms, to terminate its S-400 Triumph deal.³³ However, India did not comply and continued operationalising the BMD purchase from Russia. Despite India's decisions after the Russia-Ukraine conflict and refusal to terminate the S-400 Triumph deal, its CAATSA waiver finally materialised through an amendment in the American National Defence Authorization Act (NDAA).³⁴ The approved legislation essentially provides for an India-specific release via modification for the primary purpose of balancing against and deterring China since India is considered one of the best candidates.³⁵ The trend of strengthening the Indo-US strategic partnership, which started with President George W. Bush's first term in office, has become an explanatory factor in India's BMD programme. It is not just how it acquired or developed BMDs but also why. The strength of the Indo-US strategic partnership as an external political factor has only grown over decades, along with an intensifying

power competition and rivalry between the US and China. While it is one of the most critical factors, it is not the only primary political driver.

Internal Political Drivers of India's BMD Programme

There is a long-standing power aspiration held by India which is visible through various actions on a military and political level. Historically, it has used the development and acquisition of military technology to work towards its power ambitions to attain regional hegemony.³⁶ For this purpose, enhancing military might is crucial, and a part of that involves acquiring the high-end S-400 Triumph system and developing its own indigenous BMD programme. In addition, the tendency towards adopting a solid power position is partly driven by a high degree of nationalism interwoven with India's larger power aspirations.³⁷ This intense nationalism gets commonly referred to as "Hindu Nationalism" because it becomes most apparent when the religiously dominated Bhartiya Janata Party (BJP) is elected or is substantively associated with internal power corridors in one form or another.³⁸ The reason is that BJP's philosophy revolves around the notion of Hindu nationalism, which started to gain traction at a state level from the late 1990s onwards.³⁹

The events and domestic conflicts behind the increase in the party's popularity push Indian governments to present a strong power position externally to have a strong internal. This is evident through the times BJP came into power, its electoral promises, and subsequent government actions or actions by its political leaders.⁴⁰ A hard-line position emerges that permeates strategic and conventional military acquisition decisions and a blunter foreign policy.⁴¹ It has manifested in activities such as the 9 per cent increase in India's defence budget of 2020, its 2018 Land Warfare Doctrine, and the 2017 Joint Armed Forces Doctrine.

The hard-line driven by the aforementioned domestic dynamics is also visible in its increased focus and efforts into military modernisation and associated acquisitions or production other than the S-400 Triumph system. These include the SU-30 MKI for launching a supersonic missile, a sea-based Brahmos supersonic cruise missile, Rafale jets, nuclear-powered submarines, and aircraft carriers.⁴² Thus, BMD systems or any missile defence system are primarily centred around political factors.⁴³

An Assessment of BMDs and Their Effectiveness

The discussion of BMD effectiveness is helpful in further analysing whether the political dimensions are the primary drivers of India's BMD programme. The efficacy of a BMD system has been a much-debated subject, both theoretically and practically. A large portion of academic literature on the topic, which has dominated

the debate on their use, points to their destabilising and ineffective role in strategic stability and deterrence.⁴⁴ It argues that the state perceiving a threat to its deterrence via BMD will inevitably find ways to restore the balance by taking countermeasures to penetrate the system. Outside of the theoretical dimensions of their effectiveness, there are technical and practical factors to consider.

The US can arguably be considered one of the most advanced defence technologies in the market. However, the performance of its various BMD systems presents ineffective results in terms of interception capabilities. The testing of these systems demonstrated around 50 per cent interception.⁴⁵ Its performance and effectiveness become more questionable when factoring in possible tactics and countermeasures to such a BMD system within the missile, such as decoy missiles.⁴⁶

Additionally, even the aforementioned tested level of effectiveness is based on optimal operating conditions without any technical limitations. In reality, there are a host of technical challenges.⁴⁷ The most crucial challenge is integration at every stage of a BMD system, which means all technologies and associated components that go towards its operation must be integrated seamlessly.⁴⁸ This level of integration is hard to achieve, especially in the case of India.

Interoperability Issues in India's BMD: S-400 Triumph

Even if India's BMD programme's theoretical ineffectiveness is put aside, seamless integration to operating the S-400 Triumph at its marketed functionality will be the most challenging. To develop the kind of defence shield India seeks, the S-400 Triumph should work with its indigenous BMD programme. These include the Prithvi Air Defence (PAD) and the Advanced Air Defence (AAD).⁴⁹ Whether or not the desired level of integration will happen is debatable since they rely on the Swordfish radar, a derivative of the Israeli Green Pine Radars.⁵⁰ The other planned layers of its intended multi-tiered BMD shield include the Israeli Barak-8 and possibly the US NASAM-II.⁵¹ Altogether, India's BMD programme consists of systems from various countries, increasing the chances of data integration and interoperability issues. When Turkey was acquiring the S-400 Triumph system, the US had raised objections regarding its incompatibility with NATO systems and other US technology. It was primarily due to concerns around the S-400's ability to chart and assess the weaknesses of the F-35 fighter jet, meaning Russia could determine the disadvantage of a high-end weapon system crucial for the US. While India does not possess the F-35 aircraft, it does operate other US-based systems. This political consideration becomes more prominent if the NASAM-II is considered.

Regarding operationalising the Indo-US data and intelligence sharing agreements for its various missile defence systems mentioned earlier, India may face

interoperability issues due to data integration problems. For example, the advertised range of the S-400 Triumph's longest missile and interceptor (40N6E) is 400 km.⁵² However, for it to operate at this marketed range without any issues of range limitation due to geography, India requires radars mounted on Airborne Warning and Control Systems (AWACS).⁵³ It must be noted that the Israeli Phalcon AWACS forms a significant portion of its AWACS capacity,⁵⁴ whereas the S-400 Triumph system is of Russian origin. Consequently, it could face interoperability and integration issues, highlighted earlier, to operationalise the entire range. More so, it has already faced such problems. The 2019 crisis between India and Pakistan is an example where a lack of interoperability and integration between Indian fighter jets of French and Russian origin led to reduced situational awareness on the battlefield.⁵⁵

India could face similar issues, as it did in the 2019 crisis when it tried to interoperate the Russian S-400 Triumph with other layers of its BMD shield that are essential of Israeli and US origin. Moreover, considering how the Russia-Ukraine conflict regarding US-Russia ties is developing, integration issues may become even more problematic. Furthermore, the 400 km range can be operationalised by a country only if it receives the 40N6E, and there are no official reports that state India will receive that missile and interceptor.⁵⁶ Considering all these aspects, the actual effectiveness of India's BMD systems becomes even weaker, and the political dimensions appear evident as the driving force behind its continued development and modernisation.

Implications for South Asian Strategic Stability

The true implications of BMD systems do not come from their technical performance or effectiveness but rather the perceptions associated with them on a state leadership and political level. These security implications to strategic stability stem from how a BMD system impacts its essence and leads to false perceptions of protection that feed into state decisions and political actions.⁵⁷ The logic for this perception is that the BMD possessor state is protected from an incoming ballistic missile or another threat the BMD system can target.⁵⁸ It may result in state leadership adopting a more aggressive foreign and defence policy posture. The idea that the adversary's arsenal is not as much of a threat anymore erodes its credibility, deterrence, and strategic stability.⁵⁹ As discussed earlier, strategic stability is about the lack of incentives to use nuclear weapons against a state due to the knowledge that there will be an equally devastating response.⁶⁰ However, the presence of a BMD system directly challenges the respective deterrence equation between India and Pakistan.⁶¹

Due to a challenged deterrence equation, the increasingly aggressive posture and willingness to take higher risks in crises can manifest in the thinking that in an emergency, India will be able to intercept and nullify a substantive number of incoming missiles. Resultantly, Indian decision-makers will be more likely to engage in conflicts that try to test Pakistan's red lines. Consequently, in a worst-case scenario, India may be the first to pull the trigger on its strategic arsenal and escalate the conflict to unforeseen levels of devastation.⁶² This destabilising effect of BMDs, and the S-400 Triumph mainly, has been communicated by Pakistan at a state level. Accordingly, the Pakistani Ministry of Foreign Affairs has stated that the acquisition of the S-400 Triumph and India's larger BMDs is destabilising and, therefore, necessitates countermeasures that Pakistan must take to restore strategic stability.⁶³

Notably, a long-term implication becomes evident when factors behind the acquisition and development of BMD systems are seen in congruence. The external and internal political drivers discussed earlier in the paper suggest that India will continue to take measures that repeatedly question and challenge strategic stability between India and Pakistan. Moreover, Pakistan must remember that the need to restore strategic stability will only increase in the future and different domains depending on how and in what form political factors develop. For instance, if strengthening Indo-US strategic partnership manifests in high-end cyber technology integrated into India's strategic arsenal and architecture, Pakistan must examine that accordingly and craft adequate countermeasures. In addition to direct implications to South Asia's strategic stability, Pakistan would also have to consider tangential benefits that India receives towards its indigenous defence systems.

Advancement of Indigenous Systems

While the S-400 Triumph's performance may be questionable, as the paper highlighted earlier, the tangential benefits to India are noteworthy. Foreign partnerships and collaborations help improve indigenous technologies and their developments through technology transfer, knowledge sharing, etc. Over the years, India's defence and space industry has dramatically benefitted in this manner.⁶⁴ The Swordfish radar mentioned before is one example of how a defence acquisition of the Green Pine Radar from Israel allowed India to create a derivative. Also, it developed long-range Arrow radars with Israeli cooperation and guidance radars through French collaboration.⁶⁵

Another case is the BrahMos missile, the product of a collaboration between India and Russia.⁶⁶ With Russia specifically, India has a history of solid defence industry collaboration with a joint production or technology-transfer model. With

the S-400 acquisition, deployment of its batteries, and training of the Indian Air Force (IAF),⁶⁷ the number of benefits it extracts from access to the technology will increase with time. Consequently, it can incorporate and transfer those benefits to its indigenous PAD and AAD. Pakistan must also consider these tangential benefits to India's defence technology in the context of their security implications.

Countering BMDs and Options for Pakistan

There are numerous ways of countering a BMD system since it is challenging for a BMD system to provide the marketed level of fool-proof security. Pakistan possesses several countermeasures that are already available. India's BMD systems could be penetrated and made ineffective by Pakistan's terrain-hugging cruise missile Babur (air, land, and sea-based), the air-launched cruise missile Raad, and the developing Multiple Independently Targeted Re-entry Vehicles (MIRVs) capability.⁶⁸ Pakistan should look towards quantitatively and qualitatively improving its MIRVs and cruise missile technology to saturate and penetrate BMD systems.

The issues of interoperability faced by the IAF during the February 2019 crises can be capitalised upon through investing in advanced electronic warfare and jamming capabilities to disrupt Indian BMD's associated radar technologies.⁶⁹ Pakistan may also improve its Intelligence, Surveillance, and Reconnaissance (ISR) capabilities to track and monitor the AWACS functioning with the S-400 to identify gaps during refuelling and reloading for tactical countermeasures. Also, S-400 batteries require a reload time of 30 or 50 minutes if a highly trained crew operates it after all interceptors have been exhausted.⁷⁰ It provides another gap for tactical countermeasures and those related to saturating a BMD system. More simply, BMDs cannot practically cover all geographical areas India wants to protect. Resultantly, they can be countered on a tactical level again by launching a missile from a location outside the interception zone of the BMD system.⁷¹ This tactical manoeuvre has shown to be effective in the case of Syria, where it was operating Russian BMD systems.

With cost-effectiveness and Pakistan's fiscal constraints in mind, Unmanned Aerial Vehicles (UAVs) are a practical option since they have already proven effective against BMDs. For example, Azeri drones could easily overwhelm Russian BMD systems used by Armenia in the Nagorno-Karabakh conflict between Azerbaijan and Armenia.⁷² Pakistan has an indigenous UAV programme under Project Azm of the Pakistan Air Force (PAF), and improving upon it can provide a cost-effective countermeasure to rebalance the strategic equation. Furthermore, UAVs may be fitted with electronic warfare and jamming capabilities to disrupt the

associated ISR technologies of the S-400 Triumph system or to saturate its interceptors and engagement capacity.

These methods of evading and penetrating a BMD are more cost-effective and provide higher returns.⁷³ Most importantly, cost-effective responses are necessary because India's BMD programme's external and internal political aspects indicate a long-term trend. It means that Pakistan will have to be dynamic and intelligent about its countermeasures and demonstrate them with relative ease and higher frequency, which is possible with UAVS than with missile technology that takes longer to develop and is significantly costlier.

Conclusion

Given the history and political dimensions surrounding India's indigenous and acquired BMD programme, the paper has shown that India's official justification for developing and acquiring BMD provides an unconvincing argument. Instead, external and internal political dimensions give a better explanation. India's BMD programme grew in parallel with the growth of the Indo-US strategic partnership. It substantively starts from the NSSP and has major cornerstones such as the Indo-US nuclear deal, India being named as the net security provider and economic anchor for the region as part of the US-led Indo-Pacific strategy, and the numerous ISR-related cooperation agreements; COMCASA, LEMOA, BECA, and SSA. This external factor is made most apparent through the CAATSA waiver for India, even though it had received direct and intense pressure from the US to terminate the S-400 Triumph deal after the Russia-Ukraine conflict had started.

Internal political factors have influenced its BMD programme as well. Developing or acquiring high-end military technology is viewed as crucially important by India for the kind of military might it requires for power projection externally and establishing a solid power position internally. This element of intense nationalism creates a trend of presenting a stable external power position to strengthen internal legitimacy by Indian governments. Both external and internal political drivers are made more valid when the effectiveness of BMDs is considered. India, in particular, will likely face interoperability and data integration issues with its BMD systems because of their varied set of origin countries. Therefore, the political drivers behind it are the most significant.

The false sense of security India gains from its BMDs significantly impacts strategic stability between nuclear-armed India and Pakistan. The perception of being protected in Indian decision-making circles leads to a more aggressive posture, and India's state leadership may then become inclined to think that the credibility of Pakistan's deterrence has been eroded along with mutual vulnerability. This false

perception can significantly damage strategic stability as India may become more inclined to initiate or escalate conflicts to a devastating level.

Pakistan has several existing countermeasures and cost-effective options moving forward to address the implications of strategic stability from India's growing BMD programme. These include both conventional and unconventional choices. Not getting involved in a BMD race is essential since they lack the desired cost and performance effectiveness. Pakistan's cruise missile arsenal and MIRVs can evade and penetrate India's BMD systems. Furthermore, by improving and using the current ISR capabilities, Pakistan may identify tactical gaps by tracking AWACS supplying ISR to the S-400 Triumph or evading its operating zone altogether. Pakistan's indigenous UAV programme can effectively counter India's BMD systems and the S-400 specifically.

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