S-400 Deployment in South Asia and the US' Regional Interests

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Abstract

India has signed an agreement with Russia for purchase S-400 system. Unlike the systems like PAC-3 and THAAD, S-400 can be employed against ballistic missiles and aerial targets; making it both a missile and air defense system. S-400 is a more advanced system than India's indigenous system. It is equally sought by the US' allies and adversaries. Besides India, Turkey, Saudi Arabia and Qatar other US allies are considering to purchase S-400 system. Unlike these states, India has central place in the US Asia Pacific strategy aimed at countering China. The recently passed Countering America's Adversaries Through Sanctions Act (CAATSA) obliges the US President to sanction India for trading with Russia. This could possibly have long term implications for the Indo-US relations. Besides countering China, the US has other objectives in the region like maintenance of peace/strategic stability and prevention of an arms race. This study explores the possible configuration of this system's deployment in India and its relevance against China and/or Pakistan. The paper also analyses this system's impact on US' regional interests which include strategic stability between India and Pakistan, the prospects of an arms control and non-proliferation in the region, and the long-term Indo-US relations which are critical for countering China.

Keywords

S-400, Russia, India, China, CAATSA, Strategic Stability, non-proliferation, Ballistic Missile Defense, South Asia

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Introduction

South Asia is an important region in the global politics. India and Pakistan possess nuclear weapons and have fought several wars. India is seen as a relevant partner by the US when it comes to the pursuit of containing China. Pakistan on the other hand has been a front-line state in the US led war on terror. Pakistan is also working with the US to draw a political end to almost two-decade long war in Afghanistan. The US has some key interests which may be affected because of conflict between India and Pakistan in particular, and with instability in the region in general. India's signing of the S-400 deal with Russia is a development that has the potential to affect US regional interests.

S-400 is a defense system that would likely gain strategic significance in South Asian environment. The system's employment in the region will negatively impact upon the conventional balance between India and Pakistan. This can potentially have implications for non-proliferation and arms control at least at the regional level, though some ramifications could be global as a regional arms race in consequence of this system's deployment can spiral into a global one, given the peculiar dynamics of Pakistan-India-China and US deterrent relationship.[1] The US has vividly maintained that stable relationship between India and Pakistan is in its interest. Likewise, it has shown concerns over the possibility of continued vertical missile and nuclear proliferation in the region. Furthermore, under the CAATSA[2] arrangement, the US President will be obliged to sanction India for its purchase of S-400 system. CAATSA, which came into effect in January 2018, is meant to economically and financially punish countries engaging in "significant transactions" with the Russian state-owned defense industry.[3] This could lead to far reaching implications for Indo-US relations and the US ambition of propping India as a counterweight to China.

The study starts with an overview of the S-400 system and the different circumstances under which it can be physically deployed. Based on information available in the open source, this research

points out what kind of interceptors India is likely to receive. To assess how this system is likely to be deployed in India, the system's deployment around the world are considered. Building upon the configuration of this system, it is assessed whether this system will have a ballistic missile or air defense role in India. To this end, primary source information has been gathered through interviewing relevant experts.

The study also explores the critical question of this system's utility against China and Pakistan. These findings are further checked against expert opinions through interviews. This section also enables the answer to the critical question that whether there is adequate incentive for the US to allow this deal to get through because of its potential utility against China. Later, it is assessed whether this employment of S-400 system will have any implications for strategic stability between India and Pakistan. These findings are further corroborated against expert opinions on the subject. The study then goes on to assess the possible counter-measures that Pakistan could employ. Before concluding, implications for vertical proliferation in the region are also discussed.

Possible Configuration of S-400 System in India

The S-400 system (NATO designation SA-21) is essentially a combination of the 30K6E battle management system (that consists of 55K6E Command Post and 91N6E Big Bird acquisition radar), 98Zh6E Fire Units (comprising of 92N6E Grave Stone "multimode" engagement radar and Transporter Erector Launchers), a complement of Surface to Air Missile rounds (that can have a mix of the four different interceptors), and 30Ts6E logistical support system (comprising missile storage, test and maintenance equipment).[4] A combination of these components, allows the system to "destroy opposing stand-off jammer aircraft, Airborne Early Warning and Control aircraft, reconnaissance and armed reconnaissance aircraft on higher altitudes, strategic bombers, cruise missiles, Tactical, Theatre and Intermediate Range Ballistic Missiles, and any other atmospheric

threats, all in an intensive Electronic Counter Measures environment."[5]

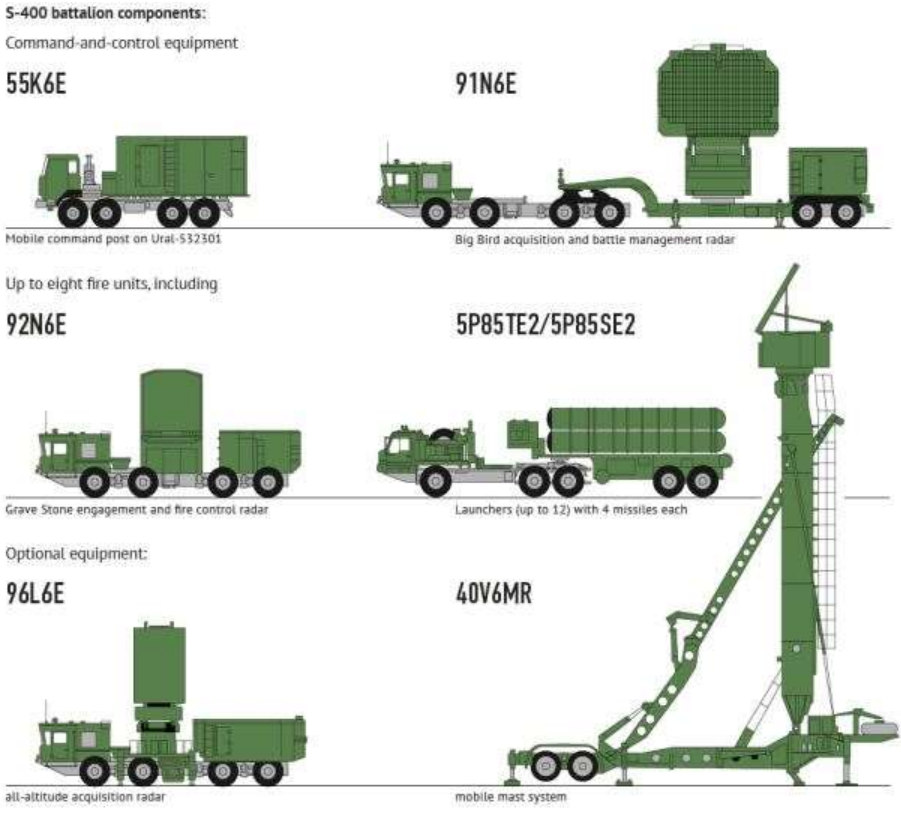


Fig-1: S-400 Defence System[6]

The S-400 system have different targeting capabilities depending upon the interceptors. The S-400 is compatible with four missiles/ interceptors that can fulfil varied operational requirements i.e. the very long-range 40N6E (400 km), long-range 48N6 (250 km), medium-range 9M96e2 (120 km) and short-range 9m96e (40 km).[7] The defense system is being exported to Turkey and China besides India. Qatar and Saudi Arabia have also reportedly shown interest in procuring the system for their air defense needs. China had conducted user trials of S-400 system in China with 48N6 interceptors.[8] According to media reports, China was scheduled to receive 40N6E

long range interceptors (400 km) but the shipment faced accident and the equipment had to be destroyed.[9] This is seen by some analysts as a Russian cover-up because the transfer could have been viewed as violation of MTCR guidelines which restricts transfer of missiles with a range of over 290 km to states which are not a member of the group. Unlike India, China is not a member of MTCR.

Even in Indian case, the official statements or the press releases following the agreement, between India and Russia, do not reveal what kind of interceptors India will receive. Justin Bronk, research fellow and editor at Royal United Services Institute (RUSI) for Defence and Security Studies, observes that potential S-400 customers will certainly receive both the 9M96E series shorter range missiles and the longer range 48N6E series, allowing engagement of both aircraft and cruise missiles up to approximately 250 km depending upon altitude and ballistic missiles within 60 km.[10] Whether they also receive the 40N6 for '400km' range is more questionable but certainly possible.[11] He further adds that the 40N6 was not designed for export but for Russia's own S-400 batteries; since it is now potentially entering service, it may be exported in future.[12]

With possible insights into the agreement, a noted Indian expert, Pravin Sawhney, reveals that out of the total 1000 interceptors that India will receive, 70 percent would comprise very long range (400 km) and long range (350km) interceptors.[13] Since there are no interceptors for S-400 with an exact range of 350 km, it is logical to assume that 70 percent of the total receivable missiles (or about 700 missiles) would be the long range 40N6 (400km). This essentially means that out of total five regiments, four are likely to be loaded with these interceptor missiles. Another source puts that India has signed up for 40N6 (400km) and the 48N6 (250km) interceptors.[14] Therefore, one of the five regiments could well have 48N6 interceptors. The S-400 system uses a mix of missiles in a typical load so it is hard to tell from outside which missiles the canisters on the Transporter Erector Launchers (TELs) contain.[15] Therefore, each

regiment can also be loaded with a mix of 40N6 (400km) and 48N6 (250km) interceptors. The likelihood of India receiving the longer range interceptors (40N6) is also validated by the assessment of experts like Ashley Tellis who believes that, "the IAF prefers the S-400 because [of] its long maximum slant range."[16]

Ballistic Missile or Air Defense?

The S-400 system is capable of intercepting not just an aircraft, and/or cruise missiles but also ballistic missiles in their terminal phase. The 40N6 interceptors have a longer interception range for aerial targets i.e. 400km. These interceptors can target ballistic missiles at a range of 15 km.[17] The 48N6 interceptors on the other hand can intercept ballistic missiles at a range of 60 km and aerial targets at a range of up to 250 km.[18] The S-400 system may be used against both aerial targets and ballistic missiles making it a more attractive option compared to the US PAC-3 system and the THAAD.[19] Unlike S-400's 40N6 (400km) interceptors, PAC-3 can only intercept aerial targets at a range of 180 km and ballistic missiles at a range of 100 km.[20] THAAD, on the other hand, is strictly an anti-missile weapon system and cannot intercept aircraft.[21]

While the S-400 system may theoretically be able to intercept both aerial targets and ballistic missiles, the system is credited more for its air defense capabilities. The Russian deployments of this system along the borders with Ukraine, Lithuania, Belarus and Finland suggests that even Russia finds it more useful for air defense along the periphery.[22] Similarly, China may be using the system for air defense along the Taiwan Strait rather than deploying it to defend against ballistic missiles which may be expected to target Chinese population centers, industry, or military installations. Likewise, in Syria the system was deployed after Turkish downing of a Russian Su-24. It was not deployed as such to defend against any ballistic missile threat. Analysts believe that the system may be a formidable capability against aerial targets, but it is subpar in its ability to intercept ballistic missiles because of known weaknesses in terminal phase accuracy of

Russian systems.[23] Based on similar considerations, analysts believe that operationally, India seeks S-400 as a long-range surface-to-air capability aimed at neutralizing air-breathing rather than ballistic threats.[24]

Justin Bronk views India's deployment of S-400 as intended to serve both an anti-aircraft and ballistic missile defence function. While acknowledging Chinese missile capability, he argues that the sheer size of the People's Liberation Army Air Force (PLAAF) prompts India to have a seriously potent strategic Surface to Air Missile (SAM) system like S-400.[25] Mathew Kroenig, Deputy Director for Strategy, Scowcroft Center for Strategy and Security at Atlantic Council and Associate Professor of Government and Foreign Service, Georgetown University, believes that India would want to utilize this system in both an air and missile defense role.[26] However, Kroenig points out that the missile threat environment for India is worse and growing and India's Indigenous missile defense capabilities are not comparable to S-400's.[27]

While India's indigenous capabilities is surely not at par with S-400, the system may still not be deployed with focus on ballistic missiles. India has been pursuing an indigenous ballistic missile defense system for over three decades. The deployment of a foreign system for the task instead would not only raise issues relating to inter-operability and training of the operatives and technicians, but would also raise questions over Indian DRDO's ability to deliver on its commitments. DRDO had claimed back in 2012 that it was ready to deploy the first phase of Indian BMD to defend Delhi and Mumbai against ballistic missile threats.[28] The deadline has slipped several times and the most recent came in 2019.[29] Missing such deadlines is not a serious shortcoming when it comes to fulfilment of such gigantic tasks. In fact some earlier indigenous defense projects by DRDO have had delays spread over years. However, finally resorting to a foreign supplied system to achieve the objectives which were supposed to be met by country's own defense supplier could have political costs and

would reflect negatively on its credibility to deliver national security solutions.

Because of the deployment patterns elsewhere, capability issues, and India's indigenous ballistic missile defense system, it is likely that the system will be deployed in India with aerial targets in mind rather than ballistic missile defense aspirations. India claims that it faces a two-front threat from China and Pakistan. While India enjoys a conventional superiority against Pakistan, it is sees itself at an asymmetry with China which is in the latter's favor. Therefore, the system can be deployed against China or Pakistan, or both. However, it is important to assess the relative gains and potential disadvantages that India might face in case of these deployments.

A System against China or Pakistan?

Like any other capability, the S-400 can be used against any threat whether it emanates from China, Pakistan or elsewhere in future. This is further facilitated by S-400 being a mobile system which can be deployed in merely 5-10 minutes (excluding the time for the vehicles to move to a certain point).[30] In this regard, it is important to evaluate Indian requirements vis-à-vis both China and Pakistan to assess its likely deployment.

Tellis argues that S-400's long range and ability to destroy targets at high altitude "make it the ideal weapon to destroy Chinese high-value platforms, such as airborne warning and aerial refueling aircraft, as well as advanced fighters, at great distances behind the front."[31] He further adds, "The United States does not currently possess any comparable system to the S-400 will provide India with a reliable air defense capability against China."[32] Like Tellis, Justin Bronk views this system's likely deployment against China rather than Pakistan – in the medium term.[33] Mathew Kroenig, on the other hand acknowledges Indian considerations regarding Pakistan but believes that India is more concerned about China.[34] However, as has been noted previously, Kroenig's considerations are missile threats rather than

aerial threats when it comes to this system's deployment in India. Given Chinese advances in MIRVs and hypersonic cruise missiles, S-400 is unlikely to play any significant role as a BMD system against missile threat from China.

Notwithstanding the perception of this system's utility against China, it is important to note that China and India have never engaged in an aerial combat. Even during the 1962 war, China and India did not use their air forces. It is difficult to contemplate as to under what conditions would India even consider attacking high-value Chinese aerial platforms which may be inside Chinese territory. This at best appears to be an attempt to create a perception within the US that this system would be critical against China and hence needs to be exempted from sanctions under CAATSA. Being a mobile system, S-400 can eventually be deployed against China but such a deployment is likely to be preceded by a conflict where use of air forces may be imminent.

It is also argued that with the acquisition of S-400, India will have an opportunity to test its offensive capabilities against this system (S-400) that China is also deploying. Therefore, this implies that procurement and deployment of this system is important for India to be able to overcome Chinese defenses which will now include S-400. As Abhijit Aiyer-Mitra argues:

"The purchase was not done entirely to use the missile against adversaries, but rather to understand its capabilities thoroughly, simulate how to go up against it, how to jam it and to understand what its limitations are. As such its main use will be testing the Rafale's ability to penetrate Chinese airspace guarded by the system."[35]

To assess this line of argument, it is important to consider two key factors i.e. 1) China has already started testing this system and its forces would know how to counter a similar system deployed in India, and 2) Chinese S-400 system is likely to be deployed along the Taiwan

Strait and not against India.[36] Therefore, obviating Indian need to deploy S-400 against China. Nonetheless – like India – China can redeploy this system in case it is in a conflict with India where latter's use of air offensive may be imminent. Such a situation appears to be unlikely and if China's S-400 system remains deployed along its border with Taiwan, it does not affect Indian offensive forces. Extending this logic further, if India can overcome Chinese S-400 by just testing and improving its capabilities against the same system deployed in India; then so can China – making Indian deployment of S-400 against China redundant.

Moreover, China and India never had an aerial conflict in their history. It would be against the logic to direct a 5.4 billion-dollar military investment against an adversary where it is unlikely to be used. Besides, if S-400 system is deployed on Indian air-bases along the Chinese border; it is unlikely that the US or other European suppliers would agree to sell India their aircraft to be based on those same air-bases. This is one of the primary reasons that has been holding off the sales of F-35 fighter aircraft to Turkey. Based on similar considerations, Kroenig believes that the US will be less likely to provide US made or Western aircraft to India and also exclude it from any integrated air and missile defense systems in the Indo-Pacific if it operates the S-400 system.[37] Like Korenig, Bronk believes that if India is serious about wanting to be a part of the F-35 program at some point, the S-400 system makes that impossible.[38] Notwithstanding the implications for South Asian strategic stability, arms control, and vertical non-proliferation, this system will also complicate future considerations vis-à-vis the US' regional strategy.[39] If this problem is addressed through relocating S-400s or the US/ European military hardware and aircraft; then each will lose its stated utility against China (i.e. the US/ European supplied offensive military hardware and aircraft will have to be deployed elsewhere if S-400 is deployed along Indian border with China and vice versa).

Unlike China and India, Pakistan and India have fought several wars where aerial combat has taken place. Pakistan and India have understandably varying claims as to how their air forces dominated the other. For example Pakistan claims that during the 1965 war it destroyed 104 Indian aircraft while losing 19 of their own.[40] The Indians, while accepting higher losses, claimed that they had won by 73 to 35.[41] Indian air force also played a role in supporting its ground forces during the 1971 war with Pakistan.[42] During the Kargil conflict, India used its air force to overcome operational challenges.[43] IAF has continued to enjoy a quantitative superiority over PAF where the former operates 520 fighter aircrafts compared to latter's 348.[44] However, following the recent Pulwama attacks and the downing of Indian aircraft, it would appear that Pakistan has appropriate responses available at the conventional level. Indian military and political leadership were vying for more aggression against Pakistan for achieving a different outcome than how the crisis unfolded in reality.[45] With the outstanding disputes and Indian proclivity towards use of force, the crises are more likely with Pakistan than with China. Furthermore, India has been using Russian supplied military hardware against Pakistan. This would alleviate US and Western concerns over deployment of this system alongside their military hardware. Therefore, India may have a higher rate of return on its investment in the S-400 system if it is deployed against Pakistan where it is more likely to be used and prove useful.

Impact on South Asian Strategic Stability

Strategic stability is a term that came to be defined during the mid-1950s. It was in the context of Cold War between the United States and erstwhile Soviet Union. Strategic stability was defined as, "a situation in which no party has an incentive to use nuclear weapons for vindication of its vital interests in extreme circumstances."[46] The concept is defined by Prof David Holloway as, "the [stable] relationship between the US and the Soviet Union as long as both sides knew that each could respond in a devastating way to a nuclear

attack by the other."[47] By these definitions, anything that incentivizes a state's ability to employ offensive strategic weapons against its adversary in a 'devastating' manner without fear of equal amount of retaliation would be counter-productive to the idea of strategic stability. During the Cold War, the two antagonists – the US and the USSR - resorted to airborne bombers and later nuclear capable submarines to ensure their ability to respond after absorbing a first strike. Even though S-400 system may be deployed in air defense role, it has the potential to affect strategic stability between India and Pakistan because of latter's reliance on cruise missiles for its air and naval leg of the triad.

The table below (Table 1) distributes Pakistan's nuclear forces depending upon the launch platforms i.e. land, air or sea. Amongst the land-based delivery systems, Babur may be vulnerable to interception by the S-400 systems. Pakistan's air and sea-based leg of nuclear forces are entirely dependent on cruise missiles and hence susceptible to the S-400 system. The air leg is even more exposed because the aircraft carrying those weapons would expose themselves. Considering China's investment in air defenses (including S-400) and its proximity with Taiwan, a RAND study finds Taiwan to be facing "one of the most difficult air defense problems in the world."[48] The study finds that Chinese investments in air defense and geography "threaten Taiwan's aircraft—not just while they are in the air but also while they are on the ground."[49] Pakistan will face a similar problem if these systems are deployed close to its border. These capabilities and geographical proximity have led analysts to conclude that, "If deployed near the border with Pakistan, a S-400 battery can shoot down a hostile F-16 fighter or cruise missile much before it even comes anywhere near the Indian airspace during hostilities."[50]

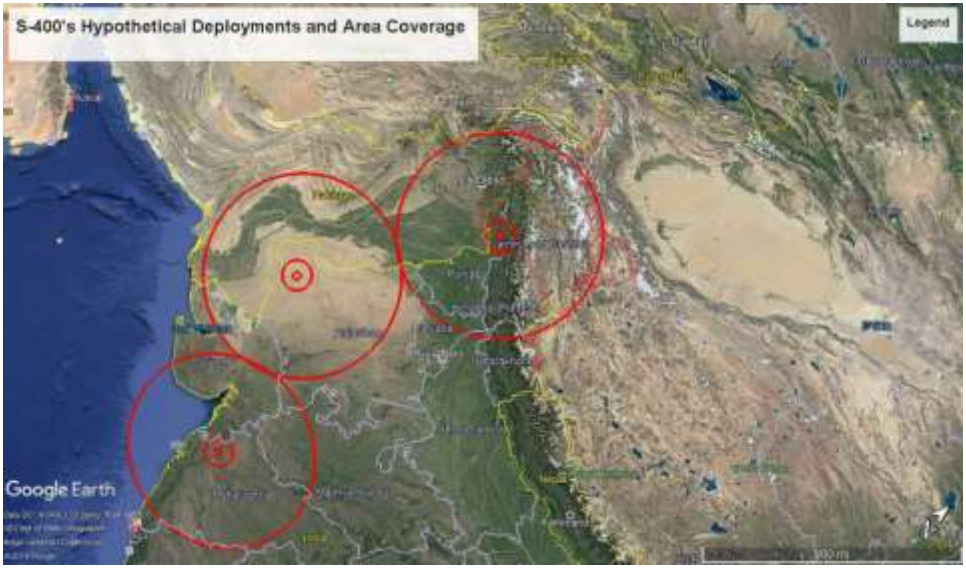
Table-1: Likely Impact of S-400 Capability on Pakistan's Nuclear Forces

Sr.	Missile Name	Type/ Range (km)	Affected by S-400?
	Land Based Nuclear Forces		
1.	ABDALI	Ballistic/ 180	Possibly
2.	GHAZNAVI	Ballistic/ 290	Unlikely
3.	SHAHEEN-I	Ballistic/ 900	Unlikely
4.	GHAURI	Ballistic/ 1800	Unlikely
5.	SHAHEEN-II	Ballistic/ 2200	Unlikely
6.	SHAHEEN - III	Ballistic/ 2750	Unlikely
7.	NASR	Ballistic/ 70	Possibly
8.	Ababeel	Ballistic/ 2200	Unlikely
9.	Babur	Cruise/ 700	Possibly
	Air Based Nuclear Forces		
1.	Ra'ad	Cruise/ 350	Possibly
	Sea Based Nuclear Forces		
1.	Babur-3	Cruise/ 450	Possibly

If, in a hypothetical scenario, India deploys three of its S-400 regiments around Udhampur (32.911503°N 75.154410°E), Jaisalmer (26°53′21″N 70°51′52″E), and Ojhar (20°07′10″N 073°54′49″E) Air Force Stations, it will be in a position to cover Pakistan's entire air space along the land borders while also covering significant portion of air space along the Arabian Sea. This situation is illustrated in Fig 1. The figure also illustrates how Pakistan's aerial assets including cruise missiles will be susceptible to interception even inside its own territory. The inner circles (60 and 15 km radius) indicate the area where the S-400 batteries will be in a position to intercept ballistic missiles. The deployment of S-400 regiments along the Arabian Sea

can potentially provide interception capability against Pakistan's limited range (450 km) Babur-3 cruise missile.

Fig-1: A hypothetical deployment of three S-400 regiments around Udhampur, Jaisalmer and Ojhar Air Force Stations.



The S-400 can potentially undermine Pakistan's two entire legs of nuclear forces i.e. the air launched cruise missile (Ra'ad) and the submarine launched cruise missile (Babur-3). These are the only available nuclear delivery options respectively available with Pakistan's Air Force Strategic Command and Naval Strategic Force Command. Such a deployment of S-400 could also affect the deliverability of ground launched cruise missile (Babur). Pakistan's rationale for development of cruise missiles was to circumvent Indian ballistic missile defense. The press releases following Pakistani test of cruise missiles often refer to this consideration of Indian missile defense system behind development of cruise missiles.[51] It was understood that Indian indigenous BMD did not provide an answer to Pakistan's stealth cruise missile capability.[52] However, deployment of S-400 system will undermine this very capability and disturb mutual vulnerability between India and Pakistan.

Besides the cruise missiles, ballistic missiles with an intended impact point within 15km of the S-400's location would also be susceptible to interception by this system. With forward deployment and confidence in this system's ability to neutralize shorter range ballistic missiles (which can have an impact point within this system's 15km range), India may be further emboldened to execute its conventional warfighting doctrines like the Cold Start and possibly consider preempting Pakistan's nuclear forces in pursuit of damage limitation. Given a sense of conventional superiority against Pakistan, huge stockpiles of weapon-usable fissile materials, availability of counter-force nuclear delivery options, and advanced space-based capabilities to facilitate target acquisition; India is likely to further consider pre-emptive policies[53] which will in turn affect strategic stability creating 'use it or lose it dynamics.'[54] This is needless to emphasize that such dynamics will be a recipe for a renewed arms race in the region with possible global ramifications.

S-400 Deployment in India and Impact on Vertical Non-Proliferation and Arms Control in South Asia

The table in this study assumes that some of the ballistic missiles and all the cruise missiles and aircraft will be susceptible to interception by the S-400 system. However, that would not be the case. Like any other defense system, S-400 is not without weaknesses and there may be countermeasures. In studies specifically focusing on countermeasures against the S-400 system, 'saturation attack' is presented as the most obvious solution.[55] If deployed with long range interceptors (40N6 – 400km), one battalion may only be able to intercept 16 targets at once.[56] Therefore, anything beyond that number is likely to get through.

Some analysts have noted that "while the S-400 is advertised as having an anti-cruise missile capability, it is more geared toward ballistic missiles coming in from very high angles, very quickly, and other tactical aircraft. It's more geared toward those kinds of targets than subsonic, land-skimming missiles."[57] These "subsonic" and "land-

skimming" attributes essentially define the cruise missiles that Pakistan already has in the form of Babur and Ra'ad. Khalid Banuri, former Director General Arms Control and Disarmament Affairs, notes "Undoubtedly, the first casualty [of BMD deployment] is the possibility of any ceiling on the numbers game. This implies a significant change in the number of warheads, missiles assemblies or the tractor-erector launchers (TELs)."[58] These measures can be seen as quantitative response to Indian BMD and should be more readily available with Pakistan without depending on any other state per se. Some other possible countermeasures, that Pakistan can employ, could include "spoofing and decoying techniques, timely early warning, dummy warheads to spoil intercept geometry, reduction in infrared signature, use of chaff clouds and degradation of radar capabilities."[59]

That said, this system's deployment is likely to increase Indian confidence in its ability to undertake offensive conventional operations against Pakistan. Indian Cold Start Doctrine already envisions conventional war fighting with Pakistan under the assumption that it would remain under Pakistan's perceived nuclear threshold. The availability of such a defense system that can substantially erode Pakistani ability to even conventionally respond through its air force would increase Indian proclivity towards risking a conventional war. This situation is further worsened by the availability of huge fissile material stockpiles and expansive nuclear delivery systems that could re-assure India in its ability to be able to limit damage through pre-emption - thereby carrying the potential for a lowered nuclear threshold.[60]

Such a situation will exacerbate Pakistan's threat perception vis-à-vis India. In such an environment, Pakistan is likely to employ available qualitative and quantitative measures. This will negatively affect the prospects of arms control in the region. As South Asian strategic developments are explained under concepts like "strategic chain,"[61] these developments can have far reaching negative impact on global

arms control efforts. The US has long maintained that it is in its interest to ensure vertical non-proliferation around the globe and South Asia in particular. The American political support, or looking away, regarding this transfer and subsequent deployment would directly carry a negative impact on US own interests.

Indian Acquisition of S-400 & Future of India-US Relations

India has increasingly assumed a central role for the US in the region vis-à-vis its Asia-Pacific Strategy to counter China. While a case may be built that the acquisition of S-400 system is essential for India for this purpose; the situation suggests that India is unlikely to deploy this system against China. This defense system will be more relevant against Pakistan than China as discussed earlier. Furthermore, China is most likely going to be able to defeat the system through qualitative countermeasures and based on the experience of having operated the system itself. For instance, China could use the opportunity of operating this system "to understand its capabilities thoroughly, simulate how to go up against it, how to jam it and to understand what its limitations are,"[62] as can India against a Chinese deployment of S-400 system. Moreover, China and India have never had an aerial conflict in their entire history. Such an Indian deployment is likely to be seen as provocative by China and hence India will likely avoid that.

Under the CAATSA, the US President is obliged to sanction any state carrying out military transactions with Russia. Under the same act, the US has sanctioned China for procurement of Russian S-400 defense system and the SU-35 fighter aircraft in violation of the CAATSA.[63] The US is also threatening its ally, Turkey, of stringent sanctions if it does not give up the S-400 deal.[64] The same laws will oblige the US to sanction India for purchase of S-400 system. The sanctions can be held-off until at least October 2020 when India is scheduled to receive the system. However, analysts believe that there is a growing consensus in the US. Government that CAATSA should not jeopardize the evolving strategic partnership with India.[65] This is a more likely outcome as was indicated by former Defense Secretary James Mattis'

comments that, "We will work everything out. Trust me."[66] Similar expectations appear to be there on the Indian side.[67]

Justin Bronk of RUSI believes that there is a high likelihood that US will apply sanctions to India over the S-400 system but potentially with some waivers and exceptions to try and limit the diplomatic fallout.[68] He further adds, "if the US does sanction India, the relationship will endure but the damage will be lasting. India is already viewed as far too close to Russia by the US to be a reliable partner. Whilst India will continue to get stronger in the coming decades, its proximity to an increasingly powerful and assertive China means it cannot afford to shut the door on the US relationship."[69] Similarly, Mathew Kroenig argues that President Trump has poorly treated even some of its treaty allies, including Japan, South Korea and NATO allies; but behind the scenes, they have been increasing defence cooperation against China and Russia.[70]

The 2019 National Defense Authorization Act (NDAA) enables the US President to waive sanctions under CAATSA if the transaction involves Soviet-era military hardware costing less than $15 million; in S-400's case, it is neither.[71] Furthermore, India signed the agreement with Russia once the CAATSA was already in place. China on the other hand had signed the deal back in 2014. Ideally, the Chinese transaction should have gone unsanctioned as the laws are generally not implemented retroactively. Given these considerations, it could be politically costly for the US President to still waive sanctions for India while punishing China and Turkey. Furthermore, the President will be obliged to certify that the transfer would not "significantly increase the risk of compromising the US defense systems and operational capabilities."[72] This amendment in the US laws will oblige it to ensure that the S-400 is not deployed in a manner that it compromises the US and allied hardware that India will be operating. In Turkish case, the US officials had concerns that if Turkey operated both S-400 and the US F-35, Russians could potentially get sensitive information on how the latest US aircraft operate.[73] Such concerns would also determine

where and how the US would want India to deploy this system if ultimately a waiver is granted. It is unlikely that the US will allow deployment of this system on IAF bases where the US or European supplied military hardware may be operating .This is primarily because in order for S-400 and US/ European supplied aircrafts to operate in same area, S-400 will require sensitive data from the sensors of the aircraft to be fed into it in order to identify the aircraft as friend or a foe.[74] It is feared that this will compromise sensitive information about the US or European supplied fighter aircraft undermining their stealth and offensive capabilities.

Whether the US sanctions India or not, this deployment in South Asia will continue to create differences between the US and India. The potential utility of this system against China – and hence the advantages for the US – may be very limited. Any US interference in determining this system's deployment in India will be seen as US meddling in Indian domestic affairs.[75] The possibility of such an Indian approach should be considered as more likely when it comes to influencing India's foreign policy and national security determinations.

Conclusion

The information coming out of Indian media and senior analysts suggests that India will be receiving the very long range (40N6) and long range (48N6) interceptors from Russia. The same is yet to be confirmed by any official Indian or Russian sources. These longer-range interceptors have greater utility in terms of air defense rather than ballistic missile defense role. Furthermore, India's indigenous BMD system already caters for the ranges that these interceptors provide against hostile ballistic missiles. The system is already deployed in AD role in Russia, China and Syria; India would be no exception.

While this system's acquisition may be justified in terms of the asymmetry that India faces vis-à-vis China, the study suggests that

this system will likely be deployed against Pakistan. China and India have never had an aerial conflict. Having the experience of operating S-400 itself, China can employ qualitative countermeasures to overcome this system in India. Also, the Chinese S-400 is being deployed along the Taiwan Strait and Indian deployment against China could be seen as escalatory by the latter. If this system is deployed along the Indian bases bordering China, this will restrict deployment of US and Western supplied military hardware in that region because of the US concerns that this system would compromise the secrecy of its advanced military hardware – as has been the case with scrapping of F-35 deal with Turkey owing to such concerns.

This system's deployment against Pakistan would appear to have greater returns on the investment for India. With Pakistan, the crises have been frequent and air forces have played significant role in all the past conflicts. The outcomes of recent Pulwama crisis may have challenged the notion of Indian air superiority against Pakistan which was duly reflected in IAF chief and PM Modi's statements who asserted that with S-400 and Rafale, the outcomes could have been different.

Even if this system is deployed in AD role against Pakistan, it could have serious implications for strategic stability. The system can potentially intercept some of Pakistan's ballistic missiles (falling within a range of 15-60km of this system's location of deployment), and all of its aircraft and cruise missiles. This is increasingly problematic because two third of Pakistan's strategic triad are based on cruise missiles (the air and sea leg). This disturbed balance of mutual vulnerability is likely to have a negative impact on arms control and vertical non-proliferation in the region. Because of the confidence in S-400's capabilities, Indian leadership may be tempted to experiment with the ideas like CSD and pre-emptive first strikes. Such a situation will also prompt the adversary to have a quantitatively and qualitatively superior nuclear forces to ensure their survivability and deliverability.

The US has already sanctioned China under CAATSA and it seems that Turkey will be next as it has started receiving the system. Owing to Indian relevance against China, the US is likely to waive off sanctions over India under CAATSA. However, NDAA will oblige the US Administration to influence this system's deployment options in India. A waiver for India is unlikely to bode well with the US' NATO ally – Turkey. Furthermore, a waiver will prompt other US allies like UAE and Qatar to go ahead with acquisition of S-400 without concern for threat of sanctions under CAATSA. It is unlikely that the US will prioritize South Asian strategic stability and non-proliferation over the great players' competition, the destabilizing implications of doing so will be enduring.

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