



INDIA'S NUCLEAR DOCTRINE AND DETERRENCE STRATEGY IN SOUTH ASIA

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RESEARCH ARTICLE



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DOI:

<https://doi.org/10.70096/tssr.260402024>

Abstract

India's nuclear doctrine represents a cornerstone of its national security strategy and plays a significant role in shaping the strategic landscape of South Asia. Since conducting its nuclear tests in 1998, India has articulated a doctrine based on credible minimum deterrence and a no-first-use (NFU) policy. These principles aim to maintain strategic stability while deterring potential nuclear threats from regional adversaries, particularly Pakistan and China. India's nuclear strategy reflects a defensive posture that prioritises deterrence rather than warfighting capabilities. However, the evolving security environment, technological advancements, and regional rivalries have introduced new complexities into India's deterrence framework. This article examines the evolution of India's nuclear doctrine, the strategic rationale behind its deterrence policy, and the implications of its nuclear strategy for regional security in South Asia. The study also analyses the challenges posed by Pakistan's tactical nuclear weapons, China's expanding nuclear arsenal, and emerging technologies that may influence nuclear stability. The article argues that while India's nuclear doctrine has contributed to maintaining deterrence stability in South Asia, evolving geopolitical dynamics may necessitate adjustments in India's strategic approach in the future.

Keywords: *Nuclear Doctrine, Deterrence, South Asia, India, Strategic Stability, Nuclear Policy*

Introduction

Nuclear weapons have fundamentally altered strategic aspects of international relations since the middle of the last century. Their destructive ability and deterrent power have transformed military doctrines and security strategies and how states operate in relation to each other. Since the end of the Second World War, nuclear deterrence has been widely seen as one of the most influential factors in preventing large-scale wars between major powers. Scholars of international relations contend that nuclear weapons change the cost-benefit analysis of states because the cost of these weapons makes the consequences of warfare potentially so catastrophic that states will seek restraint and strategic stability (Sagan & Waltz, 2003). For states that have nuclear capabilities, deterrence thus forms a central part of national security policy and affects both military planning as well as decision making in foreign policy.

India and Pakistan in 1998 finally shattered years of speculation on their nuclear capabilities by openly conducting nuclear tests. While particular analysts felt that nuclearisation would provide stability in the South Asia region through deterrence, others had warned that nuclearisation may lead to an increased possibility of conflict. In areas where there is intense geopolitical rivalry and historical tensions, nuclear deterrence is especially important. South Asia, therefore, remains one of the most complex nuclear regions because of enduring political disputes as well as the presence of two nuclear-armed rivals. Before overt nuclearisation, they had engaged in conventional war in 1947-48, 1965, and 1971 between India and Pakistan. The advent of nuclear weapons thus fundamentally changed the region's strategic environment, so much so that there is today a relationship of deterrence that still affects the strategic calculations of both states (Ganguly & Kapur, 2010).

India officially declared itself as a nuclear-weapon state as a result of the series of nuclear weapon tests in May 1998 at Pokhran. These tests were a major milestone in the development of India's defence and strategic policies and an end to decades of nuclear research and technological development. Although India had shown the ability to develop nuclear weapons even earlier by conducting the so-called "peaceful nuclear explosion" in 1974, the 1998 nuclear tests marked India's shift from nuclear ambiguity to outright nuclearisation. According to Perkovich (1999), the decision to undertake the tests was shaped by a variety of considerations such as regional security concerns, the perceived need to counter nuclear threats from China and Pakistan, as well as India's desire to establish itself as a major power in the international system. The tests, therefore, marked a strategic as well as political milestone in India's policy of national security.

After nuclear tests in 1998, India inaugurated a formal nuclear doctrine, which would govern the development and deployment of its nuclear arsenal and how it might be used. In 1999, the National Security Advisory Board presented a draft nuclear doctrine that discusses the basic tenets of India's nuclear policy. These principles were reaffirmed and clarified by the Indian government in 2003. Central to India's nuclear doctrine are the concepts of credible minimum deterrence and commitment to no-first-use (NFU) nuclear weapons. Credible minimum deterrence means having a nuclear arsenal that is sufficient to act as a deterrent to potential adversaries without having to engage in an extensive nuclear arms race. India's attachment to the policy of No First Use (NFU) further sets apart India's nuclear doctrine from those of engaged countries that have a notable nuclear stockpile. Under this policy, India undertakes that it will not undertake the use of nuclear weapons but reserves the right to retaliate by massive means in the event it becomes the victim of a nuclear attack. The NFU principle is meant to strengthen India's defensive nuclear posture and convey nuclear restraint. Scholars have argued that the NFU policy reflects India's larger normative commitment towards responsible nuclear behaviour and strategic stability (Tellis, 2001). By giving emphasis to deterrence more than on nuclear warfighting, India's doctrine aims at reducing the probability of nuclear escalation in the event of regional crises. India's nuclear doctrine is therefore unique in a number of ways. Unlike some nuclear powers that have had ambiguous or flexible nuclear policies, India has been transparent about the principles that govern its nuclear policy. The doctrine intends to ensure that nuclear weapons are used primarily as an instrument of deterrence, rather than an instrument of coercion and battlefield warfare. This approach is India's timeless advocacy of nuclear disarmament globally and at the same time recognising the strategic realities of a nuclearised regional environment (Perkovich, 1999).

Despite all these principles of restraint, the regional security environment in South Asia is very volatile and complex. India has strategic challenges from its two nuclear-armed neighbours, i.e. Pakistan and China, and both have an impact on India's deterrence calculation in various ways. Pakistan's nuclear strategy, which involves the development of tactical nuclear weapons and a refusal to adopt a no-first-use policy, gives great potential for escalation in the case of conventional conflicts. At the same time, the continued modernisation of China's nuclear arsenal and missile capabilities has wider implications for India's long-term strategic planning (Tellis, 2001). These developments make it difficult for India to ensure credible deterrence and yet avoid a costly arms race.

In this context, India's nuclear doctrine needs to constantly adapt to the changing geopolitical realities, technological changes and changing power relationships in the region. Understanding the evolution and the principles of the nuclear strategy of India is thus essential to analyse the wider dynamics of nuclear deterrence in South Asia. This article discusses the evolution of India's nuclear doctrine; it explores the strategic rationale behind India's deterrence strategy and the implications of such policies for the security and stability of the region.

Theoretical Framework

The study of nuclear doctrine and deterrence strategy has a deep theoretical foundation in the study of international relations. Several theoretical approaches - especially realism, deterrence theory and security dilemma frameworks - offer analytical tools for understanding the motivation for nuclear weapons development as well as the strategic logic of nuclear policies. These theories help to explain why states pursue nuclear capabilities, as well as nuclear doctrines and how they affect regional security dynamics.

The main foundation for the analysis of nuclear strategy is realist theory. Classical and structural realism believe that the international system is characterised by anarchy, that is, there is no overarching authority capable of guaranteeing the security of states. As a result, states must seek out their own powers to ensure survival and protect national interests (Mearsheimer 2001). Within this context, nuclear weapons are seen as effective tools of national security because they can dramatically increase a state's capacity to deter threats from abroad. For emerging powers such as India, nuclear capability may be a strategic equaliser against stronger adversaries in that it raises the costs of aggression. Realists, therefore, believe that nuclear weapons do contribute to a balance of power by deterring military confrontation between rival states.

Closely connected with realism, the deterrence theory is a key conceptual foundation of nuclear doctrines. It proposes that nuclear weapons act as a deterrent to mitigate conflict and suggests the threat of retaliation to devastating effect against an adversary. The effectiveness of deterrence depends on the credibility of this threat and the misperception that the costs of aggression are higher than the possible benefits. Freedman (2004) describes deterrence as a state of mind and a strategic option with a focus on the importance of successful deterrence, depending upon the ability to communicate clear intentions and having credible means of retaliation. Although widely influential in strategic thought since World War II, Freedman also analyses the evolution of deterrence to assess its continuing relevance in contemporary international security and post-Cold War strategic thought and practice.

Another key theoretical concept in nuclear deterrence in South Asia is the security dilemma. The security dilemma occurs when actions taken by one state to improve its security (such as developing nuclear weapons or increasing military capabilities) are seen as threatening by other states, who respond to them with similar measures. This process can lead to an arms race even if none of the states involved in the process had initially aimed to escalate tensions. Jervis (1978) argues that the security dilemma is created when the methods by which a state attempts to achieve greater security are themselves threatening the security of others. This is a very important concept in order to understand the complex interactions between states in an anarchic system of international relations. Defensive actions by one state may be offensive to another, whose suspicion is heightened. In the context

of South Asia, the development of nuclear weapons by India and Pakistan can be seen in terms of the security dilemma, as both have acquired nuclear capabilities mainly to offset what they see as a threat from the other.

In addition to these traditional theories, scholars have also laid emphasis on the importance of regional dynamics of deterrence in a nuclearised environment. Regional nuclear deterrence differs from that of the Cold War in many respects, such as the shorter missile flight time, geographic proximity, and the existence of unsettled territorial disputes. Narang in the paper (2014) argues that regional nuclear powers typically pursue different deterrence strategies depending on their internal security environment and conventional military balance. For example, some states with conventional forms of military disadvantage may tend to rely more heavily on the threat of nuclear power as a substitute for making up for weaknesses in conventional military power.

The application of these theoretical perspectives presents the overall framework for analysing the nuclear doctrine and the deterrence strategy of India. Realism HB: Realism provides an understanding of India's moves towards nuclear capabilities as a response to security threats in the region, while deterrence theory gives strategic rationales behind the maintenance of the credibility of the nuclear posture, and the security dilemma describes the cyclic dynamics of nuclear competition in South Asia. Together, these theoretical approaches help lay the foundation for an understanding of the role of India's nuclear doctrine as a defensive measure and also as a way of maintaining strategic stability in the complex regional environment.

Historical Evolution of India's Nuclear Policy

India's nuclear policy has been through several phases of development, based on technological development, domestic political priorities, and regional security issues. From its early focus on peaceful nuclear research to its eventual status as a declared nuclear weapons state, the evolution of India's nuclear trajectory is a complex interplay of strategic necessity, scientific capacity and geopolitical pressures. Understanding the historical course of the development of India's nuclear policy is therefore vital for analysing the logic behind its current nuclear doctrine and deterrence strategy. In the immediate post-independence years of 1947, the Indian nuclear program was mainly oriented to peaceful scientific and technological development. Under the leadership of Prime Minister Jawaharlal Nehru and the leadership of great nuclear scientist Homi J. Bhabha, India built a massive institutional framework for nuclear research. The establishment of the Atomic Energy Commission in 1948 and other research centres such as Bhabha Atomic Research Centre paved the way for the nuclear infrastructure in India. At the same time, Indian policy makers were aware of the strategic implications of nuclear technology and wanted to retain the technological capability that could potentially be adapted for national defence if necessary. India's security environment underwent significant alteration in early 1960s which had deep impact on its nuclear policy. The 1962 Sino-Indian War displayed India's military weakness and identified the problems of regional security threats. These concerns were heightened when China successfully performed China's first nuclear test in 1964. China's entry in the nuclear club created a strategic imbalance in Asia and generated serious debates in India as to the need for a nuclear deterrent capability. As Stephen P. Cohen examines, the domestic and international factors that contributed to India's coming out as a significant power have been closely related to its perceptions of regional threats and relations with neighbouring states. Cohen discusses how India's social structure and historical traditions shape its strategic outlook in India and also analyses India's complex relationship with Pakistan, China and the United States (Cohen, 2001). The next major milestone of the unfolding of India's nuclear policy occurred in 1974, when India conducted its first nuclear test at Pokhran in Rajasthan. The test codenamed the Smiling Buddha was officially described by the Indian government as a "peaceful nuclear explosion." While India continued to insist that the test was for scientific purposes, it proved that the country also possessed the technological capability of developing nuclear weapons. The test also signalled India's displeasure with the global nuclear non-proliferation regime, especially the Nuclear Non-Proliferation Treaty (NPT) which India had refused to sign on the grounds that it institutionalised a discriminatory system favouring existing nuclear powers (Bajpai & Pant, 2013). After India tested nuclear technology in 1974, it pursued a policy that is sometimes referred to as "nuclear ambiguity," in which neither confirmed nor denied having a nuclear weapons program. This way, India was able to keep strategic flexibility without evoking the consequences of overt nuclearisation in terms of political and economic sanctions in India. Throughout the 1980s and early 1990s, India continued to develop its nuclear capabilities with this posture of ambiguity. Over this period increased regional security complexities were introduced by Pakistan's quest for nuclear weapons. Pakistan's nuclear programme, which took off after India's test in 1974, had led to a nuclear competition in South Asia. By the late 1980s both India and Pakistan were widely believed to have the technical capability to assemble nuclear weapons, although neither state had declared itself to be a nuclear weapons power. Nuclear weapons have destabilised the subcontinent, particularly due to interaction with India and Pakistan's territorial preferences and comparative military capabilities (Kapur, 2007). A very decisive shift in India's nuclear policy came about in May 1998, when the country staged a series of nuclear tests and named them Operation Shakti. In May 1998 exploding several more, encountering in the process domestic plaudits, but international condemnation and a nuclear arms race in South Asia (Abraham, 1998). These tests include India's transition from nuclear ambiguity to overt nuclearisation and made India a declared nuclear weapons state. The decision to go for the tests was informed by a array of factors, such as fears of China's military capabilities, Pakistan's burgeoning nuclear program, and domestic political considerations. According to the scholars analysing this decision the tests were a reflection of India's desire for asserting strategic autonomy and making credible deterrence in an increasingly uncertain security environment. (Paul, 2009). Following the tests of 1998, India started the process of formalisation of its nuclear strategy with the articulation of a nuclear doctrine. In 1999, the National Security Advisory Board issued a draught nuclear doctrine for the principles governing India's nuclear policy. These principles included credible minimum deterrence, commitment to no first use of nuclear weapons and a survivable second-strike capability. The doctrine was later made clear in 2003 when the Indian government officially announced aspects of its nuclear command structure and nuclear

retaliation policy. Overall, the historical evolution of India's nuclear policy shows an excision of nuclear dimensions from nuclear restraint to strategic deterrence. While in the beginning India focused on peaceful development of the nuclear option and global nuclear disarmament, but due to regional security conditions and geostrategic changes the development of a formal nuclear strategy by India started. This historical path is critical to provide essential background for India's modern nuclear doctrine and its role in the countries south of the Himalayas.

India's Nuclear Doctrine

India's nuclear doctrine is the strategic framework that governs the development, deployment and possible use of India's nuclear arsenal. Following the nuclear tests conducted in May 1998, the Indian government endeavored to spell out the principles that would underpin its nuclear strategy with a view to achieve transparency and strategic stability in the regional and global security environment. The articulation of a nuclear doctrine was therefore intended to do more than to create a coherent strategic posture, it was also to signal India's commitment to responsible nuclear behaviour. Over the years, India's nuclear doctrine was developed by a combination of strategic restraint, the necessity for deterrence and the security of the region.

The first time India's nuclear doctrine was put down in a formal way was in 1999, when the National Security Advisory Board (NSAB) came out with a draft document detailing India's central elements of a nuclear policy. Although the draft doctrine in its entirety was not adopted officially, it formed the conceptual basis for India's nuclear policy. The government subsequently made clear and reiterated certain elements of the doctrine in 2003, notably in the areas of command authority and retaliation policy. These developments created the basic principles which remain the guiding principles of India's nuclear strategy to the present day (Pant, 2016).

One of the main building blocks of India's nuclear doctrine is the concept of credible minimum deterrence. This principle emphasises that India will have only the minimum nuclear capability to deter possible adversaries from a nuclear attack. Unlike nuclear policies built on the possession of large arsenals or uneasy postures for deployment, the emphasis of credible minimum deterrence is on possessing a survivable and effective retaliatory capability. The underlying assumption is that the fact that nuclear retaliation is a possibility will deter adversaries from embarking upon nuclear aggression. As has been remarked by scholars, India's adoption of credible minimum deterrence reflects its wish to avoid an open-ended nuclear arms race, but without imposing on itself the risk of an inability to maintain the credibility of its nuclear deterrent capacity (Krepon and Thompson, 2013).

Another feature that characterizes India's nuclear doctrine is its adherence to the No First Use (NFU) nuclear policy. According to this principle India has pledged not to be the first to use nuclear weapons and then respond with nuclear retaliation when it is attacked with nuclear weapons. The NFU policy is aimed at strengthening the defensiveness of India's nuclear posture and minimize the chances of accidental or premature nuclear escalation during times of crisis. By not using nuclear weapons first, India wants to show its restraint and encourage stability in the regional strategic environment. Analysts have argued that the NFU policy also has an important diplomatic purpose by supporting India's image as a responsible nuclear power, which is focused on deterrence rather than nuclear coercion (Tellis, 2016).

Closely related to the NFU commitment is the emphasis of the doctrine on massive retaliation. India's nuclear doctrine says that if India is victim of a nuclear attack, it will retaliate with overwhelming nuclear force, aimed to inflict unacceptable damage on the aggressor. The concept of massive retaliation is supposed to enhance the deterrence by ensuring that any nuclear attack would trigger devastating consequences to the attacker. This approach involves the belief that a credible and comprehensible threat of massive retaliation can deter the other party from considering aggression with nuclear weapons in the first place. As pointed out by those who have studied India's nuclear policy, the doctrine's emphasis on massive retaliation strengthens the credibility of the element of deterrence by increasing the potential costs of nuclear conflict (Narang, 2014).

India's nuclear doctrine also gives a lot of importance to maintaining a credible second-strike capability. Second-strike capability is the ability of a state to counter with nuclear power even after suffering an initial nuclear attack. This is a crucial capability for the effective use of deterrence as it allows adversaries to know that a nuclear attack cannot destroy the possibility of retaliation. To enhance its second strike capability, India has developed the nuclear triad consisting of land-based ballistic missiles, nuclear-armed aircraft and submarine-launched ballistic missiles. Entanglement refers to interactions between the nuclear and non-nuclear. For present purposes, its most important manifestations include the dual-use character of many C3I assets as well as military threats (real or perceived) to the nuclear forces or their C3I infrastructure. Other manifestations, mentioned only in passing here, are dual-use systems for delivering nuclear warheads; nuclear delivery systems that are superficially similar to nonnuclear ones; and the collocation of nuclear and nonnuclear delivery systems or C3I assets. As the Cold War has ended, there is a significant rise in entanglement and indeed, it is continuing to rise in military technology and doctrine (Acton, 2018).

In addition to these operational principles, India's nuclear doctrine comprises the well-planned command and control system set in place to ensure that political control is always maintained and to prevent unauthorised uses of nuclear weapons. The Nuclear Command Authority (NCA) was created in 2003 and is in charge of controlling India's nuclear forces and decision making in the use of nuclear weapons. The NCA is made up of two parts: the Political Council, which is chaired by the Prime Minister and has the right to authorise nuclear retaliation and the Executive Council, which is responsible for strategic advice and operational coordination. This centralised command structure is suggestive of the Indian focus on tight civilian control over nuclear decision-making (Nayyar, 2019).

All in all, India's nuclear doctrine is a strategy of the balance of deterrence and restraint. By emphasising credible minimum deterrence, no first use, massive retaliation and second strike-capability, the doctrine seeks to avoid nuclear conflict while ensuring security of the nation. At the same time, the nature of India's nuclear strategy is also influenced by the complex regional security environment of South Asia, where nuclear deterrence must work in the context of customary geopolitical rivalry and changing technological developments.

India-Pakistan Nuclear Deterrence Dynamics

The nuclear relationship between India and Pakistan is one of the most complex deterrence environments in the contemporary international system. Since both different states conducted nuclear tests in 1998, South Asia is a region characterised by mutual nuclear deterrence, constant geopolitical rivalry and recurring security crises. In contrast to the comparatively stable deterrence relationship that existed between the United States and Soviet Union during the Cold War, the India-Pakistan nuclear rivalry plays out against the backdrop of territorial disputes, historical conflict and frequent military tensions. As a result, the balance of almost all nuclear weapons between the two countries has immense implications for the stability of the region and international security altogether.

South Asia has frequently been considered as a potential nuclear flashpoint and likely source of nuclear terrorism (Chakma, 2011). The roots of the India-Pakistan nuclear competition can be traced back to the overarching strategic competition that grew out of a situation created by the partition of British India in 1947. The two states have fought several wars, the most notable in 1947-48, 1965, and 1971, most of which have been over the disputed region called Kashmir. These conflicts left deep mutual mistrust and a constant state of security dilemma, which coloured the strategic policies of both countries. While India's nuclear program was created at first in response to more general threats to the region as a whole, especially by China, Pakistan's nuclear program was largely driven by the perceived need to balance India's military superiority. Consequently, nuclearisation of South Asia evolved as a competitive process wherein every state attempted to ensure its security from the other.

Devin T. Hagerty study of 1990 Indo-Pakistan crisis indicates the influence of nuclear capabilities on strategic behaviour in south Asia and shows the increasing role of nuclear deterrence in the dynamics of regional security. His analysis emphasises the complexity of deterrence between the two rivals and what implications this may have on the stability of the crisis (Hagerty, 2005). The overt nuclearisation of South Asia in May 1998 when India tested nuclear weapons, followed by tests on the Pakistani side in Chagai, caused a further change in the regional strategic landscape. With both of the states being nuclear weapons states, there was a state of mutual vulnerability achieved, where one side has the capacity to inflict catastrophic damage upon the other. This balance of deterrence has played an important role in attracting full-scale conventional war between the two countries since 1998 (Hagerty, 2005).

Despite the stabilising effects often associated with nuclear deterrence, the India-Pakistan nuclear relationship has always been incredibly fragile, owing to the persistence of lower-level conflicts and crises. Several major confrontations have taken place since nuclearisation, such as the conflict in Kargil district back in 1999, the military standoff after Parliament attack in 2001 2002, as well as more recent problems precipitated by terrorist incidents and cross-border tensions. These events prove that nuclear weapons have not eliminated conflict between the two countries but have instead altered the nature of strategic competition. Scholars argue that nuclear deterrence in the South Asia runs under a condition that is sometimes described as stability-instability paradox in which the existence of nuclear weapons discourages waging a large scale war yet may invite limited conflict or proxy confrontation (Kapur, 2005).

A great difficulty in the India-Pakistan relationship of deterrence stems from variations in the nuclear doctrine of the two countries. India's nuclear doctrine stresses on credible minimum deterrence and no first use while Pakistan, for deliberate and calculated optimization, pursued a strategy that permits for the first use of nuclear weapons in response to perceived conventional threats. Pakistan's approach reflects the country's concern over India's conventional military superiority and also to prevent the possibility of large-scale conventional military operations. To bolster this strategy, Pakistan has developed tactical nuclear weapons, which are designed to potentially be used at the battlefield level against advancing conventional forces (Narang, 2010). The entry of tactical nuclear weapons into the strategic environment of South Asia has provoked serious debate among scholars and policy makers. Critics draw attention to the lowered threshold for nuclear weapons use, the escalating risk of nuclear applied during times of crisis as such limited battlefield strikes could easily spark a larger nuclear warhead exchange. In response, India has argued that it would attract massive retaliation if it were to use nuclear against its forces (even on the tactical level) in order to ensure the credibility of its own deterrence strategy and dissuade limited nuclear use by Pakistan. At the same time, however, Pakistan has developed diverse nuclear capabilities and is likely to retain them as a deterrent against what it sees as existential threats from India. In this regard, Pakistan's military leadership may regard its nuclear posture as adequate for establishing a "strategic" deterrent and being able to avoid both limited nuclear exchanges and large-scale conventional war (Dalton & Krepon, 2015).

Another significant aspect of the India-Pakistan nuclear deterrence relationship has linked the role of the non-state actors and cross-border terrorism. A number of crises between the two countries have been triggered by terrorist attacks attributed to militant groups operating from Pakistani territory. These incidents produce complex dynamics in their escalation as they involve actors that are outside of direct state control. Scholars point out that the existence of nuclear weapons adds to the complications of coping with crises in such cases where both states seek to carefully weigh their options between military responses and the risk of nuclear escalation (Nayak & Krepon, 2013).

The nuclear deterrence relationship between India and Pakistan is a very peculiar and highly sensitive strategic environment. While nuclear weapons have helped to prevent large-scale wars happening, they have not ended the political and territorial disputes that underlie conflict between the two states. Instead, nuclear deterrence has allowed a delicate balance in which crises must be carefully managed so they do not escalate. Understanding the dynamics of India-Pakistan nuclear deterrence is therefore critical for considering the prospects for long-term stability in South Asia and for considering the broader implications of nuclear weapons in regional conflicts.

India–China Nuclear Dynamics

A nuclear relationship between India and China is a vital aspect of strategic stability in Asia. While the India-Pakistan nuclear rivalry tends to get more attention because of frequent crises, the India nuclear doctrine and deterrence development has long been shaped by China's military capabilities and strategic posture. China's emergence as a nuclear weapons state in 1964 and the subsequent modernisation of its nuclear forces has played an important role in India's perception of its security in the region and its strategic vulnerability. As a consequence, the dynamics of nuclear deterrence between India and China continue to be a key factor in setting India's nuclear policy and defence planning.

After testing its first nuclear device in 1964, China developed a limited arsenal grounded in assured retaliation and not massive expansion. Meanwhile India's anxieties were heightened following the 1962 Sino-Indian War and China's nuclearisation, which occurred and created an asymmetry of power in the region and arguments within India for the development of its own nuclear deterrent capability (Fravel & Medeiros, 2010). The relationship between India and China historically has been characterised by a mixture of competition, cooperation and strategic mistrust. While the two countries have had ongoing diplomatic engagement and economic interaction, outstanding territorial disputes on their border have continued to shape bilateral relations. The presence of nuclear weapons on both sides also puts an additional wrinkle into this relation. In comparison with India-Pakistan nuclear rivalry however, the India-China nuclear relationship has generally been characterised by a more stable nuclear deterrence environment with fewer direct crises involving nuclear signalling.

One factor contributing to this relative stability is the similarity between the official nuclear doctrines of India and China. Both countries have made public commitments to No First Use (NFU) policy so they will not use nuclear weapons unless first attacked with nuclear weapons by an adversary. China has a policy of NFU since it acquired nuclear weapons in 1964 and India followed the same commitment as its nuclear doctrine post 1998 nuclear tests. The presence of both sides NFU policies is considered by many analyses to be a stabilising factor as it reduces the possibility of preemptive nuclear strikes and underlines the defensive aspect of the role of nuclear weapons in national security strategies (Union of Concerned Scientists (n.d.)).

Despite these parallels, there are some significant asymmetries between the nuclear capabilities of India and China. China has a much larger and more technologically advanced nuclear arsenal and includes intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles as well as increasingly sophisticated delivery systems. In recent years, China has also developed its missile capability further, and invested in new generations of advanced missile technology, such as hypersonic glide vehicles and enhanced missile defence systems. These developments have important implications for the strategic relationship between India and China. Analysts assert that China's modernisation of nuclear forces has led to India's updating of its missile capability and rising deterrence posture (Logan, 2017).

India's response to these developments has included the development of the longer-range ballistic missile systems that can hit targets within Chinese territory. The Agni series of ballistic missiles, especially the Agni-IV and Agni-V are some of the key components of the Indian effort to establish credible deterrence against China. These missiles dramatically increase India's striking power and add to the credibility of the Indian nuclear deterrent. Scholars contend such developments are part of India's overall strategy of ensuring that its nuclear forces are capable of deterring both regional adversaries at the same time.

Another important dimension of the India-China nuclear relationship has to do with the role played by traditional military competition and border tensions. Recent confrontations along the disputed border, such as the Doklam standoff in 2017 and the Galwan Valley clashes in 2020, have shown that the hostility between the two geo-political neighbors. Although these confrontations have still been limited to conventional military engagements, the presence of nuclear weapons in the background introduces an important strategic dimension of crisis management. Nuclear deterrence between India and China, therefore, appears to be performing the role of a stabilising factor against escalation to large-scale war, even during periods of high tension.

In addition to the military aspect of the question, the larger geopolitical context also has a bearing on India-China nuclear dynamics. China's increasing global influence and its formulation of a growing strategic presence in the Indo-Pacific region has implications in the Indian security environment. Strategic initiatives like China's Belt and Road Initiative and its expanding military capabilities have been the reasons for India to strengthen its defence partnerships with other regional powers. While these developments are principally about the areas of conventional military and geopolitical competition, they have an indirect impact on the nuclear balance because they influence the strategic environment in which deterrence operates.

Overall, the nuclear relationship between India and China is a complex and evolving strategic relationship. While policies emphasising deterrence and restraint are present in both countries, differences in military capabilities and ongoing geopolitical competition continue to play a role in their strategic calculations. India's nuclear deterrence strategy will therefore have to reckon, not only with the immediate challenges thrown up by Pakistan, but also with the wider strategic implications of an expanding

military power in China. Understanding the dynamics of India-China nuclear deterrence is thus necessary for understanding the relative stability of the Asia strategic landscape in the longer run.

Implications for Regional Stability

India's nuclear doctrine and deterrence policy has a great impact on the global security situation of South Asia. Since the overt nuclearisation of the region in 1998, nuclear weapons have fundamentally changed the strategic calculations of the actors in the region, especially India and Pakistan and to some extent China. The presence of nuclear weapons has added a strong deterrent effect, against large-scale conventional wars between weapons states. This deterrent effect has helped provide a measure of strategic stability through increasing the possible costs of conflict to unacceptable levels.

One the most notable implication of nuclear deterrence in South Asia is the prevention of full-scale war between India and Pakistan since both countries tested nuclear weapons. While tensions between the two states remain high and periodic crises continue to happen, the existence of nuclear weapons has placed some restrictions on the escalation of conflicts. Military confrontations that earlier would have evolved into major wars are more carefully handled because of risks involved in nuclear escalation. In fact, in this sense, nuclear deterrence has brought about a form of stability by discouraging direct military confrontation between nuclear-armed rivals.

However, such stability has often been characterized as a tenuous over conditional stability rather than absolute stability. The existence of nuclear weapons has not removed the root causes of political disputes that still fuel conflict in the area. Issues such as territorial disputes, cross border terrorism and strategic competition still cause tensions between India and its neighbours. These are issues that remain unresolved so that the potential for crisis is still present, ensuring the possibility of miscalculation or unintended escalation.

Another key implication for regional stability is the creation of what, in the view of many scholars, is a "limited conflict environment." Because the introduction of nuclear weapons increases the level or consequence of a full-scale war states may seek to engage in limited military actions or indirect that are below the nuclear threshold. Such strategies may feature localised military actions, border confrontations or some other form of strategic competition without provoking nuclear retaliation. While these acts may be designed to be limited, there is always the potential that they can grow into a larger problem if not handled carefully.

The modernisation of the nuclear capabilities and advances in military technology also pose new challenges to regional stability. Improvements in missile systems, surveillance technologies and precision strike capabilities may have an impact on the credibility and survivability of nuclear deterrents. As states try to bolster their nuclear capabilities in order to maintain credible deterrence, there is a possibility of an arms competition in the region that could lead to higher levels of tension and uncertainty. Despite these challenges, the nuclear doctrine of India emphasises on a restraint and responsible nuclear behaviour. By keeping to a policy centred on deterrence-not on waging war-India seeks to help ensure a stable strategic environment in South Asia. The focus on credible minimum deterrence and retaliatory capability is meant to avoid nuclear aggression without provoking nuclear competition. If properly managed this type of approach can play a role in long-term stability by sustaining deterrence while keeping the risks of nuclear proliferation at a minimum. Nuclear weapons have helped avoid large-scale wars, but have also introduced new strategic problems for which careful management is needed. Maintaining regional stability, therefore, is interdependent upon responsible nuclear policies and effective communication between states and the further development of confidence building measures in order to minimize the risk of escalation.

Conclusion

India's nuclear doctrine and deterrence strategy is a central part of its national security policy and is an important determinant of the strategic environment of South Asia. The principles of credible minimum deterrence, no-first-use, and assured retaliation are the basis of this approach and are an expression of India's effort to balance security needs with responsible nuclear conduct.

The development of India's nuclear policy has shown how the dynamics of security in the region and geopolitical competition have shaped India's development of a nuclear policy. India's nuclear doctrine has been shaped based on having to meet challenges from both Pakistan and China while having a credible deterrent that can help prevent nuclear coercion or aggression. At the same time, India has attempted to reduce the pressure to expand its nuclear capabilities too far and to prioritise its efforts towards the survival and efficacy of its deterrent capability. The nuclear dynamics of the South Asia is an example of how nuclear weapons have stabilised as well as destabilised the region. While nuclear deterrence has helped stave off large-scale wars between nuclear-armed states in the region, it has not removed the sources of political tension and strategic rivalry. Border disputes, regional competition, and new security challenges still have impact on the strategic environment within which nuclear deterrence takes place.

Looking into the future, the future of the stability of nuclear deterrence in South Asia will rest on the ability of the regional powers to cope with changing technological developments and strategic competition, as well as with crisis situations. In this context, India's nuclear doctrine will continue to play an important role in a changing regional balance of power and in ensuring that nuclear weapons are used mainly as an instrument of deterrence and not as an instrument of conflict.

Acknowledgment: No

Author's Contribution: Akash Adhikary: Data Collection, Literature Review, Methodology, Analysis, Drafting, Referencing

Funding: No

Declaration: The author has given consent for the publication.

Competing Interest: No

References

1. Abraham, I. (1998). *The making of the Indian atomic bomb: Science, secrecy and the postcolonial state*. Zed Books.
2. Acton, J. M. (2018). Escalation through entanglement: How the vulnerability of command-and-control systems raises the risks of an inadvertent nuclear war. *International security*, 43(1), 56-99. https://doi.org/10.1162/isec_a_00320
3. Bajpai, K., & Pant, H. V. (2013). *India's national security: A reader*. Oxford University Press.
4. Chakma, B. (2011). *South Asia's nuclear security dilemma: India, Pakistan and China*. Routledge.
5. Cohen, S. P. (2001). *India: Emerging power*. Brookings Institution Press.
6. Dalton, T., & Krepon, M. (2015). *A normal nuclear Pakistan*. Carnegie Endowment for International Peace.
7. Fravel, M. T., & Medeiros, E. S. (2010). China's search for assured retaliation: The evolution of Chinese nuclear strategy and force structure. *International Security*, 35(2), 48-87. https://doi.org/10.1162/ISEC_a_00016
8. Freedman, L. (2004). *Deterrence*. Polity Press.
9. Ganguly, S., & Kapur, S. P. (2010). *India, Pakistan, and the bomb: Debating nuclear stability in South Asia*. Columbia University Press.
10. Hagerty, D. T. (2005). Nuclear deterrence in South Asia: The 1990 Indo-Pakistani crisis. *International Security*, 20(3), 79-114.
11. Jervis, R. (1978). Cooperation under the security dilemma. *World Politics*, 30(2), 167-214. <https://doi.org/10.2307/2009958>
12. Kapur, S. P. (2005). India and Pakistan's unstable peace: Why nuclear South Asia is not like Cold War Europe. *International Security*, 30(2), 127-152. <https://doi.org/10.1162/016228805775124570>
13. Kapur, S. P. (2007). *Dangerous deterrent: Nuclear weapons proliferation and conflict in South Asia*. Stanford University Press.
14. Krepon, M., & Thompson, J. (2013). *Deterrence stability and escalation control in South Asia*. Stimson Center.
15. Logan, D. C. (2017). Hard constraints on a Chinese nuclear breakout. *The Nonproliferation Review*, 24(1-2), 13-30. <https://doi.org/10.1080/10736700.2017.1371406>
16. Mearsheimer, J. J. (2001). *The tragedy of great power politics*. W. W. Norton & Company.
17. Narang, V. (2010). Posturing for peace? Pakistan's nuclear postures and South Asian stability. *International Security*, 34(3), 38-78.
18. Narang, V. (2014). *Nuclear strategy in the modern era: Regional powers and international conflict*. Princeton University Press.
19. Narang, Vipin. *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict*, Princeton: Princeton University Press, 2014. <https://doi.org/10.1515/9781400850402>
20. Nayak, P., & Krepon, M. (2013). *US crisis management in South Asia's twin peaks crisis*. Stimson Center.
21. Nayyar, D. (2019). *Resurgent Asia: Diversity in development*. Oxford University Press.
22. Pant, H. V. (2016). *Indian foreign policy: An overview*. Manchester University Press.
23. Paul, T. V. (2009). *The tradition of non-use of nuclear weapons*. Stanford University Press.
24. Perkovich, G. (1999). *India's nuclear bomb: The impact on global proliferation*. University of California Press. <https://www.ucpress.edu/book/9780520232105/indias-nuclear-bomb>
25. Sagan, S. D., & Waltz, K. N. (2003). *The spread of nuclear weapons: A debate renewed*. W. W. Norton.
26. Tellis, A. J. (2001). *India's emerging nuclear posture: Between recessed deterrent and ready arsenal*. RAND Corporation. https://www.rand.org/pubs/monograph_reports/MR1127.html
27. Tellis, A. J. (2016). India as a leading power. *Carnegie Endowment for International Peace*. <https://carnegieendowment.org/posts/2016/08/india-as-a-leading-power>
28. Union of Concerned Scientists (n.d.). *Understanding China's nuclear posture*. <https://www.ucs.org/nuclear-weapons/worldwide>

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