

Infrastructure and Deterrence

Is India Risking a Fiscal Plateau on Its Strategic Frontiers?

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In contemporary strategy, deterrence is increasingly engineered through infrastructure long before it is tested in crisis.

Infrastructure today stands as a central pillar of military power, redefining how nations build credible deterrence along contested borders. For India, the 2020 border crisis with China marked a turning point, pushing defence planning towards mobility and rapid response. This shift is visible in rising capital investments for frontier connectivity, with the Border Roads Organisation (BRO) emerging as the key driver. Its growing capacity reflects how infrastructure is being institutionalised as a genuine force multiplier. Analysis of nearly two decades of General Staff (GS) Roads data highlights the year 2020 as a strategic inflection point, when India moved from sporadic construction to a more deliberate, deterrence-oriented approach. Yet, recent signs of slowing budget growth raise questions about fiscal consolidation, even as China continues to expand its own frontier infrastructure. Deterrence through connectivity is not built overnight; it requires steady, long-

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term financing. A premature plateau in spending risks undermining the transformation set in motion after 2020. Ultimately, sustaining momentum is less about short-term expenditure and more about strategic endurance, which is critical for India's operational flexibility and lasting advantage along its borders.

CONCEPTUAL CONTRIBUTION STATEMENT

This commentary advances the argument that infrastructure should be understood not merely as developmental capital but as a foundational instrument of deterrence. By introducing the idea of the political economy of deterrence infrastructure, it highlights how sustained capital investment—rather than episodic surges—shapes long-term strategic advantage. The commentary bridges practitioner experience with strategic theory to reframe frontier connectivity as an enduring component of national security planning.

INTRODUCTION: INFRASTRUCTURE AS THE NEW CURRENCY OF DETERRENCE

This commentary is written from the perspective of a practitioner who has witnessed the operational consequences of infrastructure both in its presence and absence. In today's evolving battlespace, connectivity has shifted from being a peripheral concern to becoming central to defence strategy. Roads, tunnels, bridges and logistics networks now determine not only how militaries operate but also how states project deterrence.

The 2020–2021 border crisis between India and China highlighted the critical role of logistical readiness in safeguarding territorial integrity and enabling swift mobilisation. Well before this confrontation, Indian strategists had argued that geography favours nations that invest consistently in infrastructure. K. Subrahmanyam often stressed that national security rests as much on economic and technological strength as on military capability, implicitly recognising infrastructure as a cornerstone of strategic power.¹

In the aftermath of the crisis, India accelerated frontier development through the BRO, signalling a decisive move towards mobility-driven deterrence. GS Roads allocations rose sharply, marking a shift from piecemeal construction to capital formation aligned with defence preparedness. Yet recent budgetary trends suggest moderation. The FY 2026–27 GS Roads

allocation stands at Rs 7,394 crore—an increase, but one that points to fiscal consolidation.²

China has sustained large-scale investments across the Tibetan plateau, integrating transportation, energy and logistics networks in ways that strengthen military reach.³ As C. Raja Mohan notes, infrastructure now anchors Asia's balance of power.⁴ The question is whether India risks slowing momentum before the transformation that began in 2020 fully matures.

INFRASTRUCTURE, MOBILITY AND THE CHANGING GRAMMAR OF DETERRENCE

The link between infrastructure and military power is not new, but its importance has grown sharply in an age defined by rapid mobilisation and contested borders. Classical military thought has long stressed that the side able to concentrate force faster often shapes battlefield outcomes and crisis dynamics. What is different today is the extent to which infrastructure itself now acts as a latent deterrent capability rather than serving only as logistical support.

For much of the post-Cold War era, India relied on forward deployment backed by modest improvements in connectivity. This reflected fiscal caution and the belief that large-scale confrontation was unlikely. Yet analysts warned that infrastructure gaps along the Himalayas limited operational flexibility. Brahma Chellaney noted that China's systematic expansion of transport networks across Tibet had altered the strategic geometry of the frontier, enabling rapid mobilisation while leaving India reliant on narrower corridors.⁵

The events of 2020 confirmed these concerns. Strategic mobility—the ability to reinforce sectors, rotate formations and sustain high-altitude deployments—emerged as central to deterrence. Infrastructure was no longer peripheral; it became integral to the military options available to leadership.

This realisation aligned with India's broader rise in public capital spending, underscoring that economic strength and security are mutually reinforcing. Yet deterrence infrastructure is cumulative: depth, redundancy and resilience build advantage gradually, often revealed only in crises. As Colin Gray observed, strategy bridges military means and political purpose.⁶ Infrastructure performs this role by turning geography from constraint into operational space. Continuity of financing, not intent alone, will determine whether India sustains deterrence credibility.

INSTITUTIONAL TRANSFORMATION: THE RISE OF EXECUTION CAPACITY

Strategic ambition carries weight only when backed by institutional capability. Any evaluation of India's infrastructure trajectory must therefore consider the transformation of the BRO from a construction agency into a central pillar of frontier preparedness.

Created in 1960 to aid border management and regional integration, the BRO long operated under severe geographic and financial constraints. Projects stretched over years, mechanisation was limited and contracting ecosystems remained weak. Over the past decade, however, its execution capacity has strengthened through administrative reforms, delegated financial powers and greater reliance on Engineering, Procurement and Construction (EPC) models.

This evolution matters beyond efficiency. Reliable execution reflects state capacity, a quality that political scientists often link to deterrence credibility. As Paul Kennedy observed, great powers are defined not only by military strength but by their ability to mobilise economic resources for sustained strategic ends.⁷ Infrastructure agencies thus serve as quiet markers of national resolve.

Equally significant is the move towards permanent, all-weather connectivity. Tunnels, hardened bridges and climate-resilient engineering compress response timelines and expand escalation options, reinforcing deterrence stability. By the early 2020s, India's institutional machinery had matured. The challenge now lies not in building, but in sustaining investment to complete the transformation already underway. If institutional capacity defines what a state can build, fiscal commitment ultimately determines how far that capacity is translated into strategic effect.

TWO DECADES OF SPENDING: READING THE FISCAL SIGNAL

Public budgets often reveal strategic intent more clearly than official doctrine. A review of GS Roads allocations over the past 18 years shows that India's deterrence infrastructure has advanced not gradually but through distinct phases shaped by shifting threats and policy priorities. Figure 1 depicts GS Roads Budget allocation for the past 18 years.

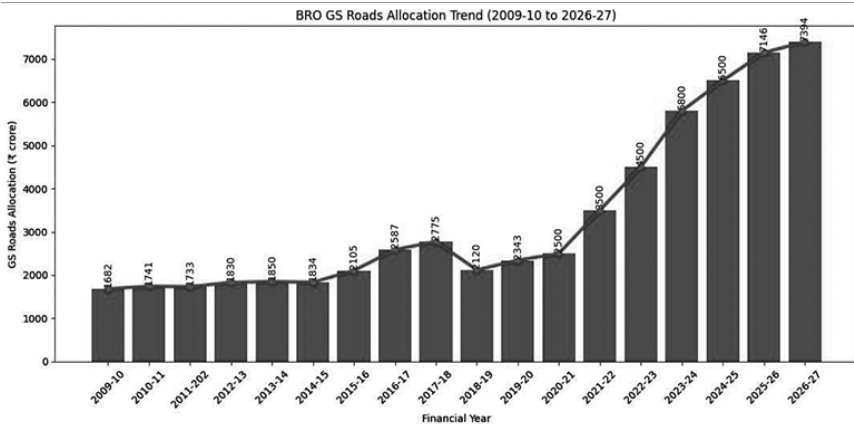


Figure 1 Fiscal rise of infrastructure-led deterrence GS Roads allocation (2009–2026)

Source: Ministry of Defence, Union Budget Documents.

- *Strategic Stagnation (2009–2014)*: This phase reflected strategic stagnation, with allocations largely flat. Infrastructure was not yet embedded within defence planning, and deterrence relied mainly on troop presence.
- *Gradual Awakening (2015–2019)*: A second phase in the mid-2010s signalled growing awareness of mobility gaps. Funding rose unevenly, suggesting recognition without structural commitment. Yet strategic infrastructure rarely thrives on episodic financing; depth requires steady capital flows.
- *Crisis-Driven Acceleration (2020–2023)*: The decisive break came in 2020. The border crisis triggered what defence economists call catch-up investment—rapid capital expansion to close capability gaps revealed during confrontation. Allocations nearly tripled, marking India's shift from incremental construction to deterrence-oriented capital formation. As Ashley Tellis noted, logistical readiness had become inseparable from credible military posture along the Himalayan frontier.⁸
- *From Acceleration to Consolidation (Post 2024)*: A fourth phase now demands scrutiny. Since FY 2024–25, growth has moderated. Normalisation is routine, yet timing matters. Infrastructure advantage builds through continuity; slowing investment before networks mature risks leaving transformation incomplete. India has entered the era

of infrastructure-led deterrence, but enduring capability depends on sustained capital commitment. Whether consolidation represents maturation or premature normalisation remains the central strategic question.

THE YEAR 2020 AND THE DOCTRINAL REORIENTATION OF INDIAN DETERRENCE

Strategic shocks often condense years of doctrinal evolution into moments of clarity. For India, the 2020 border crisis did exactly that, exposing the costs of infrastructure asymmetry and forcing a re-assessment of how deterrence must be built along contested frontiers.

Before this episode, India relied largely on positional deterrence—visible troop presence intended to signal resolve. While psychologically potent, such deployments depend on the logistical networks that sustain them. The crisis revealed that density without mobility risks creating a posture that looks strong but remains operationally fragile.

The policy response went beyond temporary alarm. Road construction accelerated, bridges multiplied and all-weather connectivity became central to defence planning. These measures reflected John Mearsheimer's enduring logic of conventional deterrence: denying adversaries rapid gains depends on how quickly defenders can marshal combat power.⁹ Mobility, in this sense, is deterrence in motion.

Indian thinkers had long gestured towards this link. K. Subrahmanyam emphasised that national security rests on mobilising resources effectively, tying infrastructure to readiness.¹⁰ The post-2020 surge was thus less a departure than a delayed realisation. Barry Posen reminds us that doctrine evolves from material capabilities as much as threats.¹¹

Ultimately, the year 2020 embedded mobility into India's deterrence logic. Yet credibility now hinges not on conceptual acceptance but on sustained fiscal execution.

THE EMERGING FISCAL PLATEAU: CONSOLIDATION OR STRATEGIC RISK?

The moderation in GS Roads allocations after FY 2024–25 presents a complex puzzle. On the surface, absolute spending continues to rise, suggesting stability rather than retrenchment. Yet the slowing growth rate points to fiscal normalisation after a period of accelerated investment.

Such consolidation is neither unusual nor inherently unwise. Public finance must balance strategic expenditure with macroeconomic stability, and governments often pause after capital surges to assess execution and absorption capacity. Defence economists have long argued that sustainable capability depends less on dramatic spikes than on predictable flows aligned with long-term planning.¹²

Infrastructure, however, is a distinctive category of strategic spending. Its value is cumulative: roads, tunnels and logistics hubs generate advantage through density and redundancy, attributes that cannot be improvised during crises. Andrew Krepinevich notes that military advantage often accrues to states sustaining preparatory investments in peacetime rather than those reacting only to immediate threats.¹³

Normalisation thus carries strategic weight. India has narrowed mobility gaps since 2020, yet parity remains elusive as competitors expand networks and dual-use facilities. Importantly, institutional capacity has strengthened. When execution improves but funding growth moderates, the constraint shifts from administration to strategy—risking deferred deterrence. The challenge lies not in justification, but in timing.

MOMENTUM AND CONTINUITY: UNDERSTANDING THE CHINA CONTRAST

Infrastructure gains strategic meaning most clearly when viewed comparatively. For India, the issue is not simply whether frontier connectivity has improved, but whether its pace matches the evolving capabilities of its principal continental competitor.

For more than two decades, China has treated infrastructure on the Tibetan plateau as integral to military preparedness. Highways, rail corridors, airfields and logistics hubs have steadily reduced the friction of altitude and distance, enabling rapid force concentration across sectors. M. Taylor Fravel notes that such networks enhance operational flexibility while strengthening Beijing's ability to signal coercion short of open conflict.¹⁴

What sets China apart is not just the scale of projects but the continuity of investment. Guided by long-horizon planning, expansion has advanced with consistency. Nadège Rolland argues this persistence reflects a strategic culture that sees connectivity as both economic and geopolitical.¹⁵

India's post-2020 surge corrected earlier asymmetries, yet recent moderation creates contrast: China sustains momentum, while India edges towards normalisation. Infrastructure advantage, however, compounds

through steady capital flows. As Hal Brands observes, long-term competition is often decided by enduring investment rather than episodic strength.¹⁶ For India, the imperative is continuity—interruptions risk reopening structural gaps. Continuity signals resolve. Interruptions invite reassessment.

THE GEOGRAPHY OF VULNERABILITY: WHY PLATEAUING TOO EARLY CARRIES STRATEGIC RISK

Strategy ultimately unfolds across terrain. Budgets and doctrine acquire meaning only when mapped onto geography—mountains that restrict manoeuvre, valleys that channel movement and rivers that need bridges to shape projection. India's frontier landscape is uniquely demanding, and the consequences of slowing infrastructure expansion differ sharply across sectors.

In the Middle Sector, the need for lateral connectivity remains critical. Historically, India's infrastructure emphasis has centred on North–South axes leading to the Line of Actual Control (LAC). While vital for forward deployment, this alignment limits flexibility if East–West routes remain underdeveloped. Military geographers stress that lateral corridors allow rapid redistribution of forces without rearward manoeuvres—a decisive capability in fast-moving crises.¹⁷ Plateauing investment before such redundancy is achieved risks embedding rigidity into India's defensive posture.

Further East, Sikkim highlights resilience over reach. Fragile mountain ecology, steep gradients and rising climatic volatility make networks vulnerable to disruption. Infrastructure here must be engineered for survivability, not just access. Security scholarship increasingly views climate resilience as integral to readiness, especially in high-altitude theatres where environmental shocks can degrade logistics as effectively as adversaries.¹⁸ Sustained capital is essential to ensure dependable connectivity under stress.

Arunachal Pradesh underscores infrastructure depth. Sparse networks lengthen mobilisation timelines, shaping escalation dynamics. John Mearsheimer notes that rapid reinforcement strengthens bargaining leverage by complicating adversary calculations.¹⁹ Shortfalls, by contrast, narrow options when flexibility is most vital.

Beyond the Himalayas, the maritime domain is equally consequential. BRO has a Task Force working at a consistent pace upgrading the critical infrastructure in the Andaman and Nicobar Islands. Investments in jetties, airfields and logistics extend surveillance and distributed posture. David Brewster observes that island infrastructure amplifies deterrence by enhancing presence without permanent concentration.²⁰

Together, these sectors reveal that infrastructure gaps are uneven—some affect speed, others resilience, others reach. Fiscal plateauing thus carries differentiated risks. The real question is whether investment sequencing matches strategic geography. Infrastructure-led deterrence must therefore be guided by cartographic logic as much as by fiscal arithmetic. Plateauing too early risks freezing the map midway through transformation.

POLICY IMPERATIVES: AVOIDING THE NORMALISATION TRAP

If the post-2020 surge marked a strategic correction, the emerging plateau presents a subtler challenge: how to consolidate gains without letting normalisation erode momentum. Capability development unfolds across long investment cycles, and once disrupted, these cycles are costly to rebuild.²¹ Policymakers must therefore look beyond annual allocations and align infrastructure financing with the extended horizon demanded by mobility-centric deterrence.

- *Non-lapsable Frontier Infrastructure Fund*: Frontier infrastructure requires a multi-year funding architecture insulated from annual volatility. Projects such as tunnels and strategic highways span several fiscal cycles, making year-to-year fluctuations inefficient. A non-lapsable frontier infrastructure framework could signal durable political commitment while shielding critical projects from short-term pressures.
- *Capital Prioritisation*: Capital prioritisation must shift from linear expansion to network depth. Early phases rightly emphasised reaching forward areas, but the next stage must focus on redundancy—lateral connectors, alternative axes and climate-resilient engineering—ensuring mobility even under disruption. Deterrence rests not only on access but on reliability.
- *Differentiated Budgeting*: High-capital assets like tunnels demand differentiated budgeting. Their expenditure profiles are non-linear, with concentrated outlays during peak phases. Treating them under conventional ceilings risks artificial slowdowns that delay capability formation.
- *Unified Budget Planning*: Continental and maritime planning must be integrated into a single deterrence ecosystem. The Andaman and Nicobar Command illustrates how island infrastructure extends surveillance reach and supports distributed posture across the Indo-Pacific. Unified planning reduces theatre-specific imbalances.

- *Sequencing and Scale*: Sequencing matters as much as scale. Strategic cartography, not administrative convenience, should guide allocation. Gaps constraining flexibility must precede projects aimed at expanding capacity.

Underlying these recommendations is a principle: normalisation must not outpace transformation. Fiscal prudence is vital, but in strategy it means sustaining investment until vulnerabilities are reduced. As Michael Beckley notes, long-term competition rewards states that maintain preparatory momentum even after crises fade.²² India now stands closer than ever to embedding infrastructure within deterrence. Avoiding the normalisation trap requires treating frontier connectivity as a continuing strategic commitment. *History suggests that infrastructure corrections undertake after crises are invariably more costly than those sustained through anticipatory investment. Maintaining double-digit annual growth in GS Roads allocations would help ensure that India's deterrence posture evolves by design rather than by compulsion.*

CONCLUSION: DETERRENCE CANNOT BE EPISODIC

India's evolving border infrastructure reflects more than development; it marks a transformation in strategic thinking. Connectivity has shifted from the margins of defence planning to its operational core, shaping how the state prepares for crises and how it seeks to deter.

The surge in spending after 2020 represented a doctrinal awakening—recognition that mobility underpins military credibility. Infrastructure, in this sense, is deterrence made durable: latent power that influences adversaries without requiring immediate deployment.

The current fiscal plateau invites reflection rather than alarm. Consolidation is natural in public finance, yet the strategic concern is whether normalisation is arriving before the transformation it seeks to stabilise has fully matured. Infrastructure asymmetries close not through single bursts of investment but through sustained capital discipline over time.

Great-power competition is often decided less by dramatic surges than by steady persistence.²³ Continuity signals resolve, reassures partners and gradually expands strategic options. Interruptions, by contrast, risk slowing capability formation precisely when momentum yields disproportionate advantage.

For India, the challenge ahead lies not in intent but endurance. Institutional capacity has strengthened, doctrinal logic has evolved and

geographic priorities are clear. What remains is fiscal steadiness to carry this transformation forward. Infrastructure-led deterrence is not episodic; it is an ongoing commitment. Sustained preparation, not short-lived acceleration, ultimately secures advantage.

NOTES

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