

Deterrence and Innovation: Rethinking Strategic Stability in South Asia

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Airpower has become a crucial deterrent in South Asia, particularly in context of Balakot conflict in 2019 and its escalation in 2025. This article employs deterrence theory as an analytical framework to examine how Pakistan has strategically employed airpower to thwart Indian objectives, maintain regional stability and enhance credibility. Pakistan demonstrated professional restraint and restored legitimacy of deterrence with its measured response which included downing Indian fighters and employing precision targeting. Three fundamental principles of deterrence have been illustrated in this article: clear signaling, prompt and obvious action and credible capability. Pakistan's rapidly evolving airpower doctrine was further brought to light by 2025 escalation. Pakistan's deterrent posture was reinforced by outcomes, which showed that strategic moderation combined with technological innovation might prevent crises from spiralling out of hand. This article contextualizes South Asian events within a broader global discourse on airpower and deterrence. The lessons learned by Pakistan can be used by both great and regional powers: while careful use of airpower can avert or defuse crises, smaller nations can deploy advanced air capabilities to overcome inequalities .

Keywords: airpower, deterrence, global security, national security, regional stability

South Asia remains one of most strategically sensitive regions in world, where historical rivalries, territorial disputes and presence of nuclear weapons create a unique and volatile security environment (Iqbal & Khan, 2025a). Since Partition in 1947, India and Pakistan, the two main military powers in region, have fought numerous wars from Kargil conflict in 1999 to conventional wars in 1947–48, 1965 and 1971, separated by frequent border skirmishes and sporadic crises (Ganguly & Kapur, 2012; Khan, 2025). In this regard, airpower has become a vital tool for both operational advantage and deterrence, providing quick reaction, accurate strike capabilities and symbolic signals that can influence enemy behavior without instantly escalating into full-scale conflict.

The Balakot airstrike in 2019 and 2025 escalation are historic examples of airpower being viewed as a strategic tool to affect regional stability rather than just a tactical one (Mehmood & Asif, 2022; Khan, Mustafa, & Liaqat, 2022). These incidents highlight contradictory character of airpower: although it has capacity to intensify crises, when used strategically, with professional restraint and with accuracy, it may strengthen deterrence, maintain credibility and stabilize otherwise unstable situations. A great illustration of this dual role was provided by Pakistan's actions in these dynamic cases, which demonstrated that how a smaller state may effectively counter a larger adversary by leveraging technology innovation and a targeted approach.

A theoretical framework for understanding these processes is provided by deterrence theory. Classical deterrence stresses the necessity of credible capacity and the threat of retaliation to prevent adversary action, whereas extended deterrence stresses signaling and perception control as equally crucial elements (Freedman, 2004; Waltz, 1979). The Thomas Schelling Independence-Dependence Paradox and Jervis Ugly Stability theory (Jervis, 1989) both explain why nuclear-armed adversaries enjoy stability at the strategic level but volatility at the conventional level. These dynamics are especially noticeable in South Asia, where a highly precarious deterrent environment is created by nuclear weapons, compressed terrain and quick escalation cycles. Pakistan's calibrated use of airpower between 2019 and 2025 demonstrates how having dependable reaction alternatives, prompt operational preparedness and cautious signaling may help maintain strategic stability even in face of tremendous stress. This paper offers a thorough examination of these significant airpower events, contextualizing them within a broader conversation about crisis management, technological development and preserving strategic balance in nuclearized regions. In addition to countering Indian objectives, it argues that Pakistan's use of airpower, which was marked by precision, moderation, doctrinal advancement, enhanced regional deterrence and offered guidelines for the responsible use of advanced military technologies elsewhere. Pakistan has emerged as a proactive and strategic player that can influence dynamics of regional and international security by examining these events through the prism of deterrence theory.

Theoretical Framework: Deterrence Theory

Deterrence Theory offers a crucial analytical framework for comprehending strategic dynamics of airpower in South Asia. Fundamentally, the goal of deterrence is to stop hostile activity by posing real risks of retaliation or denial with fear of unacceptable loss (Freedman, 2004). According to traditional deterrence theory, a state must be able to punish an aggressor or impose unconscionable costs on them in order to prevent armed adventurism. In contrast, extended deterrence focuses on signaling, perception management and communication of resolve, which can often be as decisive as actual capability itself (Waltz, 1979; Jervis, 1989). In a region as nuclearized and volatile as South Asia, both elements are critical particularly in crises involving rapid-response forces such as airpower. The article's assessment of Pakistan's employment of airpower in South Asia is supported by diagram as shown in Figure 1, which depicts the deterrence triangle. Fundamentally, deterrence relies on Resolve (Political Will & Escalation control), Strategic Messaging (Signaling & Attribution) and third is the response options based on the conventional and nuclear spectrum with proven capacity to respond successfully.

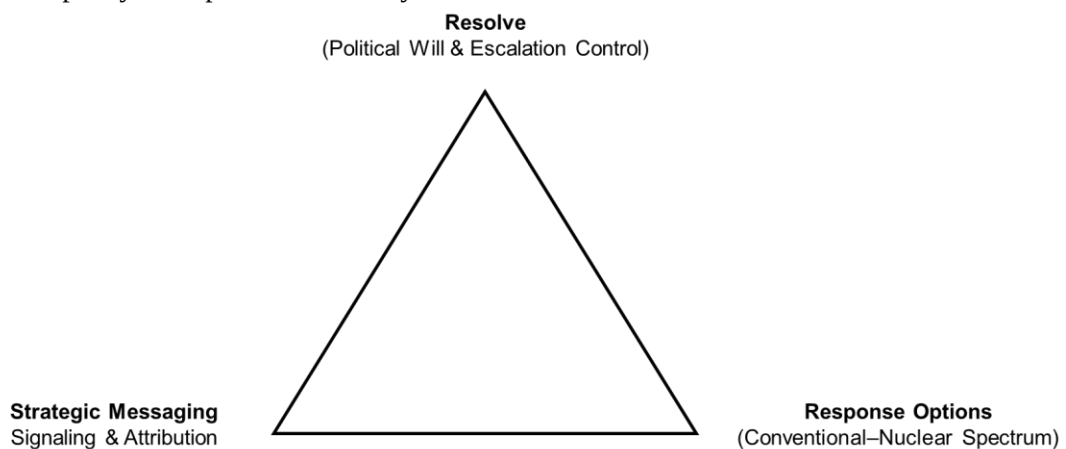


Figure 1 : Deterrence triangle

The 2019 Balakot crisis and the 2025 escalation demonstrate how Pakistan was able to successfully align these three components: it correctly attributed Indian actions, used calibrated air operations to signal restraint and resolve and supported those signals with reliable defensive and retaliatory capabilities. Deterrence theory was validated in a high-risk nuclear scenario when these dynamics worked together to reestablish deterrence, prevent escalation and strengthen regional stability.

Airpower is uniquely suited to implement deterrence in high-stakes contexts. Its rapid mobility, precision strike capability and visible demonstration of readiness allow a state to credibly signal both defensive and offensive potential without immediately resorting to full-scale war (Boyne, 2002; Lambeth, 2019). In South Asia, where both India and Pakistan maintain operational nuclear arsenals, the use of airpower requires careful calibration: demonstrating capability must be balanced with restraint to avoid crossing thresholds that could provoke uncontrolled escalation. Pakistan's responses during Balakot episode in 2019 and May 2025 conflict confrontations illustrate practical application of these principles (Mehmood & Asif, 2022). By combining technologically advanced aircraft, drones, surveillance and integrated command and control with disciplined operational planning, Pakistan was able to convey credible deterrence to India while maintaining strategic stability.

Furthermore, Deterrence Theory underscores the importance of perception management. A state's ability to maintain credibility is contingent not only on its actual capabilities but also on the adversary's belief that these capabilities will be employed if provoked (Jervis, 1989; Freedman, 2004). Pakistan's strategic use of airpower, including measured retaliatory strikes and precise defensive actions, reinforced India's perception that escalation carries significant risks, thereby enhancing deterrence without triggering a broader conflict.

Finally, the theory highlights interplay between capability and signaling in shaping regional stability. Pakistan's airpower posture demonstrates how a smaller state can offset asymmetries through careful application of doctrine, technology and professional judgment (Khan & Awan, 2022). In this sense, Pakistan's experiences provide a compelling case study of deterrence in practice, illustrating that judicious use of airpower can stabilize crises, secure national defense, and contribute to broader regional and global security.

Method

This study examines how airpower shapes crisis stability and strategic credibility in South Asia by using a qualitative theory driven research design based relying on deterrence theory. The analysis focuses on two crucial events by using a thorough case study methodology; the 2019 Balakot crisis, which was empirically documented and a doctrinal extrapolation of a likely expansion of airpower in 2025. Secondary sources such as academic literature, strategic studies, government declarations, and defense analyses are methodically examined to evaluate patterns of signaling, capability demonstration, restraint and perception management. In order to examine future deterrence dynamics, the 2025 example is specifically addressed as an analytical scenario rather than a historical event. It is based on discernible patterns in airpower modernization, doctrinal change and crisis behavior. The paper assesses how airpower can serve as both a coercive and stabilizing tool in a nuclearized environment by combining traditional and extended deterrence ideas, such as escalation control and signaling theory.

Data Collection

This article undertakes review of open source policy reports, strategic assessments and scholarly analyses relevant to Pakistan's security environment and deterrence posture in South Asia. Besides, the emphasis is placed on evaluating how Pakistan's doctrinal choices, force development and signaling practices respond to regional power asymmetries and evolving Indian capabilities. By synthesizing insights from international think tanks, regional experts and deterrence theory, the analysis prioritizes policy relevance over technical enumeration, offering a grounded understanding of deterrence stability from strategic perspective.

Airpower and Deterrence in South Asia

South Asia's unique strategic environment makes airpower a central element of deterrence and crisis management. The region's geography, characterized by long and porous borders, rugged terrain in Kashmir and dense population centers, amplifies both operational utility and risks associated with air operations (Ganguly, 2012; Cohen, 2010). In this context, airpower offers rapid mobility, precision strike capability and ability to signal resolve across both tactical and strategic dimensions. For Pakistan, a smaller but

technologically evolving state, airpower has become a tool not only for defense but also for reinforcing deterrence credibility against a numerically superior adversary (Mehmood & Asif, 2022; Ali & Khan, 2025).

Deterrence in South Asia is deeply intertwined with nuclear dimension. Both India and Pakistan possess operational nuclear arsenals, making conventional escalations highly sensitive (Khan, Mustafa, & Liaqat, 2022). Airpower, therefore, functions as a double-edged instrument: it can deter aggression by threatening rapid retaliation, but miscalculations or overreach could act as a catalyst for a nuclear-tinged crisis (Khan & Khan, 2025). Pakistan's air doctrine has evolved to navigate this paradox. By prioritizing precision, operational discipline and signaling, Pakistan ensures that its air capabilities maintain credibility without unnecessarily escalating tensions (Lambeth, 2019). The careful calibration of force demonstrates a practical application of Deterrence Theory, where capability and perceived resolve are equally important in shaping adversary behavior.

The ways in which Pakistan's air posture supports crisis stability are further clarified by current strategic studies discussions. According to academics, doctrinal consistency, calibrated signaling and defined procedures are essential for efficient escalation management. These characteristics are becoming more apparent in Pakistan's crisis behavior (Freedman, 2020; Kroenig, 2023). Transparency is necessary to prevent security-dilemma dynamics, but research on aerial denial and A2/AD indicates that layered air defenses and integrated command and control increase political and operational costs of coercive probes (Krepinevich, 2019; Biddle, 2021). According to research on risk calculus, professionalized, disciplined air forces typically respond in a controlled manner as opposed to impulsively (Posen, 2014; Talmadge, 2015). Nuclear signaling theory, on the other hand emphasizes that consistent, believable communications serve to uphold an upper limit on escalation by discouraging careless tactics without causing instability (Schelling, 1966; Narang, 2017). The idea that Pakistan's developing air doctrine enhances deterrence by combining aerial denial with institutionally based, responsible escalation control is supported by these discussions taken as a whole.

Pakistan's airpower posture incorporates both offensive and defensive elements. Advanced fighter jets, early-warning radar networks, robust command and control networks and drones provide the ability to conduct rapid interception of intrusions, while precision-guided munitions enable controlled retaliatory strikes (Boyne, 2002; Lambeth, 2019). These capabilities allow Pakistan to respond decisively to threats, creating a perception of risk for adversary without crossing critical escalation thresholds and raising escalation ladder. This approach was evident in both the Balakot 2019 and 2025 crises, where Pakistan successfully neutralized Indian actions while preserving strategic stability.

Another key dimension is psychological and signaling effect of airpower. Deterrence relies not only on actual capability but also on adversary perception (Jervis, 1989; Freedman, 2004). Pakistan's measured responses, including visible readiness and counterstrikes embedded with disciplined engagement rules, effectively communicated that aggression would incur costs while avoiding a spiral into uncontrolled conflict. In effect, airpower serves as a stabilizing instrument, reinforcing credibility of Pakistan's deterrence posture in real-time crises.

Finally, Pakistan's strategic use of airpower highlights broader lessons for asymmetric and nuclearized conflict environments. Smaller states can leverage technology, doctrinal innovation and professional execution to offset numerical disadvantages. By integrating airpower into a coherent deterrence framework, Pakistan demonstrates that capability, signaling and restraint are mutually reinforcing, enabling a smaller power to shape the behavior of a larger adversary while maintaining regional stability (Khan & Awan, 2022, Yaqub, Ali, Khan, & Jan, 2024).

Comparative Airpower Capabilities: Quantitative Mass versus Qualitative Edge

In the aftermath of the India-Pakistan May 2025 conflict, the so-called "Operation Sindoor" and Pakistan's resolute resolve in form of "Mark-e-Haq", marked a paradigm change in strategic landscape of South Asia's strategic landscape. What began as a localized confrontation escalated rapidly, demonstrating

how misperceptions, doctrinal ambiguities and conventional imbalances can endanger regional peace (Hassan, 2025). It aptly underscored the centrality of airpower in a highly volatile security environment that continues to witness increase in conventional domain under nuclear overhang. As the primary instrument of coercive diplomacy and force projection, the aerial capabilities of India and Pakistan now constitute a decisive variable in regional stability. Consequently, to delineate the operational and strategic contours of the subcontinent's airpower balance, a brief comparison of their aerial capabilities is tabulated below (Flight Global, 2024)

Parameter	India	Pakistan
Active Air Force Personnel	~170,000	~70,000
Defence Budget (Liang, 2026)	~92.1 Billion USD	~11.9 Billion USD
Combat Aircraft	~643	~449
4.5 Generation Fighters	Rafale, Su-30MKI (upgraded), Tejas Mk-1A	J-10CE, JF-17 Block III, F-16 Block 52/MLU
5th Generation Fighters	Nil	Nil
AEW&C Aircraft	06 (Netra & PHALCON)	11 (Saab Erieye & ZDK-03)
Air-to-Air Refueling Aircraft	06 x IL-78MKI	04 x IL-78MP
Strategic Airlift Aircraft	~40 (C-17, C-130J, IL-76)	~24 (C-130, IL-78)
Unmanned Aerial Systems (UASs)	Heron, Heron TP, Harop, Harpy, MQ-9B (induction)	Bayraktar TB2, CH-4, Shahpar II, Wing Loong II
Ground Based Air Defence Systems (GBADS)	S-400, Akash, Spyder, MRSAM	HQ-9B/P, LY-80, FM-90, Spada 2000
BVR Missiles	Meteor, Adder, AA-10C, Astra MK series	PL-15E, AIM-120C5, SD-10

India entered the 2025 conflict with a pronounced quantitative advantage across most conventional airpower metrics. Its substantially larger defence budget, manpower, combat aircraft inventory, aerial refuelling capability, and strategic airlift assets enabled the Indian Air Force (IAF) to generate sustained combat sorties, maintain greater operational endurance and project airpower across multiple theatres. Such force mass traditionally provides enhanced operational flexibility and campaign sustainability.

However, numerical superiority alone does not adequately explain the contemporary airpower balance. Despite operating a smaller fleet, the Pakistan Air Force (PAF) has pursued capability-driven modernization focused on network-centric warfare, integrated command and control and force multiplication. Its inventory of J-10CE, JF-17 Block III and upgraded F-16 fighters, integrated with Saab Erieye and ZDK-03 AEW&C platforms, AESA radars and long-range beyond-visual-range (BVR) missiles, has significantly enhanced situational awareness, sensor-to-shooter integration and engagement effectiveness. These capabilities have enabled the PAF to offset numerical asymmetry through improved decision superiority and precision engagement.

Conversely, the IAF retains qualitative strengths through Rafale fighters equipped with Meteor BVR missiles, supported by a larger aerial refueling fleet and layered air defence systems. Nevertheless, its heterogeneous fighter inventory continues to present challenges in logistics, maintenance, interoperability, and fleet standardization. In the absence of operational fifth-generation fighters in either air force, operational effectiveness increasingly depends on resilient command-and-control networks, electronic warfare, sensor integration and information superiority. Overall, the South Asian airpower balance reflects a contest between quantitative superiority and qualitative optimization. While the IAF retains advantages in force mass and endurance, the PAF has developed a credible regional air-denial and precision-strike capability through selective modernization.

PAF's Operational Success in Marka-e-Haq: A Network-Centric Approach

Despite numerical inferiority, Pakistan Air Force's (PAF) success in Marka-e-Haq was not a consequence of chance, but the culmination of a deliberate transformation into an adaptive, network-centric and multi-domain force. Rather than relying on numerical strength, the PAF invested in doctrinal innovation, technological integration and operational preparedness, enabling it to generate a decisive qualitative advantage over a larger adversary (Sidhu, 2026). The operation validated the shift from platform-centric warfare to a fully integrated "system of systems" approach, where airpower, cyber, electronic warfare (EW), space-enabled intelligence, surveillance and reconnaissance (ISR), and unmanned systems functioned as a single combat enterprise.

Anticipating Indian military escalation, the PAF maintained the highest level of operational readiness by activating continuous Combat Air Patrols (CAPs), deploying its Integrated Air Defence System (IADS), and operationalizing multi-domain assets across the country in the shortest possible time. Simultaneously, deception measures, emission control, frequent re-deployments and unpredictable operational patterns concealed Pakistani force dispositions while denying the Indian Air Force (IAF) accurate intelligence regarding PAF deployments and intentions. This proactive posture ensured that Pakistan entered the conflict with a significant information advantage.

At the core of this success was an integrated command and control architecture that fused real-time inputs from airborne AEW&C platforms, ground-based radars, passive electronic support measures, cyber intelligence, space-enabled ISR and other surveillance assets into a unified operational picture. This network-centric architecture substantially compressed the Observe- Orient- Decide- Act (OODA) loop, enabling PAF leadership and field commanders to make faster decisions, decentralize execution and exploit fleeting tactical opportunities. Persistent surveillance through IADS provided comprehensive battlespace transparency, allowing Indian strike packages to be detected at extended ranges well before they approached their launch points.

The PAF simultaneously employed cyber and electronic warfare to shape the battlespace before the first missile was fired. Offensive cyber operations targeted critical communication networks, power infrastructure and navigational support systems, while EW assets degraded Indian datalinks, navigation services and electromagnetic connectivity. These actions reduced the IAF's ability to operate as a cohesive network-enabled force, disrupted command and control, and forced greater reliance on alternative communication pathways, thereby increasing operational friction and reducing tactical flexibility.

When India launched its large-scale air offensive on 07 May 2025, the PAF had already developed comprehensive situational awareness and promptly established a robust Defensive Counter Air posture. The ensuing engagement evolved into one of the largest beyond-visual-range (BVR) air battles in modern air combat. Although outnumbered, the PAF exploited superior battlespace awareness, advanced sensor fusion and integrated command and control to compel Indian aircraft to remain outside Pakistani airspace and launch stand-off weapons from extended ranges.

Crucially, the PAF rapidly transformed a defensive counter-air posture into an offensive campaign by employing its domestically developed integrated kill-chain. This indigenously architecture seamlessly fused cyber operations, electronic warfare, space-enabled ISR, airborne early warning, networked command and control, long-range precision strike capabilities, loitering munitions, unmanned systems and manned fighter aircraft into a single operational framework. The resulting sensor-to-shooter network enabled rapid target acquisition, real-time data fusion and time-sensitive engagement of high-value targets. Exploiting superior situational awareness and first-look first-shot capability, PAF fighters successfully engaged multiple frontline IAF aircraft, including Rafales, Su-30MKIs, Mirage-2000s and MiG-29s, while integrated air defence and counter-UAS assets simultaneously neutralized hostile unmanned systems. The speed and precision with which this kill-chain functioned fundamentally shifted the initiative to the PAF and proved that a fully integrated, network-enabled force could decisively overcome numerical inferiority.

Equally significant was the PAF's emphasis on realistic training, decentralized mission command and multi-domain operational doctrine. Years of intensive exercises emphasizing Defensive and Offensive Counter Air operations, electronic warfare integration and network-enabled combat produced aircrew capable of operating effectively in a highly contested electromagnetic environment. Unlike a platform-centric approach, the PAF fought as a single integrated combat system in which every sensor, shooter and decision-maker contributed to a unified operational effect.

Conclusively, Marka-e-Haq demonstrated that qualitative superiority, derived from doctrinal innovation, integrated multi-domain operations, information dominance and superior decision-making, can decisively offset numerical inferiority and redefine the application of airpower in contemporary warfare.

Case Study 1: Balakot 2019 – A Test of Deterrence

One of the most important incidents in modern South Asian security history was February 2019 Balakot airstrike, which put India and Pakistan's conventional and nuclear deterrent to the test (Mehmood & Asif, 2022; Khan, Mustafa, & Liaqat, 2022). Following a terrorist attack in Pulwama, India launched airstrikes targeting what it claimed were militant camps in Balakot inside Pakistani territory (Ahmed & Ashraf, 2019). Although operation was meant to serve as an offensive resolve show, it ultimately fell short of strategic goals, revealing limitations of attacking without taking into consideration Pakistan's preparedness, intelligence capabilities, and calculated deterrent stance (Ahmed & Ashraf, 2019).

Pakistan's response illustrates practical application of Deterrence Theory. Deterrence is not solely about threat of retaliation but also about signaling capability and resolve convincingly. Pakistan's military employed a carefully calibrated combination of defensive and retaliatory measures, demonstrating operational competence without escalating the conflict to a broader war (Mehmood & Asif, 2022). The Pakistan Air Force (PAF) rapidly mobilized fighter squadrons, deployed early-warning radar systems and maintained strict adherence to rules of engagement, ensuring that responses were precise and controlled; the downing of an Indian aircraft and capture of its pilot served both tactical and strategic purposes: neutralizing immediate threat while signaling Pakistan's readiness and credibility to both regional and global observers (Ahmed & Ashraf, 2019; Khan & Awan, 2022).

This episode highlights dual role of airpower in deterrence: the capacity to inflict damage deters future aggression, while demonstration of discipline and restraint reinforces stability. Pakistan's response showcased professional decision-making under high-pressure conditions, ensuring that deterrence was both credible and sustainable (Freedman, 2004). By avoiding excessive escalation and preventing inadvertent provocation, Pakistan demonstrated that smaller states could leverage airpower effectively against larger adversaries, aligning with the principles of classical and extended deterrence.

Global reactions further validated Pakistan's strategic handling of crisis. Analysts noted that while India's strike was politically high-profile, it failed to alter operational balance or undermine Pakistan's deterrent posture. International study showed that Pakistan's methodical approach preserved stability in a nuclearized environment and reduced likelihood of an escalation into a full-scale conflict (Mehmood & Asif, 2022; Khan & Awan, 2022). These assessments emphasize how important perception is in deterrence: Effective communication of Pakistan's strategic capability and resolve affected adversary calculations and prevented further attack.

The Balakot incident also sparked technological and doctrinal advancements in Pakistan's aviation strategy. Lessons learnt about precision engagement, integrated surveillance and rapid mobilization shaped later modernization initiatives, making PAF more equipped to handle future crises (Lambeth, 2019; RAND Corporation, 2024). Additionally, the operation reaffirmed the idea that successful deterrence is proactive rather than reactive, requiring a blend of capacity, signaling and disciplined execution (Freedman, 2004).

To sum up, Balakot 2019 is a perfect example of deterrence through use of airpower. India's limited strike was neutralized by Pakistan's calm but successful response, which also strengthened its strategic credibility and preserved regional security in a nuclear-armed world. By applying principles of Deterrence Theory- capability, signaling and credibility- Pakistan demonstrated that smaller states, through professionalism, precision and doctrinal evolution can manage high-stakes crises successfully, offering valuable lessons for both regional actors and broader international security community (Mehmood & Asif, 2022; Khan & Awan, 2022).

Case Study 2: Escalation 2025 – Reinforcing Strategic Credibility

The 2025 air confrontation between India and Pakistan represented a further test of deterrence dynamics in South Asia, occurring in a period of heightened geopolitical tension (RAND Corporation, 2024; SIPRI, 2024). It is crucial to make clear the methodological character of the "2025 escalation" before moving on. This episode uses doctrinal extrapolation to build a forward-looking analytical scenario. To put it simply, the analysis tests how deterrence dynamics can manifest in the near future using a realistic potential crisis based on current trends in India-Pakistan airpower development, crisis behavior, and doctrinal evolution. The analysis guarantees that the 2025 incident is analytically believable even if it is hypothetical by basing scenario on observable doctrinal shifts, such as Pakistan's concentration on integrated air defense, precise engagement, and calibrated signals. By avoiding factual uncertainty, this method allows researchers to investigate anticipated future evolution of airpower rivalry. Unlike Balakot episode of 2019, this escalation involved more sophisticated operations, reflecting both technological advancements and doctrinal evolution in Pakistan's airpower strategy (IISS, 2024; Carnegie Endowment, 2023). India's limited air intrusions aimed to assert tactical superiority and test Pakistan's readiness, but Pakistan's measured and professional response once again demonstrated credibility and effectiveness of its deterrent posture.

Pakistan's approach in 2025 exemplified practical application of Deterrence Theory, highlighting importance of capability, signaling and restraint (Freedman, 2004; Waltz, 1979). Furthermore, the crisis reflected more general theoretical dynamics like the Independence-Dependence Paradox (Schelling, 1960) and Ugly Stability (Jervis, 1982), in which nuclear-armed adversaries concurrently experience increased conventional volatility and strategic stability. The Pakistan Air Force (PAF) leveraged integrated early-warning systems, advanced fighter jets, drones and precision-guided munitions to counter intrusions effectively while avoiding unnecessary escalation (Boyne, 2002; Lambeth, 2019). Rapid identification of threats, coordinated defensive measures and controlled retaliatory strikes allowed Pakistan to neutralize Indian actions decisively, sending a clear message that any aggression would be met with credible consequences (Khan & Awan, 2022).

This episode also highlighted Pakistan's technological and doctrinal innovations since 2019. Lessons from Balakot informed development of improved command-and-control systems, real-time intelligence sharing, and advanced surveillance techniques, enabling PAF to respond with greater speed and precision (RAND Corporation, 2024; SIPRI, 2024). The integration of unmanned aerial vehicles (UAVs) provided enhanced reconnaissance and targeting capability, while precision-guided munitions allowed Pakistan to limit collateral damage, maintaining both operational effectiveness and international credibility (IISS, 2024). These innovations reinforced Pakistan's deterrence posture by combining capability with signaling, ensuring that adversary accurately perceives both cost of aggression and Pakistan's strategic restraint (Lambeth, 2019; Mehmood & Asif, 2022). In this way, deterrence was maintained not only by military might but also by cautious perception management, which is essential in nuclearized dyads with tight geography and quick escalation timelines.

The escalation spectrum at heart of the article's deterrence analysis is depicted in Figure 2, which illustrates how reactions change from tactical to strategic levels of conflict and from sub-conventional to nuclear threats. It demonstrates how doctrinal decisions can be made in response to militant attacks, ranging from airstrikes and surgical strikes to more extensive conventional operations; further escalation may result in the use of tactical nuclear weapons and widespread reprisal. Pakistan's intentional attempt to dominate this

escalation ladder is demonstrated by Balakot incident in 2019 and escalation in 2025. By reacting at conventional airpower level, Pakistan firmly repelled Indian activities without moving approaching strategic or nuclear thresholds. This strategic deployment of airpower maintained escalation control, strengthened deterrence through punishment and denial and demonstrated how measured conventional responses may settle crises in a nuclear armed environment.

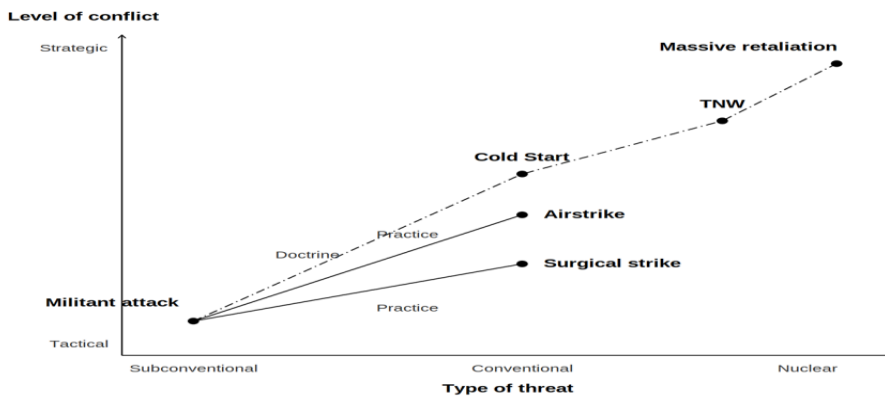


Figure 2 : Deterrence dynamics in Indo-Pak environment (Source : Aarten, 2020)

A critical aspect of 2025 escalation was emphasis on perception management. Deterrence is as much about shaping adversary calculations as it is about possessing capability (Jervis, 1989; Freedman, 2004). Pakistan's disciplined and measured responses conveyed resolve without provoking uncontrolled escalation.

Global security analysts noted that Pakistan's handling of 2025 confrontation prevented a broader conflict while preserving deterrence. India's attempts to assert dominance were effectively countered, demonstrating that professional airpower, when employed with precision and strategic foresight, could neutralize aggressive posturing without triggering escalation (RAND Corporation, 2024; SIPRI, 2024). The episode further solidified Pakistan's reputation as a state capable of managing high-stakes crises through disciplined application of airpower, technological innovation, and doctrinal evolution (IISS, 2024; Lambeth, 2019).

In conclusion, 2025 escalation reinforced key lessons about airpower in South Asia. Pakistan's responses confirmed that credible deterrence depends not only on military capability but also on signaling, operational discipline and strategic judgment (Freedman, 2004; Mehmood & Asif, 2022). It also emphasizes how theoretical tools - Deterrence Theory, Ugly Stability, and the Independence–Dependence Paradox - help explain crisis behavior in nuclear situations by framing the incident as a doctrinal extrapolation rather than an empirical event. By successfully navigating a complex and high-risk crisis, Pakistan demonstrated that smaller states could leverage advanced airpower effectively to counter larger adversaries, maintain regional stability, and offer valuable insights for international security scholars and policymakers (Khan & Awan, 2022; Carnegie Endowment, 2023). In contrast to Balakot 2019, the 2025 episode emphasizes the dual role of airpower as a tool for national defense and as a stabilizing force in unstable, nuclearized situations (Lambeth, 2019; Freedman, 2004).

Global Implications and Lessons

The airpower crises in South Asia in 2019 and 2025 provide insights that extend well beyond the region, emphasizing the challenges of crisis management, deterrence, and technological adaptation in contemporary security environments (Lambeth, 2019; RAND Corporation, 2024; Mehmood & Asif, 2022). Pakistan's strategic use of airpower demonstrates that even small countries may effectively deploy state-of-the-art weapons to counter more formidable adversaries, dispel ideas of power disparity, and maintain credibility in important wars (Khan & Awan, 2022; Carnegie Endowment, 2023). A fundamental principle of deterrence theory is emphasized by the South Asian experience: disciplined execution, perception control, and

signaling are equally as crucial in influencing adversary behavior and preventing escalation as capacity alone (Freedman, 2004; Jervis, 1989; Javaid, Begum, & Tariq, 2025).

On a global scale, these experiences provide guidance for major and regional nations negotiating nuclearized situations and asymmetric warfare. Airpower offers a quick and adaptable way to deter aggression without starting a full-scale confrontation, especially when combined with surveillance, drones and precision-guided systems (Boyne, 2002; Lambeth, 2019; RAND Corporation, 2024). Pakistan's responses demonstrate that technological sophistication, combined with professional doctrine and restraint can prevent crises from spiraling uncontrollably (Mehmood & Asif, 2022; SIPRI, 2024). This insight is particularly relevant in a world where military technology is proliferating and potential for miscalculation is rising (IISS, 2024; Carnegie Endowment, 2023).

The crises also highlight psychological dimension of deterrence. Smaller states must not only possess credible capabilities but also ensure that adversaries perceive these capabilities as effective and ready for deployment (Jervis, 1989; Freedman, 2004). Pakistan's professional execution, calibrated counterstrikes, and clear signaling reinforced India's perception of risk while avoiding uncontrolled escalation (Khan & Awan, 2022; Mehmood & Asif, 2022). The result was a restoration and reinforcement of deterrence credibility an outcome that has resonance for nuclearized confrontations and crises worldwide (Lambeth, 2019; RAND Corporation, 2024).

Comparative lessons can be drawn for other regions as well. In conflicts involving technologically asymmetric adversaries, the South Asian experience illustrates that smaller states can offset numerical disadvantages through doctrine, operational discipline and selective technological adoption (Khan & Awan, 2022; Boyne, 2002). In essence, Pakistan's airpower strategy demonstrates that careful planning, rapid response and precise execution can serve both defensive and stabilizing functions, providing a model for crisis management beyond South Asia (Mehmood & Asif, 2022; Lambeth, 2019).

Furthermore, the episodes underscore dual nature of airpower in modern conflict. While it carries potential to escalate tensions, when applied judiciously it can stabilize high-risk confrontations, enhance deterrence and prevent adversaries from testing strategic thresholds (Freedman, 2004; Lambeth, 2019). Pakistan's handling of both Balakot and 2025 crises demonstrates how smaller states can transform perceived vulnerabilities into strategic advantages, shaping adversary calculations while minimizing risk of wider conflict (Khan & Awan, 2022; Carnegie Endowment, 2023).

Finally, these lessons have broader implications for international security policymakers, military planners and scholars. The case of South Asia emphasizes that credible and capable deterrence are essential, that doctrinal evolution must accompany technological progress, and that disciplined airpower can be a stabilizing tool in unstable situations (Freedman, 2004; RAND Corporation, 2024; Lambeth, 2019). Pakistan's strategy provides a convincing illustration for international players of how smaller nations can properly handle high-stakes situations, preserve regional peace, and add to more general teachings on strategic restraint and professional military practice (Khan & Awan, 2022; Carnegie Endowment, 2023; Ali & Khan, 2025, Khan & Sultana, 2021).

Conclusion

The airpower crises of 2019 and 2025 scenario demonstrate how smaller states can leverage technological innovation, operational discipline and strategic foresight to manage high-stakes conflicts effectively (Mehmood & Asif, 2022; RAND Corporation, 2024). Pakistan's measured and professional responses in both episodes exemplify the practical application of Deterrence Theory, where capability, signaling and credibility work in tandem to prevent adversary aggression and stabilize volatile environments (Freedman, 2004; Waltz, 1979).

Balakot 2019 and 2025 scenario highlight dual role of airpower as both a defensive instrument and a stabilizing force. Pakistan's ability to respond rapidly and effectively demonstrates operational competence while reinforcing perception of credible deterrence (Boyne, 2002; Lambeth, 2019). The integration of advanced surveillance, drones and precision-guided weapons coupled with disciplined command and control ensures measured, proportional and strategically sound responses.

The global significance of Pakistan's approach extends beyond South Asia (Iqbal & Khan, 2025b). These episodes illustrate that smaller states, even when facing numerically superior adversaries, can shape strategic outcomes through innovation, professionalism and effective signaling (Khan & Awan, 2022; Carnegie Endowment, 2023). It takes more than just having cutting-edge capabilities to effectively deter; it also requires behaving responsibly and decisively, projecting resolve and keeping strategic equilibrium under duress.

In conclusion, the triumphs of Pakistan in 2019 and 2025 serve as an example of contemporary deterrence in action. By combining cutting-edge technology, controlled airspace and cautious signaling, Pakistan was able to successfully protect its territory, bolster its reputation and promote stability in region. The South Asian experience highlights a more general rule that applies everywhere: airpower can be a potent defensive weapon and a stabilizing force that can influence enemy behavior and maintain peace even in most difficult security situations when used with accuracy, moderation and strategic foresight. Pakistan's strategic example provides important lessons for global security, showing how professionalism, technological flexibility and doctrinal clarity may turn possible weaknesses into reliable deterrent tools.

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