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Nagapattinam's deltaic coast caught in 'silky crisis' with sinking shores

Nacchiarakkintyan M.
NAGAPATTINAM

On the sun-bleached shores of Vellapallam, the rhythm of tides is no longer the only clock the fishermen wait for. Instead, they wait for the rumble of a tractor engine. In a peculiar geological phenomenon, the coastlines of Vellapallam, Pushpavanam, and Vanavan Mahadevi in Vedaranyam taluk of Nagapattinam district are being swallowed by a treacherous "silky clay" that makes the simple act of launching a boat a daily struggle.

The sea is the lifeline for the 1,270 families residing in these three hamlets, but the shore has become a quagmire. Unlike the firm, sandy beaches of the Coromandel Coast, the soil here is categorised as 'silky clay loose soil'. "We are small fisherfolk; fibre boats are

our only assets," says M. Ilayarani, a fisherwoman from Vellapallam, her eyes scanning the horizon where the breakwater should have been.

"But now, the shore drains our energy and earnings. We have to pay ₹200 every time a tractor pushes our boat into the water and pulls it back. On days when the catch is low, we return home indebted to the tractor owner," she adds.

The problem, according to Fisheries Department officials, is unique to this specific stretch of the deltaic coast. Experts cite the Vennar Basin as the reason. As the river discharges sediment into the sea, the shallow gradient of the shelf – where one must travel nearly 1 km into the sea to reach a depth of even 3 m – prevents the silt from being washed away.

Between June and Sep-



Daily struggle: A fishing boat that got stuck in the silky soil at the Pushpavanam hamlet in Vedaranyam taluk. SPECIAL ARRANGEMENT

tember, the littoral drift moves this soil from the south to the north, depositing a thick layer of fine clay that lacks the structural integrity to support weight. "It is a peculiar phenomenon not seen any

where on the delta coast," a senior official said.

Drain on resources

For the women who manage the logistics, the delay is devastating. T. Jayaeswari of Vanavan Mahadevi

and Vijayakumari S. of Pushpavanam say the lack of a functional landing centre forces them to carry heavy loads across the sinking clay, often resulting in injuries.

The scale of the crisis is

best reflected in the ₹132-crore project at Vellapallam.

Despite nearly ₹100 crore being spent and 80% of the work completed, the project is in jeopardy. Roughly 70% of the massive breakwater stones – some weighing several tonnes – have sunk to the seabed.

A revised estimate for an additional ₹100 crore has been submitted to the government, but as the bureaucracy deliberates, the sea continues to swallow the huge stones.

Policy shift

At Pushpavanam, a ₹25-crore small fishing harbour remains a proposal on paper. At Vanavan Mahadevi, where 450 families await a fish landing centre, the foundation was laid with much fanfare, but not a single brick has been laid.

"The government thinks

building a harbour is the only solution," says Jones T. Spartegus, a prominent researcher and coastal activist.

"But it is ignoring the ecological reality. Since 2014, our policies have shifted heavily towards 'culture fishing' [aquaculture] over 'capture fishing' (traditional sea fishing). We have stopped the basic maintenance that kept these villages alive."

Mr. Spartegus said that in previous decades, bar-mouth dredging was done periodically.

The silky soil would be dredged and deposited on the opposite side of the shore to maintain a natural balance.

A senior official of the Fisheries Department said if the revised estimate was sanctioned, sand movement could be arrested with the construction of a more effective breakwater.

KEY HIGHLIGHTS

Context of the News

- Fishing hamlets of Vellapallam, Pushpavanam, and Vanavan Mahadevi in Vedaranyam are facing severe livelihood disruption due to accumulation of silky clay loose soil along the coast.
- Nearly 1,270 fishing families dependent on capture fishing are unable to launch fibre boats without tractor assistance.
- A ₹132-crore breakwater project at Vellapallam has seen ~70% stones sink, despite ~80% work completion; revised estimates seek ~₹100 crore more.
- Small fishing harbour at Pushpavanam (₹25 crore) remains at proposal stage; fish landing centre at Vanavan Mahadevi stalled despite foundation ceremony.

Key Points

- Soil type: Silky clay loose soil—low bearing capacity, high water retention.
- Geomorphology: Vennar basin sediment discharge + shallow continental shelf (≈1 km to reach 3 m depth).
- Ocean process: Littoral drift (June–Sept, south → north) deposits fine silt seasonally.
- Economic impact: ₹200 per tractor trip; debt cycles for small fishers, especially women handling logistics.
- Policy context: Shift since ~2014 towards aquaculture ("culture fishing") over traditional capture fishing.
- Traditional practice (declined): Bar-mouth dredging and sediment rebalancing.

Static Linkages

- Delta formation and sediment dynamics (NCERT Geography).

- Coastal processes: littoral drift, sediment budget, shoreline equilibrium.
- Fishing harbours & landing centres under Blue Economy framework (India Year Book).
- Cooperative federalism in fisheries (DoF–State coordination).
- Gendered livelihoods in informal sectors (Economic Survey).

Critical Analysis

Pros

- Breakwaters can reduce wave energy and stabilise harbours if designed for local sediment regimes.
- Infrastructure investment signals state support to coastal livelihoods.

Cons / Challenges

- One-size-fits-all harbour model ignores deltaic sediment dynamics.
- High fiscal cost escalation with uncertain outcomes.
- Neglect of low-cost, adaptive measures (periodic dredging).
- Gendered burden: women face injuries, unpaid labour losses.
- Policy tilt to aquaculture marginalises small capture fishers.

Way Forward

- Hybrid coastal management: combine selective dredging + nature-based solutions (sediment bypassing).
- Site-specific engineering using morphodynamic studies before capital-intensive breakwaters.
- Revive bar-mouth dredging with sediment redistribution protocols.
- Inter-departmental coordination (Fisheries, Ports, Environment).
- Livelihood support: interim subsidies for boat launching; insurance for work injuries.
- Participatory planning with local fishers, especially women's SHGs.

A grand vision and the great Indian research deficit

India stands at a pivotal moment in its economic and technological trajectory. With its vast human capital and a rapidly expanding economy, it harbours ambitions of becoming a global power. Yet, this grand vision is significantly hampered by a deep-seated and chronic insufficiency in research and development (R&D).



Shashi Tharoor is the fourth-term Member of Parliament (Congress) for Thiruvananthapuram (Lok Sabha), an award-winning author and a former Minister of State for Human Resources Development.

The scale in numbers
The scale of India's R&D deficit is best illustrated by a few stark numbers. Despite having 17.5% of the world's brains (since it is home to 17.5% of the world's population), India produces only a meagre 3% of the world's research output. This disparity highlights a fundamental failure in leveraging its massive demographic dividend to generate high-value research.

The situation is not much better on intellectual property creation. Recent reports from the World Intellectual Property Organization (WIPO) suggest a mixed picture: dramatic growth from a very low base, but overall an unimpressive performance. In 2023, India was ranked sixth globally for total patent filings, recording 64,480 applications. This represents the fastest growth (+15.7%) among the top 20 countries and is a significant figure. However, in the context of the total 3.55 million patent applications filed globally in 2023, India's share is still low, at approximately 1.8% of the global total. Critically, when measuring resident applications per million inhabitants, a truer reflection of domestic innovation intensity, India ranks significantly lower (47th), underscoring that the overall growth is not yet translating into widespread, population-level innovation dominance.

The most damning evidence of India's R&D gap lies in R&D expenditure. Gross Expenditure on R&D in India, covering both private and public sectors, has consistently hovered between 0.6% and 0.7% of GDP in recent years (and is slipping as GDP grows). This figure pales in comparison to major economies and innovation hubs: China spends around 2.4%, the United States is at approximately 3.5%, and Israel leads globally at over 5.4%. To grasp the magnitude of underinvestment, one only needs to compare India's entire national R&D spend with that of a single multinational corporation. In 2023, the Chinese technology giant, Huawei, invested a colossal CNY 164.7 billion (approximately \$23.4 billion) into R&D. This amount of spending from just one company – no doubt driven by intense global competition and U.S. sanctions, particularly focusing on crucial areas such as semiconductor technology – exceeds the total combined R&D expenditure of all public and private entities in India, a nation of more than 1.4 billion people. As Nvidia Chairman Jensen Huang noted, Huawei's relentless investment has propelled them to be "nanoseconds" behind the U.S. in advanced semiconductor capabilities. This

The current deficit in R&D investment cannot sustain India's ambition to become a global innovation leader.

corporate-level intensity of R&D is the engine of next-generation technological power. India's inability to muster even a fraction of this kind of concentrated, strategic investment speaks volumes about the challenge ahead for it.

So much for the numbers. They are merely symptoms of deeper, structural problems within the Indian innovation ecosystem that it must tackle on a war footing.

The government sector is the funds driver
Most disappointingly, private sector participation in R&D spending is abysmal. A global hallmark of a mature innovation economy is the dominant role of the private sector in R&D. In developed nations, industry typically accounts for two-thirds or more of such expenditure. In India, however, the government sector (central, State, higher education, and public sector industry) remains the main driver, contributing approximately 63.6% of R&D funds, with the private industrial sector contributing only around 36.4%. India's business tycoons need to rise to the R&D challenge, but they are instead largely complacent and myopic about it. Indian industry's low investment is driven by a focus on incremental improvements over disruptive innovation, a preference for technology licensing over domestic development, and a general risk-averse culture.

The second dismaying feature is one we had already identified in the second tenure of the United Progressive Alliance: a persistent academia-industry disconnect, the subject of a report N.R. Narayana Murthy wrote for us more than a decade ago that is sadly gathering dust. Indian academia, despite producing millions of highly skilled graduates, often operates in a silo. Research is frequently theoretical and disconnected from the immediate, market-driven needs of the industry. The mechanisms for technology transfer, commercialisation of research, and joint industry-academia projects remain underdeveloped. Nor do Indian companies look to the world of academia for help. In the U.S., companies commonly bring ideas to universities and give grants for student researchers to develop them into marketable innovations. There is no such culture in India. This gulf prevents valuable research from crossing the "valley of death" between the laboratory and the marketplace.

And there is no escaping the brain drain. While India produces a vast number of PhDs and engineers, the most ambitious and the talented often seek better infrastructure, funding, and career progression opportunities abroad. The domestic R&D environment struggles to attract and retain world-class researchers due to limited high-end research facilities and lower salary benchmarks compared to the rest of the world. The allocation of public R&D funds is often constrained by slow bureaucratic processes.

Project approval times can be excessively long, and the release of funds is frequently staggered and unpredictable, impeding the smooth execution of ambitious, long-term research programmes.

What, then, is the path forward?
The goal of building comprehensive tech and economic muscle, worthy of a "Viksit Bharat", is not a sprint but a marathon. To achieve it, India must engineer a fundamental shift in its approach. The most immediate and critical step is to raise the R&D expenditure to GDP ratio to at least 2% within the next five to seven years. This requires a massive public spending commitment, coupled with substantial tax incentives and grants to encourage the private sector to ramp up its contribution to at least 50% of the total R&D spend. The launch of the ₹1 lakh crore Research, Development and Innovation (RDI) Fund by the government is a step in the right direction, provided it is disbursed efficiently and targeted towards frontier technologies.

An ambitious India needs to move away from scattered research efforts and focus on national missions in strategic, high-value domains: semiconductors, artificial intelligence (AI), quantum computing, advanced materials and green energy. These missions require long-term, uninterrupted funding and clear, measurable outcomes tied to national security and economic sovereignty.

Universities and research
And there is no escaping India's obligation to reform higher education. Universities must transition from being purely teaching institutions to also becoming centres of excellence in research. This involves significantly boosting funding for PhD programmes, creating competitive research faculty positions, and building world-class research infrastructure. Furthermore, mandatory and structured mechanisms for industry-sponsored research chairs and joint incubation centres must be established to bridge the academia-industry gap. India must also inculcate a robust intellectual property culture in the country. This means simplifying patent filing processes, strengthening enforcement, and creating attractive financial incentives for inventors (both academic and corporate) whose patents are commercialised. India possesses the intellectual capital and the aspiration to become a global innovation leader. However, the current deficit in R&D investment – so glaringly exposed by the comparison to a single company such as Huawei – cannot sustain this ambition. The next decade must be dedicated to creating the structural, financial and cultural foundations for innovation. If these fundamental changes are not executed with political will and unwavering commitment, the goal of Viksit Bharat will recede well beyond 2047.

○ However, resident patents per million population are very low, reflecting weak domestic innovation culture.

● **Government Dominates R&D Funding**
○ Around 63.6% of R&D funding comes from the government, unlike developed economies where industry leads.

○ Excessive public dependence reduces market-driven and applied research outcomes.

● **Weak Private Sector Participation**
○ Indian industry prefers technology imports, licensing, and incremental improvements over risky original research.

○ Absence of long-term vision in corporate R&D investment.

● **Academia-Industry Disconnect**
○ Universities focus largely on theoretical research, while industry needs market-ready solutions.

○ Poor technology transfer mechanisms create the "valley of death" between lab and market.

● **Brain Drain**
○ Talented researchers migrate abroad due to better infrastructure, funding, and career prospects.

○ Weakens domestic research leadership and innovation continuity.

● **Administrative Bottlenecks**
○ Slow approvals, fragmented funding, and unpredictable disbursement delay research outcomes.

KEY HIGHLIGHTS

Context of the News

- India aims to become a Viksit Bharat by 2047, which requires strong technological and innovation capacity.
- Recent data highlights a persistent gap between India's economic growth and its R&D performance.
- Despite demographic advantage, India's research output, patent intensity, and R&D spending remain weak.
- Comparison with global economies and even single multinational firms exposes structural weaknesses in India's innovation ecosystem.

Key Points

- Low R&D Spending
 - India spends 0.6–0.7% of GDP on R&D, far below global innovation leaders.
 - Low spending limits frontier research, deep-tech innovation, and strategic autonomy.
- Mismatch Between Population and Research Output
 - India has ~17.5% of the world's population but only ~3% of global research output.
 - Indicates poor conversion of human capital into knowledge capital.
- Patent Data Shows Quantity Without Depth
 - India ranks 6th globally in total patent filings, showing growth momentum.

Static Linkages

- Innovation as a determinant of long-term economic growth
- Role of R&D in productivity enhancement
- Market failure justifying state support in research
- Importance of intellectual property rights in knowledge economies
- Link between science & technology and national security

Critical Analysis

Strengths / Opportunities

- Large pool of engineers, scientists, and STEM graduates
- Rapid growth in patent filings shows latent innovation potential
- Creation of ₹1 lakh crore RDI Fund indicates policy seriousness

Weaknesses / Challenges

- Underinvestment restricts cutting-edge research and global competitiveness
- Risk-averse private sector limits disruptive innovation
- Poor academia–industry linkage reduces commercialisation
- Brain drain erodes returns on public investment in education

Ethical / Governance Dimension

- Inefficient utilisation of public funds undermines intergenerational equity
- Innovation deficit threatens economic sovereignty and strategic autonomy

Way Forward

- Increase R&D spending to at least 2% of GDP within 5–7 years
- Raise private sector share to 50%+ using tax incentives and co-funding
- Launch mission-mode R&D programmes in AI, semiconductors, quantum, green energy
- Convert universities into research-intensive institutions
- Institutionalise industry-funded research chairs and joint labs
- Simplify patent processes and incentivise commercialisation of IP
- Streamline approvals and ensure predictable, timely fund release

Linked civilisations, a modern strategic partnership

Relations between Iran and India transcend the boundaries of conventional diplomacy. They represent an ongoing dialogue between two ancient civilisations that emerged from a shared cultural womb at the dawn of human history. Long before the Aryan tribes divided – one settling on the Iranian plateau and the other in the fertile plains of the Indus and Ganges – they spoke related languages, worshipped through similar myths, and held a common worldview.

The profound resemblance between the Avesta and the Rigveda stands as clear testimony to this shared origin. Through centuries of political change, this civilizational affinity has nurtured a deep reservoir of trust and cultural understanding – never completely severed despite periods of distance and turmoil.

Nowhere is this historical bond more vividly reflected than in the enduring presence of Persian in the Indian subcontinent. India embraced Persian for centuries – not merely as a language, but as a vessel of art, diplomacy and poetry. This cultural hospitality gave rise to the luminous “Indian Style” (Sabk-e Hendi) in Persian literature, shaped by the imagination and creativity of Indo-Persian poets. Among them, Mirza Abdul-Qadir Bedil Dehlavi shines as the most illustrious figure – a poet whose philosophical depth and boundless imagination expanded the horizons of Persian poetry and continues to inspire scholars and writers across generations.

The modern drivers of ties

In today's world, nostalgia alone cannot sustain bilateral relations. Fortunately, the evolving geopolitical environment and economic needs



Mohammad Fathali

is Ambassador of the Islamic Republic of Iran in India

A revitalised partnership between Iran and India will aid economic partnership and ensure stability in West Asia

have drawn Tehran and New Delhi closer than ever. As the global order tilts toward multipolarity, the Iran-India axis is positioned to assume a strategic role in shaping regional stability and economic architecture.

Energy security remains a central pillar. India, one of the fastest-growing economies globally, continues to rely significantly on oil and gas to fuel its industries. With extensive hydrocarbon reserves, Iran stands as a natural partner in securing India's long-term energy needs.

Perhaps the most consequential arena of cooperation is transport and connectivity. India's participation in the development of the Chabahar Port signals the strategic weight both nations attach to this maritime gateway. Complementing this, Iran forms a vital link in the International North-South Transport Corridor (INSTC) – a multimodal route connecting India to Russia and Northern Europe through Iran. This corridor is approximately 40% shorter and 30% more cost-efficient when compared to the traditional Suez Canal route, granting both countries a competitive advantage in Eurasian trade.

Security and technology

Beyond commerce, Iran and India share mutual concerns regarding regional security. The rise of extremism and terrorism in West and South Asia threatens both nations, making intelligence cooperation a discreet yet essential foundation of bilateral ties.

Challenges remain. Historically, third-party pressures have influenced the trajectory of relations. Yet, India has often navigated these complexities by prioritising its national interest with strategic prudence. In an era marked by shifting power centres and the rise of Asia, it is

imperative for both countries to strengthen flexible financial mechanisms – such as trade through local currencies – to reduce vulnerability to external constraints.

The future demands diversification beyond traditional oil trade. Cooperation in knowledge-based industries, information technology – where India holds significant comparative advantage – and in nanotechnology and the medical sciences (fields in which Iran has made remarkable progress), can open new horizons of economic partnership.

Such collaboration can transform the relationship from transactional to innovation-driven, benefiting both societies.

A shared future built on an ancient past

Iran and India may rightly be described as one soul in two bodies – united by history, enriched by culture, and positioned by geography to complement one another. If the Silk Road and Persian language once formed the bridge between them, today, energy cooperation, counterterrorism and strategic transit connectivity serve as the new pillars of partnership.

As the two nations mark the 75th anniversary of diplomatic relations, the moment is ripe for Tehran and New Delhi to transform historical goodwill into a bold, forward-looking alliance. A revitalised partnership will not only enhance the prosperity of their peoples but also anchor stability in the turbulent landscape of West Asia.

The time has come for Iran and India, guided by their shared legacy and mutual interests, to design a future that is collaborative, resilient, and independent, echoing the ancient symphony of civilisations that still binds them today.

KEY HIGHLIGHTS

Context of the News

- India and Iran mark 75 years of diplomatic relations amid a shifting multipolar global order.
- Renewed focus on connectivity, energy security, and regional stability.
- Strategic importance of Chabahar Port and India's role in the International North-South Transport Corridor.
- Relationship anchored in deep civilizational and cultural ties dating back to Indo-Iranian origins.

Key Points

- Civilizational Link: Common linguistic and cultural roots (Avesta-Rigveda; Persian influence in India).
- Cultural Continuity: Persian as a language of administration and literature in India; Sabk-e-Hendi tradition.
- Energy Security: Iran's hydrocarbons complement India's rising energy demand.
- Connectivity:
 - Chabahar enables access to Afghanistan & Central Asia, bypassing Pakistan.
 - INSTC is ~40% shorter and ~30% cheaper than the Suez route (Economic Survey).
- Security: Shared concerns on terrorism and regional instability.
- Future Sectors: IT, pharmaceuticals, nanotechnology, medical sciences.

Static Linkages

- Ancient Silk Route trade between India and West/Central Asia.
- Cultural synthesis under medieval Indian states through Persian language.

- India's doctrine of strategic autonomy in foreign policy.
- Multimodal corridors as tools of regional integration.

Critical Analysis

Strengths

- Enhances India's Eurasian connectivity and energy diversification.
- Converts historical goodwill into strategic leverage.

Challenges

- External sanctions and geopolitical pressures.
- Slow project execution and limited trade diversification.

Way Forward

- Promote local-currency trade mechanisms.
- Fast-track Chabahar-INSTC operationalisation.
- Diversify cooperation into knowledge and technology sectors.
- Strengthen cultural and academic exchanges.

Sham election

Myanmar's junta's search for legitimacy through controlled polls is futile

The core of electoral democracy is the institution of popular will through representation. When elections are merely held to subvert this will by imposing favoured candidates, they are clearly a sham. Such is the case with Myanmar's three-phase elections being conducted by the junta nearly five years after it upended a democratically elected government and precipitated a raging civil war. Sunday marked the first phase in 102 townships, with the subsequent phases on January 11 (100 townships) and January 25 (63 townships). The junta controls barely half the country's townships, with elections being skipped in at least 65 areas. None of the major parties from the 2020 elections is participating, including the winner, the National League for Democracy (NLD) led by imprisoned leader Daw Aung San Suu Kyi. Only the Union Solidarity and Development Party (USDP), stuffed with former junta figures, is a force. This reminds one of the 2010 elections under the 2008 constitution which the NLD boycotted and which the USDP swept. But the situation is worse now, with the junta bombing and killing thousands of citizens for five years. It also faced its strongest challenge since the early 1960s as ethnic armed organisations and the NLD-affiliated People's Defence Forces (PDF), loyal to the opposition National Unity Government formed by NLD exiles, won control of significant territory. By late-2023, this coalition, armed with Chinese weapons, dealt the biggest blow through the Three Brotherhood Alliance (TBA) in Shan State and Rakhine, seizing townships along the China border.

The junta, sustained by Russian and Belarusian weaponry, was on the back foot until China changed tack in 2025, prioritising its geo-economic interests, particularly access to the Indian Ocean. Beijing pressured the TBA to cease hostilities and return control to the junta, which two groups reluctantly did earlier this year. This shift, as well as the lack of centralised command among Bamar-dominated PDFs and other ethnic insurgent groups, have allowed the junta to regain lost territory. Yet, the junta faces pitched battles across Rakhine, Karenni, Karen, Chin States and the Sagaing Region where it has only nominal control. Only China, Russia and Belarus have endorsed these "elections", and reports from Myanmar's capital and junta-controlled areas suggest participation to be far lower than in 2020. For now, the junta seeks legitimacy as it has gained a semblance of control or managed a bloody stalemate in the civil war. The military, led by tinpot leader Min Aung Hlaing, will retain its constitutionally enshrined 25% non-elected quota of legislative seats, ensuring army dominance regardless of results. But if history is a guide, farcical elections will not win popular support and Myanmar must brace for more conflict.

KEY HIGHLIGHTS

Context of the News

- Myanmar's military junta has initiated three-phase elections nearly five years after the February 2021 coup that overturned a democratically elected government.
- The polls are scheduled across 265 townships in phases, while elections are cancelled in at least 65 townships due to lack of control.
- Major political forces from the 2020 elections, including the National League for Democracy (NLD), are absent or banned; its leader Daw Aung San Suu Kyi remains imprisoned.
- The elections are being conducted amid an ongoing civil war, widespread violence, and fragmented territorial control.
- International endorsement is limited largely to China, Russia and Belarus, raising questions over legitimacy.

Key Points

- The Union Solidarity and Development Party (USDP), linked to former military leaders, is the only significant participant.
- The junta controls barely half of Myanmar's territory, with active conflict in Rakhine, Chin, Karen, Karenni States and Sagaing Region.
- Ethnic Armed Organisations (EAOs) and People's Defence Forces (PDFs) aligned with the National Unity Government (NUG) have captured substantial areas since 2023.
- The Three Brotherhood Alliance (TBA) inflicted major losses on the junta in Shan and Rakhine, before Chinese mediation in 2025 forced partial de-escalation.
- Under the 2008 Constitution, the military retains 25% of parliamentary seats, vetoing any constitutional reform.
- Voter participation is reportedly much lower than the 2020 elections, reflecting public disillusionment.

Static Linkages

- Military-drafted constitutions and controlled democracies (comparative politics).
- Role of armed forces in politics and civil-military relations.
- Federalism and ethnic diversity in multi-ethnic states.
- Legitimacy vs legality in political theory.
- External intervention and geopolitics in internal conflicts.

Critical Analysis

- Democratic deficit: Elections without opposition participation negate popular sovereignty.
- Constitutional entrenchment of military power ensures continued dominance irrespective of outcomes.
- Humanitarian costs: Prolonged conflict has led to civilian casualties, displacement and economic collapse.
- Fragmented opposition: Lack of unified command among PDFs and EAOs weakens resistance.
- External influence: China's strategic interests (Indian Ocean access, border stability) have altered conflict dynamics.
- Regional implications: Instability affects ASEAN credibility and India's neighbourhood security.

Way Forward

- Push for inclusive political dialogue involving NLD, NUG, EAOs and civil society.
- International mediation under ASEAN-led or UN-supported frameworks with enforceable timelines.
- Gradual move towards federal democratic restructuring addressing ethnic aspirations.
- Humanitarian corridors insulated from political and military interference.
- Coordinated global pressure linking recognition and aid to credible democratic transition.

Tamil Nadu needs to think beyond the metro

Last month, Tamil Nadu Chief Minister M.K. Stalin criticised the Union government for denying metro rail projects to Coimbatore and Madurai. This created some political controversy and also sparked a wave of urban aspiration. For many people, glitzy metros have become a sign of development and modernity. The absence of metros feels like a slight; their approval, a stamp of urban arrival.

But we need to step back and ask a crucial question: do cities like Madurai and Coimbatore actually need metro rail systems? Or has the metro become an elite-driven aspiration that is fundamentally misaligned with how Indian cities move and live?

Metro: not a mobility solution India's obsession with metros is relatively new but powerful. Over the past 15 years, metros have consumed nearly 40% of all urban development funds, becoming the single largest item in the urban budget. And yet, their contribution to mobility remains surprisingly limited. In most metro cities, only 5-12% of daily trips are made on the metro. The overwhelming majority of people still walk, cycle, or take buses and small para-transit modes.

This gap arises from the mismatch between metro systems and the pattern of everyday mobility in India. Nearly 90% of India's urban workforce is informal, and the average daily commute for most workers is just 4-5 kilometres. These are short, dense journeys. They do not require high-speed, capital-intensive corridors designed for long-distance travel. Metros therefore do not serve the functional needs of the majority; they serve the elite imagination of a "world-class" city.

Tamil Nadu is one of India's most urbanised States. The middle class is rapidly rising and so is an aspiring elite. With this comes a new visual language of development: gleaming airports,



Tikender Singh Panwar
Former Deputy Mayor of Shimla and currently a member of the Kerala Urban Commission

skywalks, elevated corridors and, invariably, metro lines. But elite desire is not a substitute for public need. Globally, cities comparable to Madurai or Coimbatore – medium-density, mixed use, and compact – do not rely on metro systems. The successful examples are buses, surface-level rapid transit, cycling highways, pedestrian-first planning, and integrated feeder systems.

Singapore and Dubai, the frequently cited models, are not comparable in scale, governance, land control, or economic structure. Their metros work because their entire urban systems are shaped around them. Indian cities cannot simply copy-paste such models.

Metros are also extremely expensive. A metro costs ₹300 crore-900 crore per kilometre, depending on whether it is elevated or underground. Operating costs are equally steep. Almost no Indian metro recovers its costs through fares. Massive public subsidies keep them afloat. For cities like Coimbatore and Madurai, metro systems would mean decades of financial strain – diverting scarce funds away from schools, water supply, local roads, housing, public health, and basic neighbourhood infrastructure. To interpret the lack of metro allocation as a lack of development is to miss the real opportunity: freedom from a financially draining model.

Madurai's radial street system and Coimbatore's industrial neighbourhood clusters are inherently walkable and compact. The majority of workers move within short neighbourhood loops. Imposing metro systems onto such cities disrupts their organic form. What they need instead is a high-frequency electric buses, dedicated bus lanes on major corridors, shaded pedestrian networks, protected cycle tracks, better-integrated autos and share mobility, and neighbourhood-level last-mile systems. These are quick to build, cheaper, and beneficial.

Cities that redefined urban mobility in the last 30 years – Curitiba, Bogotá, Copenhagen, Freiburg, Medellín – did not rely on metros alone. Many, in fact, did not build metros at all. They invested in Bus Rapid Transit that moves more people per rupee than any metro; cycling super-highways; walkable neighbourhoods; hill connectivity via ropeways; multimodal integration rather than a single grand system. Modern mobility should not be defined by the scale of infrastructure, but by access, affordability, and last-mile connectivity and quality. India's own mobility patterns mirror these best practices far more than the metro-dominated model.

Tamil Nadu's opportunity Mr. Stalin's disappointment at being denied metro projects for Madurai and Coimbatore is understandable from a political point of view. But it also inadvertently gives Tamil Nadu an opportunity to reimagine Coimbatore with a grid of fast, frequent electric buses, connected to industrial clusters; Madurai with pedestrian-first temple circuits, cycle highways, and seamlessly integrated shared autos; and cities where neighbourhoods are built as 15-minute communities, where work, school, healthcare, and markets lie within short walking or cycling distance. These constitute modern, climate-sensitive, affordable, and socially inclusive infrastructure. They match how people actually move. And most important, they won't bankrupt cities.

Tamil Nadu must resist the pressure of equating development and modernity with metros. Instead, it should craft mobility systems that reflect the realities of its workers, the densities of its neighbourhoods, and the constraints of its municipal finances. If Tamil Nadu dares to think beyond the metro, it could set a new template for the rest of the country.

- Medium-density, compact cities with mixed land use show higher efficiency with buses, walking, and cycling than with heavy rail systems.

Static Linkages

- Urban transport hierarchy prioritises walk → cycle → bus → rail, as emphasised in sustainable urban planning frameworks.
- Cost-benefit analysis in public finance stresses marginal social returns per rupee spent, especially in municipal investments.
- Transit-oriented development requires high population density and structured land-use control, often absent in Indian cities.
- Sustainable development principles emphasise access, affordability, and inclusivity, not merely infrastructure scale.

Critical Analysis

Advantages of Metro Expansion

- High-capacity, low-emission transport on dense corridors
- Long-term reduction in private vehicle use where conditions suit
- Potential catalyst for planned urban densification

Limitations and Challenges

- Misalignment with short-distance, informal commuting patterns
- Financial stress on state and urban local bodies due to subsidies
- Crowding out of investment in basic services like water, housing, and health
- Disruption of organic urban form in compact cities
- Elite-driven infrastructure preferences overshadowing mass mobility needs

Stakeholder Dimensions

- Urban poor and informal workers gain limited direct benefits
- Middle-class aspiration shapes political demand
- Municipal finances face long-term fiscal pressure

Way Forward

- Prioritise high-frequency electric bus systems with dedicated lanes
- Invest in Bus Rapid Transit (BRT) where corridor demand is moderate
- Strengthen last-mile connectivity through shared and para-transit modes
- Develop pedestrian-first and cycling infrastructure for short trips
- Adopt 15-minute city planning integrating work, services, and housing
- Base approvals on ridership density and fiscal sustainability, not symbolism

KEY HIGHLIGHTS

Context of the News

- The Chief Minister of Tamil Nadu publicly criticised the Union government for not approving metro rail projects for Coimbatore and Madurai, triggering political debate and public aspiration.
- Metro rail has increasingly become a symbolic marker of “urban modernity” rather than a purely functional transport intervention.
- Over the last 15 years, metro projects have absorbed nearly 40% of India’s urban transport capital expenditure, raising questions on opportunity costs.
- The debate highlights a larger policy dilemma: infrastructure symbolism vs mobility efficiency in medium-sized Indian cities.

Key Points

- Metro systems account for only 5–12% of daily urban trips in cities where they operate, despite high capital investment.
- Nearly 90% of India’s urban workforce is informal, with an average commute distance of 4–5 km, favouring surface-level transport.
- Metro construction costs range between ₹300–900 crore per km, depending on elevation or underground alignment.
- Most Indian metro systems do not recover operational costs through fares, requiring continuous state subsidies.

At year's end, robust growth, signs that economy weathered the storms

FOR THE Indian economy, 2025 was a Goldilocks phase with three major surprises. The first was robust GDP growth. Coming in at an impressive 7.4 per cent and 8.2 per cent in the first and second quarters of the current fiscal year, respectively, it surpassed expectations, leading to anxious stakeholders revising their forecasts upward.

The second surprise was sprung by inflation coming in lower than expected. Retail inflation dropped to 0.3 per cent in October, the lowest since fiscal 2012. Excluding gold, headline inflation is in the negative zone.

The third was the muted impact of the high tariffs imposed by the US on the global economy, India and the US itself. Elevated tariffs and record-high uncertainty had a severe impact than anticipated on global growth, which the International Monetary Fund revised up by 40 basis points to 3.2 per cent for 2025.

Consequently, forecasts for the Indian economy's growth have been revised upwards and for inflation, downwards. We have raised our GDP growth forecast for this fiscal by 50 bps to 7 per cent and expect inflation to average just 2.5 per cent. Global growth turned out stronger than expected.

As the year progressed, the narrative shifted from concerns about downside risks due to tariff uncertainty to optimism driven by massive investments in the artificial intelligence (AI) ecosystem, particularly in the US.

The AI boom in the US also benefited several Asian and European economies by

driving up their exports of high-tech hardware and related services to the US. This, together with frontloading of exports before the new tariff rollout, led the World Trade Organisation to revise its world merchandise trade volume growth for 2025 to 2.4 per cent from 0.9 per cent.

However, capital inflows into India were volatile. The rupee depreciated sharply and was the worst-performing currency among emerging market economies. Net foreign institutional investments were negative in equities and muted in debt instruments, and foreign direct investment remained subdued during the first eight months of the fiscal. This stress can be seen as a function of external shocks and domestic vulnerability. While India's vulnerability is relatively low, it faced among the highest tariffs from the US, which weighed on investor sentiment.

During the taper tantrum in fiscal 2013, domestic vulnerability was elevated, amid high current account deficit (4.8 per cent of GDP), fiscal deficit (4.8 per cent of GDP) and retail inflation (9.9 per cent), and low GDP growth (5.5 per cent). India was then a part of the "fragile five".

In fiscal 2025, all these parameters remain healthy, and India is primarily experiencing stress on the capital account. The US has been the key recipient of FDI, feeding into the AI boom, whereas the Indian markets faced valuation concerns. Consequently, the net capital inflows into India have been



DHARMAKIRTI JOSHI

insufficient to finance the current account deficit below 1 per cent of GDP. A dose of good fortune came from a favourable monsoon and low crude oil prices — factors beyond the country's control — that supported growth this fiscal. Additionally, proactive cyclical policies played a key role in activating domestic growth triggers and managing external risks from tariffs.

The dominant impact was from fiscal policy in the first half of the year. Government capital expenditure (capex) was frontloaded, and the mid-year rationalisation of the Goods and Services Tax rates complemented income tax reductions announced in the budget. Direct benefit transfers to women, which are estimated at upwards of Rs 2 lakh crore, also supported consumption.

On the monetary front, the RBI's Monetary Policy Committee cut the repo rate by a cumulative 125 bps in calendar year 2025. It also announced a 100-bps cut in the cash reserve ratio, as well as regulatory easing and open market operations to improve transmission, facilitate bank lending and stabilise bond markets. We expect GDP growth of 6.7 per cent and inflation at 5 per cent, largely driven by the low base effect, in fiscal 2027.

Tax collections should improve as nominal GDP growth picks up on the back of robust real growth and a moderate increase in inflation. However, the government's ability to invest will be constrained by the need for fiscal prudence.

There are encouraging signs of a belated pick-up in private corporate capex, which we will closely monitor. It is worth pointing out that the nature of private investment is also undergoing a change. We estimate that over fiscals 2026 to 2030, the production-linked incentive scheme and emerging sectors combined are set to account for a quarter of the country's capex, up from 12 per cent in fiscals 2021-2025. Data centres serve as a prime example in this context. With several technology multinationals committing to investments in India's data centre, cloud and AI ecosystem, this segment is likely to witness robust growth and sustained investment in the medium term.

The scope for further policy rate cuts this fiscal is limited, but transmission of the already announced cuts will continue to support the economy, as monetary policy effects typically operate with a lag. The government is pushing ahead with domestic reforms, including deregulation, to improve the business climate and enhance the economy's growth potential. This should support the initial signs of a lift in private investment.

We expect foreign capital inflows to recover next year and strengthen the rupee. There are signs of a pick-up in FDI with global tech majors announcing big investment plans for India. Reaching a trade agreement with the US is expected to reduce uncertainty and improve confidence, encouraging capital inflows into India.

The writer is Chief Economist, Crisil Limited

- DBT to women (~₹2 lakh crore) supported consumption.
- External Sector
 - India faced high US tariff exposure, dampening investor sentiment.
 - FPIs negative in equities, FDI subdued in early FY25.
 - CAD <1% of GDP, but capital inflows insufficient.
- Investment Trends
 - PLI and emerging sectors expected to form ~25% of capex (FY26-30).
 - Data centres, AI, cloud infrastructure emerging as key private investment drivers.

KEY HIGHLIGHTS

Context of the News

- Indian economy in FY 2024-25 delivered three positive surprises: strong growth, ultra-low inflation, and resilience to global tariff shocks.
- GDP growth recorded 7.4% (Q1) and 8.2% (Q2), leading to upward revisions for the full year.
- Retail inflation fell to 0.3% (Oct 2024)—lowest since FY2012; inflation excluding gold turned negative.
- Despite high US tariffs, global growth remained resilient, driven by AI-led investment momentum.
- India faced capital flow volatility, rupee depreciation, and weak FDI despite sound macro fundamentals.
- Fiscal and monetary policy coordination cushioned external shocks and sustained domestic demand.

Key Points

- Global Environment
 - International Monetary Fund revised 2025 global growth to 3.2% (+40 bps).
 - World Trade Organization raised 2025 merchandise trade growth to 2.4%.
- Inflation & Monetary Policy
 - Average inflation projected at ~2.5% (FY25) due to food moderation and base effects.
 - Reserve Bank of India cut repo rate by 125 bps (CY2025).
 - CRR reduced by 100 bps; OMOs and regulatory easing improved liquidity and transmission.
- Fiscal Policy
 - Front-loaded public capex boosted growth multipliers.
 - GST rationalisation + income tax relief improved household demand.

Static Linkages

- Counter-cyclical fiscal and monetary policy
- Inflation targeting and MPC framework
- Capital account vs current account dynamics
- Public capex crowding-in private investment
- Industrial policy and structural transformation

Critical Analysis

Strengths

- High growth with low inflation signals macro stability.
- Proactive fiscal push mitigated global uncertainty.
- Structural shift towards tech-led private investment.

Concerns

- Capital account stress despite strong fundamentals.
- Dependence on favourable monsoon and low crude prices.
- Limited future fiscal space due to consolidation needs.

Way Forward

- Fast-track India-US trade agreement to reduce tariff uncertainty.
- Deepen deregulation and ease of doing business reforms.
- Improve quality and stability of capital inflows.
- Sustain capex while maintaining fiscal prudence.
- Strengthen monetary transmission to productive sectors.

Political funding needs reform to protect democratic competition



ANIL VERMA
AND SHELLY
MAHAJAN

UNEQUAL ACCESS to private donations undermines political equality and distorts electoral competition. In India, financial disparities between political parties skew the level playing field, allowing better-resourced parties to dominate campaigns and influence outcomes. Despite decades of reform proposals, the nexus between money and politics persists due to weak enforcement, inadequate regulation, and a lack of political will.

Before the introduction of electoral bonds, ruled unconstitutional by the Supreme Court last year, corporates made donations to political parties either directly or through electoral trusts.

Between the financial years (FY) 2013-14 and 2023-24, direct corporate donations declared by the incumbent BJP are at least four times more than all other national parties combined, and its overall share is 84.648 per cent. In the case of electoral trusts, the BJP received six times more funds and 71.665 per cent of the total share.

The Electoral Trust Scheme was introduced by the UPA government in 2013. Among the top ten trusts, Prudent Electoral Trust received the highest donations of Rs 33,30,537 crore, 86.38 per cent of the total contributions declared by all trusts between FY 2013-14 and 2023-24. During this period, 75 per cent of the donations disclosed by the trust were made to the BJP. In FY 2024-25, the trust declared receiving the largest donations of Rs 2,668,4917 crore. It donated Rs 2180,7119 crore to the BJP and Rs 216.335 crore to the Congress.

Thus, not only are the funds contributed to electoral trusts dominated by one particular trust, but the funds disbursed from these trusts favour the incumbent party.

While trusts are relatively more transparent than the electoral bonds scheme, the information regarding the method of disbursement of funds is not publicly available and is likely left to their discretion. The companies that have donated to these trusts and the beneficiary parties are known through the regular filing of reports. However, what is not known to the public is which party benefited from which company. Only the Election Commission and the Income Tax department know this since the introduction of the

transparency guidelines in 2014, which required trusts to disclose the records of their donors or donees to them. For greater transparency, the names of electoral trusts should indicate the name of the company/group of companies that set up the trusts.

At present, political funding in India relies largely on corporates that donate directly or through Electoral Trusts to political parties ruling at the Centre or state level. There seems to be a quid pro quo between corporates and such parties. As far as other parties are concerned, there is no level-playing field. The five-judge constitution bench of the Supreme Court in the electoral bonds case called quid pro quo an instance of institutionalised corruption. In paragraph 212, it added that "contributions made by companies are purely business transactions made with the intent of securing benefits in return".

The Constituent Assembly in 1948 argued in favour of the need for the state/public treasury to bear election expenditure in a regulated, least expensive and organised manner. They reasoned that an election is a state affair, not a private concern, and any unfair advantage to richer candidates must be avoided.

Several committee reports and experts have recommended public funding in India, subject to reforms such as internal party democracy, financial transparency, bringing parties under the Right to Information, and restricting private donations. However, the ban on corporate donations in the 1960s was followed by the consolidation of an opaque, corrupt political finance regime in which political favours were traded for donations, popularly referred to as "briefcase politics".

Hence, any future political finance framework must address disparities in access to funds, excessive concentration of economic power, and corruption arising from illegitimate funding sources.

Reducing financial entry barriers for political participation, diversifying funding sources, and ensuring transparency are essential to protect democratic competition. Without meaningful reform, it is ultimately citizens who bear the hidden costs of an unequal and distorted democracy.

Verma is a major general (ret'd) and the head of ADR. Mahajan is Program and Research Manager (Political Party Watch), ADR

While trusts are relatively more transparent than the electoral bonds scheme, the information regarding the method of disbursement of funds is not publicly available and is likely left to their discretion

KEY HIGHLIGHTS

Context of the News

- The Supreme Court struck down the Electoral Bonds Scheme (2018) as unconstitutional, citing violation of voter's right to information and institutionalisation of quid pro quo.
- Post-judgment scrutiny of corporate donations and Electoral Trusts reveals severe asymmetry in political funding across parties.
- Data from Association for Democratic Reforms (ADR) and Election Commission filings highlight extreme concentration of donations favouring the ruling party.
- The issue has revived debates on political equality, democratic fairness, and public funding of elections in India.

Key Points

- Between FY2013-14 and FY2023-24, direct corporate donations to the ruling party were four times that of all other national parties combined.
- The ruling party's share of total direct corporate donations stood at 84.65%.
- Electoral Trust contributions show even higher skew: 71.67% of total trust donations went to the ruling party.

- Prudent Electoral Trust alone accounted for 86.38% of all trust contributions during this period.
- About 75% of Prudent Trust's donations were routed to the ruling party.
- In FY2024-25, the trust received ₹2,668.49 crore and donated over ₹2,180 crore to the ruling party.
- While trusts disclose donors and beneficiaries separately, company-wise party allocation is not public, limiting transparency.
- Regulatory oversight is confined to the Election Commission of India and the Income Tax Department.

Static Linkages

- Free and fair elections as part of the basic structure doctrine (Kesavananda Bharati case).
- Political equality as an element of Article 14 and democratic participation.
- Role of money power discussed in NCERT Indian Polity (Class XI–XII) under electoral reforms.
- Constituent Assembly Debates (1948) supported state-regulated election expenditure.
- 2nd Administrative Reforms Commission (ARC) recommendations on political finance reforms.

Critical Analysis

- Pros: Electoral Trusts are relatively more transparent than electoral bonds.
- Concerns:
 - Severe funding asymmetry undermines level playing field.
 - Corporate donations create policy capture and quid pro quo.
 - Supreme Court termed such funding as institutionalised corruption.
- Impact: Weakens democratic competition; disadvantages smaller parties.

Way Forward

- Introduce partial public funding of elections.
- Bring political parties under RTI Act.
- Mandatory public disclosure of donor-party mapping.
- Cap corporate donations and diversify funding sources.
- Strengthen Election Commission's regulatory powers.

SC has role in clean-up, not in GST on purifiers

THERE HAVE been occasions when courts in India appeared to overstep into the domain of the legislature or the executive. These instances of what seems to be judicial overreach have sparked concern — in fact, this concern has also been articulated by the court. However well-intentioned the court's interventions may be, in a constitutional system that enshrines the principle of separation of powers as part of its basic structure, they run the risk of unsettling a delicate balance. In this context, the Delhi High Court's recent intervention in the matter of taxes on air purifiers veers into the legislative domain.

Last week, intervening in a PIL seeking GST reduction on air purifiers from 18 per cent to 5 per cent, the Delhi High Court asked why "GST at 5 per cent cannot be provided" for air purifiers and HEPA filters by categorising them as "medical devices". In fact, it went a step further, and reportedly urged the GST Council to meet at the earliest, perhaps virtually, to examine the issue. There can be no denying that the issue of air pollution is of urgent public importance, and that governments, at both the Centre and the states, need to be nudged to take action. But, as the Centre has also pointed out, by entertaining the petition, the court risks short-circuiting the due legislative process. Decisions regarding the GST rates and slabs are taken by the GST Council — a constitutional body that comprises the Centre and states. The Council's decisions require a three-fourth majority. So, for the GST rates on air purifiers to be lowered, neither the Centre alone, nor only the states — and certainly not the courts — can decide.

Pollution in India is indeed a public health emergency. The apex court has time and again pushed the executive to accelerate environment reforms. That impetus is needed more than ever and, in that context, the court's decision to revisit the Aravalli case is very welcome. Lowering taxes on air purifiers may make them more accessible but that's not a call for the court to take. Also, the state cannot abdicate its responsibility by simply lowering taxes on air purifiers and putting the onus on individuals to ensure clean air in private spaces. A carefully thought through long-term strategy is required to tackle the issue of air pollution. Of course, the court has a pivotal role in it but that doesn't include deciding GST rates.

KEY HIGHLIGHTS

Context of the News

- A PIL sought reduction of GST on air purifiers from 18% to 5%.
- Delhi High Court questioned why air purifiers and HEPA filters cannot be classified as medical devices.
- The Court reportedly urged the GST Council to examine the issue urgently.
- The Union government opposed the plea citing constitutional limits on judicial action.
- The issue raises concerns over judicial overreach amid India's air pollution crisis.

Key Points

- GST rate decisions fall exclusively under Article 279A.
- GST Council decisions require a three-fourths weighted majority.
- Air purifiers are taxed at 18% as consumer goods.
- Medical devices attract 5% GST.
- Courts lack mandate to determine or recommend tax rates.
- Air pollution impacts the Right to Life under Article 21.

Static Linkages

- Separation of Powers
- Basic Structure doctrine
- Fiscal and cooperative federalism
- Judicial review vs overreach
- Constitutional status of GST Council
- Environmental jurisprudence under Article 21

Critical Analysis

Merits

- Highlights urgency of air pollution as a public health emergency.
- Judicial nudging has historically improved environmental compliance.

Concerns

- Taxation is a legislative-executive function.
- Judicial intervention risks violating separation of powers.
- Undermines cooperative federalism embedded in GST.
- Shifts burden of clean air from State to individuals.

Way Forward

- Respect constitutional boundaries of institutions.
- Tackle pollution through source-based regulation, not consumer devices.
- Strengthen National Clean Air Programme implementation.
- Any GST rationalisation should occur through GST Council consensus.
- Increase public investment in clean transport and energy.