

Evolution of China's Nuclear Strategy: Lessons for Pakistan

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Abstract

Asia is undergoing rapid transformation due to asymmetric doctrines and modernisation efforts. China has historically maintained a minimum deterrence and a strict No-First-Use policy, focusing on survivability and assured retaliation rather than numerical parity. Under Xi's leadership, China's nuclear modernisation efforts have sparked debate over whether this modernisation represents a deviation from minimum deterrence or a reinforcement of assured retaliation. This study addresses this question by using Deterrence theory to conduct a comparative analysis of China and Pakistan's nuclear doctrines under three distinct paradigms: minimum deterrence, assured retaliation, and escalation control. The analysis finds that while China's modernisation remains primarily oriented toward survival, Pakistan's reliance on tactical nuclear weapons risks instability. The study suggests that China's survivability-focused model offers conditional lessons in restraint, credibility, and sustainable modernization.

Keywords: *China, Pakistan, Nuclear Strategy, Deterrence, Modernization, Full-Spectrum Deterrence, Assured Retaliation*

1. Introduction

Asymmetric doctrines and accelerating modernisation are rapidly transforming Asia's nuclear landscape. China's nuclear doctrine states that Beijing maintains a no-first-use and minimum deterrence posture. However, China is modernising its forces at a notable pace, with estimates suggesting acquisition of approximately 600 warheads in 2025 alone (Kristensen et al., 2024; Stockholm International Peace Research Institute [SIPRI], 2025). India, on its part, has also been focused on upgrading its nuclear capabilities while claiming to maintain credible minimum deterrence (CMD) under a No-first Use policy (NFU). According to Indian analysts, the country's NFU policy is weakened over time; however, they argued that it is because of Pakistan's First Use posture (Narang, 2014). In response to India's pacing moves, Pakistan was compelled to evolve its posture from CMD to Full-Spectrum Deterrence (FSD). However, this shift is not quantitative but qualitative (Tasleem, 2016; Noor, 2023). The regional stability was further strained when the Democratic People's Republic of Korea (DPRK) codified expanded first-use conditions in its 2022 Law (Cheong, 2023). Collectively, these developments have resulted in asymmetric doctrines and the introduction of modernised new tech, such as MIRVs, hypersonic, and missile defence, eroding deterrence stability across Asia.

China's policy of minimum deterrence has historically been intended to ensure retaliation, survivability, and a long-standing NFU pledge (Cunningham & Fravel, 2015). Chinese officials argue that consistent modernisation efforts are not for numerical parity but credibility (Xinhua, 2019). Despite framing its modernisation as

minimal, China is expanding and diversifying its forces through new silo construction, road-mobile Intercontinental Ballistic Missiles (ICBMs), and sea-based leg (Kristensen et al., 2024). This trajectory has generated debate among scholars. Some scholars argue that China's current modernisation blurs the line between minimum deterrence and force expansion, while others interpret these developments as consistent with an assured retaliation model adapted to changing strategic conditions (Brown, 2021; Hiim, 2024).

This paper seeks to answer the following research question: Does China's nuclear modernization represent a deviation from minimum deterrence or a reinforcement of assured retaliation, and what conditional lessons can Pakistan draw from this trajectory for its own doctrine? The first step toward answering this question is to determine whether the Chinese are moving away from their assured retaliatory posture. The next step would be to determine if there are any lessons, conditional or otherwise, that Pakistan can learn from China's experiences, especially given Pakistan's own resource constraints, and priority to have a survivable second-strike capability.

This study is comparative, policy-oriented, and survivability-focused. It examines how China has developed as a minimum deterrent and evaluates if China's modernization is still aligned with assured retaliation. The study will also analyse the potential conditional lessons that Pakistan can take away from China's experiences, especially about managing resource limitations, and prioritizing survivable second-strike capabilities. Using an updated and comparative analysis of the current doctrines of China and Pakistan, this study identifies policy-relevant implications for Pakistan's

survivability and the direction of its modernization.

2. Literature Review

During the Mao-Deng era, China's nuclear doctrine focused on assured retaliation, a no-first-use policy, and a survivable force prioritizing city-busting rather than warfighting (Cunningham & Fravel, 2015). This very initial posture is labelled as the era of minimum deterrence. Even after the Cold War, China never shifted to a first-use policy and relied on an assured retaliation capability against the US counterforce (Xinhua, 2019). China ramped up its modernisation efforts in 2010 through force diversification and growth (Kristensen et al., 2024). Modernisation produced mobile ICBMs, MIRVed warheads, SSBNs, and improved command-and-control systems while officially framing its policy as defensive (Cunningham & Fravel, 2015). Under the leadership of Xi Jinping, a significant rise in expansion was noticed—500 warheads in 2024 alone—which raised concerns about whether the expansion remains within an assured retaliation logic (Kristensen et al., 2024; SIPRI, 2025). This illustrates China's force structure and modernization trajectory. Empirical stockpile data confirm both the rapid numerical increase and delivery-system buildup (Defence Intelligence Agency, 2024). In terms of escalation control and signalling, regionally, Chinese counterspace and ASAT capabilities also complicate nuclear security by threatening early-warning systems (Kan, 2007).

Countries maintaining Minimum Deterrence do so along with economic and strategic sustainability constraints, holding a sufficient arsenal to impose unacceptable damage in retaliation without extending resources. The purpose is not to fight or

prevail in a nuclear war but to deter the opponent using the fear of reprisals. In the canonical case of China, there is a credibility problem as rivals field precision strike, ISR, BMD, and conventional counterforce; therefore, the minimum deterrence should become credible using survivability, redundancy, and signalling, not parity (Brown, 2021). According to Narang's (2014) framework, Asian nuclear states vary in assured retaliation, so some states adopt credible minimum deterrence rather than pursuing an arms race. This highlights the dimension of economic and strategic sustainability in policy practice. CMD entered official discourse to preserve flexibility and avoid unconstrained growth, particularly in South Asia.

Pakistan's nuclear doctrine evolved differently. Scholars and officials trace Pakistan's nuclear doctrine as having evolved from CMD to Full Spectrum Deterrence (FSD) to counter India at 'all rungs' (Khan, 2014; Noor, 2023). The Carnegie study by Tasleem (2016) explains that the rationale behind the evolution of Pakistan's doctrine was to focus on dynamic deterrence capable of responding to India's moves and persistent rejection of NFU. Analysts argue that in Pakistan's FSD, usage of short-range systems (Missile Nasr) for signalling and escalation control fills the gap, while some warn of crisis instability (Ahmed, 2016; Hooey, 2019). In a strategic literature review, perceptions of India-Pakistan doctrines and capabilities have been separated from reality, underscoring crisis management requirements (Levesques, 2021). Naem Salik's book tracks how the institutional learning, doctrine, and C2 maturation provide the background for FSD's emergence since 1998 (Scholar Pakistan, 2021). It also shows the dimension of Pakistan's strategic and economic sustainability constraints in

developing and maintaining its nuclear forces. The scholarly work of Kristensen et al. (2024) and Cunningham and Fravel (2015) on China's nuclear policy primarily examines China's deterrence vis-à-vis the US and India, rarely extending the analytical lens to Pakistan. In comparative terms, case studies of China and Pakistan have been discussed separately, such as in Narang's (2014) typologies, with no sustained comparative examination across the four evaluation dimensions: doctrinal evolution, force structure and modernization, escalation control and signaling, and economic and strategic sustainability. Even though Pakistan faces inadequate resources, it pursues FSD, which risks an action-reaction spiral with India. To fill that policy gap, a systematic analysis of Pakistan's adaptation to Chinese practices (survivability, signalling discipline, restrained buildup) across these four dimensions is required to sustain deterrence without fuelling an arms race. While both doctrines are well studied individually, little research compares them or examines their links.

3. Theoretical Framework

Deterrence Theory

"Deterrence" refers to persuading an adversary not to take an undesired action by threatening unbearable costs. From the Classic Cold War, Bernard Brodie, Thomas Schelling, and Glenn Snyder formulated two core forms of deterrence:

1. Deterrence by punishment (threat of retaliation)
2. Deterrence by denial (making an attack too costly or unlikely to succeed)

For these two forms of deterrence to work, forces of a state must have the capability

and credibility for the second-strike assured retaliation simultaneously (Nye, 2014). Unlike the bipolar Cold War system, the Asian nuclear landscape is shaped by regional rivalries, asymmetric capabilities, and resource constraints. That is why deterrence stability becomes more fragile in the Asian region.

- **Minimum Deterrence vs. Assured**

- **Retaliation vs. Escalation Control**

China and Pakistan's nuclear trajectories reflect three distinct deterrence paradigms: Minimum deterrence, assured retaliation, and escalation control. For minimum deterrence, China (during the Mao-Deng era) and Pakistan (post-1998) maintained a small arsenal just enough to inflict unacceptable damage. Countries pursued this strategy to ensure survivability, but technological advances and precision-strike capabilities eroded their credibility (Narang, 2014). Assured retaliation is a type of deterrence that guarantees a response after absorbing a first strike. China's model of assured retaliation underscores its NFU pledge and modernisation efforts—mobile ICBMs, SSBNs, MIRVs (Cunningham & Fravel, 2015). The last paradigm includes escalation control, which involves using nuclear options (tactical weapons) to manage escalation in a crisis. Under FSD, Pakistan developed the Nasr missile (TNW), exemplifying deterrence by escalation control (Ahmed, 2016; Hooey, 2019). However, there have been mixed arguments for and against escalation control deterrence. Its supporters believe it plugs the gap; critics warn it heightens the risk of early nuclear use and crisis instability (Sankaran, 2014).

Sino-Pak Comparison Through Deterrence Theory

China's adherence to NFU and its assured retaliation with modernisation demonstrates

its focus on survivability rather than numerical parity (Cunningham & Fravel, 2015). China's posture is about deterrence by punishment (strategic retaliation) with restraint in signalling. In contrast, Pakistan initially claimed 'minimum credible deterrence,' but moved to 'full-spectrum' with an escalation-control logic (Khan, 2014; Noor, 2023). Therefore, it combines deterrence by punishment and deterrence by denial at the tactical level.

China sustains credibility with a smaller but survivable force because retaliation is likely, deterrence stays credible without early use. On the other hand, Pakistan, with a tight budget, faces the risk of instability due to its reliance on escalation control instead of survivability (Haseeb et al., 2014; Nawaz & Guruswamy, 2014). Credibility comes from signaling willingness to use nuclear weapons sooner, which lowers thresholds and increases instability. Deterrence theory suggests Pakistan could adapt Chinese lessons on assured retaliation and survivability to strengthen deterrence without overextending through escalation control (Narang, 2014).

4. Methodology

This paper employs a qualitative and analytical approach to understand China's nuclear strategy evolution and its implications for Pakistan's doctrine trajectory. A qualitative approach was appropriate for this study since nuclear doctrines are not shaped by quantitative variables. Instead, doctrines are shaped by political, strategic norms and choices.

The study systematically compares China's 'credible minimum deterrence' with Pakistan's 'minimum credible deterrence' and subsequent 'full-spectrum deterrence.' It also takes a thematic approach to trace the evolution of doctrines under broad themes

(deterrence by punishment, denial, assured retaliation, escalation control). The thematic comparative approach can better illuminate the logic, evolution and adaptability of each state's nuclear thoughts than statistical modelling. The paper answers the central question: 'How has China's nuclear strategy evolved from minimum deterrence to credible minimum deterrence, and what lessons does this hold for Pakistan's nuclear posture?'

Research Design

This study has been conducted to be conceptual and policy-oriented. It uses deterrence theory as the guiding analytical framework to compare China's nuclear doctrine, from 1964 to the Xi era, with Pakistan's nuclear posture, from 1998 to the present. A comparative study helped identify doctrinal convergences, divergences, and lessons applicable to Pakistan.

Data Sources

To conduct a comparative study, the paper employed both primary and secondary sources. Primary sources include official documents such as China's Defence White Papers (since 1998) and Pakistan's NCA statements, speeches, and interviews from policymakers in both countries (Xinhua, 2019). Secondary sources consist of peer-reviewed journals (Journal of Strategic Studies, Asian Security, International Security, and Contemporary South Asia), reports from leading think tanks, and scholarly books such as Khan (2014) and Cunningham and Fravel (2015).

4.1 Case Study: China

Origins of Chinese Nuclear Strategy (1964 Onwards)

On 16 October 1964, China entered the nuclear club by detonating its first nuclear device at Lop Nur (Project 596) (Burr, 2014). It was when China established its baseline

doctrine centred on political deterrence with limited forces. Chinese officials made statements to maintain the defensive posture (Xinhua, 2019). Beijing clarified that the usage of nuclear weapons would be for deterrence and political signalling, not warfighting. In its doctrine, the NFU pledge serves as a foundational principle and later became a reiterated policy in official white papers (Cunningham & Fravel, 2015).

Evolution of China's Strategy

China's nuclear strategy has evolved significantly from Mao's political leadership to Xi's. Mao stayed in power from 1960 to 1976 and used a minimal arsenal for political deterrence with rudimentary delivery systems. Even though robust second-strike means didn't exist then, Mao emphasised assured retaliation in principle (Cunningham & Fravel, 2015). Therefore, deterrence under Mao was declaratory and symbolic, not numerically competitive.

From the late 1970s to 1989, Deng's leadership followed Mao's period, characterising consolidation and survivability. He focused on improving missile reliability, mobility, and command-control while preserving NFU and a small force during his period. He also emphasised retaliatory punishment rather than counterforce warfighting, which reflects his early escalation control thinking (Cunningham & Fravel, 2015).

After Deng, Jiang's period (1990s–2002) marks gradual modernisation (mobile ICBMs) in response to US precision strike and missile defence trends (Kristensen et al., 2024). Jiang reaffirmed coherence with assured retaliation in academic and policy analyses. From 2002 to 2012, Hu diversified delivery systems (improved ICBMs and the sea-based leg with Type 094/Jin-class SSBNs carrying JL-2) (Martin, 2024). The

diversification shifted China from a 'minimum' inventory to a more credible assured-retaliation posture.

Since 2012, Xi has accelerated the expansion and infrastructure build-out—new ICBM silo fields, DF-41, and progress toward JL-3 on future Type 096 SSBNs—along with reiterating NFU (Xinhua, 2019). China is estimated to have developed 600+ warheads in 2024–25, marking the fastest growth rate globally (Kristensen et al., 2024; SIPRI, 2025; Kuramitsu, 2025). China's rapid modernization therefore, illustrates the dimension of both force structure modernization and economic/strategic sustainability considerations. Considering this, scholars debate whether this remains within an assured-retaliation framework (Hiim, 2024).

Nuclear Modernisation, Force Structure, Second-Strike Capability

In its defence white papers, China declares NFU 'at any time and under any circumstances' and nuclear security assurance to non-nuclear states, anchoring its assured-retaliation model (Xinhua, 2019). Looking at the trends, China's stockpile grew rapidly from 2023 to 2025—600+ warheads in 2024—building 100 warheads each year with 320–350 new silos nearing completion (Kristensen et al., 2024; Defence Intelligence Agency, 2024).

China developed triad maturation for the second-strike survivability: land, sea, and command posture. China expanded silo-based ICBMs and mobile DF-41 to strengthen land response to ensure prompt retaliatory options (Kristensen et al., 2024). Likewise, to maintain deterrence at sea, Operational Type-094 (Jin) SSBNs (six boats) with JL-2 and future Type-096 with JL-3 were employed (Martin, 2024). In addition to deterrence at land and sea, China,

with its reiterated overall assured retaliation stance, is increasing the readiness of silo units. Modernisation of early warning and command readiness emphasize escalation control and signalling for credible retaliation strike as assessed by the U.S. (Defence Intelligence Agency, 2024).

Cunningham and Fravel (2015) highlight China's doctrinal continuity and capability growth simultaneously. The purpose behind persistent modernisation is to strategically guarantee retaliation against an improving adversary ISR/BMD without escalating to nuclear war. Despite debates about recent expansion, China's strategic posture frames it as credible-minimum, not maximalist (Binnendijk & Gompert, 2023).

5. Pakistan's Nuclear Posture

Since the independence of Pakistan, its nuclear posture has evolved reactively—maintaining existing deterrence in the 1990s, flexible MCD in the 2000s, and FSD in the 2010s. The evolution was shaped in reaction to India's Cold Start, BMD, and modernisation efforts (Khan, 2014; Noor, 2023).

Force Structure and Modernisation

In May 1998, Pakistan conducted its nuclear tests (Chagai-I & II) as a response to India's Pokhran-II nuclear test (Kerr, 2016). Historically, the tragedy of 1971 and India's nuclearization shaped Pakistan's perceived conventional imbalance with India. To counter India's superior conventional forces and nuclearization, Pakistan began to mature its nuclear program. Politically, Pakistan's decision boosted civilian and military trust, increasing national unity around the nuclear program. Like China, Pakistan also declared that nuclear weapons were for deterrence against India, not for warfighting (Khan, 2014).

Minimum Credible Deterrence (MCD) Doctrine, Escalation Control and Signaling

Leaders of Pakistan introduced 'Minimum Credible Deterrence' between 1999–2001 (Khan, 2014; Ahmed, 2019). Even after initial articulation, 'Minimum' was left deliberately undefined. Pakistan keeps adjusting its doctrine for defence against India's evolving doctrine and technology. However, the core principles remain the same, such as no declaration of NFU to offset India's conventional advantage (Tasleem, 2016). It designs arsenals for survivability and assured retaliation, not parity. By maintaining centralised control under the National Command Authority (NCA) and the Strategic Plans Division (SPD), Pakistan avoids an arms race while ensuring readiness for credible deterrence (Scholar Pakistan, 2021).

Pakistan faces challenges to its posture despite maintaining credible deterrence. The challenges include India's cold start doctrine, Indian Ballistic Missile Defence, and canisterization of its missile systems. India developed a strategy of rapid yet limited conventional strikes (Cold Start) to undermine Pakistan's nuclear threshold (Sankaran, 2014). In response, Pakistan's development of Tactical nuclear weapons (Nasr) helps deter even shallow incursions (Ahmed, 2016).

Secondly, Pakistan owns a retaliatory strike capability, which was a challenge in the presence of India's functional BMD system. To address this perceived threat that might destabilise retaliatory capability, Pakistan has prompted investment in countermeasures such as MIRVs, cruise missiles, and decoys (Levesques, 2021). Finally, Pakistan has introduced Tactical nuclear weapons (Nasr) as part of its 'Full Spectrum Deterrence' (Abid, 2023). Scholars debate whether

TNWs strengthen deterrence and limit war or lower the nuclear threshold and heighten escalation risk (Kurita, 2025; Hooley, 2019). Some are of the view that over-reliance on TNWs is risky, while some highlight the limited options for Pakistan to pursue other than FSD (Sankaran, 2014). Due to a lack of escalation-control tools, Pakistan may not be able to resist/counter India's Cold Start doctrine and BMD System while maintaining an assured retaliation posture. These scholars further argue that survivability alone cannot guarantee deterrence against India's conventional superiority; deployment of TNWs is the viable option for now to plug the deterrence gap at the tactical level and strengthen Pakistan's position (Ahmed, 2016; Khan, 2022).

5.1 Lessons for Pakistan

Pakistan needs to take China's approach of strategic patience, geoeconomic ballast, and survivable assured retaliation to develop a credible and sustainable alternative to quantitative expansion and overdependence on TNW to counter India's cold start strategy and BMD (Narang, 2014; Cunningham & Fravel, 2015). Contrary to the critics' argument that Pakistan's abandonment of TNWs without endangering deterrence is not possible, this study presents a survivability-focused deterrence model as a more sustainable alternative. Adoption of China's emphasis on assured retaliation and survivability can help Pakistan ensure long-term stability. Whereas TNWs may only help to deter shallow incursions (Sankaran, 2014).

Doctrinal Evolution: Strategic Patience & Restraint

3. Pakistan needs to anchor deterrence in credibility instead of pace-matching. As China uses doctrine to dampen the action-reaction cycle,

Pakistan can also leverage that by treating 'minimum' as political restraint and 'credible' as a technical requirement (readiness, C2, and survivability) to counter open-ended threats from India. In Chinese White Papers, China carefully gives statements by being transparent where it stabilizes and opaque where it deters (Xinhua, 2019). By doing it the same way, Pakistan can reduce worst-case scenarios and stay opaque about targeting or readiness details.

4. During a crisis, crisis management should be prioritized over posturing by investing in a hotline, pre-notified exercises, and de-risking measures for transparency to successfully keep limited provocations from cascading (Levesques, 2021).

Economic and Strategic Sustainability: Economic Integration as Security

5. Persistent crisis in South Asia disrupts trade and growth. Since the opportunity costs of arms racing are real, even modest normalization could raise GDP trajectories for both India and Pakistan. For instance, Atlantic Council research found that military competition often depresses GDP (Nawaz & Guruswamy, 2014). Pakistan cannot bear heavy fiscal pressures due to its narrower economic base. When defining 'minimum,' Pakistan should strategize by internalizing those macro costs (Haseeb et al., 2014).
6. Pakistan should leverage geoeconomics to ease security dilemmas. Complementing CPEC and regional corridors with deterrence can expand trade and lower budgetary pressure on

continuous modernization. Nuclear stability complemented by economic interdependence can reduce the vulnerability of Pakistan in times of crisis and fiscal pressures (Nawaz & Guruswamy, 2014). This way, geoeconomics can make peace more profitable than escalation without replacing deterrent efforts.

7. Increasing warheads does not ensure credibility, but fiscal sustainability does. Within a stable macroeconomic framework, if a deterrent is coherently funded it is more believable to both adversaries and allies than one with situational surges that strain the exchequer (Haseeb et al., 2014). With fiscal discipline, Pakistan can strengthen the international legitimacy of its doctrine characterized by sufficiency rather than unchecked expansion.

Force Structure and Modernization: Prioritizing Survivability over Numbers

8. China's military modernisation emphasizes survivability to guarantee second-strike capability rather than parity with the US (Cunningham & Fravel, 2015). Similarly, Pakistan should build an assured second-strike before counting warheads. Its analogue is modest but essential; enhancing mobility, enhancing secure command and control (C2), and securing long-range ALCM options can reach the target.
9. To counter Indian BMD, Pakistan needs to hedge against it by quality, not quantity. Qualitative countermeasures are often cost-effective compared to expanding inventories. Developing MIRVs,

depressed trajectories, cruise profiles, and decoys with retaliatory doctrine, Pakistan can maintain credible deterrence (Levesques, 2021; Ahmed, 2016).

10. Without C3I (command, control, communications, and intelligence), no deterrent can be considered credible. That is why Pakistan needs to secure its communication systems and early-warning capabilities to absorb a first strike and still respond. Therefore, the development of a disciplined alert posture is mandatory at the core of credible minimum deterrence (Scholar Pakistan, 2021).

Escalation Control and Signaling: Risks of Over-expansion

11. Since competitive laddering is intensifying in Asia, Pakistan's engagement in the arms race might result in outstripping its fiscal capacity (SIPRI, 2025). Even though China is now growing from 500 to 600 warheads by 2025 and building 350 silos, Pakistan should not mirror trajectories it cannot economically sustain (Haseeb et al., 2014).
12. Pakistan relies on expanding TNWs to counter Cold Start, which may deter limited incursions; however, TNWs trade stability for signalling. These weapons lower the threshold, burden C2 (command and control), and risk rapid escalation leading to potential delegation risk (Kurita, 2025; Hooey, 2019). To keep its usage in Pakistan's favour, Pakistan should retain a limited TNW capability with clear messaging to fill the deterrence gaps.
13. To avoid eroding deterrence credibility, Pakistan should not

stretch its 'credible minimum' to justify countering India's Cold Start, BMD, and expanded conventional capabilities. The more elastic 'credible minimum' becomes, the harder it is for adversaries to discern where Pakistan's thresholds lie. The ambiguity might result in confused adversary expectations, weakened deterrence, and blurred doctrine. Therefore, Pakistan needs to keep its retaliatory core explicit to avoid warfighting roles (Noor, 2023; Khan, 2022).

14. Increasing just numbers can cause preemptive fears among adversaries and does not even guarantee deterrence. It is okay to expand the arsenal size, but with the simultaneous upgradation of survivability and C2, it will not cause crisis instability and vulnerability. The China case proves that structure carries more weight than size for credibility (Cunningham & Fravel, 2015; Binnendijk & Gompert, 2023).

6. Conclusion

To sum up, the comparative analysis shows that China's strategy demonstrates how disciplined restraint can increase credibility, whereas unchecked expansion can cause unintentional escalation (Cunningham & Fravel, 2015). It exemplified that credible deterrence does not require warfighting roles or numerical parity. Instead, it focuses on survivable second-strike capability, a clear NFU pledge, and doctrinal signalling. China's success in deterring great powers and avoiding escalation spirals with the US was possible through its selective modernisation and assured retaliation framework (Binnendijk & Gompert, 2023).

In contrast, Pakistan's shift from CMD to FSD was driven by India's Cold Start doctrine, BMD, and conventional superiority. FSD is adaptive; however, the comparative findings indicate this type of deterrence poses certain risks such as lowering nuclear thresholds through TNWs, expanding numbers without survivability and strong C2, and creating delegation risks, crisis instability, and escalatory pressures (Sankaran, 2014; Kurita, 2025; Hooey, 2019).

The policy implications from this research recommend that Pakistan to be concerned with the quality of their weapons stockpile and survivable second-strike options (and not simply expanding its warhead inventory), as was shown through China's disciplined modernization (Cunningham & Fravel, 2015). This is especially important due to Pakistan's limited fiscal resources and the conventional military disparity with India (Haseeb et al., 2014; Nawaz & Guruswamy, 2014). In terms of capability development, strategic patience and selective modernization would be appropriate to achieve capability in mobility, survivability, and secure command-and-control, rather than rapidly increasing numbers, as China has pursued an incremental improvement in capabilities consistent with the credibility of deterrence (Kristensen et al., 2024). Economic and fiscal integration is a key element in supporting credible deterrence. Maintaining economic and fiscal interdependence, while avoiding an arms race that will strain national budgets, reduces the risk of destabilizing actions as illustrated by comparative analysis (Nawaz & Guruswamy, 2014). Finally, doctrinal clarity and signalling discipline are equally essential in maintaining stability in the region. Pakistan should establish 'minimum' as political restraint and 'credible' as

technological assurance, as ambiguity in establishing a threshold increases the potential for miscommunication in a crisis-prone environment in South Asia (Noor, 2023; Khan, 2022). By learning from China's balancing of survivability, signalling discipline, and economic balance, Pakistan can ensure sustainable, effective, credible nuclear capability and deterrence in the face of regional challenges. This paper debates and compared the nuclear doctrines of China and Pakistan and provides conditional, policy-relevant insights that are contextually adaptable to Pakistan's security environment (Narang, 2014).

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