

BTTN Journal

p-ISSN 2958-1214

e-ISSN 2958-1222



RESEARCH ARTICLE

## India's Outer Space Weaponization and Deterrence in South Asia: A Prism of Stability-Instability Paradox

Beenish Sultan<sup>1</sup>

Article Info	Abstract
<b>Article History:</b>	<i>India's growing outer space weaponization emboldens the idea of the stability-instability paradox in South Asia. In the context of its dual-use space technology, the successful Anti-satellite capability (ASAT) acquired in 2019 was indeed unprecedented for the region. Although the stability-instability paradox is analyzed through the prism of nuclear deterrence in the dominant literature, its implications in the evolving outer space domain remain uncharted territory. This research article delves into the subject with a threefold focus: the shifting calculus of security between India and Pakistan due to India's outer space weaponization, the triggers of instability in the regional nuclear deterrence domain, and innate institutional constraints in outer space. It adopts a qualitative methodology that encompasses semi-structured interviews with subject specialists, analysis of policy documents, and a review of case studies to identify discursive patterns and shifts in escalation risk perceptions between India and Pakistan. The idea rests on the notion that the weaponization of space by India introduces a newer layer in regional deterrence dynamics by mirroring the logic of avoiding large-scale conflict and enabling low-intensity conflict in other domains. The study identifies a core research gap at the intersection of outer space security and deterrence theory, highlighting the urgency of a robust space governance mechanism capable of mitigating the risks of inadvertent escalation in an increasingly contested orbital environment. The study addresses the main research question: how is the logic of the stability-instability paradox being reshaped amid India's growing outer space weaponization?</i>
<b>Received:</b> September 29, 2025	
<b>Revised:</b> November 24, 2025	
<b>Accepted:</b> December 31, 2025	
<b>Keywords:</b> Nuclear Deterrence, South Asian Stability, Regional Deterrence, Low-Intensity Conflict, Space Weaponization	

<sup>1</sup> Dr. Beenish Sultan served as Assistant Professor at BUITEMS and co-editor of the BUITEMS Journal. She inspires minds with her expertise in international security, law, and Pak-China relations. She can be reached at [Beenish.Sultan@buitms.edu.pk](mailto:Beenish.Sultan@buitms.edu.pk)

## Introduction

Outer space weaponization is a global trend that affects both the developed and developing world. It is characterized by competition over weapon capabilities to protect critical outer space assets through enhanced deterrence, which in turn leverages strategic advantages. Missile interceptors, space-based lasers, and kinetic weapons are examples of military tools used by states to attack or destroy targets in space and on the ground.<sup>1</sup> In turn, this phenomenon leads to the use of outer space as a battlefield. It differs in part from outer space militarization, which refers to capabilities of States employed solely for reconnaissance, surveillance, and navigation, without deploying weapons in Space.<sup>2</sup> As of today, the US remains the leading player in military space capabilities, being the only country to establish a separate US Space Force (USSF) in 2019.<sup>3</sup> The Force has a dual purpose: to monitor satellite-based reconnaissance and communications, and to counter outer space kinetic and non-kinetic weapons. Meanwhile, it oversees the hefty investments in Anti-Satellite weapons (ASAT), sensors, and potential space weapons systems.<sup>4</sup>

It is worth noting that no State to date has demonstrated live outer-space combat, but multiple States possess the capability to do so.<sup>5</sup> As an illustration using ASAT, they can use weapons such as Kinetic Kill Vehicles (KKVs), Directed Energy Weapons, and laser systems, along with Jamming and Cyber-

---

<sup>1</sup> Ahmed Saeed Minhas, "Space weapons: a rapidly evolving threat to South Asian Strategic Balance," *NDU Journal*, Vol. 32, No. 1 (2018), pp. 173–188, <https://ndujournal.ndu.edu.pk/site/article/view/174>.

<sup>2</sup> Umar Farooq, "What is National Power: Meaning, Definition, and Elements," Study Lecture Notes, (October 31, 2016): <http://www.studylecturenotes.com/international-relations/what-is-national-power-meaning-definition-and-elements>.

<sup>3</sup> USSF, United States Space Force Chronology – 2019-2024, (United States Space Force, 2024): <https://www.spaceforce.mil/Portals/2/Documents/anniversary/USSF-Chronology.pdf>

<sup>4</sup> *ibid.*

<sup>5</sup> Major Brian D. Green, "Countering Space-based Weapons of Mass Destruction," *The Army Lawyer*, No 1, (2025), <https://tjaglcs.army.mil/Periodicals/The-Army-Lawyer/tal-2025-issue-1/Post/8018/Feature-Countering-Space-Based-Weapons-of-Mass-Destruction>

attacks, which are popular for both physical and non-physical operations.<sup>6</sup> While the US conducted ASAT tests in the 1960s and 1970s, the Soviet Union/Russia tested ASAT systems during the Cold War. China, a significant space-faring state, conducted a high-profile ASAT in 2007, destroying one of its own weather satellites, creating an enormous debris cloud.<sup>7</sup> Other countries, including France and Israel, are believed to have developed or tested similar capabilities, but details are less public. In addition, India tested an ASAT weapon in 2019, which was demonstrated through the destruction of a low-earth-orbit satellite.<sup>8</sup> These illustrations highlight the potential risks and strategic vulnerabilities in space, which contribute to ongoing security dilemmas and calls for international governance. Meanwhile, there is no comprehensive treaty banning the use of weapons in space. Still, only the Outer Space Treaty (1967) prohibits the placement of nuclear or weapons of mass destruction in orbit. However, it is also a reality that prohibition may not guarantee prevention.

Consequently, nuclear deterrence, primarily a Cold War phenomenon, has prevented full-blown wars in dyadic nuclear equations. In the classical sense, it is expected to reflect a continuum, illustrating maximalist, intermediary, and minimalist understanding, which simplify it at least in theory.<sup>9</sup> The maximalist spectrum of experience ought to eliminate conflicts, even in nuclear signaling, whereas the intermediary level represents a middle ground with a 50%

---

<sup>6</sup> K. K. Nair, *Space: The Frontiers of Modern Defence* (New Delhi: Knowledge World Publishers Pvt. Ltd. in association with the Centre for Air Power Studies, 2006), pp. 173, <https://books.google.com/books?id=ZBXLi-n6UAC>.

<sup>7</sup> Timothy Farnsworth, "China Conducts ASAT Test, U.S. Says," *Arms Control Association*, August 2014, <https://www.armscontrol.org/act/2014-08/china-conducts-asat-test-us-says>.

<sup>8</sup> Talia. M. Blatt, "Anti-Satellite Weapons and the Emerging Space Arms Race," *Harvard International Review*, Vol. 41, No. 3 (May 2020), <https://hir.harvard.edu/anti-satellite-weapons-and-the-emerging-space-arms-race/>.

<sup>9</sup> Alexey Arbatov, "Nuclear Deterrence: A Guarantee for or Threat to Strategic Stability?" (NL ARMS: *Netherlands Annual Review of Military Studies*, 2020), pp. 65–86, DOI:10.1007/978-94-6265-419-8\_5, [https://link.springer.com/chapter/10.1007/978-94-6265-419-8\\_5](https://link.springer.com/chapter/10.1007/978-94-6265-419-8_5).

probability of absolute success or total failure of deterrence. In this regard, a scenario of persistent tensions arises among rival dyads, which, in turn, helps de-escalate the clash and prevents it from becoming a total war. At the minimalist level, these competing levels exemplify the details of deterrence theory, illustrating how strategic inclinations can differ considerably depending on the perceived level of danger and the intended effect on international relations.<sup>10</sup> This equation has intensified in South Asia, where the probability of an all-out war had withered amid the recurrence of strategic crises. However, a persistent strategic crisis in perceptibly balanced nuclear equations, like this region, exposed the limitations of deterrence at the lower level of conflicts, giving impetus to the concept of stability-instability paradox.

Traditionally, the stability-instability paradox posits that nuclear deterrence prevents a full-scale war and stimulates lower levels of conflict, as States feel emboldened to engage under the nuclear umbrella without fearing nuclear escalation.<sup>11</sup> This pattern was evident between India and Pakistan at various episodes, starting with Kargil (1999), leading to Pulwama (2019), and now Pahalgam (2025), with each crisis introducing new dimensions to the deterrence paradigm. This multifaceted interplay underscores the urgent need for robust, empirically grounded theories that explain and predict the behavior of nuclear-armed rivals in a volatile strategic environment. In particular, the newer, ominous threat of India's outer space weaponization has been on the rise since its ASAT test in 2019. The Pahalgam terrorist attack in Indian Occupied Kashmir and related satellite-guided precision attacks in Pakistan's territory depicted a dangerous level of conflict escalation between the two nuclear-armed rivals and undermined Pakistan's Full-Spectrum

---

<sup>10</sup> Ibid.

<sup>11</sup> Adeel Kazmi, "Nuclear Politics in South Asia: Deterrence Nuances of India-Pakistan Crisis (Mumbai to Pulwama)," *Pakistan Journal of International Affairs*, Vol. 7, No. 3, (2024): 225-245, 2024, <https://doi.org/10.52337/PJIA.V7I3.1144>

Deterrence (FSD) doctrine.<sup>12</sup> It undoubtedly changes the concept of deterrence in South Asia, shifting towards a multi-domain stability-instability paradox, with the risk of disrupting regional strategic stability altogether.

The idea of this exploratory qualitative research article rests on the notion of how India's evolving outer space weaponization is disrupting the strategic balance of South Asia. Pakistan's FSD policy, within the ambit of credible minimum deterrence, aimed to deal with a full range of threats (mainly as a retreat from India's Cold Start Doctrine).<sup>13</sup> With India's ASAT capabilities and ISR assets, there is a risk of blinding Pakistan's early-warning systems and overall infrastructure designed as a deterrent, undermining FSD altogether. This innate technological edge would enable India to engage in limited conflicts with reduced fear of escalation, reflecting the core logic of the stability-instability paradox and spilling over into multiple domains.

### **Deterrence Theory and the Stability-Instability Paradox: A Review**

Scholarship on Deterrence evolved as a significant concept of nuclear strategy, once States established that going to war is not an alternative for addressing political issues. In this regard, Zafar Nawaz Jaspal reiterates in numerous research papers and discussions that passively using force to sustain the status quo between two nuclear-armed rivals should not be confused with conflict

---

<sup>12</sup> FSD came to the fore in a press release when Pakistan tested the tactical nuclear weapon HATFIX/NASR in 2011. According to Gen Kidwai of Pakistan's National Command Authority, the implications of FSD were many, but included the development of a nuclear capability to bring "every Indian target into Pakistan's striking range" and acquire "appropriate weapons yield coverage and the numbers to deter the adversary's pronounced policy of massive retaliation."

<sup>13</sup> Walter C. Ladwig III, "A Cold Start for Hot Wars? The Indian Army's New Limited War Doctrine," *International Security*, Vol. 32, No. 3 (Winter 2007/08), pp. 158–190, <https://doi.org/10.1162/isec.2008.32.3.158>.

resolution.<sup>14</sup> However, the question is, did nuclear stability ensure the avoidance of war between Pakistan and India altogether? The traditional rivals remained engaged in a neck-to-neck conflict with three wars and other instances at the brink of a total war, the recent example in the form of the ‘Four-day’ war in May’ 2025.<sup>15</sup> Theoretically, nuclear deterrence is ensured through non-action, which in turn facilitates the status quo. Concurrently, in the case of India and Pakistan's rivalry, scholars believe that nuclear deterrence is not the mainstay, and the stability-instability paradox remains the primary factor. Nuclear deterrent is not an alternative to conventional war, as exemplified by the situation in South Asia. In this regard, a considerable non-partisan view is held among analysts and scholars of the South Asian nuclear environment regarding the concept of the stability-instability paradox. Almost all the proliferation optimists and pessimists support its hypothesis.<sup>16</sup>

Glenn Snyder conceptualized the stability-instability paradox, traditionally explaining how a strategic level of stability is achieved between two nuclear-armed states, paradoxically encouraging lower levels of instability.<sup>17</sup> Theoretically, it explains the relationship between two rival states that have achieved mutual strategic deterrence, which risks the probability of total war. To avoid it, they engage in lower-level conflicts under the guise of a nuclear umbrella. Scholars of South Asian deterrence and stability studies apply this idea extensively to the relationship between Pakistan and India. Authors such as Michael Krepon, Sumit Ganguly, and others argue that, due to the nuclear

---

<sup>14</sup> Zafar Nawaz Jaspal, “Paradox of Deterrence: India-Pakistan Strategic Relations,” *Strategic Studies*, Vol. 29, No. 4, (2009), pp. 23–36, <https://www.jstor.org/stable/48527700>.

<sup>15</sup> Christopher Clary, “Four Days in May: The India-Pakistan Crisis of 2025,” Stimson Center, 2025, <https://www.stimson.org/2025/four-days-in-may-the-india-pakistan-crisis-of-2025/>.

<sup>16</sup> Angela White, “Space War: The Militarization & Weaponization of Space,” Michigan State University, College of Law, *International Law Review*, February 16, 2017, <https://www.msuilr.org/msuilr-legalforum-blogs/2017/2/16/space-war-the-militarization-weaponization-of-space>.

<sup>17</sup> Rajesh Rajagopalan, “What Stability- Instability Paradox? Subnational Conflicts and the Nuclear Risk in South Asia,” *SASSU Research Paper*, No. 4, (February 2006), <https://www.files.ethz.ch/isn/99913/RP%20No%2004.pdf>

stability achieved between these two States, skirmishes and engagements in proxy form are frequent and do not escalate into full-scale war.<sup>18</sup>

Furthermore, the role of external factors in the employment of the stability-instability paradox is critical. In terms of India, it considers China and its technological advancement as a justification for its nuclear program. History shows that various Indian ministers (1998) emphasized the interface with China as the primary rationale for acquiring nuclear capability.<sup>19</sup> On the other hand, India's superiority in conventional and nuclear domains was the mainstay for Pakistan's nuclear program, as evident from the literature in the 1970s and 1998.<sup>20</sup> Nuclear capability was considered as one of the most feasible options for counterbalancing India, particularly, considering it as a much cheaper and effective option than sustaining conventional weapons and avoiding a full-scale war.

Consequently, the situation persisted with optimism in Pakistani scholarship, based on the satisfactory nature of Pakistan's retaliatory forces and backwardness in Indian nuclear infrastructure, lacking monitoring, surveillance, and reconnaissance through satellites and other technologies. It changed only once India climbed the ladder of technological advancement with the help of the US, the Soviet Union, and Israel. Until recently, India has gained momentum in strategic technology, including outer space, and has evolved to become one of the most significant space-faring states. India's rivalry with China and competition between the US and China provide impetus to its own National Space Promotion and Authorization Center (IN-Space). It is balancing the space program with national security concerns and commercial opportunities. India

---

<sup>18</sup> Ibid.

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

now has 25 active intelligence, surveillance, and Reconnaissance satellites, along with the ASAT capability acquired in 2019.

In this regard, a new dimension is added to the concept of the stability-instability paradox: Pakistan remains conscious of India's outer space military modernization and demonstrates concurrent adjustments to its deterrence posture. However, due to its slow modernization process, the threat of nuclear miscalculation persists, and research suggests a seventy percent probability of nuclear escalation due to increasing tensions between the two nuclear-armed rivals. This will be detrimental amidst Pakistan's FSD doctrine, which enables evolution in the deterrence requirements, ranging from credibility to minimalism.<sup>21</sup> FSD entails four assumptions: a nuclear program that is mainly India-centric, the acquisition of equivalence in the strategic domain relative to India, deterring threats from sub-conventional to strategic ones, tactical nuclear weapons as a reaffirmation of the policy of first-use, and, lastly, deterrence against all kinds of aggression from India.<sup>22</sup> The question is, can this be termed as a 'comprehensive response' from Pakistan even against aggression from outer space weapons?

In this regard, where extensive literature is confined to the nuclear domain, there is a need to extend the concept of the stability-instability paradox to non-nuclear domains, such as outer space. This indeed remains under-theorized, and in the case of developing space powers like India, it is critical to identify and understand. The truism rests in the US and Russia evolving their strategic doctrines and integrating outer space-based deterrence postures. Although Outer space as a deterrence domain is not new, its manifestation in space weaponization is a recent phenomenon. Current studies do acknowledge its

---

<sup>21</sup>Sannia Abdullallah, "Pakistan's Full Spectrum Deterrence: Trends and Trajectories," *South Asian Voices*, April 23, 2020, <https://southasianvoices.org/pakistan-full-spectrum-deterrence-trends-trajectories>.

<sup>22</sup> Ibid.

evolving themes, amidst its nature as a contested and militarized domain. Authors such as James Clay Moltz (2011) and Bleddyn Bowen (2020) explore the evolving character of space power and argue that space is transitioning from a sanctuary domain to a warfighting domain.<sup>23</sup> Bowen (2020), in particular, critiques the techno-determinist narratives in space discourse and emphasizes the geopolitical logics underpinning space militarization.<sup>24</sup>

However, despite the recognition of outer space as a strategic domain, the scholarship on deterrence has only recently evolved to acknowledge and include a separate 'space deterrence theory'. Scholars like Forrest Morgan (2010) and Karl Mueller, in a monograph published by RAND, suggest a Cold War nuclear logic deterrence in space, viewing it through the perspective of capability, credibility, and communication.<sup>25</sup> However, such models and reports are Western-centric and particularly US-centric, where it is ascertained that the US is depending on outer space for its national security more than at any time in history. This is due to the erosion of first-strike capability in space, owing to the large number of adversaries.

Such Western-centric literature lacks understanding of how adversaries in asymmetric regional environments are dealing with outer space deterrence. The Outer Space Program of India has officially remained civilian in nature. However, in the past few decades, especially after the ASAT capability acquired through Mission Shakti in 2019, it has adopted a dual-use, strategic approach. Indian scholars, like Rajeswari and Ajey Lele,<sup>26</sup> document this evolution

---

<sup>23</sup> James Clay Moltz, *The Politics of Space Security: Strategic Restraint and the Pursuit of National Interests*, 3rd ed. (Stanford, CA: Stanford University Press, 2019).

<sup>24</sup> Bleddyn E. Bowen, *War in Space: Strategy, Spacepower, Geopolitics* (Edinburgh: Edinburgh University Press, 2020): <https://doi.org/10.3366/edinburgh/9781474450485.001.0001>.

<sup>25</sup> RAND Monograph, [https://www.rand.org/content/dam/rand/pubs/monographs/2010/RAND\\_MG916.pdf](https://www.rand.org/content/dam/rand/pubs/monographs/2010/RAND_MG916.pdf).

<sup>26</sup> Ajey Lele, "Indian ASAT: Mission Shakti Should be a Comma, Not a Full Stop," *The Space Review*, March 27, 2023, <https://www.thespacereview.com/article/4556/1>.

through increasing ISR capabilities and missile defence support. Yet there is a dearth of literature on how, in the long run, these capabilities shape or reshape India's deterrence logic, especially from the perspective of the stability-instability paradox. It indeed is a nascent field of inquiry to view the intersection of India's outer space weaponization and how it will impact regional security, particularly from the perspective of its nuclear-armed rival, Pakistan.

Scholars like Laura Grego and Brian Weeden discuss the risks of escalation from outer space weaponization and warn of grave consequences arising from the lack of binding international norms and laws.<sup>27</sup> In particular, the issues of dual-use satellites, space debris from ASAT tests, and contradictory military space programs are all disturbing factors. Still, governance mechanisms are not up to the mark, particularly regarding conflict-prone regions and actors. India, as a central space-faring state, desires to be part of the international governance mechanism. Still, its intentions remain dubious, as there is no room for discussion on confidence-building measures (CBMs) in South Asia. The literature on how the strategic discourse will develop remains uncharted, particularly in Pakistani scholarship. This is significant for understanding how the logic of the stability-instability paradox is evolving across multiple domains.

Nonetheless, the prevailing literature predominantly emphasizes deterrence, strategy, and India's space militarization. There is a dearth of scholarship on multi-domain analysis to comprehend India's space weaponization and how it has evolved the concept of the stability-instability paradox in South Asia. In this regard, this study fills a gap by merging concepts of nuclear deterrence, outer space security, and the South Asian strategic environment. It has been theorized that India's weaponization of outer space is introducing a new layer to regional

---

<sup>27</sup> Raju, Nivedita, and Wilfred Wan, "Escalation Risks at the Space–Nuclear Nexus," *SIPRI Research Policy Paper* (Stockholm: Stockholm International Peace Research Institute, February 2024), [https://www.sipri.org/sites/default/files/2024-02/2402\\_rpp\\_space-nuclear\\_nexus.pdf](https://www.sipri.org/sites/default/files/2024-02/2402_rpp_space-nuclear_nexus.pdf).

deterrence, potentially reconfiguring strategic stability and facilitating low-intensity conflicts.

## **Theorizing Outer Space Weaponization through the Stability-Instability Paradox**

Strategic stability in South Asia is deteriorating, with an increased likelihood of lower-level conflicts. India's outer space weaponization, in the form of dual-use satellites, missile defense, and precision strike capabilities, intensifies the risks of escalation at all levels, which reduces crisis stability.<sup>28</sup> In this regard, it is important to note how Pakistan views and reconfigures its deterrence doctrine. Pakistan may not be as technologically sound as India, but it remains committed to enhancing its capabilities at the tactical nuclear level and other domains like cyber and information. India's C4ISR support systems are viewed in Pakistan as a step towards dominance. It is this layer of paradigm that introduces the theoretical underpinnings of the multi-domain stability-instability paradox. Restraint in one domain, space, or nuclear, coexists with increased risk-taking in others (conventional, cyber, or proxy conflicts).

The truism lies in recognizing that outer space has evolved into a strategic domain due to its exceptional legal and physical character. The 1967 Outer Space Treaty governs it as a global common, which explicitly prohibits placing any Weapons of Mass Destruction in orbit and bars any claims to celestial bodies based on sovereignty.<sup>29</sup> However, this ultimate 'high ground' is still

---

<sup>28</sup> Muhammad Tehsin, "Space Weaponization and Strategic Stability in South Asia", *Global Social Sciences Review*, Vol. 5, Issue 1, (2020), <https://www.humapub.com/admin/alljournals/gssr/papers/90LRPNqJt.pdf>

<sup>29</sup> United Nations, Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, A/RES/2222(XXI), adopted 19 December 1966, opened for signature 27 January 1967, entered into force 10 October 1967, United Nations, <https://digitallibrary.un.org/record/203169>.

viewed by numerous States as a tool for attaining military superiority.<sup>30</sup> This idea is reintegrated into the strategic underpinnings by States through the employment of dual-use satellites and ASAT capabilities, including those of the US, Russia, China, and now India.<sup>31</sup> In addition, these capabilities fuel a security dilemma in outer space, where space-faring states or others may pursue defensive or offensive capabilities as anticipatory actions. In addition, the space deterrence theory has evolved significantly, suggesting mandatory action to develop abilities and policies to restrict hostility in outer space, similar to those practiced in other domains.<sup>32</sup> On the other hand, there is a standard integration of private and public entities that blurs the line between commercial and national assets. SpaceX and OneWeb are companies that have leveraged their assets to advance strategic national objectives.

Consequently, India has integrated its private and national space assets, mainly after the successful Mission Shakti ASAT in 2019. This has significantly changed the threat perceptions in Pakistan and evolved the concept of strategic stability in the region. The recent escalation between India and Pakistan in May 2025 illustrated how the scenario has changed. The short-period war underscores how outer space has become one of the most significant salients of South Asian strategic dynamics. The private-public partnership in India's space program enabled real-time ISR during the conflict. The targeted strikes in Pakistan's territory were an illustration of compounding the Indian Space

---

<sup>30</sup> Brian Weeden and Victoria Samson, *Global Counterspace Capabilities: An Open Source Assessment* (Washington, DC: Secure World Foundation, 2022), <https://www.swfound.org/publications-and-reports/2022-global-counterspace-capabilities-report>.

<sup>31</sup> Steve Erwin, "Anti-Satellite Weapons: The Growing Threat to Space Assets," SpaceNews. 2019.

<sup>32</sup> Todd Harrison, Kaitlyn Johnson, and Makena Young, *Defense Against the Dark Arts in Space: Protecting Space Systems from Counterspace Weapons* (Washington, DC: Center for Strategic and International Studies, February 2021): [https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/210225\\_Harrison\\_Defense\\_Space.pdf](https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/210225_Harrison_Defense_Space.pdf).

Research Organization's (ISRO) civilian resources with national command structures through the Defense Space Agency (DSA).

On the other hand, Pakistan viewed India's outer space capabilities and their employment during the four-day military crisis as a move to erode the crisis stability of the region, without crossing the nuclear threshold. Due to their asymmetry, Pakistan accelerated its counter-space strategy and focused on cyber, information, and air warfare. After this episode, it has sought partnerships with private actors and states such as China for investments in space situational awareness (SSA) programs.<sup>33</sup> This escalation indeed shifted the doctrine of strategy in South Asia by recognizing outer space not just as an enabler of war, but as an active tool of deterrence dynamics. Notably, this allowed strategists to revisit the core principle of the stability-instability paradox, which had traditionally been aligned only with nuclear deterrence. It facilitated understanding how escalation in outer space can make space for partial conventional wars. The newer layer of 'space-facilitated instability under the garb of nuclear stability' was introduced. Both countries showed restraint in the nuclear domain, but for Pakistan, it also raised questions about its FSD doctrine, which traditionally assumed the ability to counter across all escalation ladders.

Nonetheless, amid evolving strategic dynamics in South Asia and India's rapid space weaponization, there is a theoretical debate about the role of counter-space deterrence in reconfiguring the strategic balance. It is significant to note that unless the outer space asymmetry between Pakistan and India is addressed, either through technological evolution or diplomatic efforts, the deterrence environment in South Asia will become highly unstable, where the gap in space capabilities can embolden limited conflicts without fear of strategic

---

<sup>33</sup> M. Ahmed, *Strategic Asymmetries and Pakistan's Emerging Space Doctrine: Lessons from the May 2025 Conflict*, Islamabad Policy Research Institute (IPRI), <https://www.ipripak.org>.

retaliation.<sup>34</sup> The May 2025 crisis thus evolved the stability–instability paradox into a multi-domain framework, with outer space emerging as a critical axis for managing escalation in future crises.

## Methodology

This research article is based on qualitative inquiry with a two-fold focus: firstly, content analysis of secondary-source literature, and secondly, primary data in the form of credible national and international media reports. For this study, Grounded theory content analysis was adopted. This inductive approach allowed the author to explore how outer space has become a highly contested domain and, with the lack of international frameworks, is evolving towards dangerous levels of weaponization. It developed a theory that, where stability is attained at the strategic or multi-domain level, sub-conventional instability will persist or even increase. More than 50 articles were read for this study from Google scholar, most of them related to stability-instability paradox and a few articles like ‘Outer space and strategic stability in South Asia’ by Samir Ali Khan and Irteza Imam and ‘Space Weaponization and Strategic Stability in South Asia’ by Muhammad Tehsin, referring to the theme of how outer space weaponization has become the epitome of evolving regional deterrence in South Asia. Hence, the theme of ‘governance issues and lack of CBMs’ as the leading cause of weaponization and militarization in space was adopted. The word cloud illustrates the key areas identified.

Secondly, field research through a questionnaire circulated amongst officials from SUPARCO, Army officers, and Defence Analysts/International Relations experts. Due to the sensitive nature of the topic and the limited availability of

---

<sup>34</sup> Feroz Hassan Khan, “*Stability-Instability in the Space Age: South Asia’s Doctrinal Evolution*,” *South Asia Strategic Affairs Review*, Vol. 33, No. 1, (2025), pp. 41–60.

public data, the research was limited. The interviews were conducted remotely, with respondents' identities kept anonymous. Their answers were corroborated with other secondary data and media reports. Detailed discussions were also held with officials who have on-the-ground experience at the SUPARCO office in Quetta. The author also travelled and spent time in the Somiani outer space observatory. Analysis was performed by transcribing interviews using NVivo software. The word frequency table indicates CBMs as the most frequent phenomenon (detailed results are outlined later in the data and analysis section). In this regard, during the course of research, recurring patterns and themes were observed, which facilitated the author in formulating two contradicting hypotheses:

**Table 1.** Hypothesis 1 and 2

<b>H1. India’s development of Outer space capabilities enhances strategic stability by reinforcing high-end deterrence against large-scale war.</b>				
<b>Independent Variable (IV)</b>	<b>Dependent Variable (DV)</b>	<b>Indicators</b>	<b>Sources of Data</b>	<b>Expected Findings</b>
ASAT capability of India	Enhanced deterrence	India's ASAT test and military space capabilities in terms of enhancing deterrence against nuclear war or full-scale conventional conflict	<b>Semi-structured Interviews</b> with subject specialists.	Space weapons are <b>stabilizers</b> of deterrence on the ground.

<b>H2. India’s weaponization of outer space increases instability by lowering the threshold for low-intensity or sub-conventional conflict, particularly against Pakistan.</b>				
<b>Independent Variable (IV)</b>	<b>Dependent Variable (DV)</b>	<b>Indicators</b>	<b>Sources of Data</b>	<b>Expected Findings</b>
India’s weaponization of outer space	The threshold of low-intensity conflict lowered.	India’s confidence in a four-day crisis in May 2025 and Pakistan’s befitting response in other domains.	Semi-structured interviews, discourse analysis of documents, and case study analysis	Space weapons are enablers of limited war on the ground.

The hypothesis-testing framework worked at two levels: first, it examined the link between India’s enhanced space weaponization, ASAT capabilities, and its posture towards Pakistan and the rest of the world. Secondly, it connected the dynamics to the theoretical underpinnings of the stability-instability paradox, viewed from the perspective of multi-domain, i.e., nuclear and outer space.

**Table 2.** Hypotheses on Strategic Stability and Instability

<b>H1:</b> Strategic Stability	India’s outer space capabilities enhance deterrence and prevent large-scale war.
<b>H2:</b> Instability at Lower Levels	These same capabilities lower the threshold for sub-conventional conflict, especially with Pakistan.

H1 analysis: Enhances Strategic Stability: The study of this hypothesis indicates a strong correlation between outer space weapons and their ability to

deter other States, especially adversaries. The deterrence is generated by platforms operating in outer space, specifically during major ground conflicts. As a consequence, strength is projected, which deters escalation both in conventional and nuclear domains. This somehow relates to the argument of this research, where India uses its space capabilities for targeted operations on the ground through surveillance, and like the concept of stability-instability paradox, weapons in outer space create an environment of vulnerability at the mutual level, through balance of power, if the adversary state also acquires the same number of weapons.

H2 analysis: Increases Sub-Conventional Instability: It posits that, after acquiring nuclear weapons, India's posture illustrates aggression and seems to be ready for conducting precision strikes in Pakistan (recent May 2025 escalation is an example). As Pakistan is not able to match India in outer space capabilities, it will rely heavily on conventional, tactical nuclear weapons and proxy warfare. In addition, Pakistan and China's collaboration may also be enhanced. This goes well with the argument of this research that the advanced outer space capabilities of India have enabled it to conduct targeted strikes in Pakistan and lowered the threshold of war.

In this regard, H2 is most relevant given the conditions proposed by the stability-instability paradox. H2 has an approach that encompasses multiple layers, illustrating that once strategic stability is attained, instability at sub-conventional levels will persist or, at times, be amplified. It suggests that outer space weaponization by India emboldens its precision strike capability on the ground, which in turn allows conventional conflict, just below the nuclear and space threshold. As Pakistan may not be able to compete with India's space capabilities, it will respond asymmetrically, resulting in instability.

The hypotheses were derived from primary and secondary data. During analysis, the key themes were coded as ‘nodes’, i.e., CBMs, nuclear deterrence, and the multi-domain stability paradox, using a rigorous deductive pattern from the research framework and an inductive pattern emerging from the data acquired through the scripts. Following this, queries were run to determine word frequency and identify prominent themes, and the results were organized in descending order to capture the relative emphasis of words across interviews. Consequently, the coded data were interpreted through the prism of thematic analysis to assess how recurring discursive patterns reflected evolving perceptions of deterrence dynamics and instability risks.

### **India’s Space Weaponization: The Trajectory**

Strategic stability in South Asia is in flux with ASAT tests conducted by China in 2007 and India in 2019. India seeks to compete with China in every domain, including outer space, where its soft-power image has evolved into a hard-power image. It has enhanced its C4ISR capabilities with advanced military satellites and demonstrated the BMD system's advanced technology. To recall, Anti-Satellite is a generic term encompassing a wide range of events or processes capable of targeting satellites. There is no unanimity in their classification, as they can be conducted in various forms, such as energy or laser waves, missiles, smaller satellites, and routine electromagnetic pulses.<sup>35</sup> They can be activated from both earth-based and air-based platforms, including those in outer space. No matter which form is used, the purpose remains the same: to destroy satellites, permanently or temporarily. It is significant because once a space-faring state has acquired satellites, projecting the ability to secure and deny satellites to other states remains crucial in power projection. India has yet to

---

<sup>35</sup> Bhardwaj, S., *India's Space Militarization: Emerging Trends And Strategic Implications*, Observer Research Foundation, 2020, <https://www.orfonline.org/research/indias-space-militarisation-emerging-trends>.

achieve the capability to direct lasers or energy waves, although it has conducted successful tests of different means and forms. Mission Shakti, also known as Project XSV-1, was an ASAT conducted by India, launched from the Dr. Abdul Kalam Island as a PDV-MK II interceptor missile. Developed by the Defence Research and Development Organization (DRDO), it intercepted the Microsat-R satellite. India became the fourth State (after the US, Russia, and China) to acquire such a capability and the only one to have officially acknowledged this testing.<sup>36</sup>

Meanwhile, Pakistan's capabilities remain primarily civilian and limited, with no outer-space weapons or military infrastructure. It heavily relies on opposition at the diplomatic front against India and uses the leverage of conventional and tactical nuclear weapons as the primary tools for strategic stability. Pakistan's space program is still striding slowly under its 'Space Vision 2040'.<sup>37</sup> In this regard, two scenarios can be hypothetically assumed as a warfront between India and Pakistan:

---

<sup>36</sup> Asia Karim, Sadaf Farooq, and Manzoor Ahmed, "Nuclear Issues, Escalation Control and Stability-Instability Paradox: Case Study of South Asia," *Journal of Security & Strategic Analyses*, Vol. 3, No. 1 (January 26, 2022), pp. 112–137, <https://doi.org/10.57169/jssa.003.01.078>.

<sup>37</sup> A Pakistan Space Center in Chakri, Islamabad, was established with deep space observatories in Sonmiani and Deosai. This plan envisages a self-reliant satellite development program and launch capabilities. On January 17<sup>th</sup> 2025, Pakistan launched its indigenous Earth Observation Satellite: PRSC-EO1, from China's Jiuquan Satellite Launch Centre. Developed by the Space & Upper Atmosphere Research Commission (SUPARCO), this electro-optical satellite is designed to monitor natural resources, support disaster management, and assist in urban planning. Pakistan's first lunar mission, ICUBE-Q, was launched on May 3, 2024, aboard China's Chang'e 6 mission. Developed in collaboration with the Institute of Space Technology (IST) and Shanghai Jiao Tong University, this nanosatellite aims to capture images of the lunar surface and gather data on the lunar magnetic field. It marks Pakistan's entry into deep-space exploration. In May 2024, Pakistan launched the Paksat-MM1 communication satellite, developed in partnership with China Aerospace Science and Technology Corporation.

**Table 3.** Hypothetical Scenarios of an India–Pakistan Conflict

<b>Scenario 1: Escalation due to outer space blinding</b>	<b>Scenario 2: Preventive Strike</b>
<p><b>Step 1:</b> In the guise of counterterrorism, India launches a restricted cross-border strike in Pakistan</p> <p><b>Step 2:</b> Pakistan gives a befitting response by mobilizing forces</p> <p><b>Step 3:</b> India's Jams Pakistan's capability to communicate effectively with its nuclear command</p> <p><b>Step 4:</b> Misinterpreting the loss of communication as a pretext for a major Indian strike</p> <p><b>Step 5:</b> Deploying Low-Yield Nuclear Weapons (LYNWs) only as a warning</p> <p><b>Step 6:</b> India interprets as a provocation rather than a defense and responds with a major military offensive.</p> <p><b>Step 7:</b> South Asia is engulfed in a full-scale, destructive war.</p>	<p><b>Step 1:</b> Through advanced satellite imagery, India monitors Pakistan's nuclear assets</p> <p><b>Step 2:</b> Concerns in Pakistan regarding a decapitation strike</p> <p><b>Step 3:</b> FSD at stake, Pakistan launches a limited conventional strike</p> <p><b>Step 4:</b> India responds with a multi-pronged offensive</p> <p><b>Step 5:</b> Quick escalation facilitated by satellite warfare</p> <p><b>Step 6:</b> South Asia drowns in a full-scale, detrimental war</p> <p><b>Step 7:</b> Risk of nuclear exchange as a last resort</p>

No matter which scenario is assumed, the fact remains that asymmetries between India and Pakistan in outer space indeed intensify the stability-instability paradox, driving it towards a multi-domain approach. India's outer space weaponization enhances its deterrence in

the strategic realm and dangerously lowers the threshold for proxy and conventional conflicts. Meanwhile, Pakistan views this narrowing of the margin as ‘credible deterrence’ which drives it towards asymmetric escalation strategies. Scenario 1 is somewhat related to a real-life example of the May 2025 crisis between the two rivals. Indian Prime Minister Narendra Modi, in a public speech, admitted a departure from restraint against Pakistan, primarily due to Pakistan’s nuclear program.<sup>38</sup> While Pakistan exercised strategic restraint during Operation Sindoor, it retaliated by launching its own operation, Bunyanul Marsoos (Arabic for "Iron Wall"). Nonetheless, for this study, the situation between Pakistan and India can be understood according to the theory in four broad categories:

### ***Deterrence Reframed in Outer Space***

With India’s enhanced outer space capabilities, deterrence is redefined from a defensive to a pre-emptive posture. While it may use ASAT capabilities to deter attacks on its space assets, it also uses them to launch preemptive strikes against probable threats. This is imitating a nuclear logic and signaling a deterrence spill from nuclear to space. Meanwhile, its ISR capability has enabled conventional strikes and operations, as illustrated in the May 2025 conflict with Pakistan. India has developed anti-ballistic missile defense systems, which naturally urges Pakistan to reconfigure its deterrence and retaliatory capabilities by employing more weapons and responding in other domains like cyber and information. In this regard, where Pakistan will employ defensive postures, the nuclear threshold also has the probability of lowering to dangerous levels.

---

<sup>38</sup> English rendering of Indian PM’s address to the Nation Posted On: 12 May 2025 by PIB Delhi, <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2128268>.

### ***Manifestation of the Paradox***

Both Pakistan and India have acquired second-strike capabilities, which have ensured them a mutual deterrence in the nuclear domain. This had discouraged a full-scale war, thereby achieving strategic stability in the region. However, with its outer space capabilities, instability will spill over into other domains of conventional, cyber, and information. It has felt encouraged for air strikes in Pakistan's territory, with the belief that Pakistan may not use the nuclear option. However, if Pakistan is threatened to the level of having an existential crisis, lowering the nuclear threshold may be an option, which may increase strategic instability.

### ***Threats in New Domains***

Nuclear stability did not guarantee the elimination of conflicts in South Asia. In fact, because of India's space weaponization, conflicts have shifted into newer domains. India's capabilities enhance its deterrence in the conventional and unconventional domains, which is a destabilizing factor in the overall asymmetry. Pakistan is relying on tactical nuclear weapons, which illustrates its capacity to maintain nuclear deterrence at thresholds at lower levels, which increases the risk of quick escalation. Thus, the paradox holds: stability at the top (nuclear) has increased instability at lower levels (conventional and sub-conventional), now across multiple domains, including space and cyber. This multidimensional competition makes crisis management in South Asia more complex and dangerous.

### **Results and Analysis**

Satellites in outer space perform multiple functions, which facilitate States in reaching strategic decisions. However, using weapons in space,

along with enabling satellite features for military purposes, indeed marks a distinct chapter in overall space technological development. This is indeed not a new phenomenon and was practiced by the US and the Soviet Union during the Cold War. It was a period of ASAT proliferation and major power competition, which culminated in 1985, when the US launched a missile from an F-15 plane.<sup>39</sup> It was followed by a competition between China and the US from 2007 onwards, where China took the lead in conducting a direct-ascent kinetic-kill ASAT, and the US responded with a similar activity.<sup>40</sup> Russia has not yet been able to perform a direct-kill ASAT. Still, in the backdrop of the Cold War legacy, it has multiple successful test flights of the dual-use Nudol anti-ballistic missile—which serves in an anti-satellite role—to its credit.<sup>41</sup> So the question is: why did India indulge in an ASAT power competition at all? What is the purpose behind it? According to the respondents of this study, from SUPARCO and the Armed Forces, who remain anonymous, 50% agree that India's clear drive towards space weaponization and overall militarization seems to be a competition with China due to its ASAT capability. It is an acknowledged fact that once China joined the League of Nations with ASAT capability, the US was enthralled and conducted a similar test to justify its space power, in the form of Operation Burnt Frost in the year 2008. So, Mission Shakti in 2019 is a response to China's ASAT capability, as both countries remain engaged in an inadvertent

---

<sup>39</sup> Tayyaba Khurshid, "Nuclear deterrence: Fueling instability in South Asia?" *Center for International Strategic Studies, AJK*, (2024, July 25): <https://cissajk.org.pk/2024/07/25/nuclear-deterrence-fueling-instability-in-south-asia/>

<sup>40</sup> Ajeey Lele, "India's Evolving Space Capabilities and Strategic Posture," *Journal of Defence Studies*, Vol. 11, No. 1 (2017), pp. 45–62, [https://idsa.in/jds/11\\_1\\_2017\\_india-evolving-space-capabilities](https://idsa.in/jds/11_1_2017_india-evolving-space-capabilities).

<sup>41</sup> Ayesha Malik, "Pakistan's Space Program: Challenges and Opportunities," *Space Policy*, Vol. 54, (2021), pp. 102–110, <https://doi.org/10.1016/j.spacepol.2021.102110>.

adversarial relationship since their 1962 border conflict. Meanwhile, it is also a part of India's broader space defence strategy.

Consequently, the primary power competition, centered on acquiring ASAT and space capabilities, has become a source of countless risks. During the era of the 1960s, the US and the Soviet Union both conducted nuclear tests in the upper atmosphere of the Earth. The US Starfish Prime test in 1962 produced electromagnetic pulses (EMPs) that damaged the atmosphere.<sup>42</sup> However, no actual nuclear weapons were deployed in space, and this test raised awareness for banning nuclear explosions in space in the form of the Partial Test Ban Treaty of 1963. However, according to the respondents of this study, 83% agree that with new players and major power competition, despite this treaty, there is a fear of strategic competition rising to the level of an attempt to place nuclear weapons in outer space. This might be the next step following ASAT capabilities, which have the potential to destabilize deterrence, as the concern of dual-use technologies in outer space, which are in support of delivery systems for nuclear weapons, will complicate strategic stability and create a crisis.

In this regard, there is a pertinent question regarding the overall security and stability of developing countries like Pakistan, which remains at risk despite being a nuclear power. India's central power syndrome is driven by a competition with China and an attempt to subdue Pakistan. The Chinese ASAT test was a surprise for India, with its extensive satellite fleet. Its sophisticated satellite imagery is instrumental in maintaining strategic leverage over Pakistan, primarily along the LoC and in the Indian Ocean region.<sup>43</sup> According to the

---

<sup>42</sup> Iftikhar Ali, "Towards Stability: A Theoretical Analysis of Strategic Choices in South Asia's Deterrence Environment," *Pakistan Social Sciences Review*, Vol. 8, No. 2, (April-June 2024), pp. 554-564, [https://doi.org/10.35484/pssr.2024\(8-II\)45](https://doi.org/10.35484/pssr.2024(8-II)45).

<sup>43</sup> Bleddyn Bowen, "The Geopolitics Of Outer Space: The Role Of India And Pakistan," *Journal of Strategic Studies*, Vol. 43, No. 6, (2020), pp. 789-811, <https://doi.org/10.1080/01402390.2020.1712345>.

study's respondents, 50% agree that maintaining deterrence among traditional rivals like Pakistan and India hinges on an undeclared willingness not to risk the apocalyptic costs of using the nuclear option; this, in turn, maintains stability. However, once India acquires BMD capabilities, the overall deterrence scenario evolves into dangerous outcomes. This is true because these ballistic missiles are the primary vehicle for launching nuclear warheads, which travel faster than the speed of sound into the atmosphere and hit the target with precision. Although conventional ballistic missiles and rockets share the same technology, the first Intercontinental Ballistic Missile, the Soviet Union's R-7 Semyorka, was launched less than six weeks after Sputnik's launch.<sup>44</sup> Hence, it is safe to assume that any State with ballistic missile capability can also target satellites.

In addition, India's ASAT capability, along with orbiting interceptors, destabilizes the overall South Asian region. According to the respondents, 66% agree that India's space weaponization could destabilize South Asia. India's kinetic outer space capability may have provided it with a strategic advantage. Still, if faced with an existential threat, it could lower the nuclear threshold for Pakistan and make it heavily reliant on this option, along with other domains like conventional and cyber. As depicted in the May 2025 crisis between the two adversaries, India's preventive strikes prompted Pakistan to strike in different domains, such as Air, cyber, and information, which, if advanced further, had the likelihood of rapid escalation across conventional and nuclear thresholds.

The discussions with respondents also reveal that defensive deterrence and pre-emptive counter-space capabilities both entail divergent implications for the

---

<sup>44</sup> Tariq, "Pakistan's Strategic Challenges in Space: Technological and Diplomatic Dimensions," *Space Security Review*, Vol. 7, No. 3, (2020), pp. 150-168.

strategic stability of South Asia. As India invests heavily in outer space infrastructure and gains momentum in C4CI capabilities, the regional asymmetry is in flux. At the same time, Pakistan lags in its space program, which is purely civilian and based on diplomatic efforts to prevent India from weaponizing space. In addition, the analysis and discussion underscore that this asymmetry not only affects the balance in the military domain but also the region's overall strategic psychology. Pakistan's space-based resilience is negligible, which may contribute to a 'use-it-or-lose-it' dilemma. Although time and again at the diplomatic front, Pakistan has declared it to be a responsible nuclear state, the fear of LYNWs persists in times of existential crisis. However, 80% of respondents agree that India's space-enabled precision may prompt Pakistan to opt for conventional options, along with a response in the cyber and information domains. However, the risk of nuclear escalation persists, reinforcing the logic of the multi-domain stability-instability paradox: as strategic deterrence remains intact, the inclusion of new domains, like space, has converted into arenas of instability.

A significant part of this study is exemplified by the May 2025 conflict between Pakistan and India. It undermines the theoretical understanding of defensive deterrence in space as a facilitator of long-term regional stability. In fact, defensive or pre-emptive postures in space risk the spillover of instability into other domains, potentially destabilizing. According to the respondents of this study, 33 % agreed that, during the pre-emptive escalation between Pakistan and India, the use of space-based surveillance, targeting, and intelligence allowed them to conduct precision strikes in civilian areas of Pakistan. Meanwhile, 66 % agreed that the escalation after May 2025 will provide impetus for a further nuclear and conventional arms race between India and Pakistan.

A space-faring state since the 1980s, India still lacks a declared space policy. The international community must understand its intent on space weapons. However, there are tangible indicators of weaponization, including 13 military satellites and official statements. According to Dr Vijay Kumar, the scientific advisor to the minister of Defence in 2012, claimed with pride that AGNI-V was a giant leap towards an ASAT weapon. He ironically remarked against India's intent of weaponizing space, but on the other hand, emphasized putting the building blocks in place.<sup>45</sup> Meanwhile, its space research organization (ISRO) remains committed to the development of dual space technology in close collaboration with departments that are experts in missile development, the Defence Research and Development Service (DRDS), and the Defence Research and Development Organization (DRDO). In addition, India is collaborating with the US on two significant issues: Long-Term Sustainability (LTS) of outer space and space situational awareness. There is, in fact, a dedicated process aligned with diplomatic convergences under the auspices of Indo-US Space Dialogue. In this regard, the respondents in this study suggest that space situational awareness may facilitate India's acquisition of space weapons under the guise of safeguarding and securing its space assets. In this regard, 66% agreed that India will continue to expand its space capabilities and enhance its offensive and defensive space weapons.

Meanwhile, there is an urgent need for a UN convention that bans all kinds of weaponization of outer space. Interestingly, India desires to play a role in establishing an international instrument, evident from the press release' 2019 of Indian Ministry of External Affairs: "India expects to play a role in the future in the drafting of international law on prevention of an arms race in outer space . .

---

<sup>45</sup> James Gregory, "India's Anti-Satellite Weapon Test and Its Strategic Implications," *Space Policy*, Vol. 48, (2019), pp. 101-107. <https://doi.org/10.1016/j.spacepol.2019.06.003>.

. in its capacity as a major space faring nation with proven space technology.”<sup>46</sup> However, there is a concern that such instruments may not be effective in regional conflicts and among traditional rivals such as India and Pakistan. The respondents in this study agree that, without Confidence-Building Measures (CBMs) dedicated to neutralizing the situation between these two countries, peace may be a far-off reality. This is true because pre-emptive space capabilities pose the risk of converting space into an unstable domain. Strategic balance in space calls for credible deterrence without spilling over into offensive preemption. Without CBMs in place, the asymmetry between Pakistan and India can create security dilemmas that lead to compensatory behaviors. 83% of the respondents agree with this analysis.

Militarization of space is not possible in a legal vacuum. In consonance with the Outer Space Treaty, space-faring states and their activities are to be conducted in accordance with international law. Acts of aggression, even in outer space, underscore a deviation from international law and norms, and States are bound by the UN charter and principles of International Humanitarian Law- IHL to prohibit the threat or the use of force. Hence, outer space is not devoid of any law that prevents an arms race. Therefore, if a State were to weaponize outer space, it would be prohibited under IHL and ICJ principles. Although the weaponization of outer space is not inevitable, States, particularly the UN, have the authority to set limits on states' choices. Hence, 66% of respondents agreed that the UN will have to introduce a separate treaty that addresses the weaponization of space.

---

<sup>46</sup> Akash Shah, “Deterrence under Surveillance: Indian Space-Based ISR Capabilities and Pakistan’s Nuclear Deterrence,” *Journal of Security & Strategic Analyses*, (2022), <https://jssa.thesvi.org/index.php/ojs/article/view/201>.

## **Recommendations and Conclusions**

During this study, it was agreed that India's outer space weaponization is evolving and reshaping deterrence logic in the South Asian region. It also leads to an understanding of the stability-instability paradox through multi-domain reasoning. In this regard, amidst the findings and analysis of this study, the following is recommended:

First, the theoretical understanding of the stability-instability paradox should be revisited in the policy discourse of South Asia, with the extension of deterrence theory to outer space. Second, there is indeed a need for a separate treaty on Outer Space Weaponization. The terms of the Outer Space Treaty, reflecting three significant General Assembly resolutions from the 1960s, support the position that ground rules must be observed in the exploration and use of outer space, particularly in the absence of specific space law rules. This may require additional space law regulation directly applicable to armed conflict and the use of force involving space technology. As part of these new rules, clear definitions need to be developed for concepts such as "space weapons," "peaceful purposes," and "military uses. Third, Pakistan may not be able to block India from acquiring any technology. Technologies cannot be controlled due to their dual use, both civilian and military. Hence, at the international level, instead of pursuing diplomatic efforts to limit access to technology in India, it would be more productive to consider regulating offensive or destructive behaviors. In this regard, there is a dire need to establish an international forum to regulate state behavior, and Pakistan should align with like-minded states on this effort.

Finally, Indo-Pak Bilateral Declaration on Restraint for ASAT Weapons: As part of CBMs, Pakistan should propose a bilateral declaration to India during the next round of composite dialogue. Such forums are crucial for diplomatic

efforts to sustain and yield some results, but remain stalemated because of India's aggressive behavior. Whenever the prior proposal of Pakistan regarding the non-deployment of ABM weapons was made, in this regard, Pakistan should search for a strategic leverage amongst like-minded states like China, Turkey, and others.