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# Indian Nuclear Submarine Programme: Countering China or Disrupting South Asian Strategic Stability?

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**Abstract**

This paper offers a critical examination of the expanding Indian Nuclear Submarine (SSBN) Programme in light of recent development and the Indian ambitions of expanding its maritime presence in the Indo-Pacific region. The prominent interpretation of the programme is that is a response to the growing Chinese maritime military capabilities, however these analyses do not aptly capture the full scope of the Indian strategic ambitions. This paper assesses that the Indian maritime ambitions, especially the development and recent expansion of its SSBN programme is a means of asserting its power, prestige and regional dominance. This paper utilises the relatively underutilised framework of the Power Transition Theory (PTT) to investigate and highlight the Indian ambitions in this particular domain. Multiple experts in this particular field, both Pakistani and International, were interviewed to substantiate the findings of the paper. The key findings of this paper highlight that India, as an aspiring power, seeks to challenge the Indo-Pacific regional status quo through its SSBN development and maritime projection. While this aspiration may be aimed at shifting the balance in the Indo-Pacific where China currently sits at the top, these developments by India have implications for Pakistan's security calculus in the maritime domain as well as for South Asian regional stability.

## 1. Introduction

Throughout recorded history, warfare has served a two-fold purpose: projection of power in regional and subsequently global arenas while subjugating the adversaries to one's own will. One of the ways states are fulfilling the above objectives in the present era is through the expansion in the maritime domain, especially undersea, with the expansion of their submarine fleets. Nuclear-powered submarines, more commonly known as SSBNs, play a significant role in this power maximisation and afford the states that possess this technology an edge over those that do not. Not only do these platforms provide a state with an assured second-strike capability, but they are also increasingly being credited with helping states maintain a strategic advantage in maintaining a stable balance of power. The possession of a SSBN programme is seen as an enhancement of a nation's influence not only within the regional context but also in international affairs.

Nowhere is this more evident than in the Indo-Pacific region, where India and China, as the two major competing powers, remain embroiled in a strategic competition. The rise of China and the bolstering of India by the US as a net security provider against its rise have made this region a strategically important flashpoint. Against this backdrop, the primary objective of this research is a critical

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evaluation of the Indian SSBN programme, which moves beyond the traditional framework of reactive deterrence. More specifically, this study highlights that Indian naval nuclear expansion is driven by its dissatisfaction with its status in the maritime domain of the Indo-Pacific region and its underlying desire to alter the regional hierarchy. The paper aims to map the cascading effects of the ensuing modernisation being undertaken by India to fulfil this desire. This study is significant because it offers both a theoretical and policy perspective. Conceptually the paper addresses a gap in the literature by applying a relatively underutilised theoretical framework, the Power Transition Theory (PTT) to decode the Indian psyche in this particular domain. From a policy perspective, the research offers critical insights by contextualising how prestige-driven naval modernisation can inadvertently or advertently intensify regional security dilemmas.

## 1.1 Theoretical Framework and Analytical Approach

This research draws on the Power Transition Theory (PTT), which offers a vastly underutilised perspective on Indian SSBN development and is instrumental in understanding the Indian rationale. PTT, developed by A.F.K. Organski, a professor of world politics, posits that the international system is inherently hierarchical, with a dominant power at the top. States that consider themselves rising powers and are dissatisfied with their position within this hierarchy seek to revise the existing order by acquiring greater economic and military capabilities. This manifests as a strategic competition especially when the rising power sees an opportunity to alter the regional balance of power in its favour. Sometimes the rise of an emerging power is peaceful; however, more often than not, the rising power's desire to replace the dominant state leads to war and conflict as both parties vie for supremacy. Conflicts can occur when the challenger seeks to prematurely replace the prevailing dominant state (Tammen, Kugler & Lemke, 2017).

In this context, India’s naval nuclear modernisation, particularly its SSBN programme, is a means of disrupting the regional hierarchy in the Indo-Pacific, currently led by China. In this scenario, India considers itself a rising power dissatisfied with the status quo and seeks to alter it to its advantage. Three analytical variables allow the operationalisation of this framework:

1. **Status Dissatisfaction**, which stems from India's perception of its subordinate position in the regional hierarchy, which China dominates.
2. **Capability acquisition**, which includes the expansion of India's SSBN fleet and its associated SLBM arsenal, which are instruments of systemic revision.
3. **Behavioural manifestation of revisionism**, which includes India's assertive maritime posture, doctrinal ambiguity and signalling behaviour in the Indian Ocean Region (IOR).

These three variables help explain the Indian pursuit of advanced maritime capabilities including SSBNs as both a material and symbolic capability in its pursuit to revise the regional status quo. Conventional realism terms this behaviour as status seeking within the anarchic international system. However, under the PTT framework, this can be seen as the dissatisfaction of the rising power with the existing status quo. This paper proposes that India, unhappy with the prevailing hierarchy in the Indo-Pacific seeks to augment its relative power vis-à-vis China in a bid to rise as the dominant power in the region. The SSBN programme is the practical manifestation of this desire.

The trickle-down impact of this development on the South Asian security calculus is also profound. Within this region, Pakistan’s strategic aim is to maintain the status quo, while its adversary is adamant on eroding the precarious balance of power through its revisionist behaviour. Integration of PTT in this study offers a new framework for analysing the Indian SSBN development. It explains how Indian ambitions in the Indo-Pacific, as well as its desire for regional dominance, ultimately impact the overall strategic stability of the South Asian region and its strategic relationship with Pakistan.

## 2. Review of Existing Literature and Identification of the Gap

An extensive scholarship exists on India's evolving nuclear posture and the development of its sea-based deterrent. However, the interpretations of this development differ significantly depending on the motivations and implications of this programme. Much of the early as well as contemporary literature on this issue offers analysis based on the framework of deterrence, stability, technological advancements and great power competition. While these aspects have been valuable in explaining the operational logic as well as doctrinal rationale behind India's naval nuclear modernisation, however, they tend to overlook the broader systemic and psychological dimensions of India's strategic behaviour.

From a doctrinal standpoint, several scholars, including Frank O'Donnell and Yokesh Joshi, have argued that the SSBN programme forms a critical component of India's quest for a survivable and assured second strike capability (O'Donnell and Joshi 2018). They have rationalised the operational necessity of a sea-based nuclear leg to reinforce credible minimum deterrence, as well as second-strike capability, while also enhancing the flexibility of India's retaliatory options. Vipin Narang and Chris Clary's research, although similar, focuses more on nuclear entanglement and doctrinal ambiguity, particularly regarding India's C-2 infrastructure in relation to its SSBNs (Clary and Narang 2019). They argue that India is increasingly moving towards counterforce capabilities, which can prove to be highly unstable and lead to regional instability.

Indian scholarship on the subject predictably places the Indian SSBN programme as a defensive reaction to the expansion of the Chinese maritime presence in the Indo-Pacific and its expanding SSBN programme which includes its Jin-Class submarines in particular the JL-2. These Chinese developments have been termed as the catalyst for the Indian programme (Kanwal & Rajagopalan, 2016). Non-Indian scholars on the other hand highlight the implications of this development beyond the China-India dynamic. Their arguments stems from the point that any Indian development cannot be seen in isolation and will necessarily have an impact on South Asia (Kazmi 2017). Pakistan's development of Baber 3 SLCM as well as increasing investment in other conventional undersea assets represents its asymmetric attempts to preserve the strategic balance in the region in light of the Indian assertive developments in the maritime domain (Sultan, 2025).

More recent analyses, which built on these foundational debates, highlight that India's counterforce temptations have transitioned from theoretical to tangible operational posture. Recent assessments, most notably in the SIPRI yearbook (2026), suggest a historic departure from India's alleged disassembled, 'recessed deterrence' framework. The yearbook suggests that India is now potentially deploying active nuclear warheads in peacetime on automated cannisteraised sea-based systems. Additionally, scholars also note that such rapid technological diversification is also severely straining the declared Indian No-First-Use (NFU) stance, thereby introducing heightened risks of escalation in low-trust maritime environments.

Despite a plethora of studies on this issue, a number of gaps still remain in the existing scholarship. This research, in particular, will focus on two of these gaps. The first gap identified from a review of the existing literature is that the Indian SSBN programme is seen as a relative measure in response to external maritime pressures emanating from China's maritime strategy. Existing studies have not focused on Indian revisionist designs, which are aided by the development of such prestigious capability. Analysed from this perspective, the development highlights India's long-term quest for great-power recognition and the prestige associated with developing such capabilities. The second gap is theoretical because the PTT has not been applied in this particular domain to explain how naval nuclearisation through the development of SSBN by India aims to reshape the regional status quo in its favour.

This research aims to plug these gaps by analysing the Indian SSBN programme as a response to its dissatisfaction with the existing status quo in the Indo-Pacific region. In this regard, the Indian

revisionist intent, which is disguised under its security-driven agenda, will also be analysed to ascertain its implications not only for the Indo-Pacific but also for the trickle-down effects in South Asia.

## 3. Methodology

This research follows a qualitative analytical approach to examine India's SSBN program and its implications for regional strategic stability. Document analysis, as well as expert interviews, have been conducted to ensure a balanced understanding of both the developments and the strategic perceptions surrounding them. Compounding this is a review of primary documents which includes doctrines, policy statements, press releases and statements by officials as well as secondary literature including academic writings and open-source analysis.

Complementing this documentary research are semi-structured expert interviews with scholars and analysts specialising in this domain. A set of guiding questions was developed to elicit qualitative insights on key themes, including the strategic motivation behind India's SSBN programme, its doctrinal implications, and the resultant effect on South Asian strategic stability. The interviews were conducted via Zoom or through written correspondence between March and April 2025. A semi-structured format allowed flexibility for the interviewees to elaborate beyond the basic guiding questions, which generated richer, more nuanced analysis. The interview notes were transcribed, thematically coded and cross-referenced with the secondary data sources to identify converging as well as diverging points of view. Formal informed consent was sought and obtained from all expert participants prior to conducting the interviews. The experts were fully briefed on the specific scope, objectives and academic nature of the research project. Explicit verbal as well as written authorisation was secured regarding the disclosure of their professional identities, organisational affiliation and verbatim quotes.

Data from these diverse sources were thematically analysed to establish causal linkages between India’s SSBN development, its status-seeking behaviour, as postulated by PTT, and the resulting cascading impact on South Asia. While this study encompasses multiple perspectives, it acknowledges certain limitations, including a lack of access to classified and operational data on SSBN development, as well as C-2 arrangements.

## 4. Indian SSBN Programme: A Strategic Fulcrum

Within the strategic calculus of the Indo-Pacific, the Indian SSBN programme serves as an extension of the naval leg of the Indian nuclear triad. While India may perceive a legitimate threat from China's naval developments in the region, its development of nuclear submarines can also be seen as a deliberate instrument of power projection in the maritime sphere. Tracing the historical evolution of the SSBN programme is crucial to ascertain the Indian motivation and rationale for its development. A close examination reveals that the programme is driven by a set of interwoven factors: historical precedent, domestic compulsions, external influences, as well as psychological aspects related to the Indian strategic thought. The following analysis traces the trajectory of the Indian SSBN development as well as how these capability acquisitions reflect a manifestation of India’s dissatisfaction with its regional status. This framing is also helpful in differentiating the SSBN’s military utility from the political symbolism of this development, which stems from systemic revisionism rather than reactive balancing efforts.

### 4.1 Historical Evolution and Strategic Drivers of the Programme

The evolution of the Indian SSBN programme can be traced back to the 1980s when it launched the Advanced Technology Vessel (ATV) project (NTI, 2025). This project focused on reverse-engineering the Russian Akula-class submarine technology with the aim of developing indigenous vessels. Following several decades of under-the-radar developments, the country finally launched the

INS Arihant in a public ceremony in 2009, with formal commissioning occurring in 2016 (Peri, 2016). Alongside the country, missile systems were also being developed that would be compatible with these undersea platforms. The latest iteration of this technology demonstration came in August 2024, when India commissioned its second SSBN, the INS Arighat as well as the development and deployment of the K-15 and K-4 missiles. Table 1 presents a detailed historical account of the Indian SSBN programme, along with the timeline for the development of missiles for these platforms.

**(Table 1: Evolution of India's SSBN Programme and Missile Pairing 1970s–2024)**

| Year/Period | SSBN Development | Ballistic Missile Development | Key Notes |
|---|---|---|---|
| 1970s–1980s | **Initiation Phase** | **Sagarika/K-15 Begins** | - BARC begins naval reactor research (Project 932).<br>- Missile design starts under DRDO's Sagarika project. |
| 1985–1998 | **Project ATV Launched** | **K-15 Sagarika Testing Begins** | - Secretive 'ATV' project initiated with Russian assistance.<br>- Missile tests began in the early 1990s. |
| 1998 | **Nuclear Tests (Pokhran-II)** | — | - Catalyst for accelerating SSBN and SLBM development.<br>- Formalisation of India's No-First-Use (NFU) doctrine. |
| 2004–2009 | **INS Arihant Construction** | **K-15 (750 km) Tests Successful** | - SSBN Hull constructed at Ship Building Centre, Visakhapatnam.<br>- K-15 Sagarika tested from an underwater platform in 2008. |
| July 2009 | **INS Arihant Launched** | — | - First indigenously built SSBN launched.<br>- Sea trials begin. |
| 2013–2016 | **INS Arihant Trials** | **K-15 Integrated into Arihant** | - INS Arihant underwent sea and weapons integration trials.<br>- K-15 Sagarika test-fired multiple times from INS Arihant |
| August 2016 | **INS Arihant Commissioned** | — | - INS Arihant became operational, marking India's entry into the SSBN club<br>- capable of carrying twelve K-15 Sagarika missiles |
| 2017–2020 | **INS Arighat Constructed & Sea Trials Begin** | **K-4 SLBM (3500 km) Tested** | - Second SSBN built secretly, initially named Arihant-II<br>- K-4 SLBM tests conducted from submerged pontoon and sea platforms |
| 2022–2023 | **INS Arighat Final Trials** | **K-4 Near Induction** | - Advanced SSBN trials with more vertical launch tubes (estimated 8)<br>- K-4 testing completed |
| August 2024 | **INS Arighat commissioned** | **K-4 Deployment Pending** | - Quiet commissioning of INS Arighat<br>- K-15 fitted initially; K-4 planned |
| 2025 | **SSBN Fleet Expansion Plans** | **K-5 & K-6 SLBMs in Development** | - Next-gen SSBNs (S-4, S-4*) under construction.<br>- K-5 (5000 km) and K-6 (6000+ km MIRV-capable) missiles in advanced R&D. |
| 2026 | **SSBN Fleet Expansion** | **S4 (INS Aridhaman)** | - INS Aridhaman was commissioned into the Indian navy in April 2026 |

Augmenting the existing SSBN fleet is INS Aridhaman, also known as S4 which was commissioned in April 2026, a marginally larger SSBN. Another SSBN, currently known by its codename S4*, was launched secretively in October 2024 (Peri, 2024). While INS Arihant and INS Arighat share the same reactor, the newer S4 and S4* variants will have imported reactors. The S4* is also larger than all its predecessors and can carry more K-4 missiles, each with a stated range of 3500 km.

The gradual scaling up of their SSBN tonnage and missile range illustrates a deliberate pattern whereby incremental capability acquisition is synonymous with the behaviour of a rising power seeking parity with states it perceives as on a higher tier, as posited by PTT. While India frames its development of the SSBNs as purely defensive, the development of this and other sea-based platforms effectively blurs the lines between its strategic defensive compulsions and its desire for power projection (Afridi, 2024).

In an interview with the author, an expert on India's strategic and nuclear issues, asserted that "India's SSBN plan predates the post-Cold War environment in the Indo-Pacific region. It was not intended to counter Chinese presence in the region but was a continuation of India's strategic thought process since its independence in 1947 (Sultan, 2025)." This observation situates the Indian programme within a broader framework of Indian strategic behaviour, where technological milestones are pursued as status symbols to augment a country's regional and international stature. The introduction of nuclear weapons by India in the regional calculus in 1974 is another example of this behaviour. Collectively, this resonates with the PTT's notion of dissatisfaction with the prevailing regional hierarchy.

## 4.2 Indian SSBN Programme considering China's Strategic Developments

One of the most compelling justifications given by India for the development of its SSBN's is that of Chinese naval advancements. Recent years have seen an increase in Chinese maritime developments particularly in its own SSBN fleet. The induction of Chinese Jin-Class SSBNs equipped with JL-2 SLBM (TNTI, 2024), coupled with China's expansion of its surface fleet, forms a part of a broader Chinese strategy designed to ensure maritime security in critical regions such as the South China Sea. According to Dr Tong Zhao, senior fellow with the Nuclear Policy Program at the Carnegie Centre in China, Chinese SSBNs are primarily aimed at countering the US and its Western allies (Zhao, 2025). In view of this, China is also making a great effort to extend the reach of its SLBMs. While the Chinese focus remains on the US, however, should China ever plan to expand the reach of its SSBNs westward, it would be able to launch missiles from different angles against India. However, given the current Chinese plans, this does not seem to be the trajectory of Chinese plans (Zhao, 2025).

It is essential to compare and contrast China's development in the SSBN domains with that of India's pursuit. While there is a definite domino effect of strategic developments starting with the US, cascading all the way to India through China, recent Indian developments in this respect highlight a stark exaggeration by the Indian side. One example that can be cited in this case is the K4 missile, which has a range of 3,500 kilometres and thus far exceeds the distances needed to counter critical Chinese naval assets in the IOR or even in the South China Sea. These ranges are also far beyond what would necessarily be needed for effective deterrence vis-à-vis China in the immediate Indo-Pacific context. Therefore, the scale and range of India's SSBN developments suggest motivations to extend its force posture beyond immediate deterrence needs. The divergence between the Chinese strategic intent and Indian threat perception positions the latter's naval nuclear modernisation as only partially reactive to the former. It also suggests an assertive approach aimed at improving India's position in the regional hierarchical structure.

Overall, it indicates India's aspiration to enhance its regional influence and international standing, a behaviour consistent with a power seeking to revise, rather than operate within, the existing system. The prestige factor becomes clear when viewed through the above lens. SSBNs allow India to become

part of a select group of states which have this technology, a point which has been reiterated by several Indian leaders over the years, thus augmenting the argument that it is a status symbol.

This pattern of institutionalised prestige is further corroborated by India's rapid naval expansion in more recent years. As of April 2026, India has commissioned its third SSBN INS Aridhaman (S4), which theoretically provides the Indian Navy with the baseline structural redundancy required to establish a Continuous At-Sea Deterrent (CASD) cycle (Dempsey & Dewey, 2026). From the PTT perspective, the secrecy surrounding the 2026 commissioning, juxtaposed with more aggressive signalling, highlights that these platforms are meant to solidify systemic status revisionism, aiming for recognition at a more global level while bypassing any regional containment (Colom, 2025). Altogether, these developments reflect India's strategic duality: while claimed to be deterrence-driven, its SSBN developments suggest deeper prestige-related motivations. The following section dissects this in detail by situating the development of SSNBs within the broader Indian psyche and historic pursuit of recognition as a major power.

## 4.3 SSBNS and India's Strategic Psychology

Historically, the military developments undertaken by India have had prestige and status symbolism. The most pertinent example of this is the 1974 nuclear tests by India, which were undertaken as a result of the Indian desire for great power status rather than any strategic requirement. The main aim was to highlight its ability to develop sophisticated technology. This point is augmented when seen in conjunction with the statement of a former Indian Prime Minister, who said that the door leading to a permanent seat at the UN Security Council has a (metaphorical) sign stating that only those with economic prowess or nuclear weapons may enter (Ali, 2023). This highlights that despite numerous stated reasons for going towards nuclearisation, a major factor was the overarching desire for great power status. Through the lens of PTT, this falls within the ambit of status dissatisfaction, in which a revisionist state seeks to augment its current stature by developing such technologies.

Similar is the case vis-à-vis the development of its SSBN programme. While India has grounded the rationale for this development in deterrence and maritime strategic language, however the pursuit of this development seems to have been equally shaped by a deeper quest of recognition at both regional and global levels. Unlike the conventional submarines, SSBNs are not mere defence tools: they are powerful symbols which can help augment the great power identity of an aspiring power. Accordingly, the SSBN fleet, while it has a clear deterrent role, is also a political signal to communicate India's entry into a domain which has historically been monopolised by major powers.

Indian Prime Minister Manmohan Singh clearly indicated this desire in July 2009 at the launch of INS Arihant when he said, "Today we join a select group of the five nations who possess the capability to build a nuclear-powered submarine." Compounding this aspect is the fact that much of the developments in this domain go far beyond the Indian threat matrix vis-à-vis China, the prime Indian adversary in the naval domain.

As one of the only non-P5 states operating an indigenous SSBN programme, India sees its fleet as a marker of parity with de jure nuclear powers. This symbolism is central to India's psychological needs to assert its position in the world. The China factor allows India the space to justify its military modernisation, while the major motivation propelling India's SSBN programme is prestige and regional dominance (Sultan, 2025).

China views the Indian SSBN programme to be driven by two factors: security and prestige. One does not necessarily has to be at the expense of the other and both can be true at the same time (Zhao, 202). The security aspect stems from the Indian perception of threat from the Chinese advancements in the naval domain. The prestige factor, which appears to be the more compelling of the two, becomes apparent when viewed through a comparison of the developments by both sides. India seems to be following a similar incremental development path as China as it expands its programme. India began the development of the SSBNs with only four times, the next SSBN had eight whereas the future ones

are expected to have twelve (Zhao, 2025). The PTT framework of 'capability acquisition' as a means to augment one's power fits this staged Indian acquisition plan, which aims to accumulate power while also augmenting its prestige.

## 5. Cascading Implications of Indian SSBN Programme Development

The power-projection and status-seeking dimension of India's SSBN programme is a hallmark of a revisionist power seeking to augment its relative power vis-à-vis the status quo state, in this case China, within the ambit of the PTT. The status-seeking and power projecting behaviour in this particular case is further reinforced by India's increasingly assertive nuclear posture. While India officially continues to adhere to its declared No-First-Use (NFU) policy, the operational logistics of sea-based deterrence complicate this stance. SSBNs, which are deployed for longer-duration patrols, require either pre-delegation launch authority or a highly redundant communication system, both of which introduce significant strategic ambiguity into India's already complex nuclear doctrine. Such ambiguity, while serving a deterrent purpose, also signals an assertiveness towards projecting greater strategic autonomy. In addition, recent statements by Indian officials on the conditionality of Indian NFU suggest a departure from stated policy under extreme circumstances, which further reinforces the perception of a flexible doctrine in the near future (Rajagopalan, 2016).

Ambiguity, thus, serves a dual purpose. On one hand, it aims to maximise India's deterrent effect, leaving adversaries uncertain about the nuclear threshold and retaliatory capabilities. On the other hand, it provides space for political signalling, allowing India to calibrate its strategic messaging for different audiences, be it Pakistan or China. From a Pakistani perspective, this ambiguity is highly destabilising: SSBNs with their high survivability rate could potentially embolden India towards pre-emptive counterforce options, thus eroding stability in an already volatile region. According to Dr Clary and Dr Narang, India is already moving towards a nuclear posture focused on counterforce as well as pre-emptive first-strike options (Clary and Narang 2019). This concern is further magnified by India's increasingly ambiguous nuclear doctrine, especially the conditional interpretation of its NFU policy aimed at carving out a space for limited pre-emptive strikes in scenarios where the threat is perceived to be imminent. This doctrinal evolution can be interpreted as the behavioural manifestation of revisionism. From a PTT lens, it posits a shift from restraint to assertive deterrence, aimed at reinforcing India's emerging great-power self-image. In crisis-prone dyadic relationships, such as those between Pakistan and India, where early warning systems remain limited and strategic communication is underdeveloped and underutilised, the presence of SSBNs may unintentionally lower the threshold of nuclear use by creating an illusion of escalation dominance. Thus, the Pakistani apprehension stems not only from the platforms alone, but also from the doctrinal fluidity and crisis instability they could incentivise in the adversary's psyche.

According to Dr Zhao, the Chinese are not particularly impressed by the Indian display of its naval nuclear power or its SSBN fleet. There has only been one case, during the 2020 border crisis, where reports emerged of the INS Arihant being mobilised as a deterrence signal for China. However, the Indian SSBN capability does not register very high on the Chinese radar (Zhao, 2025). This clearly indicates that, while India continues to invoke the alleged Chinese threat for justify its naval developments, the actual developments align more closely with its power-projection plans and have a direct bearing on Pakistan's security calculus. This diversion between the intent and the perception encapsulates the core argument of this paper: that Indian SSBN development is less a response to immediate strategic imperatives and more a quest for recognition and greater influence in the regional hierarchy. This also highlights the Indian status seeking behaviour: an archetype of power transition behaviour under the PTT framework which has significant implications for Pakistan's security calculus specially in the maritime domain.

# 6. Strategic Implications for Pakistan

Given the domino effect of security developments in the Indo-Pacific and South Asian regions, India's development of an SSBN programme severely complicates Pakistan's security calculus. The shift in the region's strategic landscape, in light of this development by the Indian side, necessitates corresponding adjustments by Pakistan to its deterrence and security posture to preclude potential escalation risks.

## 6.1 Pakistan's Strategic Dilemma

The current Indian SSBN fleet has introduced a new survivability gap in the South Asian nuclear equation, providing India with an added advantage (Sultan, 2025). It can be construed as a deliberate shift in India's nuclear posture from strategic restraint to dominance in the event of escalation. This doctrinal shift mirrors India's evolving assertion-based security posture, a hallmark of power-transition behaviour in which a rising state's strategic ambitions unsettle regional equilibria.

This asymmetry increases acute doctrinal concerns within Pakistan. The continued ambiguity in India's NFU stance, combined with the opacity of SSBN's C-2 systems, fosters uncertainty about Indian intentions during a crisis. C-2 also become far more complex in the naval nuclear context. In the absence of foolproof, redundant, and fail-safe communication channels, the deployment of SSBNs risks unauthorised and inadvertent use, highlighting an inherent vulnerability of delegated authority at sea. These platforms, therefore, increase the chances of miscalculation or unintended crisis (Sultan, 2025). To this end, nuclear Confidence-Building Measures (CBMs) are a pressing need of the hour, especially to build confidence in each other's C-2 systems as well as deterrence postures (Sultan, 2025).

## 6.2 Pakistan's Asymmetric Adaptation under the Power-Transition Framework

Pakistan has initiated several asymmetric response options to counter these Indian developments, starting with the successful test of Babur III SLCM in 2017 (MDP, 2017). This test can be considered Pakistan's first step towards developing its own credible second-strike capability at sea, which, according to an interviewee, is necessary to create uncertainty in the mind of its adversary (Sultan, 2025). Babur III, which was launched from a submerged mobile platform, is a viable but limited option relative to India's SLBM, which can be launched from its SSBNs. However, it remains operationally significant, reflecting a cost-effective strategy of maintaining minimum but assured retaliatory capabilities at sea, which is consistent with Pakistan's doctrine of maintaining a credible deterrence at all levels of conflict for a full spectrum of threats. Matching capability with India's capability would be difficult and is also not required; therefore, Babur III offers a viable and proportionate response consistent with Pakistan's principle of credible minimum deterrence.

Alongside the nuclear options, Pakistan has invested in conventional undersea forces, including the acquisition of Hangor-class submarines from China. Pakistan is also in the process of acquiring Air Independent Propulsion (AIP)- equipped submarines from China, which are likely to be delivered in the next few years. Submarines equipped with AIP technology will have longer underwater endurance compared to traditional diesel-electric submarines, which Pakistan currently possesses.

The Pakistan Air Force (PAF) also plays a role in augmenting Pakistan's naval leg through multiple joint endeavours, chief among them being the Sea Spark Exercises which bring together personnel from both services for continuous maintenance of safety and security at sea (Official PAF Social Media Page, 2024). The PAF also offers its surveillance, reconnaissance and strike-capabilities to its sister service both for surface and aerial threats. Air-launched missiles are used complimentarily with sea-based platforms for multi-vector strike capability. Ra'ad II is particularly significant in this regard because it offers strategic stand-off capability both at land and sea (ISPR, 2020). Long-range maritime patrol aircraft alongside advanced surveillance systems round out the use of the aerial domain as a

force multiplier for the maritime operations (Vavasseur, 2021). Ultimately, a combination of all these capabilities bridges any gaps in the country's maritime deterrence in the absence of SSBNs and SLBMs. This type of multi-vector integration and interoperability between sister services ensures that the Pakistani deterrence architecture is networked, flexible, and all-encompassing.

On the naval front, while Pakistan is in the process of augmenting its maritime military assets, the country still faces significant technical, financial and doctrinal constraints reflecting the structural limitations of peripheral powers in a power-transition framework. If Pakistan were to plan for an SSBN fleet, it would require substantial investment, crew training, C3I redundancies, and several years to reach parity with India's current position. Additionally, the rapid development of countermeasures, such as quantum and seabed sensors that enhance detection capabilities, can make it difficult for SSBNs to remain undetected by adversaries. This can result in the nullification of its stealth aspects which is the hallmark of this development as an assured second-strike option (Sultan, 2025).

Therefore, Pakistan's best short-term options lie in pursuing a limited, asymmetric sea-based deterrent that serves as a credible retaliatory platform for sea denial without entering an overt naval arms race. The Indian SSBN fleet and its planned expansion will, at least in the short term, continue to disrupt all its adversarial dyads.

## 6.3 South Asian Strategic Stability and Escalation Risks

Indian SSBNs create conditions which are ripe for arms race dynamics unless one side shows the necessary restraint. Continued Indian investment and augmentation of its SSBN fleet could compel Pakistan to develop countermeasures to ensure that its own deterrent remains credible amid evolving threat perceptions. While quantum sensors remain a far-off idea, the development of seabed sensors, which detect vessels passing above, can be a viable alternative for Pakistan (Salik, 2025).

In addition, the maritime domain also lacks established risk reduction platforms, unlike the more mature land-based channels that exist between Pakistan and India. While most of the existing CBMs between Pakistan and India continue to be tenuous, however, the complete lack of CBMs in the naval domain raises serious concerns for strategic stability in South Asia. While naval skirmishes in the past may have remained limited, the addition of these newer SSBNs can lead to a dangerous escalation. Compounding this risk are the vulnerabilities within the Indian C3I, whereby a breakdown in secure communications between land-based command centres and the SSBNs, either due to technical failure, interference, or the unavailability of clear lines of communication, can lead to unintended or unauthorised actions. Within the power-transition framework, the development of India's SSBNs and the ensuing Pakistani asymmetric adaptation exemplify a classic security dilemma, albeit intensified by India's dissatisfaction with its position in the Indo-Pacific regional hierarchy.

# 7. Potential Strategic Response Options for Pakistan

Looking at Pakistan from the lens of PPT, it can be identified as a status quo state, which is confronted with a revisionist India intent on reshaping the existing hierarchy of the Indo-Pacific. Consequently, Pakistan has to navigate through an intense and complex maritime deterrence environment. In order to maintain the regional order and stability, Pakistan has to undertaken specific measures in the maritime domain. These do not necessarily have to be a replication of the Indian moves such as the development of SSBNs. Pakistan can pursue other technologically viable, cost-effective and strategically sustainable options which preserve the regional strategic stability. As elucidated above, Pakistan has already taken several measures to safeguard its maritime security in this regard. The following section highlights prospective strategic options that, when viewed through the PTT lens, constitute asymmetric adaptations suited to Pakistan's specific needs.

### 7.1 Tech Adaptation through Emerging Technologies

Diversification and augmentation of emerging and disruptive technologies represent one area through which Pakistan can maintain its competitive edge vis-à-vis India in the maritime domain. One way this can be achieved is through investments in newer sensor technologies to detect SSBNs. China has established a network of hydroacoustic sensors that utilise sonar to detect submarines (SDM, 2024). Given the strategic partnership between Pakistan and China, this technology or relevant expertise can be gained. Additionally, Pakistan can also look into developing seabed sensors, which would enhance its ability to potentially detect even SSBNs near its territorial waters.

### 7.2 Institutionalisation of Naval CBMs

There is an urgent need to institutionalise naval CBMs between Pakistan and India, a historically neglected area. These CBMs can include the establishment of a dedicated naval hotline akin to the existing ones between the Foreign Secretaries and the DGMOs. A Prevention of Incident at Sea agreement similar to the one signed between the US and USSR during the Cold War (US DOS, nd) is another potential area for confidence-building. In competitive dyads marked by high mistrust, maintaining reliable channels of communication, even on an informal level, can help cultivate a nuanced understanding of mutual concerns and reduce the likelihood of inadvertent escalation. (Zhao, 2025)

### 7.3 Integration of Air Power to Augment Maritime Deterrence

Keeping in mind the important role of air power in reinforcing the maritime deterrent, Pakistan can continue to leverage the expertise of the PAF to strengthen its naval posture. This can be achieved through several initiatives, including leveraging PAF's ISR capabilities to provide real-time intelligence to the naval forces. Exploring the option of deploying air-launched cruise missiles, with maritime strike capabilities, along the shoreline could also work to enhance Pakistan's deterrence posture.

### 7.4 Consolidation of a Credible, Asymmetric Second Strike Capability

According to Dr Adil Sultan, Pakistan has already developed some version of a second-strike capability, which has also been alluded to by Lt Gen Khalid Kidwai (Retd) in recent years (Sultan, 2025). Therefore, if existing second-strike capacity is sufficient, then it would be counterproductive to compete with India in terms of numbers or similar technologies. A second-strike capability does not necessarily have to be achieved only through sea-based options. It can also be achieved through land and air-based technologies if these are deployed in creative ways to enhance their survivability even against massive attacks with precision weapons, whether nuclear or conventional (Zhao, 2025).

## 8. Conclusion

Indian development of SSBNs marks a significant transformation in the deterrence landscape of not only Indo-Pacific but also South Asia. Although publicly framed as a response to Chinese naval developments, a more apt rationale appears to be India's desire to augment its power projection and prestige at both regional and global levels. This development has far-reaching consequences for South Asia as a whole and Pakistan's security calculus in particular.

The analysis presented in this paper suggests that India's SSBN development is not a purely technical or operational endeavour. This development is embedded in the broader strategic psychology which is driving India's quest for recognition as a great power and a net security provider in the IOR. Analysing this development through the lens of PTT, it becomes abundantly clear that India's development of SSBNs is not merely a defensive response, but a deliberate assertion of strategic and systemic status revisionism and power-projection within and outside the regional contexts.

The three variables highlighted at the beginning of the paper and as posited by PTT, namely status dissatisfaction, capability acquisition and behavioural manifestation of revisionism, altogether form the core construct of a revisionist state's ambitions, which transcend beyond pure deterrence logic. The central logic of this study — that India's SSBN development is less about countering a specific threat and more about fulfilling its self-ascribed great power identity — is also affirmed through this framework.

The empirical findings derived from the expert interviews further reinforce the central argument of the paper, although Dr Sultan and Dr Zhao approached the Indian SSBN programme from varying vantage points, their assessments converged on several important themes. Both experts acknowledged that India's pursuit of an SSBN capability extends beyond the narrow operational requirements vis-à-vis the Chinese threat in the maritime domain. Frequently it carries a prestige dimension associated with power-seeking status. At the same time, their perspectives also revealed a nuanced distinction. Whereas Dr Sultan viewed prestige and regional power projection as the principal drivers of the programme, Dr Zhao argued that India's motivations are shaped by both security concerns and status aspirations. However, neither expert regarded the Chinese maritime threat alone as a sufficient explanation of the scale and trajectory of India's expanding capabilities in this domain.

The convergence of expert assessment alongside empirical data supports this paper's central contention that India's naval nuclear modernization can be best understood as an expansion of its status-seeking behaviour, which is consistent with the tenets of the Power Transition Theory, rather than being a pure reactive response to Chinese maritime development. From a Pakistani perspective, the induction of India's SSBNs introduces several destabilising factors into the South Asian nuclear dynamics. Not only does it create a survivability gap in the nuclear deterrence equation between the two sides, but it also complicates the regional dynamics through doctrinal asymmetry and decapitation strategies by the Indian side. The inherent opacity in India's maritime C3I, in conjunction with its ambiguous NFU doctrine, increases crisis instability, especially in an environment which is already lacking robust maritime CBMs or reliable communication mechanisms.

Pakistan's response to the Indian development of SSBNs and SLBMs through the induction of Babur III SLCM is a rudimentary but politically significant signal of the country's intent to continue to maintain credible deterrence at sea. Pakistan is also in the process of modernising its conventional submarine fleet, as well as integrating air power in the maritime domain to augment strategic flexibility.

The expert interviews and documentary analysis in this study highlight that India's SSBN program cannot be adequately explained through a deterrence strategy-centric model alone. The evidence points towards a broader pattern of status-seeking behaviour, power-expansion, capability acquisition and strategic signalling, which aligns closely with the expectations of the Power Transition Theory. Consequently, the evolution of India's SSBN programme, as well as Pakistan's asymmetric adaptation efforts, highlight how shifting regional hierarchies can reshape strategic behaviour in both the Indo-Pacific and South Asian regions. The way forward for Pakistan is not to pursue numerical parity, but to continue its efforts to preserve deterrence credibility through technologically sustainable asymmetric capabilities, while also advocating for stronger naval CBMs aimed at reducing the risks of inadvertent escalation.

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