Indian Military Modernization and Its Implications on Strategic Stability in South Asia

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Abstract

Indian military modernization and its implications have been a major debate in the South Asian security calculus. The strategic dynamics of South Asia reflect divergent priorities and goals for India and Pakistan. For India, military modernization aims towards regional hegemony, while for Pakistan, it is a source of strategic stability. In the given context, this study examines how the ongoing trends in India's military modernization are exacerbating the security dilemma in South Asia and examines Pakistan's responses to establish arms parity. The findings reveal that while Pakistan primarily relies on credible minimum deterrence, it recognises the need to modernize its conventional military capabilities. Whereas India theoretically adheres to a two-front war strategy, its main military build-up and capabilities are Pakistan-centric. Further, this research also examines the role of great powers i.e., the United States, Russia, France, and China, as major providers of military hardware for their respective strategic interests in the region. This study concludes Indian Military Modernization and the ensuing arms race pose a challenge to strategic stability in South Asia. India's aim to fight a conventional war through its military modernization under a nuclear shadow has made South Asia the most dangerous nuclear flashpoint.

Key Words: India, Pakistan, Military Modernization, South Asia, Security Dilemma, Strategic Stability

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Introduction

Modernization in military affairs refers to a holistic process driven by technological innovations and advancements that influence doctrinal thinking, tactical approach, and organizational structures.[2] Existing technologies are replaced by or supported by superior capabilities, improving the efficiency and lethality of wars.[3] States modernize their military through indigenous development of modern weapons or by procuring advanced weapons from their allies. The factors influencing military modernization include changing geostrategic and geo-economic realities, global innovation in modern technologies and most importantly, the threat perception.

In case of India, the drivers of Indian military modernization include aspiration to become regional hegemon, sustainable economic growth, the convergence of Indo-US interests in the Indian Ocean Region (IOR). These strategic desires influence the security architecture between India and Pakistan.

India has world's second-largest military and fifth-largest defence budget. It is now qualitatively improving its military to achieve strategic edge in South Asia.[4] According to the *Global Fire Power Ranking* 2024, India is the world's fourth most powerful military.[5] This has enabled the Indian Air Force (IAF) to develop modern capabilities in offensive and defensive operations. India's blue-water Navy is steadily being upgraded with innovative naval technologies reinforced with nuclear submarines. India has also partnered with the US and Israel to improve its spy satellites, acquire ballistic missile defence systems, and import modern unmanned aerial vehicles (UAVs).[6]

In contrast, Pakistan is strategically committed to 'full spectrum deterrence,' keeping in line with its policy of 'Credible Minimum Deterrence' vis-à-vis India. Pakistan seeks to maintain conventional warfare capabilities as integral part of its doctrinal thinking for pursuing

[2] Richard A Bitzinger and Michael Raska, "Capacity for Innovation: Technological Drivers of China's Future Military Modernization," Chinese Liberation Army in 2025. *Strategic Studies Institute US Army War College* (2015): 132.
[3] Bernard Fook Wang Loo, Decisive Battles, Victories and the Revolution in Military Affairs," *Journal of Strategic Studies,* Vol 32, no. 2 (April 2009): 189-211.
[4] Xiao Liang et. Al, "Trends in World Military Expenditure: 2024," *Stockholm International Peace Research Institute* (April 2025), https://www.sipri.org/sites/default/files/2025-04/2504_fs_milex_2024.pdf.
[5] "2024 Military Strength Ranking", *Global Fire Power,* 2024, Retrieved from: https://www.globalfirepower.com/countries-listing.php.
[6] Ishtiaq Ali, "Challenges for the Conventional Deterrence of Pakistan in the Post-2019 Security Situations: Options and Choices," *Scandic Journal of Advanced Research and Reviews* 3, No. 3 (2022): 12, https://doi.org/10.55966/sjarr.2022.3.3.0054.

arms parity.[7] Compared to India, Pakistan is ranked twenty-ninth in terms of military spending. In response to the Indian military modernization, Pakistan faces a significant challenge of updating its land, air and sea-based military capabilities. While deterrence stability has tested four major escalations in South Asia since 2001: the 2001-2002 standoff, the 2008 military buildup, the 2019 Pulwama-Balakot standoff and the May 7-10, 2025 post-Phalagam Conflict, the importance of conventional capabilities remains vital.

Pakistan responded to the Indian 'Balakot Airstrikes' by shooting down an Indian MIG-21 on February 27th 2019. Pakistan also struck Indian military targets and shot down six Indian Air Force (IAF) fighter jets in response to Indian missile strikes inside Pakistan on May 7th and 8th, 2025. Pakistan's conventional response demonstrated that Pakistan has a defensive strategic posture vis-à-vis India and acted in self-defence in response to Indian aggression.

The existing scholarship on the military modernization in South Asia encompasses doctrinal evolution, nuclear deterrence and arms race in the region.[8] Whereas, the emerging scholarly work focuses on crucial aspects of military modernization, such as India's space-based intelligence, development of sea-based nuclear capabilities and future trends within modern warfare.[9] Experts on South Asian military affairs have expressed concerns that Indian military modernization has increased the risk of an accidental war in South Asia.[10] This notion was reinforced on March 9, 2022, when the Indian BrahMos missile launched from Haryana, India, accidentally landed in Pakistan's Khanewal district.[11] While the incident exposed weaknesses in the Indian technological spectrum, it also heightened the risks of escalation through such accidents.[12]

Indian military modernization is also viewed as a means to counter the dual threat of China and the Sino-Pak strategic cooperation.[13] India's efforts to expand its naval strength and

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[7] Nabeel Hussain and Salma Malik, "Prospects of Integrated Deterrence for Pakistan Amid Conventional Asymmetry in South Asia" *Journal of Security & Strategic Analyses* 9, no. 1 (2023): 44, https://doi.org/10.57169/jssa.009.01.0241.

[8] Ghazala Yasmin Jalil, "Nuclear Arms Race in South Asia: Pakistan's Quest for Security," *Strategic Studies* 37, no. 1 (2017): 25, https://www.jstor.org/stable/48535985.

[9] Noreen Naseer, Muhammad Fahim Khan and Aamer Raza, "A Comparative View of India and Pakistan's Defence Capabilities: Historical Evolution and Future Trends," *Asian Journal of Comparative Politics* 8, no. 1 (2023): 218, https://doi.org/10.1177/20578911221124384.

[10] Yogesh Joshi, and Frank O'Donnell, *India and Nuclear Asia: Forces, Doctrine, and Dangers,* (Washington D.C., Georgetown University Press, 2019). 6.

[11] Christopher Clary, "The Curious Case of Accidental Indian Missile Launch," *War on the Rocks*, March 17, 2022, https://warontherocks.com/2022/03/the-curious-case-of-the-accidental-indian-missile-launch/.

[12] Atia Ali Kazmi, "Accidental, Inadvertent or Deliberate Launch: The Case of Indian Air Force's Nuclear Supersonic Cruise Missile," *CISS Strategic View* IV, (2024), https://ciss.org.pk/accidental-inadvertent-or-deliberate-launch/.

[13] Rajesh Basrur, Ajaya Kumar Das and Manjeet S. Pardesi (eds), 'Introduction', in Rajesh Basrur, Ajaya Kumar Das, and Manjeet Singh Pardesi (eds), *India's Military Modernization: Challenges and Prospects,* Oxford

establish blue-water dominance in the IOR, by acquiring new ships, submarines and aircraft carriers, aims to achieve strategic advantage, not only in South Asia but beyond.[14] Yogesh Joshi argues that "facing a coordinated military manoeuvre from a relatively weak but prickly and resolute military power like Pakistan and a highly capable Chinese military is beyond India's capability to resist and defend."[15] Therefore, India has been modernizing its domestic military infrastructure and diversifying foreign procurement.[16] Moreover, India has been focused on Integrated Deterrence, which will guide policy frameworks to 'deter any forms of conflict above and below the conventional armed conflict spectrum.'[17]

Blarel and Ebert have contested that the military modernization of the two nuclear rivals will only complicate the mutual strategic behaviour and increase the chances of potential conflict.[18] Furthermore, the 'security trilemma' in a volatile nuclear-powered region, exacerbated by the 'unresolved territorial disputes, cross-border terrorism, and growing nuclear arsenals', increases the chances of conflict.[19] "South Asia is marred by aggressive posturing and bitterness as witnessed by the sour relationship that exists between Pakistan and India, the two strongest nations in the region. This animosity left them with consistent and incremental growth in defence expenditure."[20]

Keeping the existing literature on India-Pakistan military modernization and its impact on strategic stability in perspective, this study finds that there is abundant literature available on the topic from a theoretical viewpoint. This study, however, adds to the literature on the doctrinal approach corresponding with the modernization trends, viewing Indian military procurements aimed at an absolute conventional superiority against Pakistan. Also, this paper

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International Relations in South Asia (Delhi, 2013; online edn, Oxford Academic, Jan 23, 2014), https://doi.org/10.1093/acprof:oso/9780198092384.003.0001.

[14] Aditya Gowdara Shivamurthy, "Building Indian Narrative and Battling New Militancy in Kashmir," *Observer Research Foundation*, July 26, 2021, https://www.orfonline.org/research/building-indian-narratives-and-battling-new-militancy-in-kashmir.

[15] Yogesh Joshi, "India's Two-Front War Anxiety and Nuclear Deterrence", *Institute of South Asian Studies,* August 30, 2023, https://www.isas.nus.edu.sg/papers/indias-two-front-war-anxietyand-nuclear-deterrence/.

[16] Alok Bhagwat and Pradnya Vishwas Chitrao, "The Economics of 'Make in India' Over 'Buy (Import)' Decision in Selected Technologies for the Indian Navy," In *Information and Communication Technology for Sustainable Development*, (2019): 345–61, https://doi.org/10.1007/978-981-13-7166-0_34.

[17] Adil Sultan, Faraz Haider and Shayan Hassan Jamy, "Integrated Deterrence: Relevance & Implications for South Asia," *Margalla Papers* 27, no. 2 (2023): 72, https://doi.org/10.54690/margallapapers.27.2.176.

[18] Nicolas Blareland Hannes Ebert, "Explaining the Evolution of Contestation in South Asia," *International Politics* 52, no. 2 (2014): 238, https://doi.org/10.1057/ip.2014.44.

[19] Gregory D Koblentz, "Strategic Stability in the Second Nuclear Age." Special Report No. 71, *Council on Foreign Relations*, (Nov 2014): 3, https://cdn.cfr.org/sites/default/files/pdf/2014/11/Second%20Nuclear%20Age_CSR71.pdf

[20] Unbreen Qayyum, Sohail Anjum, and Samina Sabir, "Armed Conflict, Militarization and Ecological Footprint: Empirical Evidence from South Asia," *Journal of Cleaner Production* 281 (Jan 2021): 1 https://doi.org/10.1016/j.jclepro.2020.125299

has briefly explained how India is gradually making a rationale for fighting a conventional war under a nuclear umbrella by raising the escalation ladder in the conventional domain through analysing the series of recent conflicts between India and Pakistan.

Given the above discussion, this study would examine the primary research question that how India is modernizing its military and its possible implications on Pakistan? The primary research question is followed by the secondary research that how does Pakistan view Indian military modernization and approach its military modernization?

Based on the following research question, this paper argues that the strategic landscape of South Asia is primarily shaped by the interplay of two nuclear powers, India and Pakistan. India regards Pakistan as its arch-rival on its western border, supported by the Republic of China on its northern and north-eastern borders. Indian military doctrines and subsequent modernisation aim to counter a two-front challenge. However, India's military modernisation creates a security dilemma for Pakistan, which has a history of wars with India. Pakistan has a strong predilection to prevent India from undermining the strategic stability that resulted from South Asian nuclearization in 1998. Based on these assumptions, this paper hypothesises that "Indian military modernisation is driven by its pursuit of regional dominance and the concept of a two-front war, which heightens Pakistan's efforts to secure itself through countermeasures, resulting in a perpetual security dilemma in the region."

This research is qualitative descriptive research grounded in the theoretical premise of offensive realism. It explores the policies, perceptions and interplay of strategic responses of India and Pakistan towards their respective military modernizations. This study utilizes official documents, policy papers and statements of political and senior military leadership. For the secondary sources, this study uses reputable and relevant books, journals and newspaper articles.

The Indian perception of a two-pronged security dilemma has transformed its approach to a more offensive posture. According to India's former Air Vice Marshal Arjuna Subramaniam, India's military is rapidly evolving, shifting from a predominantly continental and conventional strategy to a comprehensive approach that fully utilises aerospace and cyber domains in all-spectrum operations.

Indian military modernization efforts and Pakistan's quest for balance can, therefore, be scrutinised through the lens of the Structural Realist paradigm. Structural Realism provides a systemic analysis of Indian military modernization, its impact on South Asian nuclear rivalry, and how this cycle of insecurity shapes regional security dynamics. The theoretical examination is followed by the doctrinal debate of the Indian military modernization.

Discussion regarding doctrines is an important component of this paper, which underscores the Indian threat perception, which has spurred its modernization efforts. This section also explains the evolution and further development of the Indian military doctrines with reference to the changing geopolitical realities and strategic requirements. The following section explains Pakistan's response to Indian Military modernization and enunciates the China mix in the India-Pakistan equation. Last section provides policy recommendations.

Structural Realism and Arms Race in South Asia

This study uses Structural Realism as conceptual framework, explaining how South Asian military modernization efforts will reinforce the security maximisation in the region.[21] The anarchic structural conditions in South Asia have created a self-help environment that undermines regional stability.[22] According to Structural Realists, Pakistan and India are modernising their militaries to maximise their relative power.[23]

According to Structural Realism, this military growth is not merely about maximizing security but enhancing India's position as regional hegemon. Therefore, New Delhi's ambitions extend beyond simply defending its territory to cementing itself as a key power broker in the South-Asian region.

These anarchic structural forces have driven Pakistan into a never-ending cycle of insecurity. Pakistan views India's modernising and aggressive stance as an existential threat. This has resulted in a regional security arrangement, hindered by a security dilemma, where Pakistan cannot retreat without seeming vulnerable.

Based on an understanding of John Mearsheimer's Offensive Realism, New Delhi's aspirations aim to achieve a relative power-maximising behaviour for regional hegemony. These aspirations not only stem from the antagonistic sense of mistrust and insecurity between South Asian rivals but have also been shaping the security culture in the region. Pakistan, in its quest for arms parity, follows the reactive logic of Structural Realism and endeavours to balance equilibrium vis-à-vis India in the hostile regional security environment to ensure its survival.

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[21] Liliang You, "Looking at the Security Dilemma between India and Pakistan from Structural Realism," *Proceedings of the 3rd International Conference on Economics and Management, Education, Humanities and Social Sciences (EMEHSS 2019)* (2019), https://doi.org/10.2991/EMEHSS-19.2019.25.

[22] Liliang You, "Looking at the Security Dilemma between India and Pakistan from Structural Realism," *Proceedings of the 3rd International Conference on Economics and Management, Education, Humanities and Social Sciences (EMEHSS 2019)* (2019), https://doi.org/10.2991/EMEHSS-19.2019.25.

[23] Nimra Sajjad, Tajjalla Munir and Sharmeen Batoo,l "Indian Hegemonic Design in South Asia: Implication for Regional Stability," *Global International Relations Review* V, no. III (2022): 32, https://doi.org/10.31703/girr.2022%28v-iii%29.04.

Although Pakistan is facing an economic crisis and cannot afford full-scale military modernization at this stage, its approach has been asymmetric, focusing full spectrum deterrence and adequate conventional capabilities to counter India's offensive posturing. Thus, Pakistan's pursuit of arms parity is no different to the traditional arms race, characterised by its selective India-centric military modernisation and the precision of its military capabilities, including tactical versatility and nuclear deterrence.

Thus, India and Pakistan have divergent goals in their pursuit of military modernization. While India aims to dominate the region and establish its position as the net security provider in the region, Pakistan aims for strategic stability by denying India the opportunity to dominate the regional security architecture.

These divergent goals put India in a persistent pursuit of power maximization through military buildup and extra-regional alliances. Pakistan, in response, would aim to enhance its defensive military capabilities and maintain credible minimum deterrence to ensure that the regional balance of power is not shifted in India's favour.

Evolution of the Indian Military Doctrines

One of the main reasons behind Indian military modernization is that Indian policymakers believe there is room for limited conflict against Pakistan under a nuclear umbrella.[24] This evolving nature of Indian warfare strategies aligns with the need to adapt to contemporary challenges.[25] This has led to India's military doctrinal evolution over the years, marked by crucial developments in its various strategic doctrines.

- ***Sunderji Doctrine***

India's military has a predilection towards an 'orthodox offensive' doctrine, which is Pakistan-centric and rooted in India's organizational and wartime experiences with Pakistan during 1965 and 1971 wars. The 'orthodox offensive' relies on large army formations and revolves around the concept of 'deterrence by punishment.'[26] The Sunderji Doctrine of 1981 reflected the offensive orthodoxy, following India's territorial losses during the war with China in 1962. This doctrine aimed to enable India to conduct a military offensive deeper into Pakistani

[24] Syed Ali Zia Jaffery, "Enhancing Deterrence Stability on the Subcontinent: The Case for Conventional Deterrence," *Stimson*, (2020), https://www.stimson.org/2020/enhancing-deterrence-stability-on-the-subcontinent-the-case-for-conventional-deterrence/.
[25] B. W Thangamani, "Defence Budget: Insufficient Allocation for Modernization of Forces," *International Journal of Management* 7, no. 3 (2020): 28-30, https://doi.org/10.34293/management.v7i3.1438.
[26] Arzan Tarapore, "The Army in Indian Military Strategy: Rethink Doctrine or Risk Irrelevance," *Carnegie India,* (2020), https://carnegieindia.org/2020/08/10/army-in-indian-military-strategy-rethink-doctrine-or-risk-irrelevance-pub-82426.

territory using conventional forces.[27] This doctrine was perceived as a direct threat to territorial integrity prompting Islamabad to proactively mobilise its forces alongside the Indian border as a defensive strategy in the 1980s and 1990s.[28] To date there is little evidence that India has shifted away from the 'Orthodox Offensive' doctrine.

- ***Cold Start Doctrine***

Since the late 1990s and early 2000s, orthodox offensive has been based on the notion of 'deterrence by punishment' and is considered India's de facto military strategy.[29] In line with this ideology, the Sunderji Doctrine was followed by the 2003 Cold Start Doctrine, which was tailored in the aftermath of the 2001-02 India-Pakistan border standoff. The 'Cold Start Doctrine' envisioned the deployment of the IAF along the borders with Pakistan in a formation that would allow proactivity and flexibility to Indian forces.[30] Under this doctrine, New Delhi envisioned a 'concept of 'limited war under the nuclear overhang', which included the mobilisation of troops in a short time and capturing a portion of Pakistan's territory, to be later used as a bargaining chip.[31]

India's assertive military operations strategy and limited warfare posturing are an even bigger threat to the survival and security of Pakistan. Therefore, in response to India's offensive tactics, Pakistan improvised its nuclear doctrine by developing 'HATF IX/NASR' tactical nuclear missiles in 2011, and achieved Full-Spectrum Deterrence (FSD) against India, giving Pakistan the ability to deter conventional and sub-conventional threats from India's offensive approach.[32] However, these shifts in the South Asian military milieu did not affect India's offensive doctrinal thinking towards Pakistan and subsequently evolved into the Indian Land Warfare Doctrine (LWD); however, before it, India also adopted other doctrines.

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[27] Ayaz Khokhar, "Shifts in India's Security Policy Towards Pakistan: From Sunderji to Cold Start Doctrine," *Strafasia*, (2019), https://strafasia.com/shifts-in-indias-security-policy-towards-pakistan-from-sunderji-to-cold-start-doctrine/.

[28] Hafeez Ullah Khan and Ijaz Khalid, "Indian Cold Start Doctrine: Pakistan's Policy Response," *Journal of the Research Society of Pakistan* 33, no. 1 (2018): 326-27, https://pu.edu.pk/images/journal/history/PDF-FILES/24_55_1_18.pdf.

[29] Abeer Iftikhar Tahirkheli, "India's Strategic Force Modernization and Its Implications on Strategic Environment of Pakistan," *Strategic Thought* 4, no. 1 (2022): 158, https://strategicthought.ndu.edu.pk/site/article/view/83.

[30] Ayaz Khokhar, "Shifts in India's Security Policy Towards Pakistan: From Sunderji to Cold Start Doctrine," *Strafasia*, (2019) https://strafasia.com/shifts-in-indias-security-policy-towards-pakistan-from-sunderji-to-cold-start-doctrine/.

[31] Allah Nawaz, "Analysing India's Military Doctrinal Evolution," *Strafasia*, (April 8, 2023), https://strafasia.com/analysing-indias-military-doctrinal-evolution/.

[32] Sannia Abdullah, "Pakistan's Full-Spectrum Deterrence: Trends and Trajectories," *South Asian Voices,* (December 13, 2018), https://southasianvoices.org/pakistan-full-spectrum-deterrence-trends-trajectories/.

- ***Joint Armed Forces Doctrine (JAFD)***

Complementing the LWD is the Indian JAFD of 2016, which aims to enhance coordination between the military tri-services (Army, Air Force and Navy), making them more effective and efficient in their responses to critical security threats.[33] The JAFD stands out for its focus on cohesive joint operations, information sharing and the integration of advanced cutting-edge technology to fuel its warfare engines.[34] Implementing JAFD and LWD has enabled India to modernize its Cyber Warfare (CW) capacities and augment its Information Warfare (IW) capabilities.

- ***Indian Land Warfare Doctrine***

In 2018, India introduced the LWD within a previous strategic orthodoxy, replacing the Cold Start Doctrine, an approach that focused more on conventional warfare.[35] The LWD aims to enhance Indian warfare capabilities to address threats emerging from grey zones and hybrid warfare techniques.[36] This doctrine provided broad details and key insights into India's plans, and laid the foundations for the modernizing of the Indian military by incorporating advanced hardware and futuristic technologies into warfare planning and strategies.[37] The LWD, the deployment of Rafael C jets and S-400 systems supporting the Integrated Battle Groups (IBGs) formations along the border with Pakistan.[38] Through the LWD, the formulators envision that the Indian military will be sufficiently modernised to operate in a complex security environment in the region.

- ***The Indian Air Force (IAF) Doctrines***

The IAF has significantly influenced Indian doctrinal thought. The IAF 2012 doctrine marked a crucial development reflecting the evolution and modernization of India's warfare strategies. Under this doctrine, all branches of the Indian armed forces (Army, Navy, and Air Force) would enhance their capabilities of 'jointness' to effectively counter emerging regional challenges. This doctrine was further optimised and refined under the IAF 2017 Doctrine, which aimed to

[33] Gulshan Bibi, "Deterrence Adrift: Dissecting Indian Coercive Military Doctrines 2017-2018," *Journal of Security and Strategic Analyses* 5, no. 1 (2021): 27, https://thesvi.org/wp-content/uploads/2020/01/JSSA-Vol-5-No.1-Final-31-48.pdf.
[34] Ankit Panda, "India's 2017 Joint Armed Forces Doctrine: First Takeaways," *The Diplomat,* (April 28, 2017), https://thediplomat.com/2017/04/indias-2017-joint-armed-forces-doctrine-first-takeaways/.
[35] Samara Iqbal Babar and Muhammad Nadeem Mirza, "Indian Strategic Doctrinal Transformation: Trends and Trajectory," *Journal of Security and Strategic Analyses* 6, no. 2 (2021): 80.
[36] Yasir Hussain, "India's Pakistan-Specific Land Warfare Doctrine: An Overview," *South Asian Voices,* (March 15, 2019), https://southasianvoices.org/indias-pakistan-specific-land-warfare-doctrine-an-overview/.
[37] P. C Katoch, "Indian Army Land Warfare Doctrine 2018," *SP Guide Publications,* Issue 6. 2018, https://www.spslandforces.com/story/?h=Indian-Army-Land-Warfare-Doctrine-2018&id=570.
[38] Muhammad Ali and Syed Mussawar Hussain Bukhari, "Indian Military Doctrine and Its Impact on South Asia's Strategic Stability," *Margalla Papers* 26, no. I (2022): 75, https://doi.org/10.54690/margallapapers.26.I.98.

modernise Indian Air Defence and Air Offensive capabilities to tackle the full spectrum of challenges.[39] Subsequently, the refined IAF 2022 Doctrine emphasised the development of sophisticated aerospace capabilities to ensure India's dominance in the regional airpower spectrum.[40] It outlines modernised aerospace power, including reach, enhanced mobility, efficient responsiveness, and support for India's offensive approach and sustained military dominance against Pakistan.[41] The Indian military's doctrinal evolution illustrates an ambitious plan to solidify its conventional asymmetry against Pakistan. By retaining the core principle of 'Orthodox Offence', India's modernization expedition reinforces the notion of engaging in fighting a conventional warfare against Pakistan.

India's Military Modernization

Indian military modernization seeks to maximise regional power, particularly against Pakistan.[42] In recent years, India's defence budget reflects strategic recalibrations, geopolitical shifts, and economic health.[43] India allocated USD 19.64 billion to procure advanced weapons and technology in the fiscal year 2024, which is part of the increased USD 78.8 billion defence budget for 2024/25.[44] As compared to the other high military spenders the IOR including France spending of USD 64 billion on defence and Australia pouring USD 59 billion, India aims to be the highest spender. The spending aimed at the procurement of new warships, aircraft and military hardware.[45] To complement its military modernization, India has been planning to increase its nuclear arsenal and construct new plutonium production facilities to increase its nuclear warheads.[46] Moreover, India has been developing new warhead delivery

[39] Christopher Clary, and Vipin Narang, "India's Counterforce Temptations: Strategic Dilemmas, Doctrine, and Capabilities," *International Security* 43, no. 3 (2019): 32. https://doi.org/10.1162/isec_a_00340.
[40] Anil Chopra. "Indian Air Force Released Its New Doctrine; Aims to Evolve as Aerospace Power to Keep Pace with Technology," *EurAsian Times*, (Feb 19, 2023), https://www.eurasiantimes.com/indian-air-force-released-its-new-doctrine-aims-to-evolve/.
[41] Zaki Khalid, "Analysing Indian Air Force's 2022 Doctrine," *Centre for Strategic and Contemporary Research,* (February 21, 2023), https://cscr.pk/explore/themes/defense-security/analysing-indian-air-forces-2022-doctrine/.
[42] Nimra Sajjad, Tajjalla Munir, and Sharmeen Batool, "Indian Hegemonic Design in South Asia: Implications for Regional Stability," *Global International Relations Review* 5, no. 3 (2022): 28 https://doi.org/10.31703/girr.2022%28v-iii%29.04.
[43] Sarahbeth George, "From Galwan to 2024: How India's Defence Budget Reflects Strategic Changes," *Economic Times*, (July 16, 2024). https://economictimes.indiatimes.com/news/defence/union-budget-2024-from-galwan-to-2024-indias-defence-budget-reflects-strategic-changes/articleshow/111773915.cms.
[44] Vivek Raghuvanshi, "India to Boost Defence Spending by 13% with Billions for New Weapons," *Defence News,* (Feb 2, 2023), https://www.defensenews.com/global/2023/02/02/india-to-boost-defense-spending-13-with-billions-for-new-weapons.
[45] "Defence Budget of India 2023: India's Defence Sector Gets Rs 5.94 Lakh Crore for 2023-24," *Economic Times.* (Feb 1, 2023), https://economictimes.indiatimes.com/news/defence/budget-2023-indias-defence-sector-gets-rs-5-94-lakh-crore-for-2023-24/articleshow/97511172.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst.
[46] Hans M Kristensen and Matt Korda, "Indian Nuclear Weapons," *Bulletin of the Atomic Scientists* 78, no. 4 (July 2022): 224, https://doi.org/10.1080/00963402.2022.2087385.

systems, such as new variants of its Agni Ballistic Missiles. India's Defence Research and Development Organisation (DRDO) and its Strategic Forces Command have demonstrated confidence in their newly deployed Agni-V and Agni-P, which incorporates a host of novel technologies and are capable of carrying nuclear and conventional warheads over medium to long ranges. With the inclusion of new missile technologies, such as BrahMos missile system, India gains the readiness and confidence in its Draft Nuclear Doctrine, to maintain a credible minimum deterrent. However, the Indian defence minister, Rajnath Singh, has hinted at the evolving nuclear doctrine of India, which might be a shift away from the 'no first use' (NFU) policy.[47] India's increasing tilt towards reconsidering the NFU shows wariness of China's technological advancements and changing geostrategic realities.

Indian Naval Modernization

The Neo-realist perspective explains security dynamics in South Asian and Indian Ocean region.[48] To meet its strategic needs in the Indian Ocean and control key trade routes in the region, India has started to invest heavily in upgrading its naval strength, hardware and technologies. In 2019, New Delhi allocated USD 8 billion to pursue its ambitious P75 (I) project to build new and modern shipyards to develop high-quality submarines to improve India's deep-water naval capabilities.[49] BrahMos PJ-10 hypersonic missile system was inducted into the Indian Navy in 2023. It has a speed of up to Mach 3, with a range of up to 300 km, and carries a payload of 300 kg.[50] India is also in the process of developing the advanced version of this hypersonic cruise missile, BrahMos II, which will have a range of up to 1500 km, a speed of up to 8,575 km per hour, and will allow the Indian Navy to hit targets with more precision.[51] This will enable the Indian Navy to maintain a strong strategic position across the Indian Ocean's littoral states.

The Indian Navy has also acquired 12 additional P8-I, LRMR/ASW aircraft, which are equipped with lethal modern armament systems, including depth charges, Harpoon Block-II

[47] Elizabeth Roche, "India's No First Use Nuclear Policy May Change: Rajnath Singh," *Live Mint*, (September 17, 2019), https://www.livemint.com/news/india/india-s-no-first-use-nuclear-policy-may-change-rajnath-singh-1565946292515.html.
[48] Bruce Vaughn, "China-India Great Power Competition in the Indian Ocean Region: Issues for Congress," *Congressional Research Service*, (April 2018), https://sgp.fas.org/crs/row/R45194.pdf.
[49] Alok Bhagwat, and Pradnya Vishwas Chitrao, "The Economics of 'Make in India' Over 'Buy (Import)' Decision in Selected Technologies for the Indian Navy," In *Information and Communication Technology for Sustainable Development,* (2019): 345, https://doi.org/10.1007/978-981-13-7166-0_34.
[50] Joe Saballa, "Indian Navy to Order BrahMos Cruise Missiles for $2.5 Billion." *The Defence Post,* (March 15, 2023), https://www.thedefensepost.com/2023/03/15/indian-navy-brahmos-missiles/.
[51] "Hypersonic BrahMos-II Missile May Include Tech from Tsirkon Missile," *Naval News*, (Aug 2, 2022). https://www.navalnews.com/naval-news/2022/08/hypersonic-brahmos-ii-missile-may-include-tech-from-tsirkon-missile/.

missiles and MK-54 lightweight torpedoes.[52] These aircraft can detect incoming threats and support maritime surveillance, electronic warfare, search and rescue missions, providing targeting data and real-time surveillance.[53] In 2021, the Indian Navy Directorate of Network Centric Operations (DNCO) issued a tender for Space-Based Automatic Dependent Surveillance-Broadcast (ADS-B) feeds.[54] India is also planning to upgrade its fleet under the Advanced Technology Vessel (ATV) program. Under the ATV, India will build four Nuclear-Powered Ballistic Missile Submarines (SSBNs), with the Indian built Arihant-class already operational.[55]

India, together with France, has launched the document entitled '*Horizon 2047*', under which India will acquire futuristic modern French-made diesel-electric Scorpene submarines.[56] Additionally, through projects like *75 Alpha* and modernisation, India aims to strengthen its nuclear triad. "This is the first time that India is moving towards consolidating its position in the Indian Ocean as a foreign policy priority. Imports to India's harbours are a growing part of its economy that it must protect with a strong navy."[57] The INS Vikram Aditya, India's Aircraft Carrier that can carry MiG-29K aircraft, with a range of 1500 kms with air defence and strike capabilities, gives India the offensive edge to assert its effective presence in the Arabian Sea and the Bay of Bengal. Moreover, the Indian naval bases in the IOR, including the Andaman and Nicobar Islands, Lakshadweep and Minicoy Island, which harbour the Indian Navy Ships (INS) fleets, are positioned to counter China's growing influence and develop a strong naval presence in the region.

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[52] Ajai Shukla, "Boeing Completes Delivery of 12 P-8I Aircraft to India," *Business Standard,* (February 24, 2022), https://www.business-standard.com/article/economy-policy/boeing-completes-delivery-of-12-p-8i-aircraft-to-india-122022400776_1.html.

[53] "India's Navy's P-81 Maritime Surveillance Aircraft Completes a Decade; Expects More Order," *Financial Express,* (Feb 24, 2023), https://www.financialexpress.com/business/defence-india-navys-p-8i-maritime-surveillance-aircraft-completes-a-decade-expects-more-order-2991922/.

[54] Zaki Khalid, "Indian Navy Eyes Enhanced Air Traffic Surveillance of the Arabian Sea," *Centre for Strategic and Contemporary Research,* (May 24, 2021), https://cscr.pk/explore/themes/defense-security/indian-navy-eyes-enhanced-air-trafficsurveillance-of-the-arabian-sea/.

[55] Brad Lendon, "India Has a New Nuclear-Capable Ballistic Missile Submarine. But Can It Catch Up with China?" *CNN*, (Sep 14, 2024), https://edition.cnn.com/2024/09/14/asia/india-nuclear-ballistic-missile-submarine-intl-hnk-ml/.

[56] Christina Mackenzie, "India, France Increase Defense Ties with New Rafale Jet and Submarine Buys." *Breaking Defense,* (July 18, 2023), https://breakingdefense.com/2023/07/india-france-increase-defense-ties-with-new-rafale-jet-and-submarine-buys/.

[57] Meredith Roaten, "India Manages Diverse Arms Sources for Military Modernization," *National Defence*, (December 9, 2021), https://www.nationaldefensemagazine.org/articles/2021/12/9/india-manages-diverse-arms--sources-for-military-modernization.

Modernization of the Indian Air Force

The IAF 2022 doctrine has transformed the IAF's regional posture. With the inclusion of French Rafale jets, India has planned to develop multiple new squadrons that will enhance its combat abilities. In addition, Boeing has already delivered the AH-64E Apache and CH-47F (I) Chinook military helicopters to the IAF.[58] For a long time, the IAF has faced criticism for its ageing technology and aircraft, such as the Mig-21 Bison, which is not set to retire.[59] India, to diversify its air combat solutions, has begun manufacturing an indigenous single-engine multi-role light-weight combat jet, Tejas, a project of Hindustan Aeronautics Limited (HAL).[60] Under the initiative to promote 'Made in India', decision has been made to equip the IAF with 123 Tejas jets, despite critics opposing the inclusion. India, however, plans to develop more advanced variants of Tejas in the future, such as Tejas Mark II, which will feature a multi-sensor data fusion system, including an Active Electronically Scanned Array (AESA) radar and a missile approach warning system with search and track infrared.[61]

Technological superiority is a crucial aspect of modern warfare.[62] So far, India's biggest obstacle to becoming a dominant military force in South Asia is its inability to assert conventional superiority vis-à-vis Pakistan despite clear numerical advantage. Comparing the Indian military to Pakistan's military, India's 1.46 million active personnel are more than double the Pakistan's 654,000 personnel. India is ranked the 5th largest in terms of military size, whereas Pakistan is ranked 12th. Similarly, India has the 7th largest naval force in the world as compared to Pakistan, which is ranked 27th.[63] However, despite Indian military numerical strengthen, it faced setback against Pakistan in limited conflicts. For instance, after the 2019 Balakot strikes inside Pakistan, two IAF jets were shot down in a dogfight by Pakistan.

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[58] Dario Leone, "Boeing Completes Delivery of All AH-64E Apache and CH-47F Chinook Military Helicopters to the Indian Air Force," *The Aviation Geek Club*, (July 13, 2022), https://theaviationgeekclub.com/boeing-completes-delivery-of-all-ah-64e-apache-and-ch-47f-chinook-military-helicopters-to-the-indian-air-force/#:~:text=Boeing%20has%20completed%20delivery%20of,at%20Air%20Force%20Station%2C%20Hindan.

[59] Alison Saldanha, "MiG-21s Well Past Their Retirement Age: Here's Why IAF Needs New Jets," *Business Standard,* (March 1, 2019), https://www.business-standard.com/article/current-affairs/mig-21s-well-past-their-retirement-age-here-swhy-iaf-needs-new-jets-119030100184_1.html.

[60] Shreya Biswas, "Tejas Light Combat Aircraft: Here's How India Created Its First Flying Dagger," *India Today*, (July 1, 2016), https://www.indiatoday.in/fyi/story/tejas-light-combat-aircraft-history-indian-air-force-326777-2016-07-01.

[61] EurAsian Times Desk, "Tejas Mk-2 – India's New SuperFighter Is Now One of Top 4 Light Combat Aircraft in the World Along With 'Idol' Saab Gripen," *EurAsian Times*, (October 31, 2021), https://www.eurasiantimes.com/tejas-mk-2-indias-new-superfighter-top-light-combat-aircraft/.

[62] Aamir, Omer, "IAF's Defence Acquisitions and Their Effect on Regional Stability," *SSRN,* (2020)*:* 2 http://dx.doi.org/10.2139/ssrn.3543058.

[63] Desk, DH Web, "India vs Pakistan Military 2025: Strength, Manpower, Budget and More Compared," Deccan Herald, April 27, 2025, https://www.deccanherald.com/india/india-vs-pakistan-military-ranking-manpower-budget-and-more-3512808.

In 2025, India lost five aircraft, including three advanced French Rafael jets, during the May 7-10 conflict with Pakistan.[64] These setbacks demonstrate that mere numerical superiority does not guarantee Indian dominance in South Asia. The key issues hindering the Indian military's modernization include technology, training capacity and the integration of new technology in the military operations.

India declared the year 2023 as its 'Year of Transformation', based on the five pillars of Force Structuring and Optimisation, Modernisation & Technology Infusion, Systems, Processes & Functions, Human Resource Management and Jointness and Integration with an estimated allocation of USD 42 billion.[65] To achieve the envisioned modernization of the Indian military intended to integrate five squadrons of S-400 systems, which include forty launchers, 1,000 missiles, and a multifunctional radar system equipped with anti-stealth capabilities and an autonomous detection and targeting system, out of which three have been received and operationalized. This advanced system allows the IAF to engage multiple targets simultaneously through mobile launch vehicles. Additionally, India's USD 10 billion procurement from the US includes logistics aircraft such as C-130J 'Super Hercules, C-17 Globemaster and patrolling P-81 aircraft.[66] Through the inclusion of S-400, India plans to utilise it for an offensive air defence role during a war against Pakistan. India's diversification of military hardware is supported by huge budgetary inflows, a pattern which reflects India's aspirations of absolute superiority in the South Asia. These aspirations are not only doctrinal but also supported by investment in military hardware and technology.

Indian Military Modernization in the Disruptive Technologies

Indian military modernization is prompting New Delhi to enhance coordination amongst its tri-services while developing advanced technologies that will be crucial in the South-Asian region, including Artificial Intelligence (AI), Lethal Autonomous Weapons (LAWs), Hypersonic Weapons, Directed Energy Weapons (DEWs), and Quantum technology, apart from modernizing Intelligence, Surveillance and Reconnaissance (ISR) capabilities. In 2019, India established the Defence AI Council (DAIC) chaired by Indian Minister of Defence. This division has been created to integrate AI in the defence structures of the Indian armed forces. The use of AI, advanced robotics, cyberspace and nanomaterials will play a vital role in the

[64] Akalia Kalan, "How did Pakistan Shoot Down Five Indian Jets," *The Economist,* (July 16th, 2025), https://www.economist.com/asia/2025/07/16/how-did-pakistan-shoot-down-indias-fighter-jets.
[65] Alok Deb, "Indian Military: Five Issues for the Immediate Future," *The Peninsula Foundation,* (February 07, 2024), https://www.thepeninsula.org.in/2024/02/07/the-indian-military-five-issues-for-the-immediate-future/.
[66] Sandeep Unnithan, "In a Graphic: India-US—Brothers in Arms," *India Today,* (September 23, 2021), https://www.indiatoday.in/india-today-insight/story/india-us-brothers-in-arms-1856465-2021-09-23.

future of warfare. Additionally, AI-integrated systems can more efficiently manage vast quantity of data.[67] The application of AI-powered technology is diverse covering areas such as logistics, reconnaissance, cyberspace, warfare, missile guidance and the detection of hostile units.[68]

With the advancement in AI, LAWs are the future of warfare. In 2018, India signed a deal with Israel Aerospace Industries to provide India with approximately 100 Heron TP UAVs and 10 missile-armed drones, to improve its cross-border strike capabilities, especially the surgical strike capabilities.[69] Furthermore, to expand its drone inventory in January 2025, India joined the Eurodrone program as an observer, indicating its interest in acquiring Eurodrone Remotely Piloted Aircraft (RPAS). This inter-European technological venture is a highly advanced drone system with a payload capability of over 2.3 tons and advanced reconnaissance and precision strike capability.[70] The drone expedition shows India's intent to expand strategic alliances with advanced countries, including Israel and Europe, to expand its UAVs capabilities.

India has now developed effective hypersonic-missile technology to establish a first strike capability against strategic targets in Pakistan.[71] In 2020, India's DRDO announced the development of DEWs to address China's rising dominance along its northern borders. India, along with other major powers of the system, has made significant progress in quantum research and development. India has upgraded and developed advanced ISR systems through the utilisation of quantum technology.[72] The ISR capabilities of India have become a pivotal 'informationised' warfare tool, as they serve as a crucial component contributing to India's national security strategy. Furthermore, the development of an ISR network by India is likely to adversely impact the South Asian security environment where India and Pakistan, the two

[67] Eliaçık, Eray, "Guns and Codes: The Era of AI-Wars Begins," *Dataconomy* (August 17, 2022), https://dataconomy.com/2022/08/17/how-is-artificial-intelligence-used-in-the-military/.
[68] Maximilian Schreiner, "AI in War: How Artificial Intelligence Is Changing the Battlefield," *The Decoder* (January 9, 2023), https://the-decoder.com/ai-in-war-how-artificial-intelligence-is-changing-the-battlefield/#:~:text=AI%20is%20helping%20to%20optimize,an%20impact%20on%20military%20operations.
[69] Manu Pubby, "Government Approves $400-Million Plan to Procure Armed Heron TP Drones from Israel," *Economic Times,* (Sep 15, 2015), https://economictimes.indiatimes.com/news/defence/government-approves-400-million-plan-to-procure-armed-heron-tp-drones-from-israel/articleshow/48906195.cms.
[70] "India Joins Eurodrone Program as the Newest OCCAR Observer State," (January 21, 2025), *OCCAR,* https://www.occar.int/news/india-joins-eurodrone-programme-as-newest-occar-observer-state-.
[71] V. K Saxena, "India's March towards Achieving Hypersonic Capability," *Vivekananda International Foundation*, (Feb 16, 2023), https://www.vifindia.org/article/2023/february/16/indias-march-towards-achieving-hypersonic-capability.
[72] Michal Krelina and Denis Dúbravčík, "Quantum Technology for Defence," *JAPCC,* 35 (Feb 2023), https://www.japcc.org/articles/quantum-technology-for-defence/.

nuclear-armed states, remain embroiled in a military competition and have experienced several serious military crises over the past many years."[73]

On the space front, the Indian Space Research Organisation (ISRO) has been designing modern strategic warning systems, which are being spearheaded by their information gathering satellites alongside an 'expanding fleet of airborne platforms and ground-based sensors.[74] In addition to this, ISRO has developed cutting-edge space systems which are equipped with Space Situational Awareness (SSA) as well as Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR).[75] With these advancements in its space and satellite technology, India is now equipped with military satellite networks, including ELINT (Electronic Intelligence), GEOINT geo-spatial intelligence and even Communications, Early Warning, Navigation, Search and Rescue, Space Control, which will benefit India with its Ballistic Missile Defence (BMD) systems.[76] These security installations are not merely measures to feel secure, but have been developed to equip India to demonstrate its offensive posture at will. It is difficult to argue against India's attainment of a relative qualitative and quantitative advantage in its military inventory. Nevertheless, in a region plagued with unresolved territorial disputes and a history of wars, India's rising military ambitions have germinated a security dilemma for Pakistan.

Pakistan's Response to Indian Military Modernization

To maintain a balance in the South Asian power equation, Pakistan has been improving its conventional capabilities to counter Indian military modernization. Pakistan's defensive yet enduring posture has contested India's offensive rise in the region. Blarel and Ebert argue that the current conditions of regional contestation in South Asia, most importantly the persistent revisionist versus status-quo domestic agendas, the presence of growing nuclear arsenals, and multi-tiered Asian rivalry constellations, undermine prospects for conflict resolution and complicate modelling future strategic behaviour in the region.[77] As a direct consequence of the Indian Military modernization, the conventional asymmetries between the two states are

[73] Amjad Mahmood and Adil Sultan, "Impact of India's ISR Capabilities on South Asian Security Dynamics," *Strategic Studies* 41, no. 4 (April 2022): 17, https://doi.org/10.53532/ss.041.04.0040.
[74] Muhammad Jawad Hashmi and Sultan Mubariz Khan, "Emerging Network Centric Warfare Capabilities of Indian Military: Challenges for Pakistan's Security," *Margalla Papers* 23, no. 2 (2019), https://margallapapers.ndu.edu.pk/site/issue/download/15/70.
[75] Amjad Mahmood, Adil Sultan, "Impact of India's ISR Capabilities on South Asian Security Dynamics," *Strategic Studies* 41, no. 4 (2022): 19, https://doi.org/10.53532/ss.041.04.0040.
[76] Amjad Mahmood and Adil Sultan, "Impact of India's ISR Capabilities on South Asian Security Dynamics," *Strategic Studies* 41, no. 4 (April 2022): 20, https://doi.org/10.53532/ss.041.04.0040.
[77] Nicolas Blarel and Hannes Ebert, "Explaining the Evolution of Contestation in South Asia," *International Politics* 52, no. 2 (Dec 2014): 233, https://doi.org/10.1057/ip.2014.44.

expanding. Pakistan is now focusing on efforts to achieve credible arms parity with India to deter any aggression coming from its eastern borders. Although the Indian IBGs' formation at the western borders with Pakistan could not undermine stability, it has given rise to a new age of arms race, which has the potential to put the deterrence stability in South Asia under stress.[78]

The existing conventional asymmetry between Pakistan and India is increasing because of the sizes of their respective economies. India has allocated USD 74.34 billion as its defence budget for the fiscal year 2024/25, which is a 4.79% increase from the previous year and an 18.43% increase from the fiscal year 2022/23.[79] India's defence budget accounts for 1.91% of its GDP.[80] Pakistan, on the other hand, allocated USD 7.6 billion as defence budget for the fiscal year 2024/25, which is almost a 15% increase from the previous year, and accounts for just 1.7% of its GDP, a decline compared to previous years, which was around 2%.[81]. Pakistan's defence spending is expected to reach USD 12.5 billion by 2027 as forecasted by Global Data.[82]

According to Pakistan's former Air Marshal, Ashfaq Arain, Indian military modernisation and its ever-evolving offensive doctrine will push Pakistan into modifying its warfighting tactics along the border with India. Furthermore, the right-wing BJP-RSS rise in India will further lead to a contestation of ideologies between Pakistan and India, which might push both adversaries into hostile confrontations. All these developments around the Eastern borders of Pakistan are forcing Pakistan to resort to its nuclear deterrent. However, Pakistan is now moving towards selective modernization of its conventional forces, naval modernization, and missile development and delivery systems, to balance the evolving and delicate arms disparity in South Asia.[83]

India has deployed Rafael jets, S-400, long-range Air defence systems, modern UAVs, long-range maritime systems and nuclear submarines along the borders of Pakistan.[84] In

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[78] Muhammad Ali and Syed Mussawar Hussain Bukhari, "Indian Military Doctrine and Its Impact on South Asia's Strategic Stability," *Margalla Papers* 26, no. 1 (2022): 74-84 https://doi.org/10.54690/margallapapers.26.I.98.

[79] Gordon Arthur, "Despite Security Threats, India's Defense Budget Remains Static," *Defense News*, (August 6, 2024), https://www.defensenews.com/land/2024/08/06/despite-security-threats-indias-defense-budget-remains-static/

[80] Vanessa Le, "India's 2024-2025 Defense Budget: Incremental Progress at Best • Stimson Center," *Stimson Center*, November 30, 2024, https://www.stimson.org/2024/indias-2024-2025-defense-budget-incremental-progress-at-best/.

[81] Usman Ansari, "Pakistan Unveils Increased Defence Budget, IMF Decries Spending Plan," *Defence News*, (June 22, 2023), https://www.defensenews.com/global/asiapacific/2023/06/22/pakistan-unveils-increased-defense-budget-imf-decries-spending-plan/.

[82] "Pakistan Defense Market Size, Trends, Budget Allocation, Regulations, Acquisitions, Competitive Landscape and Forecast to 2028," *GlobalData,* August 10, 2023, https://www.globaldata.com/store/report/pakistan-defense-urmarket-analysis/.

[83] Iftikhar Ali and Jatswan S. Sidhu, "Strategic Dynamics of the Arms Race in South Asia," *Journal of Asian and African Studies,* (2023): 16, https://doi.org/10.1177/00219096231153150.

[84] Muhammad Ali and Syed Mussawar Hussain Bukhari, "Indian Military Doctrine and Its Impact on South Asia's Strategic Stability," *Margalla Papers* 26, no. I (2022): 77, https://doi.org/10.54690/margallapapers.26.I.98.

response, Pakistan has started to increase the quantity of its MIRVs along the border and is working to enhance its long-range ballistic and submarine-launched cruise missile (SLCM) systems, such as the Shaheen III and Babur III.[85] Pakistan has also developed warfare drones, which have been very effective and precise in its fight against terrorism.[86] As a counter to India's deal of procuring Rafael C jets, Pakistan has procured 25 J-10C Firebird multi-purpose 4.5 generation fighter aircrafts.[87] Alongside, China has supplied Pakistan with PL-15 air-to-air missiles, which add real value to Pakistan's aerial combat ability.

Earlier this year, Pakistan's former Air Chief indicated that Pakistan is also set to acquire 36 FC-31 Gyrfalcon fifth-generation stealth fighter jets from China, becoming the first nation to do so.[88] Pakistan has also enhanced its capabilities, such as ISR, air defence, cyber and mechanisation systems, despite economic challenges. In 2020, Pakistan ordered 50 UCAVs from the manufacturers of the Wing Loong II which will be crucial inventory for surveillance, reconnaissance and precision striking.[89] Furthermore, Pakistan has placed an order for Russian Kornet-E anti-tank guided missiles and Spanish Alcotan-100 shoulder-carried anti-tank rockets, to counter India's T-90 tanks.[90] Additionally, Pakistan has been working on enhancing its C4I systems and capabilities, developing more Al-Khalid and, Al-Zarrar tanks, advanced third-generation Haider tanks, T-80UD tanks and rebuilding the M113-series armoured personnel carriers.

The Pakistan Air Force (PAF) has been working on producing JF-17 jets, which have three production blocks: Block 1, Block 2 and Block 3 – 150 of which will be produced in the coming years.[91] Pakistan's naval modernization programs also 'remain on track', as a complete fleet renewal is underway. The Pakistan Navy has received two Type 054 A/P frigates this year.

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[85]Ankit Panda, "Pakistan Conducts Second Test of Babur-3 Nuclear-Capable Submarine-Launched Cruise Missile," *The Diplomat*, (April 1, 2018), https://thediplomat.com/2018/04/pakistan-conducts-second-test-of-babur-3-nuclear-capable-submarine-launched-cruise-missile/.

[86] Aritra Banerjee, "Pakistan 'Races Ahead' of India in Drone Technology; Is 4th Country to Deploy UCAVs in Combat Ops," *The EurAsia Times,* (September 8, 2021), https://www.eurasiantimes.com/pakistan-races-ahead-of-india-in-drone-technology-is-4th-country-to-deploy-ucavs-in-combat-ops/.

[87]Usman Ansari, "Pakistan Confirms Chinese 'Firebird' Fighter Acquisition," *Defense News*, (January 3, 2022), https://www.defensenews.com/global/asia-pacific/2022/01/03/pakistan-confirms-chinese-firebird-fighter-acquisition/.

[88] Usman Ansari, "Pakistan to Buy Chinese FC-31 Fighter Jets, Says Air Chief," *Defense News,* (January 4, 2024) https://www.defensenews.com/air/2024/01/04/pakistan-to-buy-chinese-fc-31-fighter-jets-says-air-chief/.

[89] Shishir Gupta, "China Sells 50 Armed Drones to Pakistan, Begins Psyops: It's a Reminder," *Hindustan Times,* (December 26, 2020), https://www.hindustantimes.com/india-news/chinese-platries-to-psyche-indian-army-by-supplying-armed-drones-to-pak/storytySb4UnKimFUYIxJdP3xGL.html.

[90] Bilal Khan, "Pakistan Ordered Kornet-E Anti-Tank Guided Missiles in 2017-2018," *QUWA*, (October 6, 2019), https://quwa.org/2019/10/06/pakistan-ordered-kornet-e-anti-tank-guided-missiles-in-2017-2018/.

[91] Franz-Stefan Gady, "Pakistan Stands Up New Fighter Squadron," *The Diplomat*, (March 8, 2018). https://thediplomat.com/2018/03/pakistan-stands-up-new-fighter-squadron/.

To counter India's BrahMos, Pakistan has operationalised the HHQ-16 surface-to-air missile systems and P-282/CM-401 supersonic anti-ship weapons.[92]

Pakistan's missile system is diverse, and since 1998, Pakistan has successfully tested *'Short-Range Ballistic Missiles (SRBM), Medium-Range Ballistic Missiles (MRBM), Close-Range Ballistic Missiles (CRBM), Short-Range Cruise Missiles (SRCM), Air-Launched Cruise Missiles (ALCM), Submarine-Launched Cruise Missiles (SLCM), Anti-ship Cruise Missiles (ASCM)'.*[93] By incorporating these varied missile systems, Pakistan has improved its strike range to encompass all of India. However, given the military modernization by India and growing conventional imbalances, nuclear deterrence remains the bedrock of strategic stability in South Asia.

The "China Mix" and Impact of Indian Military Modernization on Strategic Stability in South Asia

China's impact on the South-Asian balance of power and the Sino-Pak strategic partnership has played a key role in influencing Indian military modernization. When China conducted its first nuclear test on October 16, 1964, it created a spill over effect in the region. To balance the power, India conducted its nuclear test in May 1974, dubbed as the 'Operation Smiling Buddha'.[94] This spill over effect forced Pakistan to develop its nuclear capability. Pakistan conducted its first nuclear tests in May 1998, demonstrating its technological capabilities to maintain a balance of power in the region. China played a crucial role in shaping Pakistan's nuclear policy and even carried out Pakistan's first nuclear test in 1990.[95] The Sino-Pak strategic partnership has always been perceived as a threat by India, as this partnership has led to several joint military exercises, military cooperation agreements and most importantly, nuclear cooperation, through which Pakistan aims to contain Indian hegemony in the South-Asian region.

While India's relations with Pakistan remained sour, its strategic competition with China has tempted India to grow its conventional superiority. The Sino-Indian 2020 Ladakh

[92] Usman Ansari, "How are Pakistan Naval Modernization Plan Coming Along," *Defence News,* (Feb 13, 2023) https://www.defensenews.com/smr/defending-the-pacific/2023/02/13/how-are-pakistans-naval-modernization-plans-coming-along/.
[93] Iftikhar Ali and Jatswan S. Sidhu, "Strategic Dynamics of the Arms Race in South Asia," *Journal of Asian and African Studies*, 59, no. 8 (2023): 8-9, https://doi.org/10.1177/00219096231153150.
[94] "Operation Smiling Buddha: The Story of India's First Nuclear Test at Pokhran in 1974," *The Indian Express*, (May 19, 2023), https://indianexpress.com/article/explained/explained-history/operation-smiling-buddha-nuclear-first-test-pokhran-history-8616714/.
[95] Ramesh Thakur, "China's Role in the India-Pakistan Nuclear Equation," *Australian Strategic Policy Institute,* (May 7, 2019), https://www.aspistrategist.org.au/chinas-role-in-the-india-pakistan-nuclear-equation/.

limited standoff along the Line of Actual Control (LAC) is a case in point, which led India to expedite its military modernization.

The fast-paced military modernization reflects India's predilection for military rather than political and diplomatic means to deal with regional neighbours. This tendency reinforces the notion of a security dilemma for the smaller South Asian neighbours, especially for Pakistan. Since 2014, India has stalled talks and reduced the scope of any bilateral negotiations to terrorism and the status of Azad Jammu and Kashmir. In the absence of dialogue, the regional security environment is becoming volatile every passing day and can impact the region in the following ways.

- Military modernization would increase tensions and the likelihood of war in South Asia. India's increasing focus on automation, enhancing ISR capabilities, would likely to tempt India to a limited Conflict against Pakistan. The traditional notion of crisis stability relies on predictable patterns of an adversary. Supposedly, AI in the military domain by India will erode these patterns because of the speed and unpredictability of such weapons, which may result in a possibility of "miscalculation and escalation."
- Secondly, the proximity between nuclear India and Pakistan increases the risk of miscalculations and inadvertent war. In March 2022, the accidental firing of an Indian BrahMos missile inside Pakistan which India claims was due to a technical malfunction, was a serious negligence by New Delhi. While it raises questions on India's command supervision and operational protocols, more importantly, the consequences of such an incident, if a missile hits any military installation, can be grave. In the fragile security environment of South Asia, the chances of inadvertent war cannot be ruled out in the wake of any future incident of the same nature.
- For the past two decades, India has attempted to achieve escalation dominance in each conflict. Balakot strikes set the tone for the use of military force as seen in the post-Pahalgam May 2025 four-day conflict between India and Pakistan. India's Military buildup, a charged political environment, and media-supported war-hysteria have raised the ante of war below the nuclear threshold.
- Current trends in the Indian Military modernization shows a trajectory to find path for a limited war with Pakistan. Though Pakistan does not view even a limited war between India and Pakistan under a nuclear umbrella, however, India continues to explore new tools/strategy to engage in a limited conflict: a contestable-incontestable vs less credible or more credible paradox. In the realm of the emerging and disrupting technological

landscape, India will prefer to use unmanned aircraft and other aerial platforms with stand-off weapons that could be used to inflict damage deep inside Pakistan territory and build its credentials as a credible military power.[96]

Conclusion

Indian Military Modernization and the ensuing arms race pose a challenge to strategic stability in South Asia. India's aim to fight a conventional war through its military modernization under a nuclear shadow has made South Asia the most dangerous nuclear flashpoint. Further, the idea to establish a new normal by penalising Pakistan for any militant attack inside India seems a preposterous proposition. Alongside India's ploy of supporting proxies and alliances with the non-state actors inside Pakistan, espionage can lead to uncontrollable consequences that might spread beyond the regional geo-political boundaries. These instabilities have significantly hampered the Pakistan-India peace process and adversely impact on the socioeconomic development in the region.

In a regional context, the Indian Military Modernization must also be viewed as an effort to tackle the Sino-Pak strategic convergence. The "China mixes" is also another reason why India is making headways to acquire foreign armaments, including futuristic weapons systems and technologies, like advanced missiles and advanced combat systems, to enhance its warfighting capabilities. These modernization build-ups are shaping aggressively because India feels that it is militarily capable, economically confident and strategically well placed with its military and economic alliances with the global powers to restructure South Asia by becoming the dominant power. With the inclusion of Rafael C jets, and the expansion and modernizing Indian naval forces and equipping the Indian Army with futuristic weaponry, India aims not only to counter any regional strategic partnerships but to assert its strategic and economic dominance in the region. Indian Naval Modernization supports the country's extensive coastlines, international trade and shows that Indian strategic posture is now evolving beyond South Asia.

Arguably, South Asia is becoming a veritable tinderbox that could explode at any moment. To sum up, the Indian military modernization, marked by technological advancements and doctrinal evolution, has fueled the South Asian arms race, increasing the prospects of strategic instability in the region. India's hegemonic ambitions require the international community's attention to consider the rapid Indian military expansion to prevent any escalation

[96] Adil Sultan, Airpower, Conventional Escalation, and the Nuclear Overhang, Drawing Lessons from Operation Bunyanum Marsoos, Seminar on "Pakistan's Nuclear Weapon Program – Guarantor of Peace and Stability in South Asia," *CISS, Islamabad*, May 30th, 2025.

that could have regional consequences. The only way forward to de-escalate the heightened militarized environment is to address the long-standing unresolved disputes, such as Kashmir, end the use of proxies like the Balochistan Liberation Army (BLA), and engage in broad-based dialogue and cooperation through enabling cooperative frameworks, Track-II diplomacy, and people-to-people contacts. One such framework is the Strategic Restraint Regime (SRR) to reduce the likelihood of war in South Asia. In addition, Confidence-Building Measures (CBMs) such as the resumption of the composite dialogue and adherence to bilateral agreements i.e., Indus Water Treaty (IWT) will be crucial for regional peace and stability. Moreover, there is a greater need to promote people-to-people contacts and bilateral exchanges among think tanks, civil society, and academic to normalize the elevated strategic temperature in South Asia.