A way out

The West Bengal government must enable the changes doctors want to see

After five attempts, the Mamata Banerjee government finally managed to hold talks with protesting junior doctors on September 16. Conceding to most of their demands, which included a call to replace the Kolkata Police Commissioner and several Health Department officials, the Chief Minister urged them to join duty for the sake of the people. Seeking justice for the rape and murder of a colleague on August 9, the doctors have been on a cease work agitation, which, with the support of civil society and other grassroots organisations, has morphed into a people's movement. Besides several 'reclaim the night' marches and other rallies, the doctors have laid siege to Swasthya Bhavan or the Health Secretariat, not calling off the protest even during two days of pelting monsoon rain. People from all across the city have flocked to the site, with water, tents, folding cots, bedding and food. Though senior doctors, nurses and attendants have pitched in with extra hours to help government hospitals, the strain is showing, and there is a clamour for junior doctors to call off the strike. People from the suburbs and districts flock to the top government hospitals in Kolkata and while out patient department footfalls have gradually increased, planned surgeries are still on hold. With about 7,000 to 10,000 junior doctors on strike, the government should have done more to end the impasse earlier.

There is an acute trust deficit between the two sides, and the whiff of a cover-up in the way the rape and murder investigation was handled in the initial stages till the CBI took over, particularly by the hospital administration and also by the government, further alienated the doctors. The former Principal of R.G. Kar Medical College and Hospital, Sandip Ghosh, has since been arrested. But the government has a lot of work to do if it wants to seriously address some of the other demands. It will take time, money and willpower to increase the safety and the security of doctors and end the "threat culture" pervading in government hospitals. The Supreme Court of India, which is hearing the case *suo motu*, was sceptical about the deployment of contractual security personnel in government hospitals and medical colleges, and has pulled up the administration for the slow installation of CCTV cameras. To that end, the State government has told the doctors, and also informed the top court, that it is setting aside ₹100 crore to improve hospital infrastructure, and will form a task force headed by the Chief Secretary with representatives of doctors to sort out issues. To get doctors on her side, the Chief Minister, who holds the Health and Home portfolios, has to walk the talk.

Third front

Israel fighting three militias could imperil the West Asian security situation

Sunday's missile attack on Israel by Yemen's Houthi rebels marked the second breach of Israel's highly fortified skies by Houthi weapons in two months, pointing to the expanding nature of the conflict in West Asia. In July, an Iranian-made drone launched by the Houthis from Yemen, roughly 2,000 km south of Israel, had killed one person and wounded 10 others in Tel Aviv. In retaliation, Israel launched an air strike on Hodeida, a Houthi-controlled Red Sea port in Yemen. But that has done little in deterring the Houthis. Israeli authorities have provided conflicting accounts about Sunday's attack. They first said the missile had landed in central Israel and caused a fire but added later that it had "fragmented mid-air". Another official said it was intercepted, breaking it into parts but not destroying it. Whatever the facts, it should remain a security concern for Israel, which has been fighting a disastrous war in Gaza for over 11 months, and a slow-burning war with Lebanon's Hezbollah in Israel's north, that the Houthis are penetrating its air space. Israel might launch retaliatory strikes on Yemen again, but the question is whether this would deter the Houthis.

The Houthis, who control parts of Yemen, have survived multiple air strikes by foreign powers ever since they captured Sana'a, Yemen's capital, in 2014. A Saudi-led coalition, which backed a rival government in Yemen, declared war against the Houthis in 2015, months after Salman ascended the throne and Mohammed bin Salman became the Defence Minister. But Saudi bombing failed to dislodge the Houthis, which eventually led to a fragile ceasefire between the Houthis and the Saudi-backed government in Yemen. When Hamas attacked Israel on October 7, 2023 and Israel launched its retaliatory invasion, the Houthis "declared war" against Israel, primarily targeting tankers in the Red Sea. In response, a U.S.-led coalition declared an air strike campaign against the Houthis. But months of air strikes led by the U.S. and the U.K. have done little in diminishing Houthi fire power. Israel faces the same dilemma when it comes to tackling the Houthi problem. The Houthis, who have direct Iranian support, are entrenched in Yemen. By taking up the Palestine cause, they are both serving Iran's strategic purpose and consolidating power at home. And the drone and missile attacks on Israel are an indication of what is to come in Israel's unending wars. If Israel went to Gaza to crush Hamas 11 months ago, the Jewish state is now fighting three enemy militias at the same time – Hamas, Hezbollah and Houthis – with no military solution in the offing. This means that unless there is an immediate ceasefire in Gaza, the security situation in West Asia will deteriorate on multiple fronts.

The continuing distribution of the death penalty

Shailesh Kumar

Lecturer in Criminal Law at Royal Holloway, University of London, a Commonwealth Scholar, and an Editorial Board member of the Project39A Criminal Law Blog

The life of the death sentence in India has been unending, and like a phoenix revives itself in different forms every now and then. The latest addition to this is the Aparajita Woman and Child (West Bengal Criminal Laws Amendment) Bill, 2024, adopted by the West Bengal government, the reason being the brutal rape and murder of a doctor at Kolkata's R.G. Kar Medical College and Hospital. It seeks to amend the Bharatiya Nyaya Sanhita, 2023 (BNS), the Bharatiya Nagarik Suraksha Sanhita, 2023 and the Protection of Children from Sexual Offences Act, 2012, in their application to the State of West Bengal. Among other things, it introduces the death penalty for the offence of rape.

While it has been unanimously passed by the Bengal Assembly, the State Governor was critical but has referred it to the President of India Droupadi Murmu for consideration. In the same month of August, there were several such cases in other States with the survivors being Dalit/Adivasi women and children. In 2022 alone, the National Crime Records Bureau recorded 31,516 rapes in India, nearly four each hour, and 248 cases of murder with rape/gang rape. Rajasthan, Uttar Pradesh, and Madhya Pradesh topped the list with 5,399, 3,690, and 3,029 recorded cases of rape, respectively.

Global data

In global figures from Amnesty International, at the end of 2023, nearly three quarters of countries had abolished the death penalty in law or practice: 112 countries had completely abolished the death penalty in law for all crimes, while 144 countries overall had abolished the death penalty in law or practice. But 55 countries still retained the death penalty in law and practice. In South Asia, while Bhutan and Nepal are the only abolitionists for all crimes, the Maldives and Sri Lanka are abolitionists in practice. India, along with Afghanistan, Bangladesh, Pakistan, are the retentionists. Project39A reports that in 2023 alone, India had 120 recorded death sentences. There were no recorded executions, and the number is down from 167 in 2022. Moreover, there were 561 people under the death sentence in India at the end of 2023, a constant rise since 2019, when it was 378. It is also the highest death row population in a calendar year in around two decades.

Most of such death row prisoners spend several years on death row, with some being exonerated later. They have severe physical, psychological and mental health problems and without any state compensation, which suggest grave procedural flaws and perhaps caste, class, and religious biases that pervade different institutions of the Indian criminal justice system and the people who exude power through them. Some of these prisoners commit suicide, signifying the inhuman prison conditions in which they are made to live, including prison overcrowding, as undertrials are mostly from the marginalises communities and left to fend for themselves. They continue to constitute three-fourths of the total number of incarcerated people in India.

> Creating a safer environment for women and children is a complex issue; punishment alone cannot change society

On VAWC and societal responses

Unfortunately, the use of 'decolonisation language' that gave birth to the BNS (replacing the Indian Penal Code), while enabling a few positive changes, has increased the number of offences punishable by death from 12 to 18. India has shifted to a more deterrent regime for sexual offences without any significant change in women's safety and empowerment. A glance at the nature of offences where the death sentence has been given by sessions courts in 2023, shows murder involving sexual offences at the top of the chart (64). Sexual violence against women and children (VAWC), particularly where the victim is killed, most often led to outbursts of public anger, grief, and shock, followed by the demand of capital punishment from certain sections for the rapists, who are often termed as *rakshas, haivaan, wehshi darinda*.

This framing creates an 'othering' – as if the accused is not from the same society that we inhabit – and justifies death for them as a tool for avengement, which also seems to be rooted in India's religious and societal culture that celebrates death (the killing of devils by gods and goddesses). Such calls for 'justice' to victims mostly use the honour of the family, community, and nation, ignoring the victim's autonomy and what they want, which is also reflected in judicial discourse. On the other hand, there is a normalisation and politico-legal tolerance of everyday VAWC by men, including their public flogging, sexual violence, and killing – outside by strangers without any public intervention, and at home by husbands and relatives. Worryingly, searches for victims' videos trend on Google and explicit sites.

The recommendations made by the Justice Verma Committee argued that the death sentence does not necessarily act as a deterrent against crimes such as sexual offences, including gang rapes. However, the Union Cabinet did not consider those recommendations. So, if the objective behind the death penalty is not fulfilled, the carceral politics of sexual violence must be dismantled by infusing abolitionist feminism. A key concern is also to bring human rights-based language to masses, the majority of whom do not have access to it, and whose thoughts towards the death penalty are shaped by cultural and religious narratives. There must be an abolitionist feminist movement to refuse the death sentence and even life imprisonment without parole as responses to sexual violence including rape. This movement should seek to understand and work upon the social causes and cultural conditions that lead to VAWC.

It also needs to work on the structural issues of redistribution of land and wealth for the marginalised communities, their representation in all spaces and institutions – both private and public – and a radical shift towards properly funded public education and health care. Governments and society need to work on the kind of targeted support and a range of state facilities rape survivors need in order to access education, employment, health, marital and family life. They also need to provide support to families of rape survivors, particularly minor siblings, if any, in terms of their access to education and resources, and take part in community building and a realisation of fraternity to ensure their dignity that the Indian Constitution upholds.

Complex issues but there must be a start

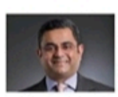
There need to be victim-centred procedural and institutional reforms and some sort of '*beta padhao, beti bachao* (educate the son, to protect the daughter') policy initiative to eliminate the patriarchal notion of the honour of the family, community, and nation residing in female bodies and virginity. Invisibilising and ignoring the problems mentioned above will make the abolition movement appear superficial to say the least and forced from the top. The death penalty is the safest escape route from accountability as it does not burden the state with the hard work of reforming the police, prosecution, judiciary and supporting survivors. A culture of utilising existing research for an evidence-based informed policymaking by the central and State legislatures needs to be inculcated to avoid knee-jerk populist reactions that lead to criminal injustice. Additionally, research needs to be conducted on if and how the socio-religious background of judges plays a role in them awarding the death sentence.

Indian society is again striving for social change through legal reform. It seeks the care, the safety and the support for rape survivors and their families, alongside state accountability. But we must remain attentive to how the apparatus of laws (including contract, family, labour and property laws) constructs the socio-economic status of women and children, particularly from the oppressed castes and other marginalised communities. It asymmetrically distributes wealth, knowledge and power.

Abolition of the death penalty and creating a safer environment for women and children are complex issues. They require understanding, teaching, and engaging the law, critically. There must be an admission of and public talk about caste, race, religion and gender-based violence through an intersectionality lens, including by the organisations and the people who champion these causes. Feminists argue that sexual offences are more about power than sex.

There is a need for public and judicial awareness campaigns debunking the myth of the death sentence leading to a reduction in VAWC and to bring gender equity from within the private sphere (family) to the public sphere, rather than distributing death penalty and sentence inflation. Punishment alone cannot change society.

Demographic advantage, Indian economy's sweet spot



Subhrakant Panda

Managing Director, Indian Metals and Ferro Alloys Limited (IMFA)

Much has been written about India's emergence as an economic giant – it is the world's fastest growing big economy, and is currently the fifth largest. Demographics is a major factor in propelling this rise given that the median age is around 28 years and 63% of the population is of working age. However, the labour force participation rate stood at 55.2% in 2022, according to a recent report released by the International Labour Organization (ILO), which goes on to state that falling labour intensity is likely due to growth being led by the services sector rather than manufacturing. Therefore, while we are certainly not experiencing "jobless growth", more steps are needed to harness the demographic dividend.

Continue with the reforms agenda

First and foremost, there is a need to press ahead with the ongoing reforms agenda to maintain, if not accelerate, India's growth trajectory as that by itself will create opportunities galore. There was a welcome reference to this in Finance Minister Nirmala Sitharaman's Budget speech to initiate and incentivise improvements in productivity and to facilitate markets and sectors to become more efficient. While there is much that the Centre has done to enhance ease of doing business, much of what needs to be done next, especially in the context of production, concerns the States (which is where the action is now). Hence, both need to walk in lockstep to broaden and deepen reforms.

The Economic Survey for 2023-24 states that technological advancements have led to a declining capital-to-labour ratio and an increasing capital-to-output ratio. It was perhaps in this context that Arvind Panagariya, economist and Chairman of the 16th Finance Commission, while speaking at a recent event in the Federation Of Indian Chambers Of Commerce and Industry said capital-led economic growth is not ideal as the country has an abundance of labour.

> Gainfully employing a large, young and aspirational population is not easy but it is a challenge India can take on

The reluctance of Micro, Small and Medium Enterprises, the backbone of employment, to grow in size and scale as well as that of large business houses to foray into labour-intensive sectors can be attributed to the compliance burden and costs imposed by outdated labour laws.

The impasse over implementing the new labour codes approved by Parliament is sending a wrong signal to existing and prospective investors alike. It is important that one or two States with an evolved manufacturing ecosystem break the logjam by taking the lead.

The Centre's efforts to give a boost to the manufacturing sector is generally viewed from the angle that it is untenable for 45% of the workforce to be employed in the agricultural sector which accounts for only 18% of GDP. While taking steps to enhance agricultural productivity, we must not forget those who are engaged in the unorganised and non-agricultural sectors – about 19% of the workforce – which are highly fragmented and suffer from low productivity.

It is important to address their aspirations by focusing on high-growth potential sectors such as toys, apparel, tourism, and logistics which are also labour intensive. Then, as skills get upgraded, there will be an opportunity to move up the value chain and provide even better and higher paying jobs.

Skilling is a continuous process

Skilling is an important aspect of making future generations productive members of society. The Economic Survey highlighted that only 4.4% of the workforce in the age cohort of 15-29 years is formally skilled. This is a huge concern, and the dichotomy of labour surplus and skills shortage must be addressed through meaningful public-private partnerships wherein industry plays an integral role in devising the curriculum and imparting 'on the job training'. Moreover, skilling is not a one-time intervention but a lifelong process which requires flexibility in institutional mechanisms as well as learning agility.

The emphasis of the New Education Policy (NEP) 2020 on foundational skills as well as higher order cognitive skills and critical thinking is a good step but, in a constantly changing world, the document must be reviewed periodically and updated.

Impact of AI/ML

Finally, in an era of artificial intelligence (AI) and machine learning (ML), repetitive tasks with low skills are most at risk but there will always be a need for human intervention and oversight. While we must not underestimate the impact of AI/ML, neither should it be demonised. The key is to have appropriate regulations govern its use while harnessing what it has to offer. In addition to the opportunities offered by various emerging sectors, AI/ML itself is estimated by Statista to grow by nearly nine times to become a $826.73 billion worldwide market by 2030. Further, according to NASSCOM, India already has the second largest talent pool globally in this field but the current gap between demand and supply is 51% which is projected to widen. Though very niche, it is an opportunity which should not be missed.

Gainfully employing a large, young and aspirational population is not easy but it is a far better challenge to have than dealing with an ageing one with its attendant economic and societal implications. India is in a sweet spot and must employ a holistic approach to create a talent pool so as to harness its demographic dividend for the benefit of the world at large.

LETTERS TO THE EDITOR

Ahead of the U.S. election

The 2024 U.S. presidential election campaign has turned most dramatic, what with two attempts on the life of Republican candidate Donald Trump, Joe Biden, President of the United States, retiring from the race suddenly and Kamala Harris, Vice-President, being catapulted into the race. Now, Elon Musk has waded in, making some strange remarks. The presidential race, which was almost evenly poised, appears to be degenerating into vitriol. It would be in the best interests of the U.S. if the presidential contestants paid more attention to issues such as the economy and immigration which are more important for voters.

Kosaraju Chandramouli,
Hyderabad

The attempts highlight the toxic election atmosphere in the U.S. Kamala Harris must inspire voters with a vision for an inclusive America. Focusing on comprehensive immigration reform, sustainable economic growth and social justice will strengthen her position as a unifying force.

Avinashiappan Myilsami,
Coimbatore

Party's evolution

It is astounding that a party that was founded on the principle that it would fight tooth and nail against corruption has now ended up battling allegations of serious corruption. While the Aam Aadmi Party and the rest of the Opposition may see an aggressive campaign being rolled out for AAP leader Arvind Kejriwal, it remains to be seen what the strategy of the Enforcement Directorate will be.

A.P. Thiruvadi,
Chennai

Letters emailed to letters@thehindu.co.in must carry the full postal address and the full name or the name with initials.

Rapa Nui genomes restore the real history of an old, troubled people

Studying Indigenous genomes offers invaluable insights into historical population dynamics, ecological adaptations, and the complex stories of human migration and survival. In many ways, the Rapa Nui genomes also show how genomic evidence can expose the derogatory myths that often surround Indigenous peoples

Sridhar Sivasubbu
Vinod Scaria


The Ahu Tongariki stone platform on Rapa Nui with all its 15 moai, restored in the 1990s. BJØRN CHRISTIAN TØRRISSEN (CC BY-SA 3.0)

The volcanic island of Rapa Nui has long been shrouded in mystery. European sailors first arrived on its shores on Easter Sunday in 1722, giving it its colloquial name: Easter Island. It covers just 160 sq. km and is one of the most remote islands on the planet. Today, Rapa Nui is part of Polynesia and is officially a territory of Chile.

Early Polynesian explorers are believed to have traversed thousands of kilometres of open ocean to reach and settle the island, likely arriving centuries before the Europeans. The island's geography is harsh and challenging for humans. Its lava-covered terrain is rocky with limited freshwater sources, poor soil quality, and a low diversity of flora and fauna.

Despite these challenges, its first humans likely established a unique society in order to survive their exacting environs. However, the island's offerings would still have been quite finite, and ingenuity could only have taken the people so far. These realities gave rise to the widely held notion that the humans eventually overpopulated the island, resulting in ecological collapse and its people's demise.

But new evidence suggests this view may be fiction.

Turning the gaze within

Rapa Nui is famous for its large statues called moai. They are shaped like large human heads and erected on stone pedestals. Some moai stand 40 feet tall and weigh 75 tonnes. They were carved in volcanic stone at quarries and then moved to their current locations across the island. Scholars believe the Rapa Nui built the moai between the 13th and the 16th centuries and represented their revered ancestors.

The statues all face inland, towards the people. Over 900 moai have been found on the island to date; more than half of them were transported across considerable distances from the quarries.

In his book 2004 *Collapse*, Jared Diamond proposed the population of Rapa Nui collapsed after overexploiting resources. The idea quickly found wide acceptance and became an example of the importance of sustainable living. But some scholars have called into question the feeble evidence to support the hypothesis.

Protecting the soil

Scientists think the island's population had declined by around 1,600 before European explorers arrived in the 18th century. By then, the population was estimated to be around 1,500-3,000.

Due to the limited availability of freshwater and the abundance of rocks, which limited widespread agriculture, the natives are believed to have burnt the palm vegetation to improve soil productivity.

They were also expected to have used rock gardening, a.k.a., lithic mulching: a way to protect soil moisture by regulating the temperature.

Either way, before the European settlers made contact with the Rapa Nui, the latter practised a limited agriculture to produce their food.

A long-awaited census

In July, researchers from Columbia University, Arizona University, and Binghamton University, plus independent researchers from Rapa Nui, reported training an AI model to identify locations in satellite images of the island where its inhabitants practised rock-gardening.

The researchers estimated rock gardening was practised in less than 1 sq. km of the land, lower than previous estimates of 4-20 sq. km. Assuming the inhabitants exclusively cultivated sweet potatoes, the findings suggest they may have numbered fewer than 4,000 people.

Genetic studies have in the past provided unique insights into the histories of Indigenous and ancestral populations around the world. In 2014, *Current Biology* journal published a paper in which researchers analysed 27 genomes of the Rapa Nui people and concluded they had a considerable Native American ancestry, of around 8%. They also found the admixture with Native Americans happened before the 18th century. A significant European admixture followed when Europeans discovered and then colonised the island in the 18th century.

> Early Polynesian explorers are believed to have traversed thousands of kilometres of open ocean to reach and settle the island, likely arriving centuries before the Europeans

Two catastrophes

In the event of an ecological collapse or a population bottleneck (when the genetic diversity of the population becomes so low as to become unable to withstand shocks like new diseases or disasters), the genomes would have been quite un-diverse in the population's descendants. Such "signals" could in turn provide insights into bottlenecks in the history of that population.

Members of the Rapa Nui community resisted an initial attempt by researchers to study their genomes. So a team led by Víctor Moreno-Mayar at the University of Copenhagen turned to the remains of 15 Rapa Nui people secured at a museum in Paris. The remains were dated to have originated between 1670 and 1950 AD. The team extracted and sequenced DNA from tissue samples and reported their findings on September 11 in *Nature*.

According to the study, the Rapa Nui population developed a bottleneck around 1300 AD – confirming a previous finding that highlighted the same date and, crucially, ruling out a population decline in around 1600 AD. Instead, the study suggested the population steadily grew until the European settlers arrived, followed by two catastrophic events: Chilean slave traders abducted more than a third of the population, and then there was a large outbreak of smallpox. The local population soon dwindled to one hundred or so individuals as a result.

Restoring real histories

So there we have it: the pre-modern Rapa Nui didn't overexploit the resources of their small island. In fact, they may have been living responsibly, only to be decimated by the apathy of other peoples.

Studying indigenous genomes offers invaluable insights into historical population dynamics, ecological adaptations, and the complex stories of human migration and survival. In many ways, the Rapa Nui genomes also show how genomic evidence can expose the derogatory myths that often surround Indigenous people and give them their real histories back.

(The authors are senior consultants at Karkinos Healthcare and adjunct professors at IIT Kanpur and the D.Y. Patil Medical College, Pune. sridhar.sivasubbu@gmail.com, vinod.scaria@karkinos.in)

THE GIST

In the book *Collapse*, it was proposed that the population collapsed after overexploiting resources. The idea found acceptance and became an example of the importance of sustainable living. But some scholars called into question the feeble evidence provided

According to a study, the Rapa Nui population grew until Europeans arrived, followed by two catastrophic events: Chilean slave traders abducted a third of the population, and then there was a smallpox outbreak. Numbers dwindled to one hundred or so

The study concludes that the pre-modern Rapa Nui didn't overexploit the resources of their small island. In fact, they may have been living responsibly, only to be decimated by the apathy of other peoples

BIG SHOT


A wildfire at Aveiro, Portugal, on Monday. Portugal has received pledges of support from its European partners as it battled forest fires in its north that have killed two people and injured a dozen firefighters, authorities said. AFP

QUESTION CORNER

Eye of the tiger

Q: Why do we aim with one eye closed?

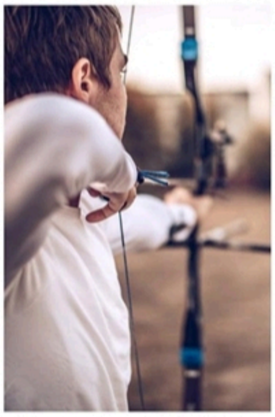
A: Not everybody does this, according to a professor of neurobiology and behaviour at Cornell University, but those who do, do so because of a phenomenon called binocular rivalry.

If you look through a sight with the left eye alone, what you see is not identical with what you see with the right alone, and the two images compete rather than blending.

For example, if the left eye is shown only vertical lines and the right eye only horizontal lines, you might think you would see a screen pattern, but in fact you would see patches of vertical lines intermingled with patches of horizontal lines.

Some people can mentally suppress the competing image, but some find it uncomfortable. So they close one eye.

When aiming at a target, most people tend to use the dominant eye, which generally, but not always has better vision. If the eyes differ in focal length, some may use one eye to aim at objects farther away and use the other for targets that are closer.


If the two eyes are shown different images, they sometimes compete instead of blending. Some people can mentally suppress the competing image, but some find it uncomfortable. GETTY IMAGES

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A climate crisis agenda remains urgent

Zerin Osho
Director of the India Program at the Institute for Governance and Sustainable Development

The next five years are critical for India's climate action efforts, given its ambitious 2030 targets. While significant advances in solar and renewable energy are under way, India's heavy reliance on coal remains a concern, with clean energy accounting for only 22% of the electricity mix. Key environmental issues that need urgent attention include reducing heat stress, improving air quality, managing waste, and enhancing energy efficiency. The growing demand for energy must be matched with comprehensive policies addressing these challenges in the near term. Encouraging businesses to view climate action as an opportunity rather than a challenge is essential, and acting swiftly on India's carbon market is a crucial step in this direction.

Mitigating pollutants

India is highly vulnerable to heat stress and may soon face heat waves beyond human survivability limits. Mitigating both CO_2 emissions and short-lived super pollutants such as methane, black carbon, and hydrofluorocarbons is crucial. These super pollutants, especially methane, contribute significantly to global warming and trap much more heat than CO_2 over short periods. Reducing them can prevent more near-term warming than cutting CO_2 alone.

Breaking down the climate problem into manageable pieces by pollutants, sinks, or sectors can make solutions more effective. Tailor-made treaties, fair to both rich and poor countries, can be integrated into the Paris Agreement for accountability. The Montreal Protocol provides a successful blueprint. With its Kigali Amendment and move away from super potent F-gases, it is expected to avoid 0.5°C of warming by the end of this century. The next target should be methane, with the potential to avoid nearly 0.3°C of warming by the 2040s. A new treaty led by the U.S., European Union, and China could lock in corporate commitments to reduce methane emissions to near zero by 2030.

> Despite its inclusion in voter demands, the climate crisis was ignored during the Lok Sabha election campaign

Reducing methane emissions through financially feasible gas capture and biogas projects can tackle one of the most potent greenhouse gases (GHGs) while improving urban sanitation. Reducing short-lived climate pollutants (SLCPs) such as black carbon and enhancing the National Clean Air Programme can significantly improve air quality and public health. However, society must recognise that air pollution is a year-round problem requiring sustained action.

Cleaning the air will require five critical changes: fostering collective responsibility, proactively investing in clean air initiatives, integrating sustainable development, leveraging data-driven interventions for precise actions, and recognising clean air as a driver of economic growth. Effective solutions require coordinated efforts, better monitoring, and regulatory reforms, highlighting the economic and health benefits of clean air for all stakeholders. For improving energy efficiency, faster decarbonisation and adoption of low global warming potential refrigerants, as per the Kigali Amendment, are crucial steps towards reducing GHG emissions.

Importance of carbon markets

Carbon markets will help incentivise reductions in GHGs by offering financial rewards for cutting emissions. To keep global temperatures from rising above 1.5-2°C, global GHG emissions need to be reduced by at least 43%. Carbon markets will play a critical role in driving these reductions. India aims to launch the 'India Carbon Market' in 2026. This could help it achieve its Nationally Determined Contributions goals and potentially become the world's largest emissions trading system by 2030. A well-developed carbon market in India could avoid $35 trillion in climate-related costs over the next 50 years.

Incentivising faster climate action by developing financial 'carrots' and a more nuanced approach to carbon trading is essential. Current single-basket metrics, which convert all climate pollutants and emission into CO_2 equivalents, offer economic efficiency but obscure the diverse impacts of different pollutants. A more useful measuring stick would treat long-lived pollutants, such as CO_2, separately from SLCPs, such as methane or black carbon. Such an approach would provide separate currencies for different pollutants, better accounting for their varied impacts over space and time.

All these actions and more are needed. These require critical scale and coordination. On the governance level, India needs a nodal authority with constitutional powers to ensure collaborative, pre-emptive action with timelines for all stakeholders. This is the bare minimum to ensure accountability and coordination across tiers of government.

A missed opportunity

The 2024 Lok Sabha election largely ignored the escalating climate crisis, despite its inclusion in voter demands. Party commitments to climate action were grossly inadequate. This neglect comes at a time when temperatures across the country are at an all-time high. Low voter turnout was attributed to searing heatwaves across the country. Rising unemployment, farming crises, and high living costs keep the poor focused on survival, deepening inequality. Unlike the West, India lacks a 'green party', and the sustainability discourse feels disconnected from ordinary citizens' reality.

Climate-progressive leadership will need to relentlessly work for an environmentally better India. This means pushing beyond mere tokenism and integrating climate action into the core of political agendas.

A matter of buns puts BJP in a pickle

The Union government has to go a long way in sensitising people about GST

STATE OF PLAY

T. Ramakrishnan
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Eight months ago, there was a controversy in Tamil Nadu over a film called *Annapoorani*. It shows the protagonist, a Brahmin woman, going against her beliefs in order to become a top chef in India. In one scene, she learns how to prepare a meat dish. Several right-wing groups claimed that the scene "hurt" the religious sentiments of the Hindu community, especially Brahmins.

Over the past week, a new controversy grabbed headlines in the State, this time over Annapoorna, a popular chain of vegetarian restaurants, known as the 'pride of Coimbatore'. This too was centred around food.

On September 11, Union Finance Minister Nirmala Sitharaman visited Coimbatore to attend a couple of events, including a meeting with representatives of industry. During the interaction, D. Srinivasan, the managing director of the Sree Annapoorna Sree Gowri Shankar Hotels in Coimbatore, raised the issue of varying GST rates on food items by providing an illustration. He said that while there is no tax levied on plain bun, adding cream to it incurs a tax of 18%. He added in humour that customers at his hotel ask only for buns, saying they will add the cream themselves.

This was not the only issue that Mr. Srinivasan raised during the meeting. However, only a portion of his speech went viral on social media. In that clip, he is heard claiming that the BJP MLA of Coimbatore (South), Vanathi Srinivasan, who was also present at the event, was a regular customer and spoke about her food preferences.

The manner in which Mr. Srinivasan highlighted the taxation issue, as reflected on social media, put the Finance Minister and the MLA in an embarrassing position. Meanwhile, some supporters of the BJP wondered whether anyone who raised similar issues with Ministers of the ruling DMK would be allowed to go scot-free.

The next day, Ms. Sitharaman told the media in Coimbatore that a Group of Ministers was examining the demands of the hotel industry regarding the GST on various food items and would submit its recommendations. She also responded to the complaint of several States that they were not getting their due of GST collections. She said that the collections were shared equally between the Union and State governments. Apart from this, the Centre gives 41% of the divisible pool of taxes to the States, she said.

The matter could have been laid to rest with this. However, the BJP's image took a hit when another video clip emerged in which Mr. Srinivasan was seen apologising to Ms. Sitharaman at a private meeting. Ms. Vanathi Srinivasan was also present at this interaction. When this apology too went viral, the Opposition slammed the BJP, especially the Finance Minister, for displaying "arrogance of power" and "intimidating those who ask questions." Congress president Mallikarjun Kharge, the Leader of the Opposition in the Lok Sabha, Rahul Gandhi; DMK deputy general secretary of the Lok Sabha, Kanimozhi Karunanidhi; the organisation secretary of the AIADMK, D. Jayakumar; and the Tamil Nadu Congress Committee chief, K. Selvaperunthagai criticised the BJP. Chief Minister M.K. Stalin, who returned to Chennai on Saturday after a three week-long visit to the U.S. to seek industrial investments, said that the way in which Ms. Sitharaman handled the episode was "shameful".

The BJP legislator asserted that her party had no role in Mr. Srinivasan tendering the apology. She rebutted Mr. Stalin's criticism saying Ms. Sitharaman had addressed the problems of industry without any assistance from the State government. The BJP legislator added that she could have disputed Mr. Srinivasan's account about herself publicly, but she refrained from doing so to maintain decorum.

Then, in a surprise move, the BJP State president, K. Annamalai, who is in the U.K. on sabbatical, wrote on X, expressing his "sincere apology" for what his colleagues did, namely, sharing in public a private conversation between Ms. Sitharaman and Mr. Srinivasan. On September 14, the restaurant chain issued a statement that its top executive "under his own volition" met Ms. Sitharaman to clear any misgivings.

The episode drives home the point that the Union government has a long way to go in sensitising people about the system concerning GST and that the Centre, though a key player in the decision-making process is not the sole authority to decide on taxation.

Post-1991, southern States emerged as leaders: EAC-PM

Punjab and West Bengal have recorded sharp declines in per capita income after a head start

DATA POINT

The Hindu Data Team

Post-liberalisation in 1991, the per capita income of the southern States surged significantly and they emerged as "leading performers", shows an analysis released by the Economic Advisory Council to the Prime Minister (EAC-PM). In contrast, the economic performances of Uttar Pradesh and Bihar regressed and worsened after bifurcation.

Among the western States, Maharashtra and Gujarat consistently performed well. Gujarat exhibited rapid growth from the beginning of the millennium. Among the northern States, Delhi and Haryana performed exceptionally well, though the latter's economic might is mostly drawn from Gurugram and its adjoining areas.

Punjab had a head start due to the Green Revolution in the 1960s and '70s, but its performance has consistently declined thereafter. The EAC-PM's paper questions whether this was a case of excessive focus on agriculture hindering a transition to industrialisation.

The eastern States continue to "remain a concern", the paper notes. West Bengal, especially, which had the third best per capita income in the 1960s, regressed rapidly to become the 14th best among the major States. The report does not consider Goa, Himachal Pradesh, north-eastern States other than Assam, and Union Territories other than Delhi as major States.

Rajasthan and Odisha, which had recorded declines until liberalisation, saw a turnaround thereafter, though the degree of rise in income levels was minimal. The per capita income levels in Chhattisgarh and Madhya Pradesh have remained consistently low.

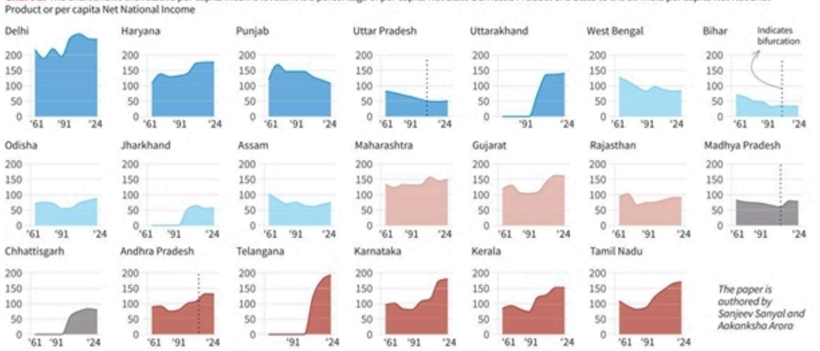
Chart 1 shows the relative per capita income levels.

Chart 2 shows the State's share in national GDP.

Rise and fall of economic fortunes

The charts are based on data sourced from the Economic Advisory Council's paper, "Relative Economic Performance of Indian States: 1960-61 to 2023-24"

Chart 1: The chart shows the relative per capita income levels. It is a percentage of per capita Net State Domestic Product of a State to the all-India per capita Net National Product or per capita Net National Income



The paper is authored by Sanjeev Sanyal and Aakanksha Arora

Chart 2: The chart shows the State's share in national GDP. It is defined as the ratio of a State's Gross State Domestic Product to the sum of GSDP of all States. The darker the blue, higher the share in national GDP

State	1960-61	1970-71	1980-81	1990-91	2000-01	2010-11	2020-21	2023-24
Delhi	1.4	1.5	2.3	2.6	3.7	3.7	3.7	3.6
Haryana	1.9	2.7	2.9	3.1	3.2	3.8	3.6	3.6
Punjab	3.2	4.4	4.3	4.3	3.9	3.3	2.7	2.4
Uttar Pradesh	14.4	13	13.2	12.6	10.2	8.7	8.2	8.4
Uttarakhand	-	-	-	-	0.7	1.2	1.1	1.1
West Bengal	10.5	9.7	8.8	7.9	8.2	6.7	5.7	5.6
Bihar	7.8	6.9	6.3	6	2.8	2.9	2.8	2.8
Odisha	2.9	3.2	3.2	2.5	2.3	2.9	2.7	2.8
Jharkhand	-	-	-	-	1.7	1.8	1.5	1.5
Assam	2.6	2.4	2.1	2.4	1.9	1.6	1.7	1.9
Maharashtra	12.5	11.9	14.2	14.6	14	15.2	13	13.3
Gujarat	5.8	6.7	6.3	6.4	6.4	7.5	8	8.1
Rajasthan	4.4	5.1	3.9	4.7	4.6	4.9	5.1	5
Madhya Pradesh	6.3	6.1	6.6	6.9	4.3	3.8	4.7	4.5
Chhattisgarh	-	-	-	-	1.5	1.7	1.7	1.7
Andhra Pradesh	7.7	7.7	7	7.6	8.2	4.6	4.9	4.7
Telangana	-	-	-	-	-	3.8	4.7	4.9
Karnataka	5.4	5.7	5.3	5.3	6.2	5.9	8.1	8.2
Kerala	3.4	3.8	3.6	3.2	4.1	3.8	3.8	3.8
Tamil Nadu	8.7	7.3	6.9	7.1	8.3	8.4	8.9	8.9

■ *In chart 2, figures for Andhra Pradesh, Uttar Pradesh, Bihar and Madhya Pradesh are that of undivided States post bifurcation and of divided States post-bifurcation*

■ *Among smaller States, Goa led the list, with its relative per capita income doubling compared to the 70s. Chandigarh also recorded a high income level, though it had declined marginally recently*

FROM THE ARCHIVES

The Hindu.

FIFTY YEARS AGO SEPTEMBER 18, 1974

Southern States oppose curbs on road transport

Trivandrum, Sept. 17: The conference of Transport Ministers of Southern States here to-day decided to request the Union Government to review its recent directive that permits should not be issued for vehicles to operate on routes exceeding a distance of 500 km.

The conference said that this directive caused considerable difficulty to the Southern States where the railway lines were comparitively limited and road transport was the mainstay to transport essential articles. It decided that this position should be brought to the notice of the Centre and if necessary require it to convene a conference of the Ministers of the Southern States.

The one-day conference was attended by the Ministers, Messrs. Ramachandran (Tamil Nadu), K.H. Raghunath (Karnataka), and M.N. Govindan Nair (Kerala). Officials from Tamil Nadu, Karnataka, Kerala and Andhra Pradesh attended the conference. Pondicherry was not represented.

The Kerala Chief Minister, Mr. A. Achutha Menon, inaugurated the conference. Mr. Ramachandran (Tamil Nadu) presided. Mr. M.N. Govindan Nair (Kerala) welcomed the gathering.

The feasibility of setting up a road transport "training, research and development institute" in South India, similar to the one functioning at Poona, was considered by the conference. Since Tamil Nadu was already examining a proposal in this regard, the conference requested that State to pursue it further.

A HUNDRED YEARS AGO SEPT. 18, 1924

Bombay factories

Bombay, Sept. 17: The annual report of the working of the Factories Act in Bombay Presidency shows an increase in the number of factories by 141 in 1923, the total number now being 1,203, the increase being mainly due to operations of the amended Act which now brings under control factories employing between 20 and 50 persons in addition to those employing over 50 operatives. The total number of operatives fell from 3,60,518 tp 3,56,418 of whom nearly seventy thousand were women and the number of children have fallen from 15,800 to 11,400, a reduction of 28 per cent in two years.

Text&Context

THE HINDU

NEWS IN NUMBERS

The decline in India's merchandise exports in August

9.3 In per cent. India's merchandise exports in August declined to $34.71 billion from $38.28 billion in the year-ago month. Imports increased by 3.3% to $64.36 billion in August as against $62.3 billion a year ago. PTI

The death toll due to typhoon Yagi in Myanmar

226 The death toll in the country, triggered by last week's typhoon Yagi, was almost seven times Friday's initial total of 33. At least 77 people were reported missing. The typhoon also claimed almost 300 lives in Vietnam. AP

The Palestinians killed in the Gaza Strip since October 7

41,252 The toll includes 26 deaths in the last 24 hours, according to the health ministry in Gaza. At least 95,497 people have been wounded in the Gaza Strip in the war between Israel and Hamas. AFP

Additional support pledged to Bangladesh by the World Bank

2 In $ billion. The World Bank said that it could mobilise an additional $2 billion to support critical reforms, flood response, better air quality and health. The World Bank Country Director pledged the new assistance when he called on Muhammad Yunus in Dhaka. PTI

Number of women-led MSMEs to benefit from CGTMSE scheme

27 In lakh. Women-owned micro and small enterprises will get enhanced credit guarantee coverage of 90% under the Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE). PTI

COMPILED BY THE HINDU DATA TEAM

Power asymmetry between China and Russia

As supplies from Moscow's traditional partners have dried up under sanctions and Russia's domestic capacity remains stretched, China has stepped up to help its friend. Compared to 2021, when high-priority goods from China accounted for 32% of Russia's import needs, China's share soared to 89% in 2023

WORLD INSIGHT

Amit Kumar

The Russian invasion of Ukraine in 2022 has brought about a major shift in the world order. Not only did it bring about a stronger trans-Atlantic alignment vis-a-vis Russia, but it has also pushed the latter closer to China. Consequently, strategists around the globe have been preoccupied with the repercussions of such a partnership between the two countries. The deepening Sino-Russian relationship has become a subject of discussion in India as well. The concern that one of India's most trusted partners now possibly shares an indispensable friendship with India's primary adversary has instigated debate around the reliability of Russia as a security partner. In this context, the most recurrent question that is being raised is: has Russia become a junior partner of China? The answer to the question will determine the autonomy that the Kremlin can exercise when it comes to choosing between Beijing and New Delhi.

Against the U.S.-led financial order

The two countries have a shared grievance against the dual hegemony of the dollar and the SWIFT messaging system central to the current global financial system. Their perpetual tension with the U.S.-led geopolitical order of the West puts them in a vulnerable spot – the effects of which have become more pronounced lately.

Following Russia's invasion of Ukraine in 2022, the U.S. and its allies froze close to $300 billion of Russia's forex reserves held overseas. China fears a similar threat in the event of a conflict with the West as around $770 billion of China's $3 trillion forex reserves are currently held in U.S. treasuries. Further, in 2024, the West imposed a SWIFT ban on Russian financial institutions involved in transactions of dual-use goods or weapons. The U.S. also threatened secondary sanctions on third-country financial institutions involved in such transactions with Russia. Fearing secondary SWIFT sanctions, Chinese financial institutions have withheld transactions worth tens of billions of yuan from Russia.

Thus, the two countries have a joint objective to reform (upend) the existing financial and economic order. The two have tried to promote de-dollarisation and alternative payment settlement systems, albeit without much success. Even as the two settled more than 90% of their bilateral trade in local currencies in 2023, this amounted to less than a percent of current account transactions globally. Renminbi-denominated transactions in settling trade amount to only around 6% of global transactions, which were otherwise dominated by the dollar, euro, pound and yen.

China's effort to promote the Cross-Border Interbank Payment System (CIPS) – its home-grown payment settlement system – is far from challenging SWIFT anytime soon, limiting its utility.

However, Russia's isolation from the Western-dominated global financial system makes its need for an alternative much more urgent. China's requirements aren't as urgent despite its grievances, as Beijing is still very much a part of the system. This essentially leaves Russia at China's mercy to set the pace for reforms. Furthermore, China alone has the diplomatic and monetary resources to mount a potential challenge to the Western-dominated financial order. Russia's isolation and limited resources render it completely dependent on China to pull it out of its misery.

Asymmetry in bilateral trade

At first glance, China-Russia trade appears symmetric over the years. In fact, Russia maintains a modest trade surplus over China. However, the asymmetry becomes apparent when their bilateral trade is put in the wider context of their respective overall trade.

In 2023, while exports to China made up for around 30.4% of Russia's total exports, Russia accounted for only 3% of China's total exports. While imports from China accounted for 36% of Russia's total imports in 2023, China's imports from Russia amounted to -5% of its total imports.

Secondly, more than 70% of Russia's exports to China were energy (fossil fuel) in 2022. In contrast, China's exports to Russia were relatively more diversified. This makes Russia's exports to China prone to shocks and uncertainties. Thirdly, not only are Russia's exports to China dominated by energy, but a majority of Russia's global energy exports are also concentrated in China. This is significant because the revenues from the energy sector have contributed between 30-50% of Russia's annual federal budget in the last 10 years. Moreover, the oil and gas sector contributes about 20% of Russia's GDP.

This renders the Kremlin's economy largely dependent on China.

And lastly, Russia has lately become completely dependent on China for its requirement of high-priority goods – a list of "50 dual-use products that are essential for manufacturing weaponry like missiles, drones, and tanks." The war in Ukraine has significantly enhanced the importance of the metalworking industry, which is critical to producing machine tools necessary for arms manufacturing. As supplies from Moscow's traditional partners have dried up under sanctions and Russia's domestic capacity remains stretched, China has stepped up to help its friend. Compared to 2021, when high-priority goods from China accounted for 32% of Russia's import needs, China's share soared to 89% in 2023. Additionally, China's share in Russian imports of critical machine tools has increased from 28% in 2021 to 59% in 2022. In 2023, almost all of Russia's requirements were sourced from China.

In the process, over the last few years, China has completely dethroned the EU as Russia's primary trade partner. Moreover, it has absorbed majority of Russia's losses emanating from reduced trade with the EU. This has kept Moscow's trade figures largely stable despite stringent sanctions from the West. To sum up, China has emerged as Russia's most indispensable partner.

What does it mean for India?

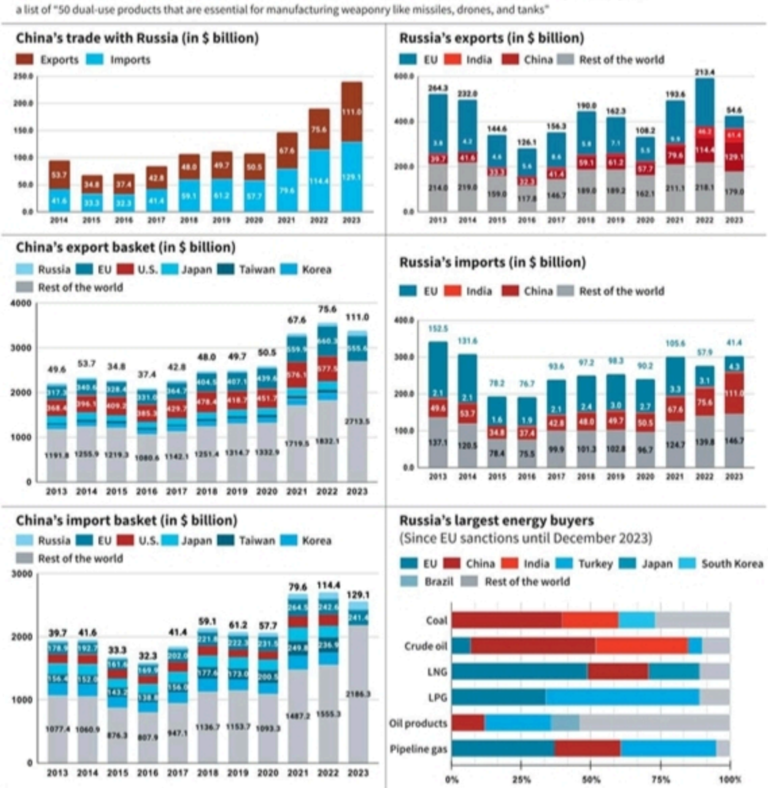
Despite all the goodwill that exists in the India-Russia relationship, the Kremlin's geopolitical goals align more closely with Beijing's than New Delhi's.

Further, trade between India and Russia constitutes only a minuscule percentage of the expanding China-Russia trade. The strategic alignment between China and Russia is too deep, and the asymmetry in their economic ties is too wide for Moscow to exercise any autonomy vis-a-vis India if it ever came down to choosing between New Delhi and Beijing. The question is no longer about Russia's willingness but its capability to resist China's pressure.

Amit Kumar is a Staff Research Analyst at Takshashila Institution. He tweets at am_i_t_kumar.

A new power nexus?

After the Russia-Ukraine war began, Russia has become completely dependent on China for its requirement of high-priority goods — a list of "50 dual-use products that are essential for manufacturing weaponry like missiles, drones, and tanks"



Note: China did not release individual figures for all countries in 2023. Rest of World figures inclusive of the U.S., Japan, Taiwan, and Korea.

Source: Bank of Russia; National Bureau of Statistics (China); Ministry of Commerce; EuroStat; General Administration of Customs (China); CREA

THE GIST

China and Russia have a shared grievance against the dual hegemony of the dollar and the SWIFT messaging system central to the current global financial system.

Following Russia's invasion of Ukraine in 2022, the U.S. and its allies froze close to $300 billion of Russia's forex reserves held overseas. China fears a similar threat in the event of a conflict with the West as around $770 billion of China's $3 trillion forex reserves are currently held in U.S. treasuries. Further, in 2024, the West imposed a SWIFT ban on Russian financial institutions involved in transactions of dual-use goods or weapons.

Despite all the goodwill that exists in the India-Russia relationship, the Kremlin's geopolitical goals align more closely with Beijing than New Delhi's.

BUILDING BLOCKS

What is a telescope? How good are modern telescopes?

The modern telescope is a window into the universe, a sophisticated paintbrush in the hands of skilled astronomers that brings the fantastical wonders of the cosmos into view. And in so doing, telescopes give us an incomparable sense of our place and remind us of the joy of curiosity and exploration

T.V. Venkateswaran

Celestial objects emit light in all directions. But only light rays travelling in the direction of the earth will reach us. And when these rays reach us after a lengthy journey, they are virtually parallel.

There are two ways to concentrate these rays and create an image. We can use a concave mirror to focus incoming photons at the focus point. The image produced by this reflecting telescope is real, inverted, and smaller. Most contemporary telescopes are such reflecting telescopes. Giant telescopes use parabolic mirrors because light rays reflected from the concave produce several focal points, causing the image to blur. *See Reflectors.*

Some telescopes also use lenses to bend light and directly create an image instead of using lenses. This is a refracting telescope. To observe fainter cosmic objects, much bigger lenses are required, which will slump under their own weight and distort the image. The maximum practicable lens size in a refracting telescope is around 1 m. The world's largest refracting telescope is at Yerkes Observatory in the U.S., with a 1.02-m lens.

The primary function of telescopes

It's a common misconception that telescopes are designed to make astronomical objects appear larger. Instead their primary function is to enhance the brightness of celestial objects, measured by their light-gathering power.

Say it's drizzling and you wish to collect rainwater. Place a cup with a small opening and a tub with a larger opening outside. Due to the larger opening, the tub will collect more water than the cup in a given time.

This is what telescopes do with light. *See The Aperture.*

Features of telescopes

The brightness of celestial objects is quantified by their apparent magnitude. Its values are logarithmic, meaning each step represents 2.512-times more brightness than the earlier. For example, a star of magnitude 4.0 is 2.512-times brighter than a star of magnitude 5.0.

The lower the apparent magnitude, the brighter the object; the larger the magnitude, the dimmer it is. The sun's apparent magnitude on this scale is -26.78, Venus's is -4.92, and Sirius, the brightest star in the night sky, is -1.46. *For more, see Resolving the Andromeda.*

Why are telescopes setup on mountains?

The earth's tumultuous atmosphere interferes with the telescope's functioning. When starlight passes through the turbulence of air, it twinkles. Even the largest telescopes have a resolution of just 0.3-0.5 arcsec. The higher we go, the less the air is disturbed, which is why most telescopes are erected atop mountains.

Space telescopes are more than 400 km above sea level, allowing them to entirely escape atmospheric disturbances. That is why the Hubble Space Telescope has a resolving power of around 0.04 arcsec, 10-times greater than the best ground-based telescopes.

In recent years, scientists have developed a method to increase the telescope's resolution by correcting for the effects of air turbulence. They use a laser to make an artificial star in the upper atmosphere and then analyse how the guiding star fluctuates. Using this information, the deformable mirror is flexed to correct for distortions.

A more enhanced version of this technology, called tomography, examines segments of the air column and eliminates aberrations to provide a crystal clear image.

Limits to telescopes

A telescope with a higher limiting magnitude is required to look deep into the universe, which demands a larger primary mirror. However, there is a limit to the size of the primary mirror.

Grab a sheet of newspaper. Hold it only at the edges and try to keep it horizontal. Because of its weight, the sheet will sag and droop. Now reduce the size of the sheet. If the sheet is large enough, it will still droop, but when it's small enough, it will be easy for you to hold it flat. Similarly, a mirror wider than around 8.5 m will sink under its own weight, distorting its surface. *Astronomers have found a solution. See Segmented Mirrors.*

Advanced telescopes around the world

The largest telescope to date is the Large Binocular Telescope (LBT), which has two 8.4-m-wide mirrors and an effective combined aperture of 11.9 m. It is located at the Mount Graham International Observatory in Arizona, USA.

The Extremely Large Telescope (ELT) is under construction atop the Cerro Armazones in the Atacama Desert in Chile, as part of the European Southern Observatory. It is expected to be completed by 2028. *See ELT Specs for its aperture.*

Astronomers also increase the exposure time to better observe distant cosmic objects. Even a cup left in a drizzle for an extended duration will become full with rainwater. Similarly, by keeping the camera's shutter mounted to the telescope open for a protracted period, we may record dimmer light sources. Telescopes expose instruments called charge-coupled devices to light from target sources for many hours before combining them to generate a composite image.

The Subaru Telescope is an 8.2-m-wide Japanese telescope located at the Mauna Kea Observatory in Hawaii. It recently used 10 hours of exposure time to capture a faint celestial object with a visual magnitude of 27.7, which is 100-million-times fainter than what any human eye can detect.

The author is a science communicator and visiting faculty member at the Indian Institute of Science Education and Research, Mohali.

D-KURU/WIKIMEDIA COMMONS

The Aperture

Let's consider the human eye. The opening size that regulates how much light may pass through an optical device is called the aperture. When the eye's pupil is fully dilated, its aperture area is around 153.9 sq. mm. To compare, a 0.07-m reflecting telescope — available as a toy — has an aperture area of 18241.4 sq. mm. This is 118.5-times more light-collecting area.

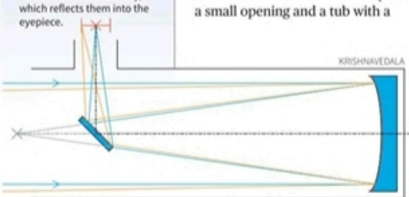
Lenses

While reflecting telescopes have replaced many refracting ones, these instruments still use lenses, and their ability to refract light, for other purposes. For example, the telescope at the Vera C. Rubin Observatory uses three lenses to help sharpen images. One of these is among the largest of its kind in the world, with a diameter of 1.55 m.

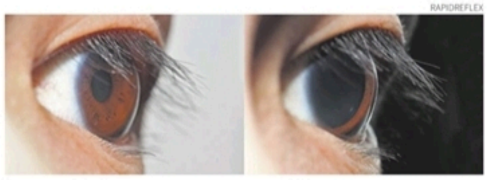
Reflectors

In a reflecting telescope, rays reflected by the primary mirror are diverted to a secondary mirror, which reflects them into an eyepiece with a small lens to enhance the image. Alternatively, a hole is drilled in the primary mirror's centre, and the rays the primary reflects pass through this hole to the secondary, which reflects them into the eyepiece.

KRISHNAVEDALA



RAPIDREFLEX

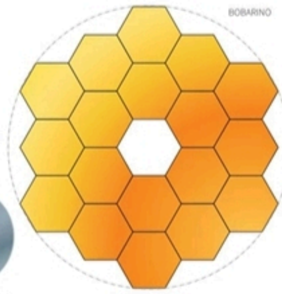


Segmented Mirrors

Instead of a single primary mirror, today's large telescopes have many segments. Each piece is small enough to remain firm without slumping. And when they are combined, the overall light-collecting area is still large.

BOBARINO


Hubble primary mirror

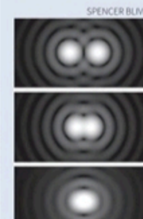

JWST primary mirror


DAVID DAYAG

Resolving the Andromeda

The Andromeda Galaxy has trillions of stars and an apparent magnitude of +3.44. It's the furthest object we can see with our eyes. It appears as a fuzzy patch and we can't discern individual stars. The star V762 Cas is 1,000,000-times brighter than the Sun. But because it is 16,000 lightyears away, it has an apparent magnitude of only +5.82. It's the faintest star visible to the naked eye. The limiting magnitude is the brightness of the faintest object visible to an optical instrument. Anything fainter will be lost to this instrument. The human eye's limiting magnitude in ideal conditions is +6.5 while that of the toy telescope is +11.2. So the telescope will reveal objects 100-times fainter than what a human eye can perceive. We can't discern Andromeda's individual stars because of resolution, another essential feature. An eye's or a telescope's resolution limit specifies the size of the smallest detail it can spot between two objects that are really close together. The greater the resolving capacity, the more details will be visible (below: effect of higher to lower resolution from top to bottom). The human eye with 20/20 vision has a resolving power of 60 arcsec. One arcsec is 1/3600th of a degree. The toy telescope's optimal resolving power is around 1.47 arcsec, over 40-times greater.

SPENCER BLIVEN



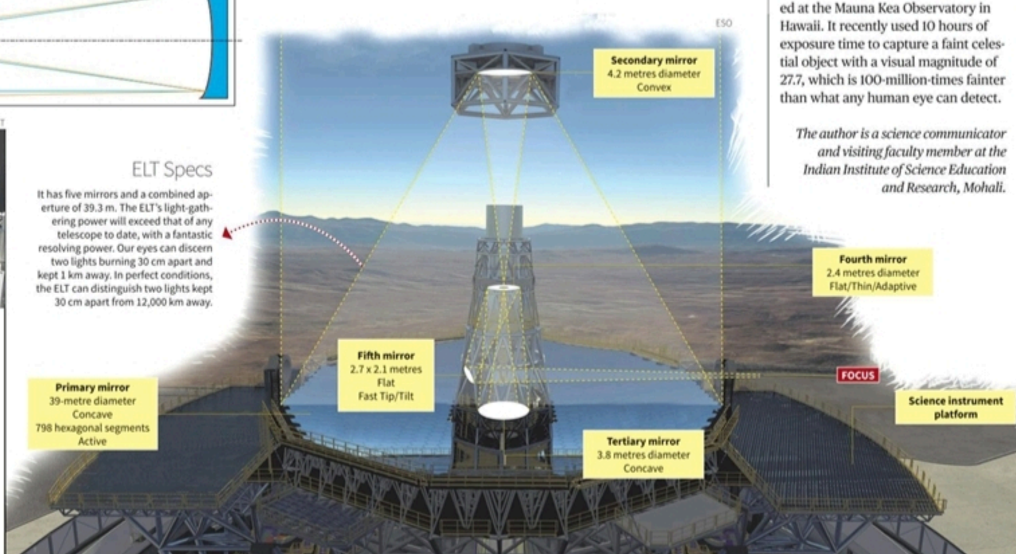
LSST

The LSST's 1.55-m corrector lens polished and coated with a broadband antireflective coating.

ELT Specs

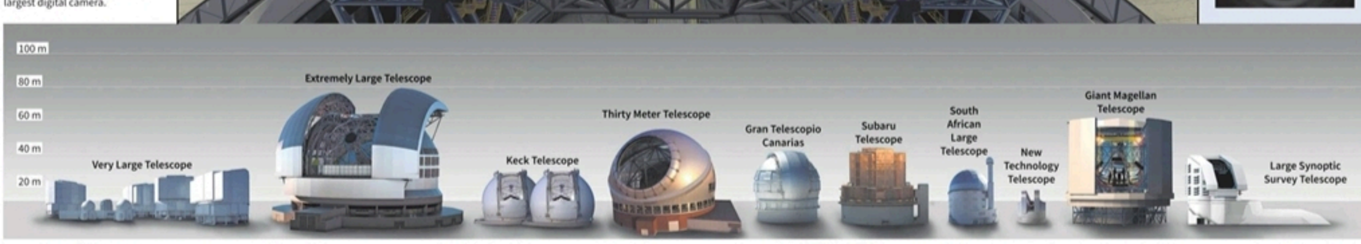
It has five mirrors and a combined aperture of 39.3 m. The ELT's light-gathering power will exceed that of any telescope to date, with a fantastic resolving power. Our eyes can discern two lights burning 30 cm apart and kept 1 km away. In perfect conditions, the ELT can distinguish two lights kept 30 cm apart from 12,000 km away.

ESO



Eyes on the sky

Many telescopes (see below) have their own claims to fame. For example, the Large Synoptic Survey Telescope (LSST) — renamed the Vera C. Rubin Observatory — will use an 8.4-metre primary mirror to capture light from large patches of the night sky into the world's largest digital camera.



The Hindustan Times
ESTABLISHED IN 1924

[OUR TAKE]

AAP's political gambit in Delhi

Atishi as CM may help the party offer a new narrative, free Arvind Kejriwal to mobilise cadres

The Aam Aadmi Party's (AAP) decision to pick Atishi, 43, to succeed Arvind Kejriwal as the Delhi chief minister (CM) does not come as a surprise since she had become the face of the government after the latter's arrest in the Delhi liquor case in March. She has been handling a large number of ministries and overseeing developmental works in the national capital. Her immediate task will be to make the most of her elevation to high office by convincing the bureaucracy to execute her party's governance agenda. Both Delhi and the AAP would benefit if the new CM could energise the administrative machinery and address the pressing infrastructure issues of the capital.

The AAP will need a big push on governance since that is the only plank it can fall back on when it seeks another term in office. It started on an anti-graft plank in 2013 but reinvented itself as a party of governance in office, so much so that it contested elections outside the national capital promising the Delhi model of good governance and development. The party has lost sheen on both claims. It has spent the past two years battling the office of the Lieutenant Governor over the mandate to rule and the jurisdiction over administration. And legal trouble over the controversial liquor policy cast a shadow over its promise of probity and transparency. The AAP, thus, needs a new narrative to reclaim the political ground it had lost in the past few months.

In any case, a decade in office can lead to anti-incumbency. A change at the top of the government has been a tactic many political parties have tried to deflect anti-incumbency in assembly elections with varying success. The choice of a woman CM — even though this is a holding job as Atishi herself has put it — may resonate with women voters in Delhi: The last Congress CM of Delhi, Sheila Dikshit, was a popular figure for most of her 15 years in office, and the record of leaders such as J Jayalalithaa and Mamata Banerjee suggests that gender can influence electoral choices. The AAP can surely do with some additional votes.

How far a new face, a young leader who is yet to prove her credentials as an administrator and a mass leader, can help the AAP politically is anybody's guess. But Kejriwal's politics of victimhood did not yield political dividends in the recent general election — the AAP failed to win a single seat despite an alliance with the Congress. Atishi as CM suggests a change of track that may help the AAP wrest the narrative. And most importantly, it provides Kejriwal the space and freedom to return to his streetfighter and mobiliser avatar.

Assembly polls mark little big step for J&K

The three-phase assembly elections in the Union territory of Jammu and Kashmir begin today with polling scheduled in 16 constituencies in the Kashmir Valley and eight in Jammu. These are the first assembly elections in J&K in a decade and, of course, the first after the abrogation of Article 370 that once defined the erstwhile state's relations with the Indian Union. The import of these elections is not limited to the UT; it will influence perceptions about Indian democracy beyond national borders.

Two important points need to be emphasised. One, it is welcome that electoral democracy is being restored to J&K. The restoration of statehood should follow. The response from both the public — though polling percentage will be an important metric — and the political class suggests that everyone in J&K wants a popular, representative government. The recent general elections indicated the yearning for electoral democracy, with a 58.46% turnout. Two, there is a crowd out there in the fray (219 candidates) for the first phase. Among them are candidates from the regional titans — the National Conference and the PDP — and local groups (former militant and now Baramulla MP Engineer Rashid's Awami Ittehad Party in alliance with independents associated with the banned Jamaat-e-Islami), as also national parties including the Congress, BJP, CPI(M) and AAP, which has put up independent candidates.

This offers choices to voters — welcome in a democracy even if it complicates the poll outcome. Each party has promised its version of what J&K ought to be — from return to statehood to restoration of Article 370. The compulsions of office would surely moderate the demands, but the first step is to ensure that polling takes place in a peaceful environment, and away from the threat of guns.

The Trump puzzle in US presidential polls

How Americans respond to Trump's politics, personality, policies, and the chaos that accompanies all of it, remains 2024's big riddle

Donald Trump is popular, but not dominant, and triggers robust opposition. This is why it is difficult to predict the election with certainty REUTERS


Prashant Jha

Donald Trump is resilient and popular. His popularity also has severe limits. Donald Trump's politics is based on racist and anti-immigrant rhetoric. And he has a clear but narrow definition of America's economic and military interests. Take each of those four elements to understand events of the past week when Trump lost in a debate, survived a second assassination bid, attacked minorities, and projected himself as the candidate of peace even as a Republican elder shifted to the Democrats.

First, his resilience. There is the obvious physical courage it takes to come close to death twice in as many months and still be strong in the public sphere. But there is also the political resilience. Since he rode down the elevator in the Trump Tower in 2015 to announce his candidacy, political rivals and America's pundits have written Trump's political obituary at least eight times.

No one thought Trump would win the Republican nomination in 2016. No one thought he could defeat Hillary Clinton in the presidential race. No one thought he would survive the investigation around Russia's backing for his candidacy. Few believed that he could withstand the impeachment linked to his conversation with the Ukrainian president urging him to investigate Joe Biden. Few believed Americans would forgive his unscientific mismanagement of the pandemic.

No one thought that he would remain a dominant player after he refused to accept the legitimacy of the 2020 election results and even sent a mob to the United States (US) Capitol, a failed bid that resulted in a second impeachment. Everyone wrote him off after the Republicans lost the Senate and barely won the House in the 2022 midterms. And no one believed he would survive a criminal conviction and the cases. Trump defied critics each time. Today, he is more popular than ever and controls the Republican Party. That's why the Democrats remain cautious about November.

Two, Trump's popularity has severe limits. After his day of triumph in November 2016, he has lost almost every single election where either he was on the ballot or where he led the Republican Party, his loyalists dominated the list of candidates, or where issues he has championed were being tested.

This includes the 2020 presidential election which Trump lost. It includes the 2018 midterms where Republicans lost the House under a Trump presidency. It includes the Georgia Senate run-off race in January 2021 where the Democrats won the seat and flipped the Senate. It includes the 2022 midterms where far-Right Trumpist candidates were defeated in Senate races from Pennsylvania to Arizona. It includes all the referendums on abortion in states that have put the issue on the ballot. Trump may have become more popular. But under him, the Republican Party has consistently lost and its appeal to the wider electorate has diminished.

Three, racism is embedded in the Trump campaign. After spending time at the Republican National Convention, going by the sheer composition of the base and representation in leadership ranks, it was clear that Make America Great Again was essentially Make America White Again. Trump's politics around illegal immigration appeals to a reasonable impulse, the sovereign desire for safe borders. But his rhetoric is meant to stoke prejudice, hatred and fear.

In the past week, Trump and JD Vance have hurled baseless claims that illegal Haitian immigrants in an Ohio town were eating pets; neither are the town's immigrants illegal nor are they eating pets. Trump's avid supporter, the far-Right social media influencer Laura Loomer, who accompanied Trump on the plane to the debate and a 9/11 memorial, launched a racist attack on Kamala Harris' Indian roots. And Trump himself has used racist tropes against Harris. All of this is not a bug but a feature of the Trumpist White Christian project. Parts of India's Right that celebrate Trump should keep this in mind.

Four, Trump speaks to an America that has a much narrower conception of its interests than both the Democrats and older Republicans did. This is not necessarily isolationism, for even Trump's world understands deep global interconnections. Indeed, in his first term, Trump brokered the Abraham Accords, boosted America's posture against China, sanctioned operations against Iran, engaged with North Korea, all of which indicates he will remain globally engaged.

What Trump detests are American financial and military obligations that come with being the dominant player in the international system. He doesn't quite see the benefits that come with it or pretends these benefits don't exist. He has instead framed globalisation and America's global role as bleeding American jobs, deepening inequities, and helping a military-industrial complex. This is more in tune with the everyday sentiments of Americans, burnt by Afghanistan and Iraq and frustrated by the chaos in Ukraine and Israel. Indeed, Dick Cheney's endorsement of Harris proves to Trump's base that he has cleansed the party of people who were responsible for bad wars, of which Iraq is the most obvious example. This projection as the candidate of peace committed to basic US interests and focused on its economic well-being is a major source of Trump's appeal. But this vision also upsets older assumptions and is contested by those who want a more internationalist role, as the assassination bid by an avid Ukraine sympathiser over the weekend showed.

Trump is popular but not dominant and triggers robust opposition. This explains why it is difficult to predict the election with certainty. Trump borrows identity-based chauvinism from the Right and criticism of liberal economics and foreign policy from the old Left. This explains why Trump is hard to box into an ideological category. Whether enough Americans like his personality, policy mix and the chaos that comes with it remains the central question of 2024.

The views expressed are personal

Who will safeguard the interests of fliers?


Anjuli Bhargava

I shall begin this article with an incident that recently happened to me — a mini scam at the new Mopa airport in Goa this July as I was flying out with my daughter to Paris via Muscat. The woman manning the check-in counter informed us that the flight was so full that she couldn't give us any two seats next to each other for the three-hour-odd flight to Muscat and that she could only assign us two middle seats. She said she could give us two emergency seats together for an extra payment of a bit over ₹3,500. Not liking the idea of two middle seats in a jam-packed aircraft, I agreed and paid.

Upon entering the aircraft, we saw rows and rows of empty seats and realised she had "scammed" us. Upon enquiry, I learnt that the passenger load factor (PLF) on the flight was just below 50%. In fact, there were many three-seat rows that were empty. The scamster turned out to be an employee of Celebi, the ground management company that handles check-in and other tasks for a clutch of airlines, including Oman Air, that outsource these at various airports.

More recently, a friend mentioned how, for no fault of his, he twice had to waste time and energy to recover the cancellation charges that IndiGo, the largest private airline in India, levied on a ticket purchased online. Both times, the airline cancelled the flight at the last minute and then deducted a small cancellation charge when it refunded the fare amount to him.

In fact, his argument was that it should be the other way round: The airline should pay him a "consolation charge" for cancelling quite late in the day and forcing him to book on another flight, possibly at a higher fare.

A back of the envelope calculation by an industry expert estimated that IndiGo earns around ₹200 crore a month from cancellations, which accounts for around 40% of its ancillary revenues. In response to a query to confirm how much it nets monthly from such charges, the airline spokesperson said that "cancellation fee is a standard airline practice to encourage hygiene towards curbing wastage of seats, being a perishable commodity".


In a country where the number of fliers is growing by the day and the choice of airlines shrinking by the year, we urgently need an empowered body or ombudsman that can exclusively safeguard passenger interests on a daily basis REUTERS

Industry professionals point out an even bigger anomaly: The cancellation charge when the passenger wants to cancel. As things stand, in the majority of cases, the passenger stands to lose a substantial portion of the amount paid on booking, even if he or she cancels two months or more prior to the date of travel. This makes little sense since the airline also charges a sharp premium on last minute bookings.

If the passenger cancels well in advance, giving the airline plenty of notice and time to sell the seat, there is no reason why the airline should deduct such a hefty amount from the fare paid, especially since fliers pay through their nose for last minute bookings.

Then, on October 6, 2023, IndiGo introduced a distance-based fuel surcharge on all passengers booking flights, claiming a significant increase in Aviation Turbine Fuel (ATF) prices and the need for "fare adjustment to address such a cost surge". On reading about this move, I asked IndiGo about it and other airlines, including Air India, Vistara and SpiceJet, if they had introduced a similar fuel surcharge. I found that IndiGo had taken the lead and SpiceJet had followed, but the other players had refrained from imposing any surcharge.

When I asked some officials in the ministry of civil aviation (MoCA), they seemed unaware of the issue, and questions to IndiGo on the logic behind the move did not elicit any response. On January 4, 2024, IndiGo, of its own volition, removed the surcharge. Was this levy or fuel surcharge justified? If so, was the amount of the levy justified? Was it just a tactic to earn some extra revenue from ignorant fliers?

There's no shortage of fog-related horror stories emanating from the National Capital Region (NCR) annually, but the ordeal faced by a friend and her daughter stayed with me. The duo's five-night holiday to Sri Lanka was effectively cut short by one day since their Air India flight was delayed by over 12 hours; so, one night of the five was spent on the floor of Delhi's Terminal 3. The airline provided some breakfast but little else. Till the boarding took place, passengers were kept in the dark, given virtually no information, and left to their own devices.

Such unpleasant stories of the suffering of fliers abound on all platforms, so I don't need to elaborate.

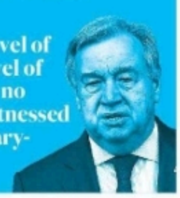
My short point is: In a country where the number of fliers is growing by the day and the choice of airlines shrinking by the year, we urgently need an empowered body or ombudsman that can exclusively safeguard passenger interests on a daily basis.

The Directorate General of Civil Aviation, MoCA, and the department of consumer affairs are neither equipped nor designed to tackle this.

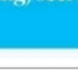
Anjuli Bhargava writes on governance, infrastructure and the social sector. The views expressed are personal

[ANTONIO GUTERRES] SECRETARY-GENERAL OF THE UN

It is unimaginable that the level of suffering in Gaza, and the level of deaths and destruction have no parallel in everything I've witnessed since (becoming) secretary-general



Industrial cities can be the boost manufacturing needs


Subhrakant Panda

The road to Viksit Bharat (developed India) undoubtedly traverses the manufacturing sector that has been paid sustained attention to increase its share in the Gross Domestic Product (GDP) to 25%, which is in line with a modern economy. This entailed several measures to enhance the ease of doing business and reduce the cost of doing business, and the focus has now turned to creating industrial infrastructure on an unprecedented scale in order to attract large-scale investments and boost manufacturing.

There are more than 4,400 industrial parks/zones across the country, 64% of which are mixed-use, although there has been a trend lately towards sector-specific parks. Together, the top five states account for nearly 75% of the total area, and this has unquestionably played a role in their growth story. Now, following through on the announcement in the Union Budget to facilitate the development of investment-ready industrial parks, the Centre has approved 12 new industrial cities under the National Industrial Corridor Development Programme (NICDP) with an investment of ₹28,602 crore. They will strengthen the nation's industrial infrastructure, enhance global competitiveness, and act as engines of economic growth by attracting investments of more than ₹1.5 lakh crore, while creating four million direct and indirect jobs.

From an industry perspective, NICDP recognises the need to facilitate investments by having readily available land parcels and creating world-class infrastructure ahead of demand as the time is ripe for India to become a global manufacturing hub on the back of geopolitical developments. By providing plug and play options in conjunction with ease of doing business measures like automatic approval of Foreign Direct Investment (FDI) and minimal clearances, the time taken to operationalise investments will reduce noticeably, which is imperative to compete with alternative geographies vying for the same set of investors. Overall, it will lead to a vibrant manufacturing ecosystem with both large anchor investors as well as MSMEs, thereby acting as a catalyst for achieving the target of $2 trillion in exports by 2030.

India's high logistics cost has been a matter of concern as it impacts competitiveness, and this led to the National Logistics Policy (NLP) being announced in 2022 to improve India's ranking in the Logistics Performance Index by bringing costs on par with competing economies. If it is decided to co-locate the entire value chain of a sector within an industrial city, there will be substantial savings in logistics. This will help realise the aim of the NLP. Further, aligning these industrial cities to the PM GatiShakti National Master Plan in terms of multi-modal connectivity infrastructure will lead to seamless movement of people, goods, and services. Many will be proximate to ports, thereby bringing down the cost of outbound goods.

Urbanisation is an off-shoot of development, and there is a need to improve urban planning in India. In this context, by developing new smart cities and promoting the walk to work concept, the NICDP has the potential to revamp how we look at manufacturing. While relieving the pressure on some of the existing clusters that have become saturated, these nodes can also become the focal point around which sustainable development takes place. The effects of the climate crisis are visible, and economic development must go hand in hand with environmental stewardship by utilising green technologies to the hilt.

It is evident from the location of the industrial cities announced in the first lot that balanced regional economic development is a key criterion. Each region's unique strengths must be leveraged to maximise economic output and foster inclusive growth, and NICDP also scores when it comes to a key focus of policymakers as it is expected to generate significant employment opportunities with an estimated one million direct and three million indirect jobs. The growth of the manufacturing sector in and of itself is critical to benefiting from India's demographic dividend, and planned industrialisation initiatives will not just lead to livelihood generation but also socio-economic upliftment across the length and breadth of the country.

Industrial parks are not new to India, but what is refreshing is the grand vision behind NICDP that ties in various aspects in the pursuit of robust, sustainable infrastructure to catalyse investments and drive balanced regional development. As with all initiatives, implementation will be key. The completion of four projects with another four currently under implementation augurs well. The bid to transform India's industrial sector is truly getting a fillip.

Subhrakant Panda is immediate past president, FICCI, and managing director, IMFA. The views expressed are personal

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WORDLY WISE

MY YESTERDAYS WALK WITH ME. THEY KEEP STEP, THEY ARE GRAY FACES THAT PEER OVER MY SHOULDER. — WILLIAM GOLDING

The Indian EXPRESS

FOUNDED BY
RAMNATH GOENKA

BECAUSE THE TRUTH INVOLVES US ALL

CM ATISHI

Delhi deserves a functioning government. AAP should turn its attention from Kejriwal's 'agnipariksha' to what the city needs

DELHI IS SET to get a new chief minister, according to a plan set in motion by Delhi's just-resigned chief minister. Arvind Kejriwal had walked out of jail on bail Friday to a challenge: The self-styled anti-corruption crusader, who first burst upon the political scene as part of the Anna Hazare movement that unfolded under the arc lights of the nation's capital and contributed to the downfall of a government that was seen to be scam-riddled, needs to retrieve his lost mantle. He needs to blot out the stains left by the excise policy case, in which his government is accused of tweaking policy to benefit the cartelisation of the liquor trade in Delhi as part of a quid pro quo. The CBI-ED cases of corruption and money laundering could prove to be sticky in spite of apprehensions, affirmed by the Supreme Court, that his arrest and prolonged detention showed a short-circuiting of due process, on the watch of a Centre wielding central agencies against its opponents to settle political scores. But that's not the only reason why, in Kejriwal's book, drastic measures may now be called for. The fact also is that Delhi's ruling party has let go of the initiative in terms of governance. Because of its constant face-offs with the Centre and its nominee, the L-G, or because of its top leaders' incarceration, or because it lost the verve that had once papered over its many organisational cracks, the Kejriwal-led AAP seems to be fumbling for a new script.

The path, or the spectacle, that Kejriwal has chosen to climb out of his corner is not new. Many politicians have sought a quick-fix vindication from the "people's court". But it remains problematic. Kejriwal has urged that the Delhi assembly elections, scheduled for February 2025, be advanced to November; Atishi will be chief minister till then, and he will become CM again only if the people hand him a certificate of innocence. Kejriwal would know that a similar strategy flopped in the Lok Sabha poll — the BJP swept Delhi, even as he, granted bail to campaign, played victim and martyr. But more importantly, by focusing the AAP's energies on his own "agnipariksha (trial by fire)", Kejriwal may be making another mistake, one that could take a toll not just on him and his party, but also on the people of Delhi. Before it turned its attention, almost full-time, to blaming the L-G and BJP, the AAP had earned its popularity by the work it had done in schools and in mohalla clinics. With its governance losing sheen since, what the AAP government needs to do, and what Delhi needs it to do, is to get down to work again. It needs to address an increasingly visible urban disrepair.

Be it on the unchecked waterlogging during rain, or the outbreak of diseases like dengue, or the inattention to issues of pollution and sanitation, the AAP government needs to act, it cannot keep pointing fingers at others. It rules Delhi, and since December 2022, also controls the MCD. Atishi's elevation will mark a milestone — as the capital's youngest CM, she comes to the job having handled over a dozen departments with both the CM and his Deputy in prison. Her challenge will be to give direction to a floundering government, and for this she will have to be more than a placeholder. For Kejriwal himself, the shadow behind her throne, the real test will be whether or not the AAP can get a grip on governance.

FERTILISER CAP AND CUT

Efficient use of nutrients on farms should be encouraged. Minerals and chemicals are also needed to make batteries

CHEMICAL FERTILISERS ARE made from fossil fuels and minerals having alternative industrial uses. Ammonia, the key input of nitrogenous fertilisers such as urea, is derived from natural gas that is also a transportation fuel and feedstock for petrochemicals and power generation. There is similar user competition now happening with rock phosphate ore. This raw material for manufacturing di-ammonium phosphate (DAP) and other phosphorous-containing fertilisers is being increasingly used as the cathode (positive electrode) source in electric vehicle batteries, replacing more costly nickel, manganese, cobalt and aluminium oxides. As more of phosphoric acid produced from the ore deposits in Morocco, China, Egypt or Tunisia goes towards making lithium iron phosphate batteries, there will be that much less available for manufacturing phosphatic fertilisers. The resultant "food versus cars" dilemma may have echoes of the more familiar "food versus fuel" debate arising from the diversion of sugarcane, foodgrain and vegetable oils for ethanol and bio-diesel production.

India imports nearly half of its natural gas consumption and hardly has any mineable phosphate, potash or elemental sulphur reserves. Its agriculture is, hence, particularly vulnerable to global price spikes and supply disruptions. All the more reason why a country that is substantially dependent on imports, of both finished fertilisers and inputs used for their domestic manufacture, needs to focus on efficient nutrient application. There was a time when farmers had to be incentivised to use chemical fertilisers for boosting crop yields. Today, they need to be restrained from over-application. Unfortunately, the government policy of under-pricing urea and, more recently, DAP, does just the opposite.

The government must take measures to cap, if not cut, the consumption of high-analysis fertilisers like urea (having 46 per cent nitrogen content), DAP (46 per cent phosphorous) and muriate of potash (60 per cent potassium). Farmers should be weaned away from these to apply complexes and water-soluble fertilisers containing less of these nutrients that can be delivered directly to the plant's root zone or sprayed to the leaves. Improved nutrient use efficiency will allow reduction in the consumption of bulk fertilisers and also imports of their intermediates and raw materials. The sustainability of Indian agriculture lies not only in more crop per drop (of water), but also more crop per kg (of nutrients).

OF LIGHT & DARKNESS

William Golding's 'Lord of the Flies' completes 70 years. Its message still rings true

WHO WOULD PEOPLE be without the civilising effects of society? William Golding imagined it to be a dystopian survivalism. In his 1954 debut novel *Lord of the Flies*, the British novelist wrote of a group of pre-adolescent school boys stranded on an uninhabited island after a plane crash and their slow descent into chaos. The theme was such a shock that the manuscript met with several rejections. It took an intrepid junior editor to recognise its genius and publish it after editorial interventions. The first half of the novel, a detailed account of the boys' evacuation during a nuclear war and the plane's accident, was reworked in its entirety, so much so that Golding is known to have said at the end of the exercise that he could "hardly bear to look at it." The end product turned out to be an enduring classic that launched Golding's Booker Prize-winning career.

The first draft, along with Golding's letters and diaries, will go on display at the University of Exeter this month to commemorate the book's 70th publication anniversary. Golding's novel had been a response of sorts to Scottish author RM Ballantyne's *The Coral Island*, which had a similar premise but where the children were rescued by their faith and cultural resilience. But Golding believed that the alternative was the most likely possibility — anarchy that led to a corruption of empathy and moral values, no matter the age of the besieged.

This imagination of children as agents of disruption had been one of the deterrents to its publication. But Golding knew, in the unerring way that writers and observers of human behaviour sometimes do, that just like adults, there is no one way for a child to be, that they, too, have a capacity for deviance. As the poet Kamala Das wrote in the poem, 'Punishment in Kindergarten': "Children are funny things, they laugh/ In mirth at others' tears..."

Reaping the silver dividend

Extending national health insurance scheme to elderly is a necessary but not adequate step

SRINIVAS GOLI, KAUSTAV CHAKRABORTY, JHUMKI KUNDU

THE CENTRE'S decision, last week, to extend the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) with a Rs 5 lakh top-up for all older adults aged above 70 years, not covered by other public health insurance schemes, is a step in the right direction. However, it's not a game-changer. The government claims that the move will benefit about 4.5 crore families. We have tried to analyse how far the proposed scheme goes in protecting households from impoverishment caused by catastrophic healthcare expenditures (CHE) and how many will benefit from it. We have also tried to calculate the annual budgetary requirements for hospitalisation for all intended beneficiaries and lay out a roadmap to promote healthy ageing.

India is not only the world's most populous country but also among the fastest ageing. Although the country's life expectancy is 70 years, the healthy life years are only 63.5. Surveys and studies have provided evidence of increasing burden of non-communicable diseases, disabilities and a bedridden older population, especially in the 70-80 and 80-plus age age group. High-risk pooling mechanisms and heavy premiums in private health insurance companies, especially for the older population, are major hindrances in healthcare coverage. In India, only one in five persons above 60 years is covered by health insurance. With nearly 92 per cent of the workforce engaged in informal labour, the financial burden caused by poor health is often devastating. Recent evidence shows that nearly half of the Indian households seeking hospitalisation or outpatient care encounter CHE, leading to impoverishment for 15 per cent of such households. Out-of-pocket (OOP) healthcare spending for inpatient care is twice as high for the elderly compared to the younger population. However, the country's social security system for older adults is inadequate. The government's decision to extend the flagship health insurance scheme to older adults will, therefore, help financially stressed people. The move will provide much-needed support for the elderly in times of increasing nucleation of families, rising economic dependency and care poverty.

The expansion of insurance coverage needs to be supplemented with expansion of public health infrastructure and hospital coverage and increase in healthcare human resources and medicine supply. India's healthcare system needs more holistic reforms that integrate primary and tertiary care support, especially for the ageing population whose health issues often demand continuous attention. Countries with better health outcomes and medical care systems view health as a human capital and healthcare as public service.

The question, though, is the move sufficient to ensure healthy ageing.

The government has allocated an additional budget of Rs 3,437 crore for AB-PMJAY to cover the proposed extension. National and state-wise preliminary estimates, however, show the need for a greater increase in funds to cover the intended beneficiaries' health care. Our estimates using the projected population from the Office of Registrar General of India show that 5.6 crore households would be eligible for the scheme. After adjusting to hospitalisation rates, derived from the Longitudinal Ageing Survey of India (LASI), and deducting the number of individuals covered by employer-based public health insurance schemes, the expected users per year account for 43.5 lakh families. Our calculation shows that if all of them become beneficiaries under the scheme, with an average cost of Rs 32,804 for hospitalisation in a year (derived from LASI), the scheme will cost Rs 14,282 crore. In other words, the amount allocated for the scheme is more than four times less than what is required to implement it effectively.

Protecting vulnerable older adults through public insurance should be complementary to, but not a substitute for, government hospital care. The disease profile of the hospitalised elderly — dominated by ailments such as diabetes, cardiovascular, respiratory and gastrointestinal diseases, cancer, vector borne diseases, injuries — indicates that the majority of illnesses are not likely to be cured in a single episode of treatment. They will require long-term care. The AB-PMJAY, like most other private insurance schemes, covers only secondary and tertiary care conditions, when outpatient services account for 46 per cent of the total health expenditure. The exclusion of outpatient care from the scheme will not help in preventive care, critical for healthy ageing. In its current form, the scheme also does not help with palliative care, a common requirement for the 80 plus group or the bid-ridden amongst the relatively younger group of the elderly who suffer from chronic diseases.

Non-communicable diseases that require multiple consultations with healthcare providers have increased steadily in recent years. Outpatient care contributes to much-needed preventive care. With improved primary and secondary (preventive) healthcare, a considerable amount of pressure can be lifted from the already burdened tertiary healthcare (curative or palliative care) sector.

Extending the beneficiary base of the AB-PMJAY will not be enough to achieve the public health goals of the country without a substantial rise in public health spending. Public healthcare spending has been stagnant at around 0.9 to 1.35 per cent of the GDP for more than seven decades. The expansion of insurance coverage needs to be supplemented with expansion of public health infrastructure and hospital coverage and increase in healthcare human resources and medicine supply. India's healthcare system needs more holistic reforms that integrate primary and tertiary care support, especially for the ageing population whose health issues often demand continuous attention. Countries with better health outcomes and medical care systems view health as a human capital and healthcare as public service — the Canadian, European, and Australian models are good examples. India, in contrast, is poised to follow less-effective systems such as those in the US. Depending on insurance-based schemes can inflate the cost of the healthcare system as a whole.

In its current shape, with the latest extension, AB-PMJAY is a crucial intervention to avoid impoverishment caused by catastrophic health spending. But it is inadequate to ensure the well-being of the ageing. In the coming decades, the demographic transition will not only alter the age structure and disease profile of the population, but also disrupt the labour market structure, migration patterns and social security policies in states where the population will age relatively faster. Promoting healthy and active ageing is non-negotiable to reap the "silver dividend" or the direct and indirect economic and non-economic contributions made by the older population.

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CATS, CAT LADIES AND TRUMP

Former president's claims are bizarre and insulting to all Americans

RANJIT LAL

EVER SINCE DONALD Trump claimed that Haitian refugees have been going around eating pet cats and dogs, I've been wondering about the nitty-gritty details of this diet. First of all, the poor immigrants (which, all Americans technically are or, at least, once were) allegedly indulging in this diet will have had to get past the huge army of "childless cat ladies" led purportedly, according to Trump again, by Kamala Harris. These ladies would do everything in their power to see that American cats were protected from meeting this fate. And do remember that Harris is the Vice-President. You can imagine what she might do to any cat-eating people she catches if she becomes President. Surely Mr Trump could not object to that.

Secondly, exactly how do you go about catching, killing and cooking cats? You can't (to the best of my knowledge) buy them tinned at the supermarket. Like Bear Grylls, you'd have to become a hunter-gatherer — and go out into the suburbs looking for them. Be warned, cats are far more canny and suspicious than dogs and will immediately recognise the predatory glint in your eyes (it takes one to know another after all) and will shoot up the nearest tree — and then you'd be obliged to call the fire services to bring them down.

Okay, and how do you deliver the coup de grace? Ah, you'd say, in America, you'd just shoot them — guns are available to one and all, the law-abiding, the lawless, and babies in diapers. But not so fast: Guns make a lot of noise (as do babies) and this would surely attract childless cat ladies by the dozen who would immediately dial 911, and there goes you and your dinner. So how about catapults or bows and arrows, or crossbows? Or, you could throw a spear at them perhaps? Any cat winged by a pebble from a catapult or struck by an arrow is going to screech like a banshee and flee. And how good is your aim with these weapons in the first place? It's more likely that you'd hit your spouse. And oh, no you do not want to indulge in personal combat with a cat, no matter how hungry you may be.

Okay, let's assume that through sheer good fortune and very bad driving, you run over a cat... Will you know how to skin and gut it? And what do you tell your kids when you bring it home? 'Guess what? We're having Puddy Tat for dinner!' Or maybe, Garfield or Sylvester or the Cat in the Hat...

Okay, let's assume that through sheer good fortune and very bad driving, you run over a cat... Will you know how to skin and gut it? And what do you tell your kids when you bring it home? "Guess what? We're having Puddy Tat for dinner!" Or maybe, Garfield or Sylvester or the Cat in the Hat...

I don't expect anyone to seriously buy the argument that illegal immigrants are sneaking around in people's gardens or driving around in the streets looking for Persians and Siamese (who are also immigrants). But I'm half expecting Mr Trump to course correct and now claim that perhaps "like in China they have tiger farms, these people have secret cat farms where they harvest the animals and eat them. And there are recipes in *The New York Times* on how to cook catburgers and catloaf if you read the paper closely enough and can find them! I mean we're already putting catsup on everything we eat, so we're as good as there!" That's garbled, right? Exactly the point!

If illegal or legal immigrants, or for that matter anyone, in a country as wealthy as America has to sneak around hunting pet cats and dogs for dinner — well, it doesn't say much for the nation and is frankly something every red-blooded American should find insulting, and not just in the way Mr Trump intends it.

Even if you are destitute and desperate, it might be a better option to sneak into people's gardens and make off with their prize pumpkins, carrots and squashes — one, the vegetables won't scream and two, everyone is going vegan these days. Alternatively, there is enough food thrown away in garbage bins to feed god knows how many millions of people, so again, here's an easier option. Even some of the animals are doing this — bears in Alaska that raid garbage bins in towns are fatter and healthier than their country bumpkin cousins.

Really, Mr Trump need not worry. As long as there is an army of childless cat ladies out there, pet cats in the United States will be safe. And yes, too much catsup on your hot dog will make you throw up.

The writer is an author, environmentalist and birdwatcher


INDIAN EXPRESS

SEPTEMBER 18, 1984, FORTY YEARS AGO

VOTE OF CONFIDENCE

ANDHRA PRADESH CHIEF Minister NT Rama Rao announced that he would seek a vote of confidence for his ministry on September 20 when the Legislative Assembly is scheduled to meet. Addressing a meeting of legislators, zilla parishad chairmen and other supporters at Ramakrishna Cine Studios, Rama Rao said he wanted to abide by his earlier stand of proving his majority as soon as the Assembly met.

NO INDO-PAK CONFLICT

PRESIDENT MOHAMMAD ZIA-UL-HAQ said Pakistan had taken measures to protect its nuclear facilities against any external attack. He was commenting on press reports in the USA of a possible Indo-Pak conflict, including an attack on Pakistan's nuclear plants. General Zia said Islamabad had sought clarification on the reports but did not specify from whom. He said hoped the reports would "not be any near to the reality."

SINO-INDIAN TALKS

THE FIFTH ROUND of Sino-Indian official-level talks began with the two sides making their presentations covering various aspects of bilateral relations, including the border issue. The Chinese viewpoint was presented first by delegation leader Gong Da Fei, Foreign Ministry, followed by Indian team leader Natwar Singh, Ministry of External Affairs.

NAGPUR VIOLENCE

THE CONGRESS(I)-CONTROLLED NATIONAL Students Union of India (I) decided to conduct an inquiry into the widespread violence, looting and molestation by its members after several students staged a *dharna* at its headquarters demanding the removal of the guilty from the organisation. Some JNU students, who had submitted a memorandum to the NSUI-(I) president asking for a "purge" of all those responsible, also joined the *dharna*.

WHAT THE OTHERS SAY

"Best would be for Labour to relax the fiscal rules it copied from the Tories that limit how much it can borrow. Better for Labour to grasp the nettle now and use the opportunity to do what it promised: to change this country for the better."

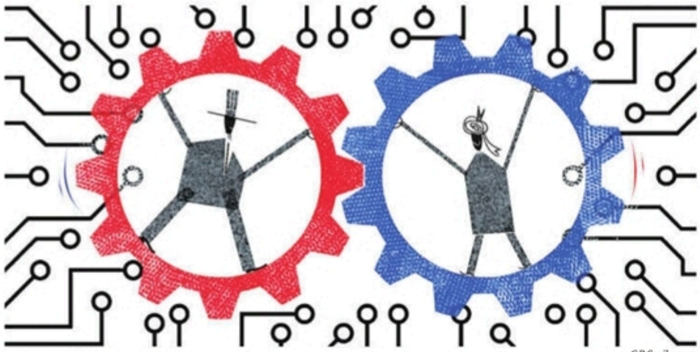
— THE GUARDIAN

Joe Biden's India story

Despite scepticism at the outset of his presidency, Biden has done much to deepen strategic, economic and techno-industrial cooperation with Delhi. The stage is now set for a bolder bilateral agenda

RAJA MANDALA

BY C RAJA MOHAN



C R Sasikumar

PRIME MINISTER NARENDRA Modi's meetings on Saturday with President Joe Biden at Wilmington — a two-hour drive south from New York — will celebrate the significant gains in the India-US partnership over the last four years. The Wilmington discussions will also continue translating some of the declared big ideas for India-US strategic cooperation on high technology, defence, and regional security into concrete outcomes.

That Wilmington, Delaware, is Biden's hometown adds a personal dimension to the proceedings of the summit of the Quadrilateral forum and the US President's bilateral meetings with partners from Australia, India, and Japan. President Biden and his advisers have invested significant amounts of political and bureaucratic capital in making the Quad a credible new forum in Asia. Biden's term has also seen the intensification of bilateral strategic cooperation with all three Quad partners.

As the last round of engagements between Modi and Biden unfold this weekend, it is a good moment to reflect on Biden's contributions to India-US relations. For India, Biden's legacy is about supporting Delhi's plans to deepen the techno-industrial base of India's economy and security.

When Biden won the presidential elections in November 2020, there was widespread Indian scepticism, including in this column, about his capacity or will to sustain the political momentum that the Trump Administration had imparted to the relationship. The question was not about the lack of goodwill within the Democratic Party's foreign policy establishment towards India. There has been a strong bipartisan consensus across the political aisle in Washington since Bill Clinton visited India in 2000, the first presidential visit in 22 years, in favour of building strong ties with Delhi.

The question at the end of 2020 was whether the Biden Administration would persist with three key innovations under Trump — recognising the futility of continued military presence in Afghanistan, downgrading the relationship with Pakistan, and confronting Chinese assertiveness in Asia. Together, the three factors had elevated India's position in the hierarchy of US strategic priorities under Trump. The first two factors saw the marginalisation of Pakistan in the US strategic calculus — for the first time since Soviet Russia's military intervention in Afghanistan in 1979. The third factor defined Beijing as a challenger to Washington after more than four decades of viewing China as a partner for America.

The Trump Administration's China strategy led to the reimagining of Asian geography as the "Indo-Pacific". Putting "Indo" into the "Pacific" marked a decisive break from Washington's tradition of seeing Delhi through the South Asian prism. This was accompanied by lending an institutional dimension to the new Indo-Pacific strategy by reviving the Quadrilateral forum (Australia, India, Japan, and the US) that went into a coma after a brief flicker in 2007.

Given the Democratic Party's hostility to Trump, few expected Biden would stick to his predecessor's policies. Biden, however, chose to double down on Trump's Asia strategy. But unlike Trump, Biden put alliances and partnerships at the centre of his global strategy.

It was no secret that Trump was uncomfortable with the continuing US military presence in Afghanistan. Less well known was Biden's conviction that the US can't win the war in Afghanistan; but few expected him to unilaterally withdraw the US military. Although the manner of withdrawal turned out to be disastrous, it freed the US from its dependence on Pakistan to sustain its Afghan policies. This meant the end of Pakistan's prolonged primacy in America's South Asia policy.

Biden brought greater coherence to the operationalisation of the strategy to build a new Asian balance of power amid the growing challenges from China. On the economic front, Biden refused to withdraw the Trump tariffs on Chinese imports. Biden sought a more comprehensive effort to de-risk the economic relationship with China and put in place tighter controls on the transfer of advanced technologies.

Reinforcing the economic pressure, Biden undertook several political and institutional steps in Asia that looked beyond the Trump legacy. These included the elevation of the Quad to the summit level barely two months after Biden was sworn in; expanding the ambit of the strategic partnership with India; the announcement of the AUKUS partnership with the UK to transfer nuclear propulsion technology to Australia; the upgrading of the alliances with Australia, Japan, and the Philippines; the effort to resolve the historical differences between Seoul and Tokyo and build a trilateral compact in North East Asia; high-level re-engagement with the ASEAN; and end to the prolonged neglect of the Pacific Islands.

The Indian and American perceptions of the China challenge began to converge in the Trump years. India's simmering tensions on the border reached a breaking point with the Galwan clashes in eastern Ladakh in the summer of 2020. On the economic front, Delhi recognised that the growing trade deficits with China represented a long-term challenge to India's economic security.

Shared perspectives between nations on objective reality do not always translate into outcomes. That is where subjective contributions matter. Biden's policies helped build on that convergence with new initiatives on high technology, defence, and regional stability. Modi, in turn, nudged Delhi's hesitant and self-doubting establishment to seize the opportunities presented by the Biden Administration.

The most consequential development of the Biden years is undoubtedly the initiative on critical and emerging technologies (iCET) that was unveiled in January 2023. If more intensive technology cooperation has long been India's ask from America, the iCET has taken it to a new level. The iCET has also helped expand the focus beyond cooperation between the S&T agencies to building industrial cooperation that is set to boost India's national capabilities in advanced sectors like semiconductors and jet engine production in India.

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Biden's emphasis on building resilient supply chains and developing deeper cooperation among trusted geographies has not only put India at the centre of this strategy but also mobilised America's allies to join the efforts to accelerate India's growth in the emerging technology areas.

It is important to note that intensifying bilateral cooperation is not a one-way street. Indian talent, companies and startups are now contributing to the US economy and security. It is not by accident that the US has emerged as the main destination for India's defence exports.

Biden chose to go along with the Indian view that the Quad should not be developed as a military alliance but as a provider of public goods in the Indo-Pacific. This has seen a steady expansion of regional cooperation on maritime domain awareness, humanitarian assistance and disaster relief, cybersecurity, telecommunications, and health to mention a few.

The depth of shared strategic interests in Asia, the political commitment in both capitals to build on it, the new institutional mechanisms for cooperation, both bilateral and regional, the deepening of economic, technological, industrial and security engagement, and the growing links between the private sectors have given India-US partnership unprecedented stability.

The new resilience in bilateral ties has allowed Delhi and Washington to withstand unexpected turbulence from different directions — including the Russian invasion of Ukraine, the alleged Indian involvement in the attempted killing of a US citizen, and the divergence over political change in Bangladesh. Despite persistent scepticism in both capitals about the utility and durability of the relationship, the Biden years have seen Washington and Delhi advance purposefully in the last four years and set the stage for an even bolder agenda under the next US president.

The writer is visiting research professor at the Institute of South Asian Studies, National University of Singapore and contributing editor on international affairs for The Indian Express

What Rahul said in America

In every interaction, he furthered India's interests and spoke for the most marginalised

SAM PITRODA

RAHUL GANDHI'S BRIEF visit to the US has evoked various responses in India, mainly on social media, and of course among commentators, and professional Rahul watchers. They have ranged from profound appreciation to strident criticism. That is not surprising. However, not much has been written about the kind of meetings and types of people from different fields he interacted with. Inadequate information and sometimes tendentious reporting led to some unwarranted comments. As chairman of the Indian Overseas Congress, I thought it best to give a straightforward and factual account of Rahul Gandhi's US visit.

During his three-day visit, Gandhi addressed various types of public meetings — serious sessions with US lawmakers, senior and influential leaders of both Democratic and Republican parties, media persons, university students, public intellectuals and others.

Although the visit was undertaken in a personal capacity, it yielded substantial outcomes that furthered India's foreign policy interests.

His public addresses in Dallas, Texas, and at Georgetown University and the National Press Club in Washington, DC, have already received extensive media coverage. However, it is his private engagements with senior and influential members of the US House of Representatives, officials from the House Foreign Affairs Committee (HFAC) and leading policy experts from think tanks that have brought a deeper, more nuanced understanding of India's domestic challenges and the broader South Asian geopolitical landscape. This includes India's relations with China, as well as Russia, especially in the context of the Russia-Ukraine war.

A pivotal aspect of the visit was a meeting with 10 members of the US House of Representatives who were drawn from the Foreign Affairs Committee, which has oversight of America's foreign policy; the Congressional Progressive Caucus (CPC), which is one of the most influential and powerful caucuses in the US Congress, the India Caucus, which focuses on US-India relations and the Congressional Black Caucus.

Congressman Brad Sherman, a senior member of the HFAC and the CPC, hosted the meeting with Rahul Gandhi. Crucially, Sherman is a senior member of the House Subcommittee on Indo-Pacific, whose deliberations pertain to India and nearby nations.

While the BJP and the Indian news media have focused on the presence of Congresswoman Ilhan Omar, who participated in her capacity as the Deputy Chair of the CPC, all lawmakers in the meeting play crucial roles in furthering US-India ties.

Congresswoman Jan Schakowsky, a 26-year Congressional veteran, serves as the chief deputy whip of the Democratic Party in the House and is a Vice Chair of the Progressive Caucus. Congresswoman Barbara Lee is a CPC member and a veteran of the Congressional Black Caucus (CBC). In fact, Lee, Omar, Jonathan Jackson (son of the iconic civil rights leader Jesse Jackson), and Hank Johnson are all outstanding African American lawmakers and veteran members of the Black Caucus. Their participation underscored the importance of Gandhi's dialogue with diverse and influential groups within the US political landscape. Three Indian-American lawmakers — Ro Khanna, Raja Krishnamoorthi, and Shri Thaneda — who have consistently championed US-India relations also attended the meeting with Rahul Gandhi. They are all members of the CPC.

These leaders have regularly engaged with Prime Minister Narendra Modi during his visits to the US or their visits to India. Ro Khanna serves as the Chair of the India Caucus and led a delegation of US lawmakers to India to participate in last year's Independence Day celebrations at Red Fort. His deep connection to India is further emphasised by his lineage — Khanna is the grandson of Amarnath Vidyalankar, a senior leader of the Indian National Congress, freedom fighter, three-time Lok Sabha member and Education Minister in Punjab.

Gandhi's discussions with US lawmakers covered a broad spectrum of topics. He articulated an economic vision aimed at combating unemployment and ensuring a more equitable distribution of wealth. He underscored the need to empower marginalised communities, particularly the lower castes and economically disadvantaged groups. He highlighted the significance of conducting a caste census to recalibrate policies to more effectively target these communities.

A consistent theme in Rahul Gandhi's discussions was the need to cherish, nourish, and preserve India's Constitution. He stressed that pluralist democracy is a foundational ideal shared by both the American and Indian Constitutions. Gandhi argued that India and the US are natural partners in their quest to strengthen democracy both domestically and globally.

When questioned about South Asia and India's relationship with Russia, particularly in the context of Ukraine, Gandhi expressed support for the Modi government's stance, noting that it aligns with the foreign policy approaches of previous Congress-led governments.

He also drew parallels between the economic challenges faced by India and those confronting the US and much of the Western world. He pointed out that while these nations have become significant consumers, they have not matched this with equivalent levels of production — an area where China has excelled. He said that countering China's economic model, which offers prosperity at the expense of freedom, requires the democratic world to find ways to produce goods and services under democratic conditions.

In his remarks, Gandhi identified substantial opportunities for expanding India's textile industry and modernising agriculture. He advocated for the infusion of technology and capital into traditional production systems.

Gandhi concluded by praising the strategic partnership between India and the US. In his view, a strengthened partnership is essential not only for the prosperity of both nations but also to preserve democratic values in the face of global challenges.

The writer is chairman, Indian Overseas Congress

The arc of a leader

From pracharak to PM, Narendra Modi's journey is inspiring

KANGANA RANAUT

BORN ON SEPTEMBER 17, 1950, a few years after India gained independence, Narendra Modi was the third of six children of Damodardas and Hiraba Modi. Modi joined the Rashtriya Swayamsevak Sangh (RSS) when he was eight and was mentored by Lakshmanrao Inamdar. Modi's first significant political action came in 1971, when he joined a Jana Sangh protest in support of the Bangladesh Liberation War, which led to a brief detention. After the 1971 India-Pakistan war, he became a full-time RSS *pracharak* (campaigner).

In June 1975, Prime Minister Indira Gandhi declared an Emergency in India that lasted until 1977. Modi was named general secretary of the Gujarat Lok Sangharsh Samiti, an RSS committee that coordinated resistance to the Emergency. After the RSS was banned, Modi went underground in Gujarat. He was active in distributing anti-government pamphlets, organising protests, and creating a network of safe houses.

In 1979, he moved to Delhi to research and write about the RSS's role during the Emergency. He returned to Gujarat and was assigned to the BJP in 1985. In 1987, he played a key role in organising the BJP's campaign in the Ahmedabad municipal election, which resulted in a decisive victory. His efforts led to his appointment as organising secretary of the BJP's Gujarat unit.

Modi continued to rise within the party, playing significant roles in organising political events such as L K Advani's Ram Rath Yatra in 1990 and Murli Manohar Joshi's Ekta Yatra in 1991–92. On October 7, 2001, Modi took on his first official role as Gujarat's Chief Minister. From that point on, he has led an elected government. He is now the longest-serving non-Congress Prime Minister and has had the longest tenure leading an elected government, including his 12 years as Gujarat's Chief Minister.

In 2014, under Modi's leadership, the BJP won a landslide victory in the Lok Sabha elections, becoming the first party in over three decades to secure a majority on its own. Modi's rise to power was seen as a shift towards strong leadership, with a focus on development and economic reforms. His message of "Sabka Saath, Sabka Vikas" resonated with the masses.

In 2019, the Modi-led BJP won a second consecutive term with an even larger majority. The election results solidified Modi's position as a transformative leader, with his government being credited for initiatives like the GST, demonetisation, and schemes aimed at the welfare of the poor. Modi's appeal to the people, coupled with his decisive leadership on national security and development, helped the BJP cross the 300-seat mark in the Lok Sabha. In 2024, Narendra Modi and the BJP once again clinched a resounding victory in the general elections, securing a third consecutive term. This win cemented Modi's place as one of India's most dominant political figures in modern history. Riding on the wave of national pride, economic growth, and social welfare schemes, his leadership continued to resonate deeply with voters across the country. His vision of a "New India" and focus on development, infrastructure, and international diplomacy proved pivotal in securing yet another historic mandate.

PM Modi has spent his entire life in service to the nation, dedicating himself to the goal of building a stronger and more united India. From his early days as a young boy helping his father sell tea, to his rise as the Prime Minister of India, Modi's journey has been one of tireless dedication and hard work. His commitment to the nation is evident in every step he has taken, whether it was working as an RSS *pracharak* in his youth or later as a leader guiding India through economic, social, and global challenges.

PM Modi believes that a strong and self-reliant India can only be built through unity, development, and progress. He has shown an ability to inspire people across the country to dream big and work together for a better tomorrow. Whether it's through the Make in India campaign, the push for Atmanirbhar Bharat (self-reliant India), or other key initiatives, Modi's dedication to building a prosperous and strong India remains at the heart of his mission.

On September 17, Modi turns 74, marking another milestone in a life dedicated to serving the nation. Throughout his journey, he has sacrificed many personal comforts and desires to focus solely on the well-being and progress of India. He gave up a regular family life and devoted all his energy to the dream of a prosperous India. His sacrifices inspire millions, showing that true leadership comes from a deep commitment to the people and the nation.

Bharat has never seen a leader like him — one who has consistently remained close to the underprivileged and the common man, even after reaching the highest office in the land. His dedication to improving the lives of those who often remain unheard has set him apart as a leader who not only listens to the underprivileged but actively works to uplift them.

The writer is the BJP MP from Mandi

LETTERS TO THE EDITOR

SELECTIVE OUTRAGE

THIS REFERS TO the article, 'Out of sync, without basis' (IE, September 17). The writer's aversion to the Gandhi family is no secret. Her swipes at Rahul Gandhi's questioning the fairness of 2024 LS election process carries little weight — she remembers neither the blatant misuse of investigating agencies by the regime to hound Opposition leaders, nor the infamous freezing of the Congress's accounts on the eve of the crucial general elections. The Election Commission's failure to take action against the Prime Minister's brazen communal appeal to get votes displayed its partisanship. Her fierce opposition to the caste census highlights her ignorance of atrocities against a section of the citizenry. She is perhaps not aware that caste supremacists are found even among the "educated".

S H Quadri, *Bikaner*

A NEW SCIENCE

THIS REFERS TO the editorial, 'Weather proofing' (IE, September 17). Since 2004, meteorologists and climate scientists have been working on a different approach to forecasting that relies on high performance computing machines or supercomputers. They sought to simulate the weather on a particular day and, via physics equations, make a map of how each day's weather would pan out over the next few days, weeks, and even months. The Mission Mausam proposes a radical approach. It succeeded in developing a general-purpose dynamic model that can be tweaked to generate forecasts on multiple timescales — from daily forecasts to seasonal monsoon predictions.

S S Paul, *Nadia*

FORMALISE FARMING

THIS REFERS TO the article, 'Giving farms their due' (IE September 16). Farmland owners who offer it up for tenant farming also play an important role in creating employment opportunities. However, in the process, the quality and value of their land and other resources is eroded. Land owners should also be adequately compensated for this. Digital records of land, farmers, farm credit, irrigation facilities, fertilisers, and other farm inputs will help in organising and strengthening the farm sector. Digital infrastructure for agriculture together with artificial intelligence can also be a useful tool to monitor natural calamities, food security and climate resilient agriculture. It will also help in creating gainful employment opportunities and formalise the agricultural sector.

Arvind Waze, *Mumbai*

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If there are questions of current or contemporary relevance that you would like explained, please write to explained@indianexpress.com

Waiting for Fed rate cut, the key question is how much

ANIL SASI
NEW DELHI, SEPTEMBER 17

THE HIGHLY anticipated two-day meeting of the Federal Open Market Committee (FOMC) of the United States Federal Reserve that began on Tuesday is expected to end with the announcement of a rate cut, the first by the American central bank since March 2020.

The "weighty decision" will be on the size of the cut. Expectation of a 50 basis-point cut has increased over the week leading up to the Fed meeting, and that of a 25 bps cut seems to have reduced slightly.

Decision time at banks

Anticipation of a rate cut has been building up since Fed Chair Jerome Powell's speech at an economic symposium in Jackson Hole, Wyoming, late last month that came closer than any of his earlier remarks to a declaration of victory over the inflationary surge that set in after the Covid-19 pandemic. Powell spelt out what Wall Street has been predicting for some time now — that a cut is in the offing.

Last week, the European Central Bank pruned its policy rate by 25 bps to 3.50%, following a similar cut in June. Brazil's central bank, too, will hold its policy meeting on Tuesday, while the Bank of England, Norway's Norges Bank, and South Africa's Reserve Bank are all slated to wrap up their own meetings on Thursday.

The Bank of Japan, which surprised some market participants in July by deciding to raise borrowing costs, is set to announce its latest rate decision at the end of its two-day meeting on Friday.

Quantum of Fed's rate cut

The size of the expected cut by the Fed represents a "weighty decision", Ed Yardeni, founder of the New York-based sell-side consultancy Yardeni Research, said in a note to clients on Monday, which was quoted by *Forbes*.

Market expectation of the odds of a 50 bps cut rose from 50% on Friday to 57% on Monday, and the probability of a 25 bps cut fell from 50% to 43%, according to futures contract data tracked by Chicago-based CME Group's FedWatch Tool, a widely cited proxy for investor expectations. The CME group owns 27% of S&P Dow Jones Indices.

Economists are split in their expectations.

JPMorgan's top US economist has been quoted as having told clients that the bank expects the Fed to cut rates by 50 bps, while the chief US economist of Goldman Sachs has weighed in favour of a 25 bps cut, saying "larger cuts have historically come in the context of an obvious crisis or at least a layoff spiral", which is not the case currently.

EXPLAINED ECONOMICS

Signals from Jackson Hole

While Powell's speech made a rate cut all but certain, the absence of any guidance at the time perhaps indicated the Fed chief wanted to keep his options open.

Besides keeping prices stable, the Fed is also mandated to ensure maximum employment — this factor too, is being tracked closely. Powell indicated at the symposium that his worries were now tilting towards that side. The Fed has kept its key lending rate at a two-decade high of 5.3% since last July, holding off on cuts that central banks such as the ECB commenced months ago.

Notably, the US has seen a recession — or a significant cooling of economic activity — almost every time the Fed has hiked interest rates in a sustained manner to control inflation. This time could be different: a soft landing — sustained high levels of inflation being brought down without setting off a recession — looks very possible.

At Jackson Hole, Powell noted the sharp slowdown in the American job market, and said the Fed did not "seek or welcome further cooling". He also shrugged off concerns about a recession in the near future, arguing that the rise in unemployment was consistent with a slowdown in hiring, not a sudden spike in job cuts.

"There is good reason to think that the economy will get back to 2% inflation while maintaining a strong labour market," he said.

Impact of Fed rate cut

The Fed (and other central banks) influences employment and inflation primarily by using monetary policy tools to control the availability and cost of credit in the economy. The Fed's primary tool of monetary policy is the federal funds rate, changes in which influence other interest rates — which in turn influence borrowing costs for households and businesses, as well as broader financial conditions.

When interest rates go down, it becomes cheaper to borrow — so, households are more inclined to buy more goods and services, and businesses have an incentive to borrow funds to expand operations, buy equipment, or invest in new projects.

Improved demand for goods and services pushes up wages, and helps rekindle the growth cycle. While monetary policy does not link directly or immediately to inflation and employment, monetary policy is a key factor in curbing runaway prices or stoking the growth impetus.

A cut in interest rates in the US could have a three-pronged impact.

■ The difference between the US and other country rates could widen — making countries such as India more attractive for the currency carry trade. The lower the US rate, the higher the arbitrage opportunity, till the time that the rate-cut cycle starts in other economies as well.

■ A lower rate signal by the Fed would also mean a higher impetus to growth in the US, which could be positive news for global growth, especially as China reels due to a real estate crisis and shows signs of slowing down.

■ Lower returns in US debt markets could also trigger a churn in emerging market equities, improving foreign investor enthusiasm. There is also a potential impact on currency markets, stemming from inflows of funds.

For the Reserve Bank of India, like other central banks, the likelihood of a future rate cut is somewhat predicated on the US Fed's decision. The RBI last cut the repo rate by 40 bps to 4% in May 2020, when the Covid-19 pandemic led to a slowdown in demand, production cuts, and job losses.

RBI has since hiked the repo rate by 250 bps to 6.5% in order to tackle runaway inflation. RBI has a mandate to keep inflation at 4%, with a cushion of 2% on either side.

The next meeting of the RBI's Monetary Policy Committee (MPC) is scheduled for October 7-9.

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LOW-COST DIABETES DRUG CAN SLOW AGEING IN MALE MONKEYS: STUDY

METFORMIN, AN inexpensive diabetes drug, slows ageing in male monkeys, particularly in their brain, according to a new study. The finding raises the possibility that the medication could one day be used to delay ageing in humans.

The study, 'Metformin decelerates aging clock in male monkeys', was published in the journal *Cell* on September 12. It was carried out by a team of 43 researchers based at the University of Chinese Academy of Sciences in Beijing, and other universities.

PAPER CLIP

The monkeys, which received metformin daily, exhibited neuronal activity — the incessant flicker of electrical currents and transmissions in the brain — which resembled that of monkeys six years younger, the study found.

What is metformin?

Metformin is one of the most widely used drugs for treating type 2 diabetes. It was first used for the purpose in France in the 1950s. It is a derivative of guanidine, a compound found in Goat's Rue, which is an herbal medicine long used in Europe.

Researchers for a long time have known that metformin has effects beyond treating diabetes. For instance, they have found that it reduces the risk of cancer.

Over the years, several studies have shown that metformin slows ageing in worms, rodents, and flies. However, the drug's effectiveness against ageing had not been tested directly in primates. That is why Guanghui Liu, a biologist at the Chinese Academy of Sciences and the lead author of the new study, decided to test the drug on monkeys.

How was the study carried out?

Liu and his colleagues gave metformin to 12 elderly male cynomolgus macaques (*Macaca fascicularis*). Another 16 elderly monkeys and 18 young or middle-aged animals served as a control group.

Treated monkeys received the standard dose of metformin that is used to treat diabetes in humans every day. The animals took the drug for 40 months.

Throughout the study, the researchers took samples from 79 types of the monkeys' tissues and organs, imaged the animals' brains, and performed routine physical examinations, according to a report in the journal *Nature*.

They analysed the cellular activity in the samples, and then created a computational model to determine the tissues' 'biological age', which can lag behind or exceed the animals' age in years since birth, the report said.

What are the findings?

The researchers found that metformin slowed the biological ageing of many tissues from organs such as the lungs, kidneys, liver, skin and the brain's frontal lobe. The drug also restrained chronic inflammation — a key symbol of ageing.

The study revealed that metformin protects the brain by activating a protein called NRF2, which thwarts cellular damage caused by injury and inflammation.

Alex Soukas, a molecular geneticist at Massachusetts General Hospital in Boston, told *Nature* that the new study was the "most quantitative, thorough examination of metformin action that I've seen beyond mice".

What happens next?

The scientists have said much more research would be required before metformin can be approved as an anti-ageing compound in humans.

Soukas told *Nature* that he would prefer to see a study which involves more animals. For now, Liu and his team have started a 120-person trial in collaboration with the biopharmaceutical company Merck in Germany, which developed and manufactures metformin, to test whether the drug slows ageing in humans.

EXPRESS NEWS SERVICE

EXPLAINED LAW

Nature of J&K Assembly

J&K Reorganisation Act of 2019 created a vastly different structure, in which the LG, appointed by Centre, has the most important role. What powers will the new Assembly of the Union Territory of J&K have?

APURVA VISHWANATH
NEW DELHI, SEPTEMBER 17

THE FIRST phase of polling for the Jammu and Kashmir Assembly will take place on Wednesday. Given that this is the first election since 2019 when the constitutional compact of Jammu and Kashmir was altered by the abrogation of Article 370, the new Legislative Assembly will be substantially different from earlier Assemblies.

The constitutional changes of August 2019 took away the statehood of Jammu and Kashmir — thus, the new Assembly will be for a Union Territory (UT), not a state. What powers will the new Assembly of Jammu and Kashmir have?

J&K, Puducherry, Delhi

The Jammu and Kashmir Reorganisation Act, 2019 created two UTs — the UT of Ladakh without a legislature, and the UT of Jammu and Kashmir with a legislature.

An amendment was made to the First Schedule of the Constitution, which lists all states and UTs, and to Article 3 of the Constitution, which deals with the "Formation of new States and alteration of areas, boundaries or names of existing States".

Article 239, which deals with the administration of Union Territories, states that "every union territory shall be administered by the President, acting, to such extent as he thinks fit, though an administrator…".

Section 13 of the 2019 Act states that Article 239A of the Constitution ("Creation of local Legislatures or Council of Ministers or both for certain Union territories"), which provides for the administration of the UT of Puducherry, shall also apply to the UT of Jammu and Kashmir.

Delhi, the only other Union Territory with a legislature, is dealt with separately in the Constitution — under Article 239AA. As the national capital, Delhi has a unique constitutional status, which has been the subject of much litigation before the Supreme Court.

While the Supreme Court has, in judgments delivered in 2018 and 2023, upheld the powers of the legislature of Delhi, a constant, politically charged tussle between the Lieutenant Governor and the state government has been seen in recent years.

In Delhi's case, three subjects — land, public order, and police — are reserved for the LG. However, control over 'services', or the bureaucracy, has been a bone of contention between the state and the Centre. After the SC clarified that the LG cannot exercise independent discretion on subjects other than the three reserved subjects, the Centre enacted legislation in 2023, bringing services under the control of the LG. This too, is now under challenge before the court.

Polling officials leave for their respective polling stations on the eve of first phase of the Jammu and Kashmir Assembly election, in Kishtwar district, Tuesday. *PTI*

Delhi's anti-corruption bureau (ACB) too, has been an issue between the state and the Centre.

The Union Ministry of Home Affairs issued a notification in 2015, saying Delhi will have control of ACB only to the extent that it deals with Delhi's bureaucrats, and not government officers in the territorial jurisdiction of Delhi. Even so, the consent of the MHA is required to prosecute central government officers working in the Delhi government.

Powers of the Assembly

As per the 1947 Instrument of Accession, J&K had acceded to India in respect of only defence, foreign affairs, and communications. Under Article 370 as it stood before the abrogation, Parliament had limited legislative powers with respect to J&K. Over the years, however, the Centre's lawmaking power was extended to cover several other subjects in the Union List (List I of the Seventh Schedule of the Constitution).

The Reorganisation Act of 2019 created a vastly different structure, in which the LG has a much bigger role compared with the state Assembly. This can be understood from two key provisions.

First, Section 32 of the Act, which deals with the extent of legislative power of the Assembly, states that "subject to the provisions of this Act, the Legislative Assembly may make laws for the whole or any part of the Union territory of Jammu and Kashmir with respect to any of the matters enumerated in the State List except the subjects mentioned at entries 1 and 2, namely "Public Order" and "Police" respectively or the Concurrent List in the Seventh Schedule to the Constitution of India in so far as any such matter is applicable in relation to the Union territories."

States, on the other hand, can legislate on subjects in the Concurrent List, to the extent that such a law is not repugnant or contrary to the central law on the issue.

Second, even for this, the 2019 Act has a key rider — Section 36, which deals with special provisions as to financial Bills. This provision states that a Bill or amendment "shall not be introduced into, or moved in, the Legislative Assembly except on the recommendation of the Lieutenant Governor", if such Bill deals with, among other aspects, "the amendment of the law with respect to any financial obligations undertaken or to be undertaken by the Government of the Union territory…".

This provision has wide import since virtually every policy decision could create a financial obligation for the Union Territory.

Powers of the J&K LG

The 2019 Act also specifies the powers of the J&K LG. Section 53, which deals with the role of the Council of Ministers, states: "The Lieutenant Governor shall, in the exercise of his functions, act in his discretion in a matter:

(i) which falls outside the purview of the powers conferred on the Legislative Assembly; or

(ii) in which he is required by or under any law to act in his discretion or to exercise any judicial functions; or

(iii) related to All India Services and Anti Corruption Bureau."

This means that apart from public order and police, the bureaucracy and the anti-corruption bureau will also be under the LG's control.

The provision also says that whenever "any question arises whether any matter is or is not a matter as respects which the Lieutenant Governor is by or under this Act required to act in his discretion, the decision of the Lieutenant Governor in his discretion shall be final, and the validity of anything done by the Lieutenant Governor shall not be called in question on the ground that he ought or ought not to have acted in his discretion", and that "the question whether any, and if so what, advice was tendered by Ministers to the Lieutenant Governor shall not be inquired into in any court".

In the run up to the elections, a series of administrative changes have extended the powers of the LG, granting him the power to also appoint the Advocate General and law officers, and to give him a say in decisions regarding prosecutions and sanctions.

LONGER VERSION ON
indianexpress.com/explained

Exploding pagers in Lebanon: Supply chain tampering prime suspect

ANIL SASI & ALIND CHAUHAN
NEW DELHI, SEPTEMBER 17

ON JANUARY 5, 1996, Hamas bombmaker Yahya Ayyash, who was linked to several suicide bombings that had killed almost 100 Israelis, got a call from his father on a cellphone. As Ayyash spoke, the phone exploded, killing him instantly.

EXPLAINED GLOBAL

Israel's security agency Shin Bet is said to have put a trace amount of RDX in the cellphone. Its operatives remotely detonated the device as Ayyash was using it.

2,750 injured, 8 killed

So, on Tuesday, when hundreds of handheld pagers exploded across Lebanon and parts of Syria, the prime suspect was Israel, a country with a storied history in executing remote and targeted attacks to take out its adversaries.

Most of those impacted were said to be members of the Iran-backed Shia militant group Hezbollah — they were blown up on busy streets, at shop counters, on bikes, inside cars, at their homes, and even in a barber shop.

Lebanon's Health Minister Firass Abia said the explosions injured 2,750 people and killed eight across Lebanon. Injuries were mostly reported to the faces, hands, and stomachs of the victims, Abia told a press conference on Tuesday.

How were the attacks carried out?

Supply chain infiltration?

Early speculation was centered on some kind of a hack that caused the pager batteries to overheat, which resulted in the explosions. But this was quickly debunked, given the way the pagers seemed to have exploded in the footage that emerged.

The Russia-born, US-based security expert Dmitri Alperovitch said on X that the explosions would make the operation "perhaps one of the most extensive physical supply chain attacks in history".

Civil defence first responders carry a man who was injured after his pager exploded in Sidon, Lebanon, on Tuesday. *AP*

Alperovitch is the chairman of Silverado Policy Accelerator, a geopolitics think tank in Washington, DC, and a co-founder and former chief technology officer of the Texas-based cybersecurity company CrowdStrike.

After the war in Gaza began last year, Hezbollah apparently warned its members to not use mobile phones for fear that they could be tampered with by Israeli intelligence agents. Given the restriction, Hezbollah were using pagers to communicate, Frank Gardner, the *BBC*'s security correspondent, reported.

A new batch of pagers was delivered recently. Several experts were suspecting that the Israelis may have infiltrated the supply chain, and likely lined each of the devices with military-grade explosives.

An unnamed British security establishment officer that the *BBC* spoke to said the pagers could have been potentially armed by an electronic signal on the lines of an alphanumeric text message.

Although it is still unclear how these devices blew up, a Hezbollah official told *The New York Times* that "the devices were programmed to beep for several seconds before exploding".

Israel-Hezbollah war

The attacks took place a day after Israeli leaders said they were considering stepping up their ongoing military campaign against Hezbollah.

Lebanon's Prime Minister Najib Mikati characterised the attack as "criminal Israeli aggression" and called it "a serious violation of Lebanese sovereignty", according to *The NYT* report.

A Hezbollah source told *The Guardian* that they believed that the attack was "in response to the alleged assassination attempt by the Shia militia on a former top Israeli defence official, revealed on Tuesday by the Israeli Shin Bet security agency".

Speaking to *The Guardian*, Yossi Melman, a co-author of *Spies Against Armageddon* and other books on Israeli intelligence, said: "This absolutely has all the hallmarks of a Mossad operation. Somebody has planted minor explosives or malware from inside the pagers. I understand they were recently supplied as well."

Melman, however, also questioned whether there was any strategic gain to be made from the coordinated explosions. "It won't change the situation on the ground, and I don't see any advance in it."

Israel has long viewed Hezbollah as the biggest threat on its borders, and has fought several wars with the Shia militant group. The last open war was fought in 2006.

the hindu businessline.
WEDNESDAY - SEPTEMBER 18, 2024

Senior cover

PM-JAY will need tweaks to deliver geriatric care

Despite nudges from the regulator, the vast majority of India's senior citizens remains unprotected by health insurance. Even within the affluent population, seniors face high policy rejection rates, are forced to endure long waiting periods on pre-existing conditions and face steep premia which make insurance unaffordable. Therefore, the Centre's decision to expand Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) the state-funded health insurance scheme for disadvantaged citizens, to universally cover all citizens above 70 years of age, was much-needed.

Six crore seniors are expected to receive free insurance coverage of up to ₹5 lakh a year, with the costs fully funded by the Central and State governments. Seniors in families already covered by the scheme will get an exclusive top-up of ₹5 lakh, while those in non-covered families will get a family cover of ₹5 lakh a year. Warts and all, PM-JAY has managed to reduce the out-of-pocket healthcare costs borne by ordinary Indians. In the six years since its rollout, PM-JAY has expanded its coverage to 35 crore individuals and defrayed health care costs of up to ₹1.07 lakh crore, funding 7.8 crore hospital admissions. The scheme has also contributed to the upgradation of over 1.74 lakh primary health centres into Ayushman Arogya Mandirs for primary care, and empanelled over 30,500 private and public hospitals for secondary and tertiary care. But the scheme may need a few tweaks to cover healthcare needs of seniors.

For one, PM-JAY allows reimbursement of bills only on hospitalisation. In order to prevent misuse and over-billing, the Centre has specified a standard set of packages and tariffs. However, treatments availed by seniors will differ significantly from younger patients. There is a need to expand the existing list of packages and rates. Two, PM JAY-approved hospitals often turn away patients because of delayed payments of bills by the States. These delays need to be addressed. But most important, despite the availability of public hospitals, over 70 per cent of Indians turn to private hospitals, many of them providing poor quality healthcare. This has posed a challenge to the working of PM-JAY. Data show that of the 13,449 private hospitals empanelled with the scheme (barely half the total number of PM-JAY hospitals), a majority are small sub-50-bed facilities. There are complaints of patients being turned away in emergencies because of private hospitals being reluctant to provide treatment at PM JAY-approved rates. They are subjected to needless procedures as well.

The only solution is for States to beef up public healthcare infrastructure and for the Centre to create greater awareness so that patients seek out public instead of private hospitals. The government should also set up geriatric care facilities to reduce long waiting times. Given that the private healthcare system is all but broken in India, PM-JAY would be more effective if it were to rely on a well-developed public health infrastructure.

POCKET

RAVIKANTH

"The IT experts feel there could be a rogue washing machine in cyberspace!"

Green disclosure norms: An overview

'SUSTAINABLE' ACCOUNTING. ISSB standards can serve as an appropriate global framework for capital markets

PS KUMAR

The International Sustainability Standards Board (ISSB, a part of IFRS Foundation) has issued two standards under the IFRS Sustainability Disclosure Standard programme — IFRS S1: 'General Requirements for Disclosure of Sustainability-related Financial Information'; and IFRS S2: 'Climate-related Disclosures'.

IFRS S1 is the core framework for disclosure of material information about sustainability-related risks and opportunities across an entity's value chain. Value chain in this context is the ecosystem in which an enterprise operates.

The objective of IFRS S1 is to require an entity to disclose information about all sustainability-related risks and opportunities that could reasonably be expected to affect the entity's cash flows, its access to finance or cost of capital over the short, medium or long term. This information is useful to primary users of general purpose financial reports in making decisions relating to providing resources to the entity. Sustainability-related risks and opportunities that could not reasonably be expected to affect an entity's prospects are outside the scope of these standards.

The words 'financial information' in the context of IFRS S1 mean information about factors critical. If water is a key resource, depletion in supply or quality deterioration will impact the operations of the company. Appendix A defines 'sustainability-related financial disclosures' and Appendix D discusses elaborately the qualitative characteristics of useful sustainability-related financial information.

ISSB has drawn a lot from the accounting standards of IASB (International Accounting Standards Board, a part of IFRS Foundation). The definition of 'Materiality', the discussion on 'Reporting Boundaries' makes it obvious. And so in the case of judgments made in preparing the disclosures, the estimates, significant uncertainties involved in the amounts reported, correction of errors, etc.

The chart demonstrates the evolution of ISSB.

How the ISSB standards evolved

Year	The frameworks in existence as they relate to the ISSB				
Before 2021	Sustainability Accounting Standards Board (SASB)	Global Reporting Initiative (GRI)	Taskforce on Climate-related Financial Disclosures (TCFD)	International Integrated Reporting Council (IIRC)	Climate Disclosure Standards Board (CDSB)
How standards have consolidated					
2021-22	SASB and IIRC merge and form Value Reporting Foundation (VRF)		ISSB is formed		VRF and CDSB merged with ISSB
Further developments					
Post 2022	ISSB and GRI announce collaboration;				
	TCFD announces cessation of its activities since ISSB has incorporated its functioning				

ISSB - International Sustainability Standards Board
Source: 'Shaping Sustainability Standard Setting', An ICAEW, UK publication modified for this article

HOW ESRS DIFFERS

The comparable standards for the European Union (EU) are the 'European Sustainability Reporting Standards' (ESRS), piloted by the European Financial Reporting Advisory Group (EFRAG). While ESRS had benefited by collaborating with GRI (Global Reporting Initiative), ISSB has started the process of aligning with the GRI.

Another difference is that the applicability of the ISSB standards is limited to the 'primary users of general purpose financial statements' whereas the ESRS extends beyond that to other stakeholders. A significant difference is the concept of 'double materiality' approach by the ESRS. Where the ISSB focused on the financial impact of environment on the entity's financial position, additionally, ESRS requires the impact of the entity on the environment to be disclosed.

> **Many commentators have raised concerns about the** 'interoperability' of three of the main standards viz. ISSB, ESRS and the US Securities and Exchange Commission

The ISSB standards are built around the core content of: (a) governance, i.e., how the organisation and the management will control the monitoring and managing of risks and opportunities; (b) strategy adopted for managing the risks and the opportunities; (c) risk-management for identification, assessment, prioritisation and monitoring the risks and opportunities; and (d) metrics for measurement and targets for goals. One can see the influence of the TCFD (Task Force on Climate-related Financial Disclosures) in structuring of the core content.

The report of disclosures should be coterminous with the financial statements covering the same period. Comparative information is to be provided. As in the case of IFRS financial statements, an explicit and unreserved statement of compliance is to be provided.

Paragraph 34 merits a special consideration. Per clause (a), an entity is expected to disclose 'the effects of sustainability-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period (current financial effects)...' There could be situations where it could become difficult for an auditor to ignore the impact of the disclosures on the financial statements giving rise to extending the examination to the possible effect on the financial statements.

Back in 2019, Nick Anderson (an IFRS staff member) demonstrated in an article how the current IFRS accounting standards were adequate for accounting for climate-related disclosures. Though the IFRS Foundation also issued a guidance note, this line of thought was not pursued since there was no framework for disclosures by companies and hence accounting for these disclosures would necessarily be dependent on what managements chose to disclose.

CONCLUSION

Many commentators have raised concerns about the 'interoperability' of three of the main standards viz. ISSB, ESRS and the US Securities and Exchange Commission (issued in 2024). An entity with operations in the three jurisdictions will need to fulfil the reporting requirements in all three jurisdictions.

A key requirement will be the assurance of disclosures in order to lend credibility.

Taskforce on Nature-related Financial Disclosures (TNFD) prepared in the mould of TCFD has issued a framework for nature related financial disclosures which will have a considerable impact on sustainability reporting standards in future.

ISSB standards have not yet been adopted officially by any jurisdiction including India, whereas the ESRS is part of the EU legislation. Currently, the requirement in force is the Business Responsibility and Sustainability Reporting (BRSR) issued by SEBI.

However, in July 2023 the International Organization for Security Councils (of which SEBI is a member) had endorsed the ISSB standards as appropriate to serve as a global framework for capital markets which gives the ISSB standards a high degree of acceptability.

The developments in this space are now gathering critical mass.

The writer is a chartered accountant

What's the deal with 'deal value threshold'?

There is concern over the new deal value threshold norm impacting 'ease of doing business'

Aayushi Sharma
Ketki Agrawal

A significant amendment to the Competition Act, 2002 (Act) introducing the "deal value threshold" (DVT) was notified along with the revamped CCI (Combination) Regulations, 2024 (Combination Regulations) on September 10.

The DVT, a twin criteria threshold test, requires a transaction to be mandatorily notified to the Competition Commission of India (CCI) for its approval if the "value of the deal" exceeds ₹2,000 crore (about $240 million) and if the target entity has a "significant" Indian presence. The newly enforced "deal value" metric supplements existing asset and turnover based thresholds to capture transactions that were previously not notifiable but nonetheless likely had a significant impact on competition. For assessing notifiability under DVT, the Combination Regulations set out (i) the manner of calculation of the transaction 'value'; and (ii) the criteria to assess "substance" of a target's Indian presence.

'VALUE' OF A TRANSACTION

Determining notifiability of transactions would require parties to navigate and closely assess 'value' of transactions that have both been signed (but not consummated) before enforcement of the DVT provision and transactions that are currently in the execution pipeline.

The scope of 'value' has been widely defined and will include considerations paid for each interconnected step of a transaction, incidental arrangements etc.

The explanations for calculating 'value' also envisage scenarios where 'value' of a transaction might not be clearly captured in transaction documents. For these situations, the assessment of a company's board is put upfront.

In a scenario where a board of directors' approval of a transaction does not set out a 'best estimate' for a future outcome specified in the transaction documents, the maximum amount payable would be taken as the consideration. Where 'value' cannot be determined with certainty, the transaction may be deemed to have crossed the ₹2,000 crore threshold.

While these explanations offer limited guidance (including a rather simple FAQ issued by the CCI), transacting parties will now need to carefully weigh the implications of the changed regulatory landscape.

THE ISSUE. Valuing deals ISTOCKPHOTO

WHERE IS THE 'SUBSTANCE'?

In addition to transaction value, 'substance' of a target's business in India would also be assessed based on user-based thresholds (only in the case of target entities providing 'digital services') and additionally on gross merchandise or turnover values (for target entities across all sectors, including digital services).

The framing of this criteria will very likely result in increased notifiability of transactions particularly in the digital sector.

Secondly, for target entities providing digital services, gross merchandise or turnover values in India must be 10 per cent or more of global values. However, for target entities in all other sectors, gross merchandise value and turnover thresholds must not only be 10 per cent or more of global values but also cross an ₹500 crore benchmark — an added criteria not applicable for digital services entities.

The idea of having a merger control regime based on "deal value" alone irrespective of the size of the parties is highly contested. While such thresholds have been adopted in certain jurisdictions, India has jumped on to the bandwagon of going after "killer acquisitions".

Interestingly, the DVT, which should ideally have been a sector agnostic threshold, appears to have singled out "digital markets" by lowering the threshold bar for them. The DVT and Combination Regulations together have clearly armed the merger control regime with a wider reach to examine a larger number of potential transactions especially in the digital services sectors.

Another aspect that will require deliberation is to analyze whether the introduction of the DVT will add another regulatory layer that dampens the government's advocated concept of "ease of business".

Aayushi is Principal Associate and Ketki Senior Associate, Economic Laws Practice

LETTERS TO EDITOR

Send your letters by email to bleditor@thehindu.co.in or by post to 'Letters to the Editor', The Hindu Business Line, Kasturi Buildings, 859-860, Anna Salai, Chennai 600002.

Farm credit woes

This refers to the "Institutional credit to agriculture in FY24 at an all-time high of ₹25.10 lakh cr" (September 17). Although the farmers have better accessibility to flexible institutional credit, there are still a lot of small and marginal farmers who rely on private money lenders. Freeing those farmers from the traps of the moneylenders is vital for their welfare. Agri-based infrastructure development is essential to reduce the cost of pre and post-farming activities. Better price discovery of farm produce is still not addressed properly and that is adversely affecting the income of farmers. More reforms are needed in the farm sector.

VSK Pillai
Changanacherry (Kerala)

SEBI staff trouble

The report 'SEBI withdraws note that blamed 'external elements' for staff unrest' (September 17), augurs well for the regulator.

Much like 'act in haste to repent at leisure', SEBI has now realised the 'critical role' of the employees and appears all set to engage with the staff who raised the issue of 'toxic work culture'. That the staff has not rescinded or withdrawn the email to FM complaining of 'abusive language/toxic work culture', the 15 minutes 'silent protest' by the staff, and now, the withdrawal of the note by SEBI; all point to the existence of merit in the allegations.

Any sign that all is not well within SEBI house needs serious attention and corrective action.

Jose Abraham
Kottayam

Dollar reliance

The article 'Dominant Dollar' (September 17) highlights a key point: despite the US facing domestic economic challenges, the dominance of the USD continues. This isn't because of stellar economic management but rather due to global reliance on the dollar. The US has a massive trade deficit with major economic powers like China, Japan, and Germany, and to a lesser extent, India.

Most countries invoice their trade in USD, and it remains the currency of choice for reserves, which strengthens its position. Efforts to trade in domestic currencies, like India's push for bilateral invoicing, haven't gained much ground due to their limited role in global trade.

Meanwhile, the US dollar's dominance negatively impacts emerging economies like India by exporting inflation whenever the US increases money supply.

Furthermore, US-imposed sanctions on countries like Russia and Iran restrict the usage of the dollar in international trade, freezing billions in assets. However, despite these setbacks, the USD remains dominant, largely because of the economic instability in parts of the EU, preventing any real challenge to its status.

Srinivasan Velamur
Chennai

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Vande Bharat questions

More clarity needed on Railways' plans

Sudhanshu Mani


VANDE BHARAT. Fanfare launch

Indian Railways (IR) recently announced a Vande Bharat portfolio with three variants: Vande Bharat (VB) Express, Vande Metro, and Vande Sleeper trains, catering to both short- and long-distance travellers. The news is that the latter two, hyped for ages, may enter service before the year ends.

The original which inspired variations — Train 18 or VB Express, a long-distance chair car train, designed indigenously by Integral Coach Factory (ICF) with cutting-edge features — was a resounding success in 2018-19. However, this writer has always maintained that after 40-45 day-trains, IR would struggle to deploy them profitably without a sleeper version to replace Rajdhanis and other fast overnight trains.

With the sleeper version delayed excessively, IR keeps deploying the existing model sub-optimally.

Even as the average speeds keep falling, unlike the initial services, at least 14 of the 50-odd origin-destination pairs now in service suffer from poor patronage, including the latest one between Lucknow and Meerut.

In an unfathomable decision, the Ministry positioned Vande Metro as 130 kmph top speed 12/16-coach train, meant for cities within a 100-150 km radius. It retains most VB features except for pantry but accommodates 280 passengers in 100 seats and space for standees in a wider aisle. Two Vande Metro trains have been around for some time, awaiting their grand debut. Unless their tickets are considerably cheaper than those for VB, filling these trains would be a Herculean task.

FARES FACTOR

Charging MEMU type fares would be suicidal as VB Metros are way more expensive than existing MEMUs. Then the dampener that the travel time would hardly be lower as the trains would be run at 110 kmph, not the intended 130 kmph.

The first train shall run between Ahmedabad and Bhuj, covering 358 km instead of the intended 100-150 km, at a disappointing average speed of 65 kmph and the fare is reportedly at around 75 per cent of regular AC Chair. We have to see what occupancy it attracts.

The VB Sleeper was a work in preliminary progress at ICF in 2018 but along with the unfortunate stoppage of VB work from 2019 to 2022, it was abandoned, a baffling decision. In 2022, however, IR took a bold decision to tender for 200 Sleeper versions for manufacture by non-railway companies and succeeded in ordering 120 and 80 trains to consortiums of TMH+RVNL and Titagarh+BHEL respectively. These prototypes are expected next year.

One believed that this outsourcing was to supplement the efforts of ICF, and not to elbow ICF out of the picture. In a strange death-wish, ICF went ahead and ordered on single tender basis another 10 trains to be built by Bharat Earth Movers Ltd (BEML), Bengaluru with the key components to be supplied by ICF to them.

BEML had earlier bid for the tender for 200 trains but was reportedly priced out. In addition, the drawings and knowhow of ICF were transferred.

VB project would not have been possible without the help of the allied industry which had matured in India, notably the manufacturer of the propulsion system.

However, projects of this magnitude need something more than capability and expertise; namely, pride and passion, which team ICF had in plenty. ICF is now going ahead with ordering the work of design and manufacture of two futuristic 250 kmph trains to BEML, although BEML has little expertise in the area of fast trains. This is going to be the most prestigious project ever undertaken by IR and one can trust ICF to deliver it in three years.

Outsourcing one's core knowledge to another PSU which has been merely manufacturing rolling stock based on borrowed designs, is like handing over one's family silver.

The writer is Retd. GM/Indian Railways, leader of Vande Bharat project and Independent Consultant

Securing India's semiconductor future

STRATEGIC ASSET. The government will have to balance short-term needs with long-term strategic goals

APARNA SHARMA
PVG MENON

India depends on electronics to drive its agenda of inclusive growth via technology. Its reliance on semiconductor imports has long exposed it to global supply chain vulnerabilities. Like many other countries, India also depends on Taiwan, Japan, and South Korea for semiconductor supplies.

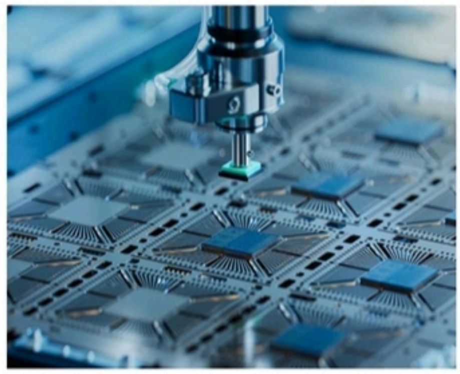
To counter these risks and to boost self-reliance, the government is promoting domestic semiconductor fabrication. This is a crucial move for national security, especially in sensitive sectors like defence and telecom.

The Covid pandemic revealed the fragility of the global electronics supply chain, as disruptions in China led to widespread shortages. The Russia-Ukraine conflict further strained the industry by interrupting the supply of neon, essential for chip manufacturing. Additionally, geopolitical tensions, including US and EU export restrictions on China, have led to it controlling the export of critical inputs like gallium and germanium, raising fears of future shortages.

SEMICONDUCTOR MISSION

India launched the Semiconductor Mission in 2021 with ₹76,000 crore ($10 billion) investment to establish a domestic ecosystem. Recent developments include Micron Technology's ₹22,516 crore ($2.75 billion) assembly and packaging plant in Gujarat, Tata Electronics' semiconductor fab in Dholera, and other semiconductor plants approved across India in 2024. These ventures are part of India's strategic push to enhance its semiconductor manufacturing capacity.

The pandemic also led to a shift from a "just-in-time" to a "just-in-case" model in global supply chains, increasing the inventory build-up. However, this change has financially strained companies, especially in India, by tying up capital and causing cash flow problems. Geopolitical tensions, particularly between the US and China, have compounded these challenges. Some analysts have recommended using the lockdown to shift supply chains from China to India, this transition has been slow due to India's structural challenges in high-volume electronics manufacturing, which includes an 8-10 per cent cost disadvantage.


The capital intensive semiconductor industry is a vital piece of infrastructure GETTY IMAGES

The 'Atmanirbhar Bharat' initiative notwithstanding, around 65-70 per cent of components for its electronics industry are still imported — mainly from China. The Production-Linked Incentive (PLI) scheme, while beneficial, incentivises companies to boost production volumes, which often translates into assembling imported components rather than manufacturing them domestically. This has led to a ballooning of the import bill for electronics. Policymakers are aware of this shortfall and are reportedly considering adjusting future policies to focus on greater value addition.

> Generous subsidies from both the Central and State governments have attracted players like Micron, Tata, and Murugappa Group to establish semiconductor plants

Global players like Apple are considering shifting part of their production away from China. India's large consumer market, along with customs duties and incentives such as the PLI scheme, have helped boost local assembly. However, India still contributes only about 3 per cent to the global electronics manufacturing value chain, compared to China's 37 per cent.

GOVT POLICIES

India has launched multiple policies to strengthen its semiconductor industry. These include the Design Linked Incentive (DLI) scheme for R&D and the PLI scheme to scale production. Generous subsidies, up to 50 per cent from the central government and an additional 20-25 per cent from state governments have attracted global players like Micron, Tata, and Murugappa Group to establish semiconductor plants.

Setting up semiconductor fabs is capital-intensive. For example, establishing a fab at the 28-nanometer technology node requires an entry investment of at least $8 billion. Tata's semiconductor venture is an $11 billion project, illustrating the scale of investment needed. Attracting such investments is a key challenge for Indian policymakers, as global competition for these high-tech projects is fierce.

There are also questions about resource allocation. While ₹76,000 crore ($10 billion) has been committed to attracting the semiconductor industry, this capital-intensive sector may only generate 10,000-15,000 direct jobs. In contrast, industries like textiles create far more jobs per unit of investment.

Nonetheless, the semiconductor industry is about building infrastructure for the future and securing India's place in the global technology landscape. The pandemic underscored how supply chain disruptions can cripple industries reliant on electronic components, and investing in semiconductors is vital for reducing dependency and securing future resilience.

However, challenges remain. Semiconductor fabs require vast amounts of ultra-pure water for production — up to 25 million litres per day — making resource management a critical issue. Additionally, the industry, while not labour-intensive, will create opportunities for highly skilled professionals, many of whom will have to come from abroad, as India does not have these skills.

India's push into semiconductors is a long-term strategic effort aimed at securing a position in the global electronics value chain. While investments may not yield immediate returns in jobs or economic output, sustained policy support, industry collaboration, and overcoming structural challenges will be key to building a resilient domestic semiconductor ecosystem.

Sharma is India Technology Policy Fellow, Pacific Forum; and Menon is Electronics & Semiconductor expert, Tata Projects, Former CEO, IESA and ESSCI

STATISTALK.

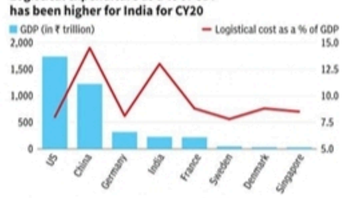
Compiled Arun K Shanmugam | Graphic Visveswaran V

How the logistics industry is positioned in India

The market size of logistics grew at a CAGR of 11 per cent from FY19 till FY24 and it is projected to reach a market size of ₹35.3 trillion by FY29. While expenditure on logostics as a % of GDP is at a relatively higher 13 per cent, it is expected to drop to high-single-digits on improving connectivity and efficiencies through formalisation of the economy. The transportation segment contributes to most of the logistics market in India and within that, roadways dominate as of FY21. However, with the improvement in the rail infrastructure, Railways are expected to grow at a faster pace. This has been compiled from the RHP of Wester Carriers (India) Limited

Market size of logistics in India - Consistent upward slope

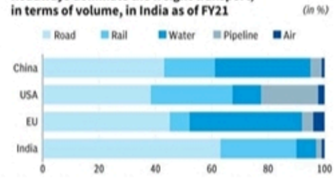
Logistical expenditure as a % of GDP has been higher for India for CY20



Transportation constituted to more than 80 per cent of the Indian logistics market in FY24

	Market size (in ₹ trillion)	(in %)
Logistics (total)	20 - 22	100
Transportation	17 - 19	84
Warehouse	1.5 - 3.5	11
VAS	0.7 - 1.7	5

Roadways dominate the freight transport, in terms of volume, in India as of FY21 (in %)



Source: RHP_Western Carriers (India) Limited

Short take

EVs may reach 24% EU car market share

Reuters

Battery-electric cars (BEVs) sold in the European Union are set to reach a total market share of between 20-24 per cent by 2025, mostly because of cheaper selling prices, campaign group Transport & Environment (T&E) said on Tuesday.

EV sales in the EU have slowed in recent months — to a 14 per cent market share in the first half of the year — in part due to diverging policies on green incentives across the bloc, while regulators, seeking to protect EU industry, have imposed hefty tariffs on Chinese cars.

Germany, the European Union's largest EV market, in September introduced incentives to speed up the green transition.

T&E, which in June had forecast a 21 per cent share for next year, anticipates sales will pick up.

It said its new projections take into account the expected arrival in 2024 and 2025 of seven new fully-electric models priced under €25,000 ($27,835.00), accounting for 10-15 per cent of the BEV market next year.

BEVs should contribute about 60 per cent of the carbon dioxide (CO_2) reduction that carmakers require to achieve EU emissions targets next year, while hybrid options could contribute 20 per cent of emission reductions, it said.

thehindu businessline.

TWENTY YEARS AGO TODAY.

September 18, 2004

No broadcaster meets BCCI's criteria: HC

The Bombay High Court on Friday observed that neither Zee Telefilms nor ESPN-Star Sports would qualify to bag the telecast rights they are contending for, if the conditions of the BCCI's tender were strictly adhered to. The Division Bench of the court, comprising the Chief Justice, Mr DC Bhandari, and Mr Justice DY Chandrachud, made this observation in response to Zee Telefilms' counsel Mr Harish Salve's arguments that no broadcaster is completely involved in the production of live cricket, including ESPN-Star Sports.

Cabinet clears DA hike for Govt staff

The Cabinet today approved a three percentage point increase of dearness allowance (DA) and dearness relief for central government employees and pensioners respectively. Thus the rate of DA from July 11 will be 14 per cent, up from the existing rate of 11 per cent.

Manufacturing competitiveness council okayed

The Cabinet Committee of Economic Affairs (CCEA) has approved the setting up of a National Manufacturing Competitiveness Council (NMCC) to energise and sustain the growth of the manufacturing sector.

BL TWO-WAY CROSSWORD2528

EASY

ACROSS
01. Useless, having no effect (11)
07. Fall into a state of quiet (7)
09. Bird of poultry kind (4)
11. Portion out (5)
12. Learned person (6)
14. Proclaimed, published abroad (11)
18. Tell the tale (6)
20. Give forth words (5)
22. Antre (4)
23. Interior (Australia) (7)
24. Reproduce abundantly (11)

DOWN
02. Like a fine mist (7)
03. Always (4)
04. Flower; stringed instrument (5)
05. Normal (5)
06. Material (5)
08. Hint, announce (8)
10. Stone-throwing weapon (8)
13. Be airborne (3)
15. One going in (7)
16. Railway wagon (5)
17. Slow vehicle (5)
19. Swain (5)
21. Pack animal (4)

NOT SO EASY

ACROSS
01. It's not working to infect one with fever right away (11)
07. It will die down if there's a substitute on the team (7)
09. Bird chewed up by wolf (4)
11. Assign everything and nothing to the table-top (5)
12. A learned man has a vehicle in the street (6)
14. Group met lad and somehow got it spread abroad (11)
18. Say how it is one may connect (6)
20. Speak the words that will put money into circulation (5)
22. Tell schoolboy to watch out for hollow in the rocks (4)
23. To a buck running wild in the bush country (7)
24. Rapidly increase real profit made going east (11)

DOWN
02. Like a fine spray of ale, applied to burn like this (7)
03. For this it takes an eternity (4)
04. One may take a bow to it in the flower bed (5)
05. Customary American dual-decapitation (5)
06. Almost dress oneself in this material (5)
08. One may hint one is on close terms with one (8)
10. It shoots stones at pal, cut resulting from it (8)
13. Knowing how to go by air (3)
15. One going in managed to get in the wrong tent (7)
16. Have no dealings with such a wagon? (5)
17. Cook first of rolls in it and slow it down (5)
19. One enamoured of first lady has too much (5)
21. Animal will move like river from South to North (4)

SOLUTION: BL TWO-WAY CROSSWORD 2527

ACROSS 1. Succeed 5. Reach 8. Recital 9. Pylon 10. Penetrate 12. Woe 13. Eagle 17. Ego 19. Constable 21. Mocha 22. Nominee 24. Tarot 25. Spartan

DOWN 1. Stripe 2. Coconut 3. Eft 4. Delta 5. Represent 6. Allow 7. Hanker 11. Trenchant 14. Cabinet 15. Permit 16. Demean 18. Occur 20. Nones 23. Moa

Opinion

WEDNESDAY, SEPTEMBER 18, 2024

USING WATER SMARTLY

President Droupadi Murmu

In many areas of Rajasthan and Gujarat, villagers have got rid of water scarcity through their efforts and by adopting effective methods of water storage

Welcome return

Re-entry of marquee names shows while MNCs must not act in haste, the govt needs to show more policy flexibility

APART FROM A vote of confidence for India as an investment destination, the return of some marquee global firms — Ford Motor and Carrefour are the latest — shows companies should never act in haste and blindly follow the template of their parents. Patience and careful navigation of a country's policies have anyway done a lot of good for many multinationals operating in India. Their return also holds an important lesson for the government as well — policies must be flexible so that India's attractiveness can be reinforced continuously.

Prior to Ford and Carrefour, there have been some other notable re-entries into the country. Harley Davidson, and fast-fashion brand Shein are examples. Barring perhaps Shein, which was banned in 2020 at the height of India-China clashes, the exit of other companies were either due to policy irritants or their products not clicking in the domestic market. Carrefour entered India in 2010 in the hope that global firms would be allowed to set up 100% subsidiaries for multi-brand retail. With that not happening, it had to run cash-and-carry format stores, which did not meet its ultimate goal, so it exited the market in 2014. It's now coming back through a franchise partnership with Dubai's Apparel Group.

Similarly, Ford Motor, which entered India way back in 1995, decided to exit in 2022 mainly because its products could not achieve volumes in the domestic market. It's now coming back and plans to make electric vehicles at the same plant, for exports to Southeast Asia. Harley Davidson, which entered the country in 2011, decided to exit in 2020 mainly because custom duty on importing fully built bikes was as high as 50%. It returned in 2023 with a tie-up with Hero MotoCorp, and now its bikes are assembled in India, thus doing away with the high custom tariff problem. Shein came back with a licensing partnership with Reliance Retail, wherein the control of the company is with the latter.

What's clear in all these cases is that the companies should have thought twice before quitting in a tearing hurry. They failed to see that India could emerge as a global value chain which could be used for both domestic as well as export markets. Apple did that well, and so did Walmart. The latter entered India around the time Carrefour did, faced the same obstacles, but much later acquired e-commerce firm Flipkart, and is highly successful. True, foreign direct investment in multi-brand retail did not happen but the same works fine in marketplace e-commerce. And the franchise model was always there.

The government also realised that it needs to engage more with the companies concerned and convince them that it does offer a conducive business environment. The government belatedly realised that global firms do face higher business costs in India compared to countries like China or Taiwan, or Southeast Asia, and brought in various incentive schemes. It also seems to have realised that countries need to compete for attracting investments. And within the country, different states need to compete. The return of Ford, for instance, has much to do with the Tamil Nadu government's efforts. Look at the way the southern states are competing to get Apple's contract manufacturers to expand their base in their regions. A similar competition is on for getting semiconductor plants. Businesses and governments can produce optimum results if there's perfect coordination and understanding between them.

GROWTH IMPERATIVE

A REFORMED TAX STRUCTURE THAT SUPPORTS AMBITIOUS INITIATIVES WILL SPUR GROWTH

Transform tax system

DINESH KANABAR

CEO, Dhruva Advisors LLP

THE WORLD BANK used to publish Ease of Doing Business rankings till 2020. In its final year, it rated India 63rd out of 190 countries, a remarkable climb from 142 in 2014. The one thing which pulled India down was paying taxes (ranked 115). The survey has been scrapped but as a fast-growing country, India needs to transform its tax system. Here are some thoughts in this direction.

Streamlining dispute resolution: One of the most pressing concerns in India's tax landscape is the time taken for resolving disputes. It can go up to 20 years for large matters to reach conclusion. A robust and efficient dispute resolution framework is vital for both taxpayers and the government. For taxpayers, timely resolution offers certainty, allowing businesses to plan effectively and deploy resources confidently. For the government, it ensures timely collection of revenue.

The government had earlier formed a direct tax code committee that made several recommendations including an independent dispute resolution committee with quasi-judicial powers to settle disputes early. This would take pressure off appellate bodies and reduce litigation. By introducing a mediation framework similar to the alternative dispute resolution mechanisms used in countries like the US and UK, disputes could be settled without extensive court proceedings.

Another key measure would be to grow the authority of the advance pricing agreement programme, which has seen success in preventing transfer pricing disputes. Implementing fast-track processes for cases involving small and medium enterprises could also provide relief, as these businesses often lack the resources to engage in prolonged legal battles.

Improving tax-to-GDP ratio: India's tax-to-GDP ratio remains a cause for concern. At 10-11%, it is much lower than the global average. Developed economies like the US, UK, and Germany boast ratios of 25-30%. Even emerging economies such as Brazil and South Africa maintain ratios above 20%. The disparity limits India's ability to invest in infrastructure and places an unfair burden on taxpayers.

Improving the ratio requires broadening the tax base and better compliance. Recent efforts like the goods and services tax (GST) and use of big data to detect evasion are positive steps. Strengthening enforcement mechanisms to reduce the large informal economy, which still accounts for nearly a third of India's GDP, will be essential.

Targeted measures to simplify GST compliance, especially for small businesses, will encourage voluntary participation in the formal economy. The government should also explore tax policy reforms that incentivise digital transactions, as these are easier to monitor and regulate, and thus discourage cash-based, off-the-record transactions.

> India must continue to address compliance issues, further integrate technology into GST processes to enhance transparency, reduce tax evasion, and improve collections

Simplification of tax laws: Complex tax law has long been a deterrent for businesses and individuals. This, coupled with frequent amendments, has made compliance challenging and costly. However, the finance minister recently announced the government's intention to rewrite tax laws to simplify them. This is a welcome step. We have sections, subsections, provisos, explanations, and so on that have accumulated over decades. These need to be simplified. The move towards the new tax regime is welcome. Rather than exemptions and deductions, we need higher thresholds.

Aligning with global standards: In an increasingly interconnected world, India must remain cognisant of global tax developments, particularly those concerning cross-border transactions. As e-commerce and technology expand, India faces the challenge of effectively taxing digital transactions. Its approach to cross-border taxation must align with global standards such as the OECD's Pillar 1 and Pillar 2 frameworks. Pillar 1 addresses allocation of profits from digital and multinational enterprises, while Pillar 2 sets a global minimum tax rate to prevent profit shifting to low-tax jurisdictions. While India has taken steps to taxing digital transactions, further alignment with global norms will be crucial to avoid double taxation and prevent disputes with other nations. India should outline its position on Pillars 1 and 2 sooner rather than later. Incorporating technology and data-sharing agreements with other countries could also help Indian tax authorities identify and track digital transactions more efficiently.

Leveraging technology: By leveraging technology for tax assessments, compliance, and audits, India can improve the efficiency of its tax system, reduce fraud, and increase revenue collection. Initiatives such as faceless assessments and the widespread use of big data analytics are reshaping the landscape, but there is room for more innovation. Technologies facing initial implementation challenges which need to be addressed.

Advanced technologies such as artificial intelligence and blockchain can be harnessed to detect anomalies, streamline processes, and enhance transparency. As businesses increasingly move online, the tax administration must continue to adopt digital tools.

Strengthening indirect tax policies: GST reform was a pivotal moment in India's tax policy. However, there are areas where GST can be optimised, particularly in balancing the tax burden across industries and ensuring small businesses are not weighed down. There GST rate structure should be rationalised further to make it simpler for businesses to comply and issues related to inverted duty structures must be addressed.

Additionally, sectors such as real estate, healthcare, and education need careful attention so that they contribute to inclusive growth. India must also continue to address compliance issues, further integrate technology into GST processes to enhance transparency, reduce tax evasion, and improve collections.

Incentives for innovation and sustainability: To leverage tax as a catalyst for growth, policy must encourage innovation and sustainability. This could include offering tax incentives for industries engaged in R&D, particularly in sectors like technology, green energy, and biotechnology. Incentivising sustainable practices through tax benefits for companies reducing carbon emissions or investing in renewable energy (RE) can also help India transition to a more environment-friendly economy.

A reformed tax structure that supports Make in India and Start-up India initiatives would further spur growth in domestic industries, promote job creation, and reduce import dependency. Targeted tax incentives for RE, electric vehicles, and green technologies can further India's sustainable development goals.

India stands at a critical juncture in its growth story, and tax policy will play a pivotal role in determining its trajectory. The next 10 years offer an opportunity to transform the tax system to support sustainable growth.

China's best growth target may be none at all

DISAPPOINTING ECONOMIC NEWS is becoming a reliable indicator in China. Another round of monthly reports point to an economy that isn't falling apart, but is far softer than officials are comfortable with. The worn — and still very accurate — conclusion is that more stimulus is required to meet targets laid out by President Xi Jinping. The story is starting to feel a bit stale.

Every now and then, however, there is something in the mix worthy of extra attention. That was the case when Xi appeared to water down his commitment to meeting the hallowed goal for growth this year, which is around 5%. The People's Bank of China then took the rare step of issuing a statement accompanying poor figures on credit. These lines fed speculation that interest rates will be reduced soon, perhaps alongside new measures to crank up the expansion. This would be welcome, though the central bank has a record of extreme caution.

First, the latest batch of data, released on Saturday: Retail sales climbed less than anticipated, industrial production missed estimates, investment was soft, and unemployment inched higher. Monday postmortems called for greater attention from Beijing to address the dour picture, while simultaneously predicting that any response would be unequal to the task. Ocean liners like the Chinese economy, the world's second largest, don't just change course immediately.

What if the Communist Party's growth target didn't matter quite so much? As China's expansion slowed from the heady clip of the late 1990s and early 2000s, when double-digit advances weren't uncommon, the objective has become more challenging. The risk is that officials, especially in the provinces, pursue projects of doubtful value, but contribute to meeting the numbers. There has long been suspicion among investors that statistics are massaged to produce the right result.

DANIEL MOSS

Bloomberg

The practice of setting targets is long-standing. Beijing sensibly suspended it in 2020 as the pandemic descended. Gross domestic product eked out a gain of about 2% that year. The 5% target does provide for a small amount of latitude above or below, though it would be a brave cadre who assumed they had a pass. Falling too far below would indicate failure, though coming in above would likely be career enhancing. The consensus among private sector economists is that undershooting is likely. Goldman Sachs Group Inc., Morgan Stanley, and Citigroup Inc. are among firms that think something in the high 4% range is realistic.

Toning down the emphasis on 5% would have to come from the very top. Xi appeared to oblige on Thursday, saying that that officials should "strive to achieve" the goal. In July, the party's senior decision-making body demanded the aspiration be "resolutely" met. There's debate as to whether the linguistic tweak reflects a shift in the underlying approach, but the president doesn't strike me as a person who wanders off script. Assuming Xi was signalling some tolerance, this is to be applauded.

Also handy was the PBOC's dangling of initiatives to put a floor under the expansion. "We will make maintaining price stability and pushing for the mild rebound in prices an important consideration for monetary policy," the bank said late Friday. Monetary authorities seek stable prices; in China's case, this means being more attuned to deflation risks. Consumer-price increases are hovering a bit above zero.

Beijing also took some modest steps toward addressing the challenges of an aging society and a contracting labour force. The retirement age for men was raised by three years to 63, while women will retire at 55 and 58, depending on their roles. This won't move the needle on GDP any time soon. The changes will be phased in over more than a decade. But it is a recognition that China has a problem at both ends of the life spectrum: The country is producing fewer kids and folks are living longer. While notable and the first change in the retirement age since 1978, it's fair to ask whether this step comes too late.

Sometimes edicts work too well. Beginning to recognise that arbitrary GDP targets aren't sacrosanct is healthy. It has the added advantage of reflecting reality.

FPI vs FDI: Gauging foreign investments

NAGESH KUMAR

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India needs more FDI inflows to build manufacturing capacity and link with global value chains, but a cautious attitude to FPIs serves its interests better

GIVEN ITS BURGEONING requirements for investible resources for closing development gaps, India has to harness foreign (and domestic) sources of capital. Foreign sources include foreign direct investment (FDI) and foreign portfolio investments (FPIs). It was reported recently that the government was working on legislative changes to enable FPIs to transition to FDI seamlessly once they cross the 10% holding threshold in a company. One would wonder why the two types of foreign investments are treated differently by policy, which allows up to 100% FDI in most sectors but FPI by a single investor is capped at 10% of a company's stock. This would require an understanding of their differences.

FDI inflows represent a long-term commitment of foreign investors (generally multinational corporations) bringing a package of entrepreneurship, technology, management, and opportunities to hook up with global value chains. FDI inflows, especially of the green-field type, augment gross fixed capital formation in the host country and can have a positive impact on income, employment, and balance of payments by substituting imports or enhancing exports. Because of the potential positives, most governments actively court FDI inflows through promotion and facilitation besides incentives and concessions.

India has progressively liberalised its FDI policy regime since 1991, throwing most sectors open to FDI with 100% ownership (with caps applicable to select sectors). FPIs, on the other hand, are essentially short-term flows generally made by foreign institutional investors (FIIs) to make a quick buck at stock exchanges abroad. They represent only a change in ownership between holders for speculative motives, and do not add to the gross fixed capital stock of the country. As fair-weather friends, they come in droves when a country's stock markets are booming but desert as soon as there is any sign of trouble.

Given their "hot money" nature, many governments impose restrictions ("capital controls") on their movements. Nobel prize-winning economist James Tobin had made a case for "throwing sand in the wheels" of short-term capital flows for financial stability by imposing a tax (Tobin tax) to moderate their movements. Over time, several countries have imposed capital controls to deal with volatility caused by short-term capital flows, including Malaysia, after the East Asian crisis of 1997, and Indonesia, South Korea, Taiwan, Brazil, and Russia in the wake of the 2008-09 global financial crisis. France, among other European countries, imposed a Tobin-type tax in 2012. The International Monetary Fund has also changed its policy stance on capital controls and now includes them in the toolkit for dealing with volatility.

> Permitted in India since 1992 as a part of the economic reforms, FPI inflows have become key determinants of stock market valuations

FPIs lead to the build-up of asset bubbles which quickly burst when they leave. India witnessed huge inflows of FPIs in the wake of monetary expansion with historically low interest rates in the US and European Union following the 2008-09 crisis. However, the 2013 announcement by the Federal Reserve of its intention to taper the easy money policy (taper tantrum) led to a considerable outflow of FPIs with huge volatility in the stock markets and exchange rates in five emerging economies, including India, dubbed the "Fragile Five". India averted a collapse with urgent steps, including enhancing the reserve requirements, a bilateral currency swap with Japan, and issuing NRI bonds.

Permitted in India since 1992 as a part of the economic reforms, FPI inflows have become key determinants of stock market valuations and exchange rate volatility. As a well-managed and fast-growing economy, India is naturally an important draw for FII inflows which have driven stock market valuations to new heights. They have also helped build reserves. However, the servicing burden of FPIs is much higher than other forms of capital inflows like external capital borrowings or American depositary receipts, considering Indian stock markets are giving good returns. The annual Nifty 50 return was 19.42% in 2023. The annual return in four of the past five years was in two digits, over 24% in 2021, and nearly 15% in 2020. Speculators such as FPIs are expected to make better returns cashing in on day-to-day fluctuations. But much more importantly, allowing FPI investors to go beyond 10% of capital may put several major Indian companies under the control of speculators. This is a serious issue with implications on economic security. For all these reasons, most governments worldwide take a cautious approach on FPIs while adopting an increasingly liberal attitude towards FDIs. Can India be different?

While India needs more FDI inflows to build manufacturing capacity and link with global value chains, a cautious attitude to FPIs, capping them at 10% in a company's capital, serves the country's interests better. Giving equal treatment to FDI and FPI is unwarranted and can have devastating and disruptive consequences for the economy.

LETTERS TO THE EDITOR

Scrappage revisit

Apropos of "Better late than never" (*FE*, September 17), the vehicle scrappage policy aimed to reduce pollution and promote sustainable transportation, seeking commercial vehicles older than 15 years and private vehicles older than 20 years to be kept off roads, with a five-year extension given to vehicles passing fitness tests. After reviewing the policy, the government has now prioritised the polluting potential of the vehicle, not age, which is a corrective measure. Well-maintained vehicles need not be replaced with new ones. The government's intervention is welcome. But it should also tighten the screws in fixing pollution norms and not hesitate to discard polluting vehicles. The new norms may not be conducive to auto manufacturers since replacement of the vehicle is not time-bound.

—NR Nagarajan, Sivakasi

Rationalise GST

Apropos of "Why GST isn't always good or simple" (*FE*, September 17), goods and services tax (GST) rates have always been a matter of concern for industry and consumers. The concept of luxury for the highest GST bracket must be reconsidered as it is not confined to the wealthy class. In food items, for instance, why should bakery (18% GST) be discriminated against household and grocery items (5% GST)? The 28% GST slab on furniture and furnishing items can't be justified too, as the consumer base is spread across income groups. Higher GST rates also drive tax evasion. All traditional businesses should have a minimal GST rate (say 5%), as their job creation, continuity of business, and revenue generation are not affected by any crisis.

—Vinod Johri, New Delhi

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