

## Large-scale encroachment of forests drives tigers out of Telangana's Asifabad

Kumram Bheem Asifabad: Three tigers inhabiting the forests of the district for quite a long time migrated to neighbouring districts in recent times, worrying forest officials. While two tigers drifted towards Mancherial district, another tiger strayed into Jagtial district. This has prompted the question why the tigers were forced to leave Asifabad's forests.

Forest cover, which is shrinking due to encroachment by both non-tribals and aboriginal tribes, is said to be driving the tigers out of the forests of this region, once touted as a safe haven for big cats. The open and large scale encroachment of forest cover is causing the loss of habitat for the tigers.

"Around 1.60 lakh acres of forest cover out of the total 6 lakh acres was encroached in the district, reflecting the gravity of the menace. While 80,000 acres was occupied by non-tribals over the last few decades, the same quantum of land was encroached upon by tribals. Sustained efforts to conserve the

tigers are going futile owing to solely this problem," a senior forest official regretted. The officials said that the non-tribals including backward communities, scheduled castes and certain privileged castes were indulging in the encroachment of the forest cover for agriculture. Members of these communities own somewhere between 5 and 20 acres in certain parts. A non-tribal man has 70 acres of land, while another occupies 30 acres in Kagaznagar division alone. The forest officials are creating awareness among the villagers over the need to protect the wild animals. They are requesting the rural folks not to occupy forest lands. They are digging trenches to prevent encroachment of forest lands. However, the forest cover is being encroached upon by mostly non-tribals. The officials remain helpless even as the precious cover is lost, resulting in migration of tigers to surrounding landscapes in search of territory. The officials managed to reclaim 1,000 acres of forest land near Itukalaphad village in Sirpur (T) mandal a few years ago.



The land was converted into a plantation of tree species. Around 40 tree species were grown in the land, attracting tigers of

Maharashtra. It has become a favourite place for tigers from Tadoba Andhari-Tigers Reserve in Chandrapur district as well.

## Once key player in agriculture, Telangana Seeds Development Corporation grappling with operational issues



Hyderabad: The Telangana State Seeds Development Corporation (TGSDCL), which rose to become a key player in the State's agricultural sector after its inception in 2015, is currently grappling with operational challenges that have impacted its performance. The fact that the seed supply tenders called by the corporation drew a blank in terms of response, speaks volumes about the state of affairs. Over the years, TGSDCL showed commendable growth in its financial performance. The corporation's turnover increased from Rs 270 crore in 2015-16 to Rs 457 crore in 2020-21. It also experienced a 3.04% increase in revenue and a 6.37% increase in

profit in financial year 2019. The network of the corporation saw an impressive increase of 19.32%. But today, it stands at a crossroads.

TGSDCL was successful in producing and supplying quality seeds of various crop species, ensuring a sustainable increase in agricultural production as long as agriculture enjoyed prime focus during the BRS rule. However, over the last one year, with a new government coming in, it has lost the focus it enjoyed. The corporation used to provide extension and technical support to the farming community, helping farmers adopt innovative practices. But doubts are being expressed over its role in the recent past and

in the coming months. One of the primary issues impacting its operations is the lack of cold storage facilities, which forces the corporation to spend substantial amounts on renting private cold storage units. This additional expenditure on storage, loading, unloading, and transport has strained the corporation's finances. Moreover, the recent postponement of seed production tenders has raised concerns about the corporation's ability to meet the demand for quality seeds. The changes in production and marketing schedules have affected the opening and closing of bids for various seed production projects. This year, there has been a noticeable lack of interest in TGSDCL's seed supply tenders. Several factors have contributed

to this situation. The corporation's financial struggles have made it difficult to attract bidders for its tenders. Delays in production schedules and logistical challenges have deterred potential suppliers. Increased competition from private seed companies offering competitive prices and better logistical support has further impacted TGSDCL's tender process. TGSDCL had decided to distribute 2,73,500 quintals of seeds, including some 50,000 quintals of soybean, for supply during the 2025-26 crop seasons. However, no seed supply company has come forward, and the lack of response is said to be of its own making. The tender schedule has been extended again, and it may not have a guaranteed response.

## Khammam based SBIT signs MoU with IBM to provide job opportunities to students

Khammam: With an objective to provide job opportunities to students by sharpening their skills Swarna Bharathi Institute of Technology (SBIT) in Khammam has signed a MoU with the global technology innovator IBM, informed the college chairman, Gundala Krishna. The college signed the MoU under the aegis of CSRBox Foundation in the presence of the foundation's senior engagement associate Rajagopal Naidu. Naidu explained the organisation's programmes that have been going on for the last nine years and the training system pro-

vided to the students. CSRBox Foundation, which has about a decade of experience in providing training, internships, job readiness and job assistance would help to enhance the skills of the students, said the college secretary and correspondent Dr. G. Dhatri. With the agreement with IBM, the students could study about 80,000 courses for free through this platform. The students would get internship opportunities in modern technology fields with the support of IBM company representatives, said the college principal, Dr. G. Raj Kumar.

# What citizenship laws do countries follow? | Explained

The story so far: In the gale of executive orders announced after Donald Trump assumed office for a second term, the President issued one diluting birthright citizenship, which has been written into the U.S. Constitution since 1866. The order has been challenged in court in more than 20 States and a federal judge has temporarily blocked it. If implemented, it will mean that children born to illegal immigrants — as well as those legally in the U.S. on temporary visas for study, work or tourism purposes — will not be eligible for automatic U.S. citizenship. At least one parent must now be a U.S. citizen or legal permanent resident, the order says.

What is the history of birthright citizenship?

The 14th amendment to the U.S. Constitution, which granted citizenship to “all persons born or naturalized in the United States, and subject to the jurisdiction thereof” was enacted in 1866, against the backdrop of the Civil War which had just ended, and was an effort to guarantee equal civil and legal rights to Black citizens. It was meant to overturn the infamous U.S. Supreme Court ruling of 1857 in *Dred Scott vs Sandford*, which held that enslaved people brought to the U.S. and their descendants could not be citizens of the country. The principle was challenged in the 1890s, a time of rising anti-immigrant sentiment, when Wong Kim Ark, born in the U.S. as the son of Chinese nationals, went to visit relatives in China and was denied re-entry into the U.S. on the grounds that he was not an American citizen. In 1898, the Supreme Court upheld his citizenship, establishing that “every citizen or subject of another country, while domiciled here, is within the allegiance and the protection, and consequently subject to the jurisdiction, of the United States”. Over a century later, Mr. Trump is seeking to contest the court’s interpretation of “jurisdiction”, arguing in his executive order that the children of those “unlawfully present”, or whose residence in the U.S. is “lawful but temporary”, are not subject to U.S. jurisdiction. His supporters rail against the practice of birth tourism, or anchor babies, where foreign nationals seek to give birth in the U.S., in the hope that those babies will be able to help their families migrate to the country as well.

How do citizenship laws vary elsewhere?

The U.S. follows the principle of *jus soli* (the right of soil), based on geography regardless of parental citizenship, as opposed to *jus sanguinis* (the right of blood), which gives citizenship based on the nationality of the child’s parents. According to the CIA’s World Factbook, there are only 37 countries which currently enforce the *jus soli* principle, of which 29 are in the Americas. Of the other eight, two are in India’s neighbourhood: Nepal and Pakistan, though the latter introduced a Bill seeking to end this. *Jus soli* historically allowed colonisers to quickly outnumber native populations as citizens. “Countries that have traditionally built their national character through diverse immigrant populations have used *jus soli* as a way of integrating diversity into the common stream of nationhood,” says Amitabh Mattoo, dean of the

School of International Studies at Jawaharlal Nehru University, adding that countries protective of their culture and identity have generally followed the principle of *jus sanguinis*. *Jus soli* derives from English common law and, until anti-migrant backlash a few decades ago, was implemented in the U.K. and most of its former colonies, including India. India offered automatic citizenship to all those born on Indian soil before 1987. Introducing the Citizenship Bill in Parliament in 1955, then-Home Minister Govind Ballabh Pant said, “The mere fact of birth in India invests with it the right of citizenship in India...we have taken a cosmopolitan view and it is in accordance with the spirit of the times, with the temper and atmosphere which we wish to promote in the civilised world.” Three decades later, sentiments had changed, in the wake of unrest in Assam due to increasing migration from Bangladesh as well as the influx of refugees from Sri Lanka, following the civil war there. “The time has come to tighten up our citizenship laws...We cannot be generous at the cost of our own people, at the cost of our own development,” said P. Chidambaram, Union Minister of State for Home Affairs, while introducing the Citizenship (Amendment) Bill in the Lok Sabha in 1986.

Will the order affect Indian immigrants?

“America once considered itself a melting pot, welcoming immigrants to become citizens, but has lately abandoned that meta-



phor for the salad bowl of distinct ethnicities. The rise of identity politics as well as political Islam has led to this desire to redefine citizenship,” says Professor Mattoo. “It will certainly result in reduced immigration, both legal and illegal.” Of the 47.8 million immigrants living in the U.S. in 2023, 2.8 million were born in India, the second-largest group after those born in Mexico, according to data analysed by the Pew Research Center. About 1,45,000 people born in India are estimated to have arrived in the U.S. in 2022, legally and illegally.

There are estimated to be 7,25,000 illegal immigrants from India living in the U.S.

Every year, more than 70% of H1B visas — a temporary work visa that is often seen as a pathway to permanent residency — are issued to Indian citizens. There are more than 3,30,000 Indians in the U.S. on student visas, many of whom hope to apply for permanent residency.

Over a million Indians, including dependents, are also waiting for employment-based green cards. For many of them, Mr. Trump’s order comes as a blow. Reports have emerged of dozens of pregnant women on temporary visas seeking to give birth prematurely before the order comes into effect, so their children can be born as U.S. citizens.

## Cycling governing body UCI bans carbon monoxide rebreathing

Paris: Cycling’s governing body has banned the repeated use of carbon monoxide rebreathing that some riders misuse to artificially increase their performances. Following a meeting of its executive committee on Saturday in France, the UCI said it approved a ban on repeated inhalation to protect the health of riders. The ban starts on Feb. 10. The inhalation will, however, continue to be authorised “within a medical facility and under the responsibility of a medical professional experienced in the handling of this gas for medical reasons, the UCI said.

The use of carbon monoxide was put in the spotlight during the Tour de France when the cycling website Escape Collective reported that riders from multiple teams inhaled the toxic gas to optimise altitude training. The gas can be used as a tracer to monitor the diffusion of oxygen in the lungs or the total mass of haemoglobin, a key blood value for racers. Two-time Tour de France champion Jonas Vingegaard said last month that some are using the method to dope “by regularly inhaling low doses of carbon monoxide, which leads to a significant increase in the performance. The UCI decided to act on medical grounds, saying that the gas, when inhaled repeatedly in non-medical conditions, “can result in acute and chronic health problems, for example headaches, lethargy, nau-



sea, dizziness, and confusion.” “Such symptoms can worsen at any time and develop into problems with heart rhythm, seizures, paralysis, and loss of consciousness,” it added. The new rules prohibit the possession, outside of a medical facility, of commercially available CO rebreathing systems connected to oxygen and CO cylinders, the UCI said. When performed under medical supervision, the UCI said only one inhala-

tion will be authorized to measure the total mass of haemoglobin, with a second inhalation allowed only two weeks after the first measurement. “Our priority is to protect the health and safety of our athletes and today’s decision is another significant step in this direction,” UCI president David Lappartient said. The method remains authorized by the World Anti-Doping Agency and the UCI said it has requested the body to take a position on the issue.

## A village that's breathing new life into theater Supporting Artists Every Year Invitation Drama Competitions Under the Leadership of Padala Ravi



Hyderabad: People often say that life itself is a stage. While there is a saying that theatre and life are separate, in reality, they are deeply connected. Some people turn their lives into plays, while others transform plays into their lives. Before the advent of cinema, theatre was the primary source of entertainment in villages, and many made it their livelihood. Some still hold on to it as a family legacy. As theatre gradually faded into the background, struggling to survive in a world dominated by digital media, one man has been striving to keep it alive—Padala Ravi, the president of the Sri Markandeya Nataka Kala Parishat.

\*The Power of Theatre in Awakening Society\*

Dreams come when we sleep, but art

has the power to awaken a sleeping society. Theatre has always played a crucial role in making people think about social issues. A couple of decades ago, street plays were a common sight in villages. Many dedicated their entire lives to theatre, living and breathing it. In fact, most veteran actors in the film industry started their careers in theatre. However, with the rise of social media and digital entertainment, theatre has been gradually disappearing. In response to this, Sri Markandeya Nataka Kala Parishat, based in Tatiparthi, Kakinada district, has been working tirelessly to support struggling theatre artists and revive the art form. Padala Ravi, its president, has been making relentless efforts to breathe new life into theatre.

\*Reviving Theatre for the New Genera-



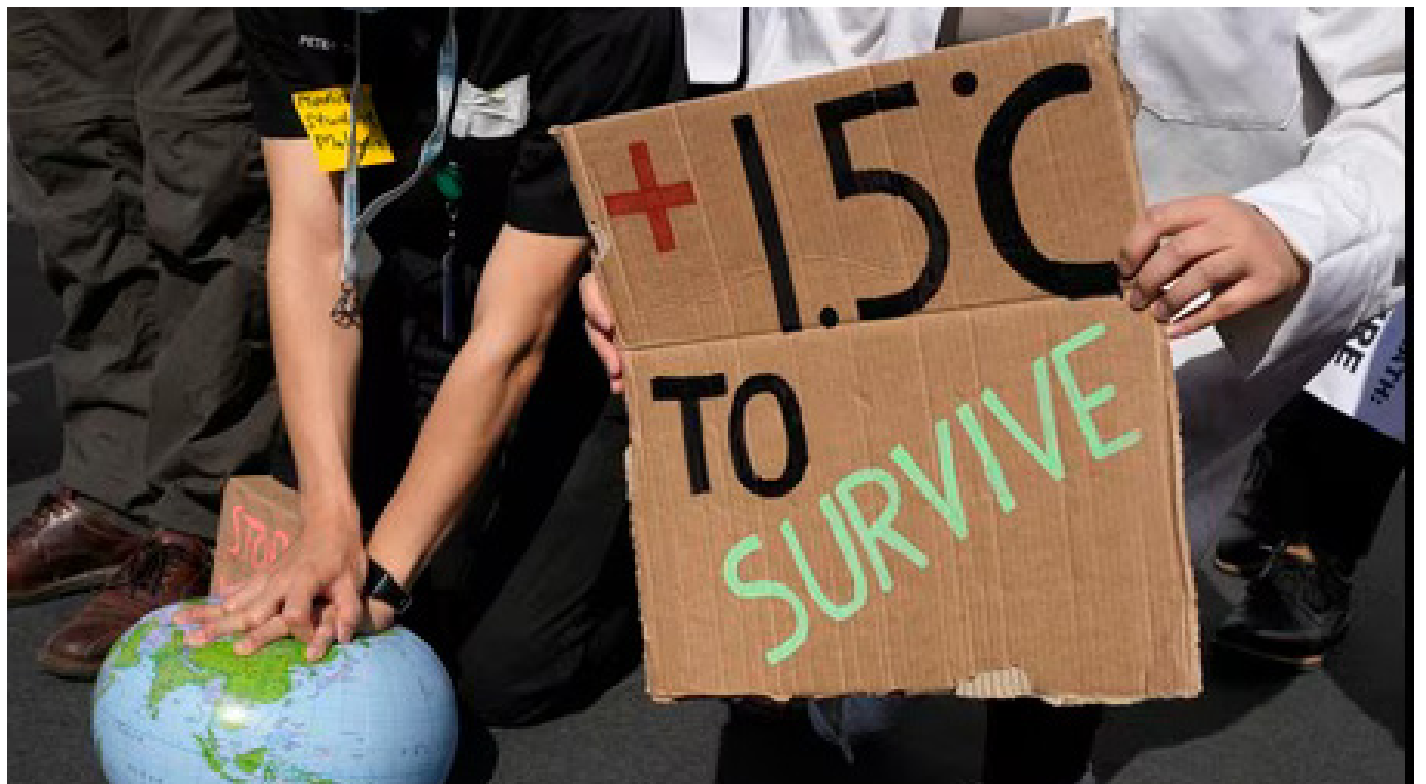
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The current generation has little exposure to theatre. However, theatre has a unique power to captivate an audience like no other art form. Many struggling theatre artists depend on it for their livelihood, and the government must step in to support them. There is a need to build open-air auditoriums in every town to encourage theatre performances. Several states in India actively pro-

mote theatre, and similar efforts should be made in our state as well. Sri Markandeya Nataka Kala Parishat organizes annual inter-state drama competitions across both Telugu-speaking states to encourage artists. They also provide financial assistance to underprivileged theatre performers. With a firm commitment to keeping theatre alive, their journey continues, striving to ensure that this powerful art form does not disappear.

## Slipping on climate crisis challenges

Is catastrophic warming of the planet now an inevitability? A new study in the journal *Environment: Science and Policy for Sustainable Development* suggests so. Former Nasa climate scientist and now Columbia University professor James Hansen, who is widely credited with pushing the term “global warming” from academic literature into the US and thereby global political lexicon, is among the authors. Hansen and his co-authors say that the Earth is more sensitive to warming from the emission of greenhouse gases (GHGs) than earlier believed and that the “2 degrees Celsius goal is dead”. This goal refers to scientific consensus on the threshold for warming above pre-industrial temperatures beyond which the worst of the climate crisis — such as the collapse of major ocean circulation systems and the abrupt melting of the northern permafrost — will occur. The Paris Agreement aims to limit warming well below this threshold, with an ambition of containing it within 1.5 degrees Celsius. Some experts — Valerie Masson-Delmotte, a former top UN climate panel scientist among them — are sceptical about such a bleak assessment. But, for policy, the debate should only underscore how fast the world is slipping on climate action.



# A question for the AI age: do machines and humans learn the same way?

From their origins in being able to separate data into different groups, AI today excels at too many tasks to count. Just in 2024, smartphones have started to be sold with AI models built into them while five of the seven men who won the 2024 science Nobel Prizes did so for work in AI. As it happens, the age of AI also promises to be a time in which scientists will learn a lot about the human brain as well. Existing AI models are inspired mostly by the brains of animals. Since these brains haven't been easy to study, scientists have been looking to AI models as a proxy.

How do humans learn?

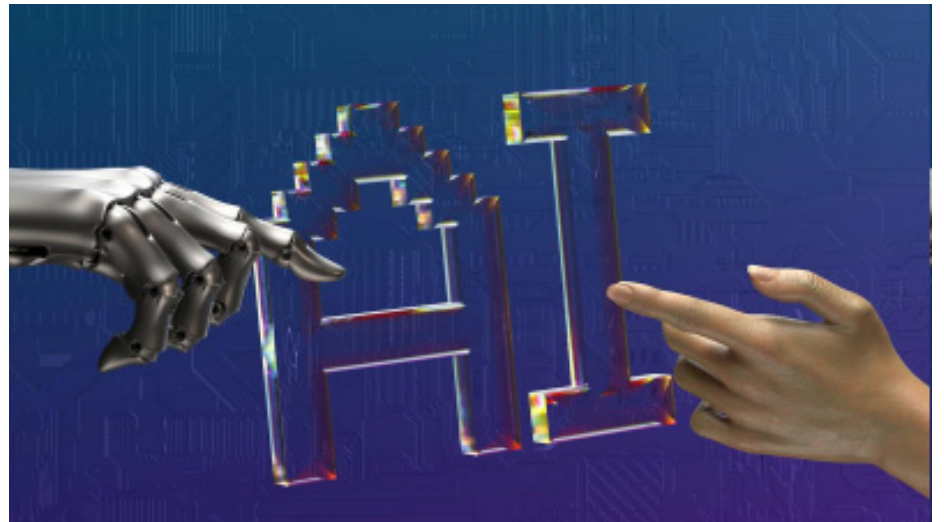
Machines excel at things that are nearly impossible for most humans, including rapidly analysing large datasets, predicting complex patterns, and learning to play chess like a grandmaster within a day. Yet neuroscientists say they also struggle with tasks that human children find easy, like understanding motives. "The paradox of today's AI stems from the fact that the human brain has an evolutionary, biological origin and AI does not," Celeste Kidd, associate professor of psychology at the University of California, Berkeley, said. "It is likely that [for] the type of intelligence that we have evolved for taking care of helpless offspring, we need to be able to read the intentions of a child that is running towards a cliff [or one] that's not yet able to feed themselves and say that they are hungry."

According to Arjun Ramakrishnan, assistant professor in the department of biological sciences and bioengineering at IIT-Kanpur, "at the heart of what drives learning in humans and animals" is a "dual focus on both meeting immediate biological needs and adapting to a constantly shifting environment." "The need to secure resources and maintain balance in the face of an ever-changing environment," he added, "likely spurred the evolution of sophisticated neural mechanisms, driving not just simple responses to immediate needs but also complex learning and strategic decision-making abilities." Learning is thus not just a process of acquiring static information but an ongoing, dynamic interaction between an organism and its environment. "The brain, shaped by evolutionary pressures, must adapt not only to predictable stimuli but also to the unpredictability of environmental fluctuations," he added. "This complexity is reflected in the ability of humans and animals to sense and respond to rapid changes in the environment and social interactions, a key advantage for survival." Learning is thus long-duration, interactive, and includes feedback loops between the organism's internal state and external challenges. Humans' upper hand According to biologists at the Heidelberg Laureate Forum, a meeting held in September 2024 in Germany, machines are not curious. "Unlike AI systems, children are naturally curious, exploring the world on their own while simultaneously learning within a social and cultural context," Kidd said at the forum. "Our curiosity is driven by knowing what we don't know." According to Kidd, the information children discover when they seek it is of a different type than the data fed into AI systems. "The single experience of a child with an apple is very different from Google Photos labeling an apple in an im-

age. A child's experience with an apple is sensory. They're feeling the apple, they're seeing the apple, it's multi-dimensional. The data people are getting is much, much richer. And there are tons of correlations you can pick up on in order to leverage things like learning and generalisation." The human brain and the body have been "trained" on such data over millennia.

Thus, human learning requires much less data to solve a problem with the same level of proficiency, according to Ashesh Dhawale, the DBT Wellcome Trust India Alliance Intermediate Fellow at the Centre for Neuroscience, Indian Institute of Science, Bengaluru, said. For example, although the AlphaZero model developed by Google subsidiary DeepMind is better at chess than any human player, it reached this level of proficiency only after playing around 40 million games during its training, Dhawale said. "In contrast, it is estimated that humans need some tens of thousands of training games to reach grandmaster proficiency." "One of the key advantages humans have over machines lies in the speed and efficiency of learning," Ramakrishnan said. "We can absorb new information rapidly, building on past experiences and knowledge in a flexible, adaptive way." This ability to continuously improve on prior lessons without extensive reprogramming gives humans a significant edge in dynamic environments where new information and challenges emerge constantly. Humans are also remarkably good at "transfer learning". "We can apply knowledge and skills from one context to entirely different, unfamiliar scenarios with relative ease," Ramakrishnan said. This ability to generalise is still a significant challenge for machines and artificial networks, which are typically confined to narrow domains and struggle to adapt to new or unforeseen contexts without retraining. The communication between neurons in the human brain takes the form of biochemical processes that operate more slowly than the channels between neurons in artificial neural networks, according to Brigitte Röder, professor of biological psychology and neuropsychology at the University of Hamburg. Yet the human brain makes decisions stunningly fast using abstractions and generalisation whereas machines still struggle to do this. Dhawale used the example of chess. "If you are proficient at chess, this ability will likely extend to other board games like checkers. This means humans can learn the structure underlying a task and generalise it to quickly solve new tasks — that is, they can learn to learn," he said.

Researchers are now attempting to bring this paradigm to machine learning, an approach called meta learning. It's not unlikely that machines will catch up here as well. Humans also excel at motor-skill learning. "Somehow humans and animals are very efficient at learning how to move," according to Dhawale, "but we don't know exactly why this is the case." Neural networks are great at navigating tasks involving discrete choices but they stumble with movement. One reason is because being able to make a simple motion, such as reaching for a fruit on a table, requires a learning agent to optimise for many independent parameters varying continuously across many degrees



The age of artificial intelligence (AI) — in the offing if it hasn't begun already — promises to be a time in which scientists will learn a lot about the human brain as well. Existing AI models are inspired mostly by the brains of animals. Since these brains haven't been easy to study, scientists have been looking to AI models as a proxy

of freedom. Then there's energy efficiency. According to Ramakrishnan, the human brain's low power consumption becomes readily apparent when recognising patterns, making decisions, and conducting social interactions. Machines can operate very fast but their energy consumption is also much higher, especially when they process large datasets.

Where machines excel However, machines are more reliable. Unlike machines, which are built for repeatability and can perform the same task again with consistent precision, humans contend with fatigue, emotional decision-making, and distractions. "While we are designed to operate in volatile, ever-changing environments and our ability to explore and adapt is one of our greatest strengths, this flexibility often comes at the cost of consistency," Ramakrishnan said. In contrast to the brain, neural network models are often trained to search exhaustively for solutions to complex tasks, Dhawale explained. This means they are more likely to discover new, better solutions to problems than humans can. At games like chess and go, AI models have been known to develop moves that surprise even expert players. "One could argue that the strategies used by humans to learn may be more efficient but can't discover the most optimal solutions because they are not designed to search exhaustively." From artificial to human The differences between human and machine learning could elucidate where the neural network of each brain — artificial or biological — falls short. "Neurons are often treated simplistically as point processes that communicate via electrical impulses, essentially operating in an on/off mode," Ramakrishnan said. "This reductionist approach has nonetheless allowed us to uncover fundamental principles that underlie complex cognitive behaviours." At its core is the idea that feedback loops drive learning. Researchers used it to develop rein-

forcement learning, a training algorithm that has also been remarkably successful at explaining how organisms update their knowledge and adapt based on their experiences, according to Ramakrishnan.

The development of artificial neural networks has also expanded our understanding of how memories could be stored and accessed in the brain: as dynamic processes that can be activated and adjusted over time rather than remain preserved in particular areas. Artificial neural networks with this ability can perform better. "The development of algorithms that handle short-term and long-term memory processes in artificial networks has provided us with a deeper understanding of how the brain may operate in these domains," Ramakrishnan said.

More broadly, AI models' successes in the real world have prompted neuroscientists and cognitive scientists to revisit ideas of how the human brain learns. For some time since the mid-20th century, scientists assumed the brain represented information about the world in a symbolic manner and that its many abilities — perception, planning, reasoning, etc. — were achieved through symbolic operations. Many early attempts at building AI models thus used approaches. One well-known application was expert systems, models capable of complex reasoning as a series of if-then problems. On the other hand, contemporary neural networks operate connectionist models, named for the weighted connections between the nodes in a network. These models begin with a blank slate and use pattern recognition techniques to achieve their primary goals: say, to accurately predict the next word in an unfinished sentence. "The question, therefore, is what type of AI — symbolic or connectionist — is the better model for human learning," Dhawale said. "Despite the success of neural network AI models, I still think they learn in a very different way from how humans learn."

# 20,000 cr R&D push in Budget 2025: A case for corporates tying up with private universities

In a pioneering move poised to reshape India's innovation landscape, Finance Minister Nirmala Sitharaman, in the Union Budget 2025-26, has allocated 20,000 crore to the Department of Science and Technology (DST) to initiate a private sector-driven research and development (R&D) fund. The government has also committed funds for fostering innovation in deep tech and emerging sectors, aiming to bolster strategic autonomy in critical technological domains. On the specific point, the minister in the Budget presentation under R and D and Innovation, said "...To implement private sector driven Research, Development and Innovation initiative announced in the July Budget, I am now allocating ₹20,000 crore." This should be seen as a direct response to the private sector's historically modest engagement in R&D activities. Despite various incentives, private enterprises have been reticent in committing substantial resources to research endeavours. One innovative idea for fostering R and D in private sector is strengthening its connect with high quality private universities to ensure clear outcomes for the new initiative. Let us see how:

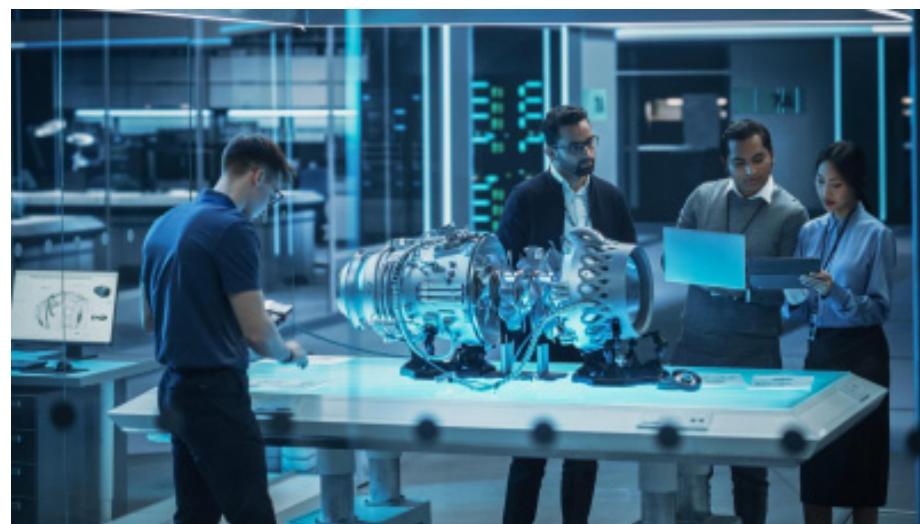
The Economic Survey preceding the budget highlighted concerns over this reluctance, noting that while the government contributes approximately 50% of the nation's total R&D expenditure, business enterprises account for only 41%. Chief Economic Advisor V. Anantha Nageswaran emphasized the need for the private sector to enhance its investment in research to drive innovation and economic growth. For years, India's innovation ecosystem has suffered from a disconnect between industry and academia. While private companies struggle with the high costs and risks associated with in-house R&D, universities remain underutilized despite possessing world-class faculty and research infrastructure. The newly allocated fund is designed to invigorate private sector participation by providing financial support for R&D in deep tech and sunrise industries.

By incentivizing private companies to collaborate with universities, the initiative aims to employ the strengths of both sectors. Companies will definitely be able to gain access to cutting-edge research and a skilled talent pool, while academic institutions will benefit from practical applications of their research, increased funding, and enhanced industry relevance. Research that once remained confined to academic journals could find tangible expressions in the form of patents, prototypes, and market-ready products. Moreover, faculty members engaging in industry projects can bridge the often-lamented 'curriculum-industry gap,' ensuring that students graduate with skills that align with contemporary business needs. The missing link in India's innovation story—private sector organizations in India, ranging from homegrown conglomerates to nimble startups, have undeniably built strong capabilities in manufacturing, IT, and pharmaceuticals. Tata Motors has developed indigenous electric vehicle (EV) technology, Biocon has emerged as a global leader in biosimilars, and Bharat Forge is pushing the boundaries of aerospace engineering. However, these success stories need to be made a norm than an exception in the whole ecosystem. According to the Department of Science and Technology, India's gross ex-

penditure on R&D hovers around 0.7% of GDP—significantly lower than China (2.4%) and the United States (3.1%). Even within this, private sector contributions are disproportionately small, with most research being publicly funded.

More worryingly, private universities — many boast world-class faculty and infrastructure — remain underutilized in this endeavour. There are several instances of Deemed and privately funded universities producing world-class innovations and patents; quite a few have the potential (or have been in the real world) to be commercialized. If the new funding initiative is used for forging deeper ties between private enterprises and private universities in India, it presents a mutually beneficial opportunity. Companies struggling with resource-intensive research can leverage university talent, while academia, often isolated in theoretical explorations, can gain exposure to real-world challenges. A global perspective: Learning from the best

Globally, some of the most innovative breakthroughs have emerged from robust academia-industry collaborations. The Silicon Valley model, for instance, was built on Stanford University's close ties with tech entrepreneurs, spawning giants like Google and Tesla. In Germany, the Fraunhofer Institutes serve as dedicated research hubs where academic knowledge is transformed into commercially viable technologies. Even in China, where state-driven investment in R&D is formidable, universities have been instrumental in shaping the country's dominance in artificial intelligence and semiconductors. If India is to replicate such successes, private firms must recognize that investing in research is not merely a cost but a strategic imperative. Investing in joint re-



search labs, funding university-led projects, and offering corporate PhD programs can create a robust pipeline of innovation. Additionally, more universities especially private Universities should reorient their outlook and work toward applied research. Currently, many institutions prioritize publishing papers in high-impact journals, but true progress will come when these findings translate into solutions for industry. They can start off by establishing dedicated technology transfer offices, that can incentivize patent filing. Increasing the length and breadth of entrepreneurship programs can foster a more innovation-driven academic culture in such institutions. A future shaped by collaboration

The government's viewpoint in promoting private sector-led R&D marks a significant shift towards a more collaborative and innovation-driven economy. By aligning financial incentives with the nation's technological aspirations, India is poised to accel-

erate its journey towards becoming a global leader in innovation and self-reliance. If Budget 2025's R&D push is the vehicle to catalyse R and D, the first step, obviously is transition the country from being a technology consumer to a technology creator. The opportunity is immense, and the time for industry and academia to join hands has never been more urgent. Private sector universities now have this immense opportunity in the form of strong policy support. Many of these institutions already have robust industry-academia collaborations. Private industry can strengthen these ties by a dedicated push for innovation driven R and D, even while recognizing the gaps in their own ability to do actual science or research. Now they can get dedicated funds to work with private universities' research teams to attain their innovations. The best response in the situation would be for corporates to use a part of their CSR funds for a dedicated push for innovation, to top government funding.

## Too Good to Be True by Prajakta Koli

Cosmopolitan Mumbai is the backdrop of actor and content creator Prajakta Koli's much anticipated debut novel, *Too Good to Be True*. At the heart of the tale is Avani, a law student working part-time at a bookstore. Romance is almost a religion for her and romance novels are her gospel. Much to her surprise (and not to the reader's), the embodiment of a perfect man slides out of her books and into her real life. Aman is the titular rich, handsome and mature man whom Avani perceives as too good to be true. Despite her friends' best efforts, she keeps searching for cracks in his persona. The plot unfolds with Aman's attempts to woo her even as she is trapped in her indecision. The novels she has read are filled with grand gestures, fateful connections, and perfect endings. Yet, in her own life, love doesn't unfold quite as effortlessly. Therein lies the tension that propels Koli's debut. A love letter to love stories, the novel is deeply aware of the romantic conventions within which it works and presents what happens when life doesn't quite measure up to the expectations set by fiction. The writing style is conversational and imbued with humour. "[I] shut my eyes in a silent prayer to whoever was listening. Gods, Satan, spirits, energies, Mark Zuckerberg," Avani says when she finds herself in the middle of a rather awkward moment.

*Too Good to be True* touches on the theme of mental health expressing how an individual's conditioning influences their perception of the world. It also explores the universal tendency to avoid confronting one's own emotions: "Denial is a funny thing. It works like a charm, till it doesn't...[then] the waves come crashing down on you. You can swim or you can drown." Written in the first person, the narration alternates between the voices of Avani and Aman. Readers hear the most intimate thoughts and sentiments of the characters, and learn that their internal frictions are the primary roadblocks to their union.

Interestingly, the voice in Avani's head, almost a character by itself, appears throughout in italics. "You can't stop thinking about his eyes?" the voice asks Avani when she first meets Aman but is in denial about falling in love at first sight. "Oh, what do you know? You're just a stupid voice in my head," Avani replies. This narrative device, which mostly plays the devil's advocate, allows readers to comprehend the central character's conflicts.

Readers familiar with the author's online persona (she has 8.4 million followers on Instagram alone) will immediately identify the narrative voice with Koli's own. While this does create a pleasing connection with the

author, it is also one of the book's weak points. At times, Aman's voice is indistinguishable from Avani's. This reviewer often had to flip back a few pages to check the chapter title and recollect who the narrator was. This was especially so while reading long passages with no gendered pronouns or markers. Among the central character's endearing qualities is her tendency to compare events in her own life with instances from fiction: But it does/doesn't happen like this in the romance novels I have read. These mentions of romance novels in a romance novel are fun at first but become somewhat irksome when they recur. Some plot holes have also been copiously discussed by readers: How did a middle-class law student like Avani manage to rent a 1-BHK in South Mumbai while also hiring house help? It's the sort of point that can be made, perhaps, in a more serious novel but is unfair to project onto one that clearly stands at the cusp of fantasy. The book doesn't deflect much from the familiar trajectory of the contemporary romance novel. Clearly, the author is not attempting to invent a new language or trope but is presenting a story that is both familiar and relatable. *Too Good to Be True* does not claim to be the layered work of a new Jane Austen. Instead, it takes solace in simplicity and radiates mass appeal.

# When Chennai parks turn into open air art galleries

More than 500 artists across age groups will turn Senmozhi Poonga into a dazzling kaleidoscope of colours on February 2. The second edition of Chennaiyil Oar Oviya Sangamam, an art exhibition presented by Indian Art Factory, will see participants, some from other cities, take every inch of their stall under tree canopies and behind plants to present a vibrant art gallery. The event is a big stage for aspiring and upcoming artists. Many of these artists do not have the means or the qualification to present their works at art galleries. While the larger goal of taking art to public spaces is to bridge the gap between artists and audiences through creative expressions, the road to this is not so easy.

For six editions, the Art Fest at Nageshwara Rao Park in Mylapore, curated by journalist and publisher Vincent D. Souza and artist Ganapathy Subramaniam, has served as a date for public engagement. This year, however, the fest scheduled to take place during the last week of February, will see a change of venue. Since civic works are under way at Nageshwara Rao Park, the venue is not fully suitable for an art show, says a post on Facebook. It meanwhile wants people to keep their artworks ready. In 2023, Anna Nagar Tower Park got to host the Tamil Nadu Art and Craft Trust Expo 2023 but with conditions. Greater Chennai Corporation did not give permission for artworks to be sold, they could only be exhibited. "That was the condition laid down to me to use this venue and we agreed as we wanted to give many struggling artists a platform and to some extent the open air exhibition served its purpose," says the organiser Jaffer Beig who is a member of Tamil Nadu Artists Association.

Ganapathy Subramaniam of Art Fest says they too were asked not to promote the event as a "sales event". "Art requires a lot of promotion, so the least support we ask for is that Greater Chennai Corporation give us space," says Ganapathy. Like the Chitra Sante held annually on the streets of a neighbourhood in Bengaluru, such events need continuity and some support from the government or the civic body in terms of providing a venue that can draw people. Jaffer is looking for a space to host the art exhibition this year but he can only afford a minimal amount as fee. Ganapathy says not all public spaces are suited for hosting an art event. "Nageshwara Rao Park was right in every sense from location to size and the space plays host to various events including the Mylapore Fest so we did not have to promote it," he says.

Selvakannan Rathinam, founder, Indian Art Factory, says organising an event of such scale is not easy. "I have paid the Horticulture Department ₹75,000 towards rent for a day, which is fine but I have been requesting a waiver in entry fee for visitors on the D-Day or it would not draw the public," says Selvakannan. From 125 artists in the first edition, this time the event has 525 people, 70 from other states, taking part in it. "We do not have an application process to shortlist artists; we look at the Instagram profile and their artworks and charge ₹1500 per stall and they have a conformed space at the venue," says Selvakannan. As a self-

taught artist he has faced many rejections from art galleries so he does not like to shortlist participants. Last year, the artist community made ₹4 lakh selling works. This time, our target is ₹25 lakh, so we want a good footfall, he says.

A majority of organisers of art events and artists will swear by Bengaluru's Chitra Santhe. Happening for the last 22 years, the Karnataka Chitrakala Parishath organises this art festival around its campus and extend it to a few VIP roads on the first Sunday of January. Streets are strictly pedestrian only for the entire day, vehicular traffic is diverted for art to spread out in all forms, shapes and sizes. So big has this street art festival grown that this year the Bengaluru Metropolitan Transport Corporation offered feeder services to the venue and Namma Yatri offered free autorickshaw rides. Shashidhar Rao S.N., general secretary, Karnataka Chitrakala Parishath, says the festival has had its own set of challenges that were ironed out gradually.

Last year, 1,800 artistes from 22 states presented their works and over six lakh people attended the day-long festival. A number of the participants are from rural areas of Karnataka who get a platform. "A number of stalls have sold more than ₹3 lakh worth of art and we don't charge any commission



from them except the registration fee of ₹1000 that covers breakfast, lunch and accommodation for outstation artists," says Rao. From a manual process, three years ago an exclusive website was designed for participants to process their application form, know whether they are shortlisted and make the payment. Does the Karnataka government fund the event? Rao says the government has been supportive but they don't have a fixed amount being given every year. "Sometimes promises are made and some-

times we get only 20% of the amount but we have no complaints.

We are happy with the support various departments give us including by cordoning off vehicles for 12 hours which is a big challenge in a city like Bengaluru," he says. Rao says registration fee is one component through which the expenses of organising this festival is met. Given the increasing crowd that has been turning up for the event, the Parishath has been mulling about moving it to a park.

## Time for Congress to walk the talk

The Congress recently announced the launch of 'Jai Bapu, Jai Bhim, Jai Samvidhan', a campaign to commemorate the 75th year of the Constitution. Hindutva ideologues have denigrated M.K. Gandhi while their antipathy towards Dr. B.R. Ambedkar became evident through the disparaging remarks made by Home Minister Amit Shah in Parliament. In this light, this campaign appears to hold promise. Since coming to power in Karnataka in 2023, the Congress government has signalled its commitment to the Constitution. It hosted an international conference titled 'Constitution and National Unity' in February 2024 and held massive celebrations in September 2024 to mark the International Day of Democracy and the Chief Minister urged people to abide by constitutional values.

Notwithstanding these, a genuine commitment to democracy must minimally ensure that everyone feels like an active participant in a consultative process. Therefore, spaces for peaceful dissent should not be curtailed. In 2021, the BJP government in Karnataka passed the Licensing and Regulation of Protests, Demonstrations and Protest Marches (Bengaluru City) Order, making public protests outside a designated area illegal. The grounds for these were that the "unauthorised manner adversely affect traffic movement, which cause huge vehicular congestion." After the order, protests in Bengaluru have been limited to a small park ambushed by a parking lot; it is ironically called Freedom Park. Protests attempted to be held anywhere else have met with police crackdowns and FIRs.

The right to freedom of expression and peaceful assembly is a fundamental right (Article 19). Indeed, the very idea of satyagraha or peaceful civil disobedience is one of the biggest contributions of India to the rest of the world. When tenant farmers in Bihar's Champaran district were forced by the British to cultivate indigo and were heavily penalised for any crop failures, Gandhi initiated the historic Champaran Satyagraha in 1917. He defied government orders to leave Champaran; this resistance led to the Champaran Agrarian Law providing relief to farmers. In 1923, the Bombay Legislative Council permitted people across castes to use places built and run by the government. However, Dalits were prevented by caste Hindus from drinking water from public tanks. In defiance, in 1927, Dr. B.R. Ambedkar led thousands of Dalits to walk to Chavdar tank in Maharashtra's Mahad and drank water from the tank in protest. These, among many others, have given the world a grammar of dissent.

The Congress government in Karnataka has continued the undemocratic order passed in 2021. On August 15, 2022, 72 farmers protesting against government acquisition of their land in Devanahalli were arrested and FIRs were registered against them. Numerous pro-Palestine protesters have been detained. The police slapped FIRs against several people who gathered at the steps of Town Hall in Bengaluru to protest against the assault of two Manipuri women. The Karnataka High Court quashed those FIRs, but the process of fighting itself became a punishment. In 2023, on Gandhi's birth



anniversary, hundreds of citizens walked from the Gandhi statue to Vidhana Soudha as a satyagraha to reclaim the rights to peaceful assembly. They were detained by the police and an FIR was filed against several people. Although election rallies and religious processions cause traffic, only protest rallies are banned. Controlling traffic is a civic matter. The government's rationale that protests held at a particular spot cause traffic is unfounded. For instance, protesting at the steps of Town Hall does not cause traffic. The real reason for traffic snarls are the exponential rise of private vehicles without a commensurate increase in affordable and quality public transportation. Peaceful protests are usually the last resort for people when all appeals to the government fail.

# Beyond tax cuts, a closer read of the Union Budget

The Union Finance Minister, Nirmala Sitharaman's presentation of the Union Budget on Saturday, February 1, was against the backdrop of pressing macroeconomic challenges — persistently high taxes and unemployment squeezing the middle-income class, subdued private investment, mounting external vulnerabilities that threaten to derail the growth story, and a looming fiscal overhang. While the Finance Minister laid out an ambitious road map for Viksit Bharat, spanning agriculture, manufacturing, micro, small and medium enterprises (MSME), social welfare, and infrastructure, the Budget's policy announcements and fiscal plans need closer scrutiny.

Targets that raise questions First, the fiscal consolidation target of 4.4% of GDP in FY26 is a key highlight of the Budget. However, achieving this target hinges on ambitious revenue projections, including a 11.2% growth in total tax revenues and a 14.4% increase in income tax revenues compared to FY25 estimates. These assumptions appear overly optimistic given the significant tax cuts announced in the Budget and the prevailing economic headwinds such as softening domestic consumption and weakening external demand. Much will also depend on the success of the second asset monetisation plan (2025-30), announced in the Budget. The underperformance of the previous asset monetisation programme raises valid concerns. Furthermore, the estimated ₹11.54 lakh crore in net market borrowings risks crowding out private capital at a critical juncture when credit demand remains tepid. Achieving the ambitious revenue targets will require improved tax buoyancy, more efficient tax administration, and realistic asset monetisation strategies to ensure that the fiscal consolidation plan remains on track. Second, the revisions in personal income-tax rates and slabs under the new tax regime, exempting incomes up to ₹12 lakh from tax (after factoring in the rebate benefit), and significantly reducing tax liabilities across various income brackets, offer welcome relief to middle-income taxpayers. However, while these changes are likely to boost disposable income, they shall come at a cost — of ₹1 lakh crore in foregone direct tax revenue, which, in turn, could constrain the government's ability to fund critical developmental initiatives. The tax-base erosion also comes when household savings have shown a structural decline over the past decade, dropping to 18.4% of GDP in FY23 (Economic Survey 2024-25). This raises pressing questions about the long-term sustainability of these tax cuts, particularly when public investments in infrastructure and social welfare remain critical to drive inclusive economic growth.

Third, on the manufacturing front, the Budget reiterates India's ambition to emerge as a global manufacturing powerhouse. The Economic Survey 2024-25 flagged India's underperformance in manufacturing, which accounts for a mere 17% of GDP. While production-linked incentives (PLIs) have shown moderate success in sectors such as electronics, their scalability and long-term impact remain uncertain. In that light, the Budget announcements on enhanced credit facilities for MSMEs and the launch of a National Manufacturing Mission aimed at improving

ease of doing business, to foster a future-ready workforce, and promote clean-tech manufacturing, are important steps. The revision of MSME classification criteria — increasing investment limits by 2.5x and doubling turnover thresholds — may improve scale economies. However, the measures fall short of addressing core competitiveness issues such as regulatory inefficiencies, infrastructure gaps, and low innovation capacity. The absence of concrete measures to boost industrial research and development — currently at a dismal 0.64% of GDP — undermines India's ability to compete with innovation-driven economies such as China and Germany. While the Budget's focus on manufacturing is a step in the right direction, achieving global competitiveness will require deeper structural reforms and sustained investment in innovation and infrastructure. The gaps remain in agriculture Fourth, agriculture, a key pillar of the economy, received significant attention through initiatives such as the Prime Minister Dhan-Dhaanya Krishi Yojana and the National Mission on High-Yielding Seeds. These measures are with the aim of enhancing productivity and climate resilience, which are critical for food security. The increase in the Kisan Credit Card (KCC) loan limit from ₹3 lakh to ₹5 lakh, along with targeted interventions in 100 low-productivity districts, signals a strategic pivot from blanket subsidies to precision support, empowering farmers with greater financial flexibility. However, the measures fall short of addressing systemic inefficiencies in agricultural markets. The Budget lays an emphasis on credit enhancements, yet the focus on short-term loans perpetuates the dependency of farmers on debt without addressing the issues of price volatility or market access. Moreover, the absence of concrete measures to promote agricultural exports — particularly as India eyes leadership in millets and natural farming — represents a missed opportunity. Fifth, while the Budget introduces some promising measures for the external sector, significant gaps remain unaddressed. Services exports, particularly in IT and business process outsourcing, continue to grow at a robust 10.5% CAGR, but budgetary efforts to diversify the export portfolio remain insufficient. Trade facilitation initiatives such as Bharat Trade Net (BTN) and export credit support for MSMEs, which were announced in the Budget, are positive steps but lack the scale required to tackle India's persistent trade deficits. Moreover, the challenges posed by the depreciation of the rupee and declining forex reserves require a more ambitious export strategy. The fiscal push to value-added sectors such as pharmaceuticals, electronics, renewable energy, and high-value agricultural products could have strengthened India's position in global supply chains and enhanced export competitiveness. Not a transformative push Finally, while the Budget signals intent on climate action and clean energy, its financial commitments reveal a cautious, incremental approach rather than a transformative push. The Budget's focus on supply-chain resilience — through incentives for lithium-ion battery recycling, duty exemptions on critical minerals, and support for domestic solar photovoltaic and battery manufacturing — is a pragmatic move to



reduce import dependence. However, without a parallel investment in grid modernisation, energy storage, and industrial decarbonisation, the transition to a low-carbon economy will remain fragmented. The Budget's fiscal outlays will eventually be judged by how effectively they address the fundamental trade-offs of Indian growth: how

to unleash private enterprise while ensuring inclusive development; how to boost consumption without compromising savings, and how to accelerate growth while maintaining macroeconomic stability. Ultimately, the credibility of execution and the government's willingness to course-correct where necessary will matter.

## A Union Budget that ticks most of the boxes

The Union Budget for FY26 has been presented in the backdrop of a challenging domestic and global macroeconomic environment. The state of the economy appears to be in a cyclical slowdown led by weakening urban consumption, lacklustre job growth and an investment cycle by the private sector that is yet to turn broad-based. Further, the global geopolitical and geoeconomic environment has become extremely uncertain, with serious risks of disruption to global trade. Nevertheless, India's macroeconomic strength remains uncompromised. GVA growth is expected to bounce-back in H2 FY25, core inflation appears to be benign, and the current account deficit has been lower than its long-term trend with structural support from a rising and buoyant services export. Last, but not least, India, unlike many other countries especially in Europe and Latin America, enjoys political and economic stability. Promises have been kept

Against this somewhat half-glass full/half-glass empty macroeconomic backdrop, the Finance Minister rightly chose to retain a focus on macroeconomic stability with a display of prudent fiscal management. At the outset, the Finance Minister not only sprung a positive surprise by revising the current year's fiscal deficit target lower by 10 bps to 4.8% of GDP, but also delivered on her promise of incremental consolidation and lowered the fiscal deficit target further by 40 bps to 4.4% of GDP in FY26. We note that, FY20 (which was partially impacted by the COVID-19 pandemic) had seen a higher fiscal deficit of 4.6% of GDP. Hence, it can now be inferred that a bulk of the post-pandemic fiscal stimulus has now been unwound. This will help India in preserving fiscal policy space, curb longer term inflationary pressures and take one step further towards a potential upgrade to its sovereign rating. International investors would welcome this tremendously at a time when fiscal policy could

come under pressures in many countries, including the United States. One distinguishing feature of recent fiscal compression has been the tight leash on revenue deficit, which in FY25 and FY26 is estimated and projected at 1.9% and 1.5% of GDP, respectively — both lower than the pre-COVID level of 2.4% seen in FY19. While a structural improvement in revenue receipts has helped in this journey, reduction in revenue deficit in FY26 is going to be achieved by the curbing of discretionary revenue expenditure — revenue spending, excluding interest, salary, pension, and subsidies, is budgeted to grow by just 3.2% in FY26, lower than the expected rate of inflation.

This appears to be a balancing act since the focal point of consumption stimulus in the FY26 Union Budget is the reduction in the personal income tax burden, which as per the Budget estimates would amount to ₹1 trillion of potential revenue forgone. We believe the actual support to consumption (predominantly urban) would be more than the accounting loss on account of the multiplier impact. Focus on personal tax and implications In fact when seen through the lens of optimism, the reduction in personal income-tax burden when juxtaposed with the upping of tax claim benefits for individuals for self-occupied houses (from one earlier to two from FY26 onwards) could trigger a much larger growth multiplier by channelling household savings to the real estate sector, which in turn is known to have a rich backward and forward linkage with the rest of the economy. While there was some disappointment among market watchers with respect to the perceived cut in capex allocation, we are not perturbed. The capex allocation for FY25 was revised lower from 3.4% of GDP to 3.1%. However, the entire cut got front loaded due to the administrative exercise of the general election 2024 and government formation thereafter.

# In Trump 2.0, it is better for India to be seen as an independent pole in a multipolar world: Mahbubani

Singapore's former Ambassador-at-large and author of several books on China, US, ASEAN and geopolitics Kishore Mahbubani says that U.S. President Donald Trump could change the world, "trampling" on the world order, and that India should prepare accordingly. He spoke to The Hindu on the side-lines of an event by the Asia Society for his latest book "Living the Asian Century".

Is there a difference between Trump 1.0. and Trump 2.0?

Yes I think that Mr. Trump feels he made a big mistake in listening to the experts last time. One example, he was told that deficits are very bad and that he mustn't spend too much money. And look at what Joe Biden did? Biden bust the budget, spent billions of dollars on borrowed money, and Trump was mad as hell, saying, I could have done that too. Biden is getting credit for a booming economy but it was just the result of money printing, right? So this time around, you're going to get the real Trump, completely unrestrained, and he's going to be surrounded more by "Yes" people, rather than quote, unquote "experts". And so he will, in a sense, to use a dramatic analogy, bare his fangs more clearly.

How do you think the world is going to change after the next four years?

The United States, at the end of the day, is not a perfect country, but at the end of the day, since the end of World War Two, it has behaved more or less as a responsible stakeholder to produce the global order. And even if they violated the norms, they would at least say, we believe in these norms, and countries should not invade or occupy other countries. And here comes along, Mr. Trump, and he completely tramples on all the principles of international order that the United States was committed to. For example, on taking back the Panama Canal, or what he has said about the use of force to take Greenland. These are all violations of the UN Charter. And frankly, since it was the United States that kept saying that Russia's invasion of Ukraine was illegal. So there are far deeper questions in the rest of the world about the next four year. The paradox about Donald Trump is that he also says that he's not a warmonger, and it's true that in his first term was Trump was the first American president in a long time who hadn't started a war.

How will the threat of a tariff war mean for Asia in particular?

Even though he's been threatening tariffs, he hasn't really imposed very heavy tariffs yet. He did impose heavy tariffs on Colombia after it refused to take back migrants, but lifted them when Colombian President backtracked.

And ties with China?

I think Trump shares the basic premise of the American establishment that America should remain the number one power. There's only one thing that unites the Democrats and Republicans, which is America should remain number one and should not allow China to become number one. So the structural contest is still carrying on. There'll be twists and turns in the road, but at the same time, Trump is somebody who is also a deal maker. So if he thinks he can get a

good deal from China, he will go ahead and make it in a way that Joe Biden could never do. , Joe Biden and his team around him, Blinken, Sullivan were very scared of being seen to be soft on China, and so they didn't dare to, even if was in American interest to do so. Like Richard Nixon, Donald Trump is the one who can make a deal with China, because he's not seen to be in any way soft on China.

How do you evaluate where the quad is today and what its future is, given the first meeting Marco Rubio took was with the Quad FMs?

The quad keeps declaring that it is not a security organization and each of the quad leaders would deny that it is meant to be an anti-China operation. Nonetheless, that's how it is perceived. It is natural for countries to keep as many options open as possible. India is a member of the quad, but India is also a member of the BRICS, and I would say it's very wise of India to keep his options open at this time (Trump 2.0). It is better for India to be seen as an independent pole in a multipolar world with far more options than, let's say, Japan, which is a completely dependent pole on the United States of America. India has also reopened ties with China... That is a very positive development, because it is a major anomaly that two of the three biggest economies in Asia don't have direct flights with each other. That's abnormal. So these are the sort of abnormalities you must get rid of. You know, just as you know, India and Pakistan don't have normal trade with each other, which is, again, something that should be restored, because what you want to do is not become friends or buddies or allies, but just have normal relations.

Even so, the impact of Chinese aggression remains....will Trump try to contain China in any way?

The answer is complicated. I don't think China wants a confrontation with the United States. The Chinese never think in terms of the next quarter, next one year, even the next five years. They're concerned about where they will be 10 years from now, 20 years from now, and their strategy is very clear. They want to grow their economy, and they know at the end of the day, the outcome, the contest between US and China will be determined not by aircraft carriers or fighter jets or tanks. It will be determined by who has the biggest GNP and China is the one major power in the world that hasn't fought an inter-state war in 45 years. That was a deliberate decision as they realized that wars crippled a country's development. So the Chinese are in no hurry whatsoever to get involved in any kind of dispute, whether it's with India or with Taiwan or in the South China Sea. Now it doesn't mean that they won't assert their position. The Chinese will become more and more assertive, but there's a big difference between being assertive and being aggressive. US officials keep saying that China will take over Taiwan by 2027. I don't believe that. What's the hurry for China? China's economy is far more important than Taiwan's. At the same time, if Taiwan declares independence, then definitely China will declare war.

Should India reconsider its walk out



from RCEP (Regional Comprehensive Economic Partnership Agreement)?

I think all the economic studies will show you that India will gain from joining RCEP. When you're part of a much larger market, you benefit. Your uncompetitive industries will not survive, but your competitive industries will thrive and do well. I think India should definitely revisit the RCEP question, especially as India wants to become a manufacturing economy. No country can become a manufacturing economy if it does not in one way or another, get more integrated with China's manufacturing economy.

In your latest book living the Asian Century, you write about the trauma of partition your mother faced, and fled from Karachi to Mumbai and then Singapore...you remain a proponent of South Asian integration and India-Pakistan ties, why is that?

Why is that? I believe that the 21st cen-

tury will be the Asian century. I've actually no doubt about this return to the norm from the year one to the year 1820, when the two largest economies of the world were always those of China and India. So we are going back to the historical norm. But the way for China and India to grow their economies rapidly is to remain peaceful with all their neighbours. I'm not saying that in India and Pakistan should sign a free trade agreement or give concessions to each other.. they should just have normal trade. If you compare India and Pakistan with China and Vietnam, India and Pakistan have been at odds with each other only since 1947. China and Vietnam have been struggling with each other for 2000 years, and Vietnam has been occupied by China 1000 years. Now you go and observe the trade levels within China and Vietnam, they've exploded, and both are benefiting. So in the same way, India and Pakistan and Bangladesh and all can all benefit.

## Union Budget bets big on emerging technology, startups

New Delhi: New and emerging technologies were in focus in the Union Budget, as Finance Minister Nirmala Sitharaman announced a national framework for Global Capability Centres (GCCs), Rs 500-crore centre of excellence in AI for education, and said a deep tech 'fund of funds' will be explored to catalyse the next generation startups. A new fund of funds, with expanded scope and a fresh contribution of additional Rs 10,000 crore is also on anvil.

A national framework will be formulated as guidance to states for promoting Global Capability Centres in emerging Tier-2 cities. This will suggest measures for enhancing availability of talent and infrastructure, building byelaw reforms, and mechanisms for collaboration with industry. "I had announced three Centres of Excellence in Artificial Intelligence for agriculture, health, and sustainable cities in 2023. Now a Centre of Excellence in Artificial Intelligence for education will be set up with a total outlay of Rs 500 crore," Sitharaman said.

Startups have a reason for cheer also as a new 'Fund of Funds' with expanded scope and a fresh contribution of additional

Rs 10,000 crore will be set up. "The Alternate Investment Funds (AIFs) for startups have received commitments of more than Rs 91,000 crore. These are supported by the Fund of Funds set up with a government contribution of Rs 10,000 crore. Now, a new fund of funds, with expanded scope and a fresh contribution of another Rs 10,000 crore will be set up," she said.

Gaja Capital Managing Partner Gopal Jain said the introduction of a new Fund of Funds for AIFs, and a Center of Excellence for AI in Education are all "promising steps" toward fostering a knowledge-driven economy. To improve access to capital, the credit guarantee cover will be enhanced for startups, from Rs 10 crore to 20 crore, with the guarantee fee being moderated to 1 per cent for loans in 27 focus sectors key for Atmanirbhar Bharat.

Bruce Keith, Co-founder CEO, InvestorAi believes that the announcement on deep tech funds, while details are awaited, needs to be viewed through the 'DeepSeek' lens of what can be done with relatively small amounts of capital when provided to agile and creative teams.