



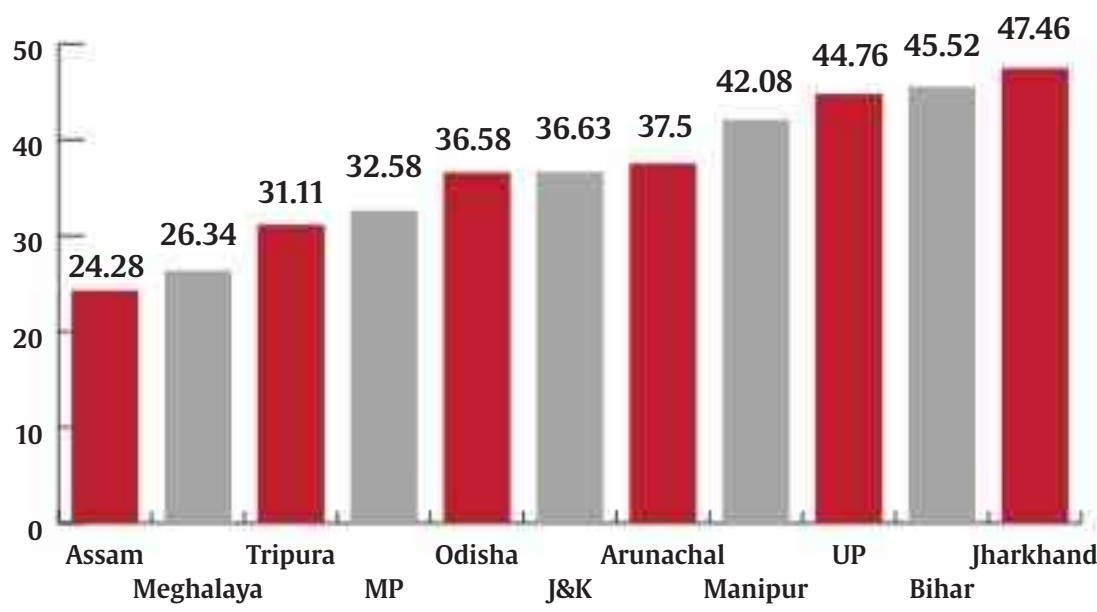
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TELLING NUMBERS

2 in 3 schools have electricity; 5 Northeast states in bottom 10

STATES WHERE LESS THAN HALF THE SCHOOLS HAVE ELECTRICITY



Source: Unified District Information System for Education, 2017-18 (provisional), via Ministry of Human Resource Development

Less than two-thirds (63.14%) of the country's schools have electricity connections, according to data from the Unified District Information System for Education (UDISE) for 2017-18 (provisional) tabled in Lok Sabha on Monday.

All schools in three Union Territories — Chandigarh, Dadra & Nagar Haveli and Lakshadweep — have a connection, followed by the states and UTs of Delhi (99.93%), Gujarat (99.91%), Puducherry, Tamil Nadu (99.55%), Punjab (99.55%), Goa (99.54%) and Daman & Diu (98.6%). At the other extreme are three

Northeastern states — Assam (24.28%), Meghalaya (26.34%) and Tripura (31.11%). Two other Northeastern states — Arunachal Pradesh (37.5%) and Manipur (42.08%) — are in the bottom 10 (see bar graph).

The ministry reply said that under the erstwhile Sarva Shiksha Abhiyan (SSA) until 2017-18 and the present Samagra Shiksha (effective from 2018-19), 1,95,519 government elementary schools have been provided internal electrification until March 2019. The ministry provided state-wise figures for the last three years (see table).

GOVERNMENT ELEMENTARY SCHOOLS ELECTRIFIED, LAST 3 YEARS			
STATE	2016-17	2017-18	2018-19
Andhra	1,168	2,595	0
Maharashtra	112	519	0
Kerala	0	0	613
Chhattisgarh	105	19	281
Uttarakhand	0	50	170
Himachal	68	39	10
TOTAL	1,453	3,222	1,074

Source: Quarterly progress reports furnished by states, via Ministry of HRD

THIS WORD MEANS

PROVENANCE

Ownership record of works of art, at the centre of controversy around auctioned Tutankhamen head

ON THURSDAY, Christie's auctioned a stone head of pharaoh Tutankhamen, amid protests by Egyptian authorities and activists (*The Indian Express*, July 8). At the heart of the controversy around the sale, which fetched £4.7 million (\$6 million), is the question of 'provenance'. In matters of antiques, the word means "the record of the ownership of a movable work of art".

When provenance is unclear, museums and institutions of repute do not usually deal with such works of art. Over 100 countries are signatories to the UNESCO 1970 Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transport of Ownership of Cultural Property. For evidence of provenance, UNESCO relies on an Interpol database of stolen objects and national inventories.

When an object is not listed, establishing its provenance becomes problematic.

In this case, Egyptian officials have alleged that the pharaoh's head was stolen, while Christie's has asserted that it can date its provenance to a time before the UNESCO Convention came into effect. *The Guardian* quoted Zahi Hawass, a former Egyptian minister of antiquities, as saying that he believed the head had been illegally exported in 1970 — the year UNESCO instituted the Convention. On the other hand, Christie's said in a statement: "The present lot was acquired from Heinz Herzog, a Munich-based dealer in 1985. Prior to this, Joseph Messina, an Austrian dealer, acquired it in 1973-74 from Prinz Wilhelm von Thurn und Taxis who reputedly had it in his collection by the 1960s."

Declared 'foreigners' in absence

In 33 years, 64,000 in Assam have been declared foreigners by *ex parte* orders. Under what circumstances do Foreigners' Tribunals deliver such orders? Ahead of publication of final NRC, a look at a complex process

ABHISHEK SAHA
GUWAHATI, JULY 8

LAST WEEK, Minister of State for Home G K Reddy told Parliament that between 1985 and February 28, 2019, Foreigners' Tribunals in Assam have declared 63,959 persons foreigners in *ex parte* proceedings — or, in the absence of these persons. According to state government data presented in an affidavit to the Supreme Court and in the Assembly this year, FTs declared 1,03,764 persons foreigners between 1985 and August 2018. These would include many of the 63,959 whose cases were decided by *ex parte* orders until February 2019.

How do Foreigners' Tribunals work?

These are a key player in the exercise to identify illegal immigrants in Assam, and in focus now ahead of the July 15 publication of the final National Register of Citizens (NRC). The Foreigners' Tribunals — 100 existing and 200 more to be functional by September 1 — are quasi-judicial bodies meant to "furnish opinion on the question as to whether a person is or is not a foreigner within the meaning of Foreigners Act, 1946". In 1964, the Centre passed the Foreigners' (Tribunals) Order under provisions of Section 3 of the Act. The FTs get two kinds of cases: those against whom a "reference" has been made by border police, and those whose names in the electoral rolls have a D (Doubtful) against them.

Under what provision do Foreigners' Tribunals pass *ex parte* orders?

Section 9 of the Foreigners Act says that "the onus of proving that such person is not a foreigner or is not a foreigner of such particular class or description, as the case may be, shall, not withstanding anything contained in the Indian Evidence Act, 1872, lie upon such person".

Thus, the accused has to prove he or she is an Indian. "Since the onus is on the person, if he or she is absconding and doesn't appear before the tribunal, the member can pass an *ex parte* order," a former member of a Foreigners' Tribunal, who did not want to be named, told *The Indian Express*.

Previously, under the Illegal Migrants (Determination by Tribunals) Act, 1983, the onus of proving one's nationality or otherwise lay on the complainant. In 2005 (*Sarbananda*



A Foreigners' Tribunal in Barpeta, one of the 100 in Assam. *Abhishek Saha*

Sonowal vs Union Of India), the Supreme Court struck down the IMDT Act and held that it "has created the biggest hurdle and is the main impediment or barrier in the identification and deportation of illegal migrants".

What are the circumstances under which *ex parte* orders are passed?

In an affidavit in the Supreme Court in April this year, the Assam government said, "In foreigners' cases, it is seen that when one comes to know that an investigation is being made regarding his citizenship status or that a reference has been made against him, he shifts to other unknown places and there remains no option before the Foreigners' Tribunals but to decide the cases *ex parte*." The affidavit adds that in some cases, the suspected foreigner "appears before the Foreigners' Tribunals on receipt of the notice and even files written statements along with few copies of documents" but eventually stops appearing on later dates.

"However, it is seen that he remains absent for quite a long period and the cases are disposed of *ex parte* on the basis of the copies of documents and written statements filed by him. These are the few reasons for which large number of reference cases are disposed of *ex parte* by the Foreigners' Tribunals," the

Assam government told the Supreme Court.

But why do the accused stop appearing?

Families of persons who have faced Foreigners' Tribunals and their lawyers cited various reasons, a key one being that the notice often fails to reach the accused. "A notice is served, say, at the rented house of a construction labourer where has was staying when the border wing of the Assam Police had investigated him months earlier. The person does not stay there anymore and has moved to work at another construction site in another district, and he won't get the notice and won't know that he has to appear at the Tribunal," said lawyer Aman Wadud, who has represented many alleged foreigners at Gauhati High Court and Foreigners' Tribunals.

"In a vast majority of cases, police don't serve the notice of the Tribunal upon the accused — as a result, these persons are declared foreigners without their knowledge," Wadud alleged. "In some cases, despite receiving the notice, many don't appear or stop after a few appearances because of poverty, illiteracy and complexity of the procedure. There are also cases where the accused didn't appear because of wrong advice by lawyers."

The government affidavit mentioned the issue of the way notices are served. It said that in many cases, the "proceedees evade and re-

What the change of power in Greece signals

UDIT MISRA
NEW DELHI, JULY 8

SUNDAY'S NATIONAL elections have ended Alexis Tsipras' tenure as the prime minister of Greece. The firebrand leader of the left-wing Syriza (an acronym for The Coalition of the Radical Left) party conceded defeat after Kyriakos Mitsotakis' centre-right New Democracy party won a resounding mandate, cornering nearly 40 per cent of the vote and reaching a comfortable majority of 158 seats in the 300-seat strong house. Tsipras, who came to power in 2015, half expected electoral losses after the setback in the European Parliament elections in May, and advanced the national elections due in October in a bid to minimise damage. However, his successor has a tough road ahead as the problems plaguing Greece have no easy solutions.

Why did Syriza lose?

In many ways, the party's performance was intrinsically linked to the declining appeal of its charismatic leader, Tsipras. Although it is true that under his leadership, Greece has slowly stepped back from the brink of a grave financial crisis, yet, over the years, Tsipras

steadily moved away from his radical beginnings — including holding a referendum to ask whether Greeks wanted to move out of the eurozone. During his tenure, he moved closer to the political centre inside the country and became closely aligned to the same eurozone countries and institutions such as the International Monetary Fund that he opposed during his mercurial rise four years ago. In the end, it was his core constituency of voters that seem to have abandoned him as they grew disenchanted and impatient with his rule.

What were the key issues in the election?

The first major issue is the poor health of the Greek economy. The onerous demands placed by the bailout provided by the IMF and eurozone countries has had a crippling effect on government spending. Each year there have been cuts in government spending adversely affecting pensions and healthcare benefits etc. On top of that, the government has also slapped high taxes — both on income and property. By itself, an economic growth rate of 2 per cent has not been enough to generate enough jobs and income and alleviate the misery even as taxation has broken the back of the middle class and businesses. Predictably, unemployment has soared to 18 per cent — an unusually



Outgoing Greek PM Tsipras (right) congratulates new PM Mitsotakis. *Reuters*

high figure for a eurozone economy.

What has exacerbated the discontent among Greeks already reeling under a decade-long economic distress has been the issue of hundreds of thousands of migrants coming into the country from Syria and other bordering nations. The country has been increasingly divided over how to treat the immigrants es-

pecially when Greeks themselves do not have access to basic healthcare and living conditions.

Does the new PM have the answers?

Not really. Mitsotakis, who is the son of a former Greek PM, and has been educated in Harvard and Stanford, seems to have benefited from the voter's anger against Tsipras. As a personality, the understated and soft-spoken Mitsotakis is quite different from his predecessor. However, much like his predecessor who moved towards the political centre from the left, Mitsotakis has been steadily moving towards the centre from the right. Many of views do not exactly mirror those of other right-wing leaders. For instance, he reportedly supports LGBT rights and a less harsh approach on migration. Retaining the support of those who have moved towards him, either away from the far-right Golden Dawn party or from the centre-left Syriza, would be a key challenge.

Similarly, on the economy, although Mitsotakis has come to power promising lower taxes and more prosperity, yet given the fact that Greece is obligated to stringent fiscal limits, which, in turn, requires the government to limit its spending and boost its revenues, there is very little that Mitsotakis can do to turn things around in a hurry.

Where to plant a trillion trees to save planet: study maps all land available

KABIR FIRAQUE
NEW DELHI, JULY 8

RESTORATION OF forests has long been seen as a potential measure to combat climate change. The latest special report by the Intergovernmental Panel on Climate Change suggests that an increase of 1 billion hectares of forest will be necessary to limit global warming to 1.5°C by 2050. What has so far been unclear, however, is how much of this tree cover might be actually possible in the existing conditions on the planet.

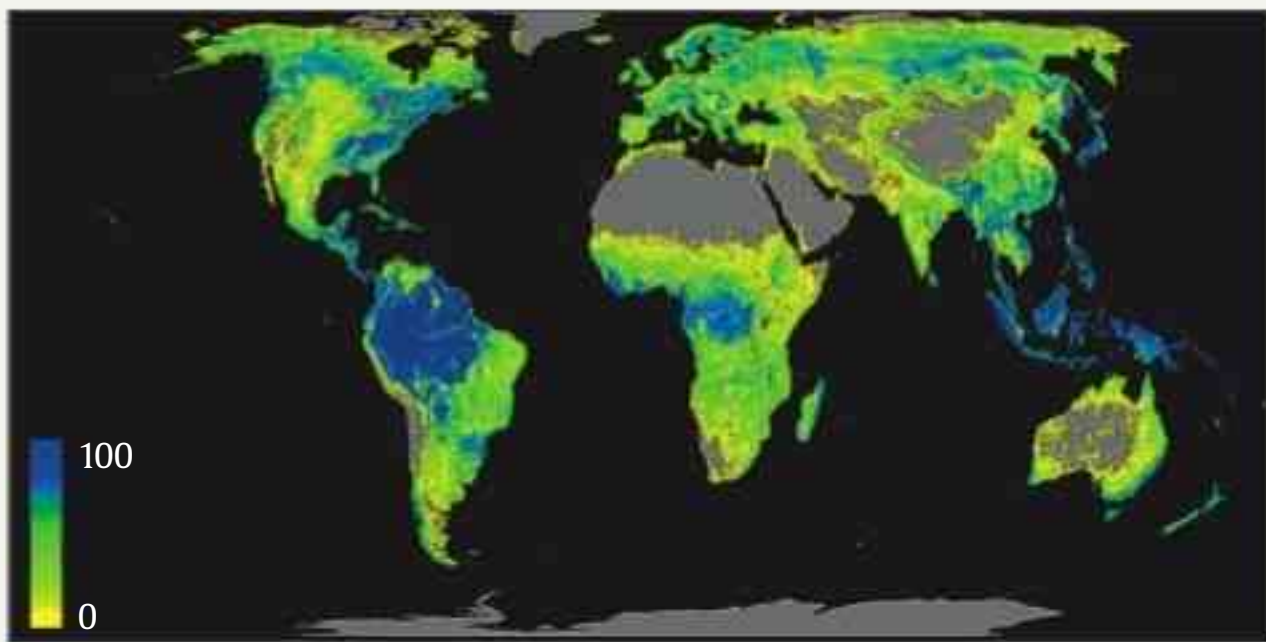
Now, researchers have quantified how much land around the world is available for reforestation, as well as the extent of carbon emissions these would prevent from being released into the atmosphere. Trees, which absorb carbon dioxide, are a natural sink for the gas emitted into the atmosphere. According to the US National Oceanic and Atmospheric Administration, trees absorb about 25% of the carbon dioxide released into the atmosphere by the burning

of fossil fuels, while the oceans absorb another 25%. The half that remains in the atmosphere contributes to global warming.

How they worked it out

The study, by researchers with the Crowther Lab of ETH Zurich university, has been published in the journal *Science*. On the basis of nearly 80,000 images from around the world, they calculated that around 0.9 billion hectares of land would be suitable for reforestation. "We are trying to restore a trillion trees," Thomas Crowther, co-author of the paper and founder of the Crowther Lab, told *The Indian Express* by email. If an area of 0.9 billion hectares is indeed reforested, the researchers calculated, it could ultimately capture two-thirds of human-made carbon emissions.

"One aspect was of particular importance to us as we did the calculations: we excluded cities or agricultural areas from the total restoration potential as these areas are needed for human life," lead author Jean-François Bastin said in a statement.



Land that can support trees (total of current forested areas and forest cover potential available for restoration). *Crowther Lab / ETH Zurich*

Earth's continuous tree cover is currently 2.8 billion hectares, and the researchers calculated that the land available could support 4.4 billion hectares, or an ad-

ditional 1.6 billion hectares. Out of this, 0.9 billion hectares — an area the size of the US — fulfil the criterion of not being used by humans, according to the paper.

These new forests, once mature, could store 205 billion tonnes of carbon, the researchers calculated. That is about two-thirds of the 300 billion tonnes of carbon that has been released into the atmosphere as a result of human activity since the industrial age.

"But we must act quickly, as new forests will take decades to mature and achieve their full potential as a source of natural carbon storage," Crowther said.

Where's that land

In India, there is room for an estimated 9.93 million extra hectares of forest, Crowther told *The Indian Express*. India's existing forest cover makes up 708,273 sq km (about 70.83 million hectares) and tree cover another 93,815 sq km (9.38 million hectares), according to the Environment and Forest Ministry's State of Forest Report 2017.

The study found that the six countries with the greatest reforestation potential are Russia (151 million hectares); the US (103 million hectares); Canada (78.4 million



The Indian EXPRESS

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RAMNATH GOENKA

BECAUSE THE TRUTH INVOLVES US ALL

CLASSROOM AND EYE

Saturation surveillance in schools would encourage compliant learning — the opposite of education

THE AAM AADMI Party government in Delhi is on its way to becoming a role model for other state governments with its commitment to school education. It has diligently diagnosed and addressed maladies of the government school system, from poor infrastructure to the lack of support for students preparing for examinations. But its obsession with digital technology has now done it a disservice, for it is headed towards turning schools into panopticons, and students into compliant inmates. Classroom cameras will be made directly accessible to parents through a smartphone app, allowing them to track behaviour and milestones in real time. Chief Minister Arvind Kejriwal has brushed aside concerns about the privacy of children while inaugurating saturation CCTV coverage in the first of over 1,000 Delhi schools, arguing that they are sent to school to gain an education, learn discipline and become good citizens, and not for private goals.

It is a matter of concern that a chief minister heading a “progressive” government seems to have so little idea of the value of privacy and the objectives of education. People are not educated in order to become well-programmed automata, fungible drones who can be plugged and played anywhere with equal facility. That was true only of the colonial era, when the three Rs were taught to children destined to become administrators and clerks, who could be sent anywhere in the world, from Bombay to Boston, and function equally well. Apart from this colonial interregnum, the objective of education has always been to nurture creative, sceptical minds which add to the sum of human knowledge by questioning received wisdom. The identification of discipline with education is therefore counter-productive, and it would be impossible for children to be creative and individualistic in a classroom where they are constantly aware of the eye of the camera, through which a parent may be watching. Besides, classrooms do not only contain students. Teachers are, unsurprisingly, essential components of the teaching environment, and no one appears to have sought their consent to pervasive surveillance. The camera would discourage their creativity, too, and turn the classroom into a process-driven workshop.

Much of what is learned in school is off the curriculum. Values are not picked up only from textbooks, but from role models like teachers, and classroom friendships teach the child how to navigate the world. How to be a good citizen, or to use the scientific method, are not curricular subjects, but are learned by usage, which calls for experimentation in a reasonably free atmosphere. Surveillance for security is useful in monitoring access, but to let it dominate the classroom is to open the door to a dystopia of compliance.

DILUTING THE CODE

In insolvency proceedings, distinction between secured financial and operational creditors must be maintained

LAST WEEK, THE National Company Law Appellate Tribunal (NCLAT) approved the resolution plan filed by ArcelorMittal for Essar Steel. But the two-member bench of the appellate tribunal modified the manner in which the proceeds from the sale would be distributed. Earlier, the resolution plan had proposed to pay financial creditors 92.5 per cent of their dues. But as per the order, both financial and operational creditors will recover 60.7 per cent each of their admitted claims. The judgement, which, in effect, places operational creditors at par with secured financial creditors at the time of settling claims, is likely to have far reaching consequences.

Under the Insolvency and Bankruptcy Code (IBC), Section 53 deals with the distribution of proceeds from the liquidation of assets. It lists the hierarchy in which various claims against the firm would be settled. Under this waterfall mechanism, after the costs associated with the insolvency resolution process and liquidation are settled, dues owed to secured creditors and workmen have to be settled first. This is followed by discharging dues of employees, unsecured creditors and governments, in this particular order. After these claims have been settled, the balance is to be distributed among preference and equity shareholders, in that order. Thus the structure draws a clear distinction between the claims of secured creditors and operational creditors in the liquidation process, with the former having the first right. However, the judgement draws a distinction between claim settlement in the resolution and liquidation process. It notes that as the case is not about “distribution of assets from the proceeds of sale of liquidation... the resolution applicant cannot take advantage of Section 53 for the purpose of determination of the manner in which distribution of the proposed upfront amount is to be made in favour of one or other stakeholders”. Creating this distinction is problematic.

The consequences of this order stretch beyond this particular case. To argue that claims of financial creditors can be treated at par with operational creditors would muddy the waters as it loses sight of the basic distinction between secured and unsecured creditors. In fact, in its judgement on the constitutionality of the IBC earlier this year, the Supreme Court had justified the difference between financial and operational creditors, making a critical distinction between financial debts which are secured and operational debts which are unsecured. Reportedly, lenders in the ArcelorMittal/Essar Steel case plan to move the Supreme Court to appeal against the NCLAT decision. The Supreme Court would do well to clarify this issue.

HER OWN SCRIPT

Playing to win need not mean playing safe.
Megan Rapinoe offers a reminder

MANY MONTHS AGO, Megan Rapinoe, star of the freshly-crowned American World Cup winning football team, had told *Eight by Eight* magazine she wasn't going to the White House (most winning teams are known to stop by), and added she doubted if she'd get an invite. When the video resurfaced, it attracted the typically incoherent wrath of US President Donald Trump. He chided Rapinoe about learning to respect the country, White House, flag, etc. This, he said, was “especially since so much has been done for her and the team”. Rapinoe, of course, got the job done in the World Cup final against Holland at Paris with penalty kicks. But she left no room for doubt about her choice to not be “co-opted”.

Being co-opted is one of sport's oldest phenomena. Not just the Roman emperors or the Nazi regime, every ruling dispensation loves casual control over winning athletes, parading them around as the nation's success stories. But in the US, there's no dearth of Tommie Smiths and John Carloses with their Black Power salutes and Muhammad Ali with his ability to defy and the conviction to strike the dissenting note. Rapinoe, a champion in the same mould, has similarly become a global darling for refusing to back down after Trump's harangues.

In India, never is co-option as evident as in the lead-up to national sports awards, when athletes are forced to angle for the Arjuna through political lobbying, and ahead of Republic Day, for the Padma awards. There is mindless parroting of scripts handed down, with little thought given to independent opinions. Not the most politically attuned nor astute, most Indian athletes have never spoken their mind unless it aligns with predictable jingoism. Playing safe equals playing to win here, there's no Megan Rapinoe in sight.



SANJAYA BARU

AN UNEXPECTED ANNOUNCEMENT in Finance Minister Nirmala Sitharaman's Union budget speech was the proposal for the government to raise funds globally by borrowing abroad to bridge the deficit at home. It is not an idea one readily associates with a nationalistic political party like the Bharatiya Janata Party. The reason why since 1991 successive governments chose not to seek fueling growth through external borrowing was because of the terrible memory of what excessive and short-term borrowing in the 1980s did to India's global standing.

While the PV Narasimha Rao government entered into a fiscal stabilisation and structural adjustment programme with the International Monetary Fund and the World Bank in 1991 to manage the balance of payments consequences of the fiscal and external economic policies of the 1980s, no government has since been willing to tap funds through external borrowing. Sitharaman's proposal to launch sovereign bonds draws attention to the binding constraint on growth imposed by inadequate government finances and domestic savings. Resisting the temptation to print money and spend one's way to growth, the finance minister has opted for incentivising private investment and borrowing abroad.

Taken along with the currency swap agreements signed last year with Japan and the United Arab Emirates, the Indian economy's dependence on external finance is once again growing. With merchandise exports remaining sluggish, the finance minister has turned to import substitution in the name of Make in India. Partly to ward off criticism of protectionist trade policies from developed economies, the government has opened doors more widely to foreign direct investment.

If the government is able to stimulate new economic activity and thereby ease the domestic fiscal constraint, it will have more leg room to spur growth. However, this will have to be done with care, given increased exposure to global sentiments that comes with increased dependence on external finance and markets. In days to come, India will have to engage its global economic partners and financial markets to enable the fi-

Coordination between managers of economic and foreign policies is necessary — more so today

Taken along with the currency swap agreements signed last year with Japan and the United Arab Emirates, the Indian economy's dependence on external finance is once again growing. With merchandise exports remaining sluggish, the finance minister has turned to import substitution in the name of Make in India. Partly to ward off criticism of protectionist trade policies from developed economies, the government has opened doors more widely to foreign direct investment.



SANJAY SRIVASTAVA

OVER THE PAST few years, the AAP government in Delhi has made commendable efforts in tackling one of the most persistent causes of social and economic inequality. Since 2015, it has paid special attention to improving the manner in which education is imparted in Delhi's government schools in order that students not only receive a better standard of education but also that this is reflected in success in examinations. While the latter should not be regarded as a reliable index of intelligence or thoughtfulness, failure in examinations has catastrophic personal and professional consequences in a society as unforgiving as ours.

Emboldened by its success, the AAP government now seeks to install CCTV cameras in each classroom and providing parents with an app that will, apparently, allow them to observe and monitor their child's behaviour. Chief Minister Arvind Kejriwal has suggested that this will further improve academic results, is “true” democracy through transparency and that “privacy” is not a relevant issue as far as school children are concerned. With this, we are now firmly in a realm of action that has no evidence. We are also indisputably in the world of political gimmickry that derives from wilfully ignoring or misunderstanding the relationship between technology and society.

The first set of questions we must ask is: Would such a scheme of complete surveillance be allowed in elite private schools? Would parents in such schools believe that the most effective manner of improving academic

BIG BROTHER IN SCHOOL

Delhi government's move to install CCTVs in classrooms is an ill-thought out idea

The AAP's move is mostly the result of ill thought-out ideas regarding the relationship between technology and social change. In effect, it will only serve to reinforce the retrograde notion that ‘good’ education exclusively results from ‘discipline’ in the classroom, rather than imparting creative learning and a critical attitude towards given knowledge. CCTVs in classrooms may, in fact, further the aims of spoon-fed knowledge to acquiescent children who may fear censure if they come across as anything but entirely attentive at all times.

results is through pervasive surveillance? Would the teachers agree to it? It would be instructive to carry out a survey of the schools where the well-off send their children and gauge their reaction to a such a scheme.

The sad fact is that when governments resort to gimmicks as public policy, it is those with the least power to influence it that are forced to be guinea pigs. Parents with limited means are naturally anxious to achieve the best schooling results for their children and may well support the CCTV scheme. However, do governments not have responsibility to base their policies on empirical research? Is there any study that suggests that it is saturation-level surveillance of students and teachers that improves educational outcomes? Poor parents will agree because of their desperation, but should private desperation be the basis of good public policy?

We may be hard put to find serious research that suggest CCTV surveillance improves academic results and children's behaviour. However, there is plenty that points to the measures that AAP has so far been undertaking as contributing factors to a better school environment. These include special classes for academically-weak students, exams-practice, home counselling to improve attendance, better training for teachers and administrators and improved physical infrastructure. Though the results of such measures are likely to be uneven, they demonstrate serious intent in reducing educational inequality.

The AAP's move is mostly the result of ill thought-out ideas regarding the relationship

come a US\$5 trillion economy requires greater coordination between the managers of foreign policy and diplomacy, on the one hand, and financial and trade policies on the other. This, in essence, is the geo-economics of the budget.

Prime Minister Modi has an effective team of four persons in place, including Finance Minister Sitharaman, External Affairs Minister S Jaishankar and the ministers for industries and trade, Piyush Goyal and Hardeep Puri, to coordinate economic and foreign policy aimed at raising the rates of investment and growth and India's share in world trade and capital flows. While Sitharaman and Goyal have a good grasp of the domestic economy and politics, Jaishankar and Puri are able diplomats with experience in economic diplomacy.

Such coordination between the managers of economic policy and of foreign policy has always been necessary but today it is more so both because of the many structural changes in global power and economic relations and the fact that this year's budgetary strategy has increased the importance of external economic management to domestic economic performance. Of course, government spokespersons have quoted Deng Xiaoping to say that India will only “cross the river by feeling the stones.” That would be wise. But the stones to feel would be both economic and geopolitical.

It has been a long time since Indian macro-economic policy has exposed itself as much as it has this year to external judgments. Western rating agencies have lost some of their professional reputation but they have not gone away and sovereign borrowing will bring them back into play. Their considerations are never purely economic nor entirely professional. External debt brings with it exposure to external judgment. India's nationalist leadership must learn to live with it. All the more reason why economic policy managers and foreign policy managers have to work in tandem to manage the geo-economics of fiscal policy.

The writer is Distinguished Fellow, Institute of Defence Studies & Analysis, India



JULY 9, 1979, FORTY YEARS AGO

LALDENG ARRESTED
THE MIZO NATIONAL Front President, Laldenga, was arrested from his South Delhi residence and remanded to police custody for three days. The government, through a notification issued last night in the gazette extraordinary has meanwhile declared the Mizo National Front and its allied organisations — including the Mizo National Army — unlawful associations under the Unlawful Activities (Prevention) Act, 1967. The deputy commissioner of police, South Delhi, K K Paul, told ENS that Laldenga was arrested on charges of conspiracy, sedition and insurgency under Sections 120 B, 124 and 126 of the Indian Penal Code.

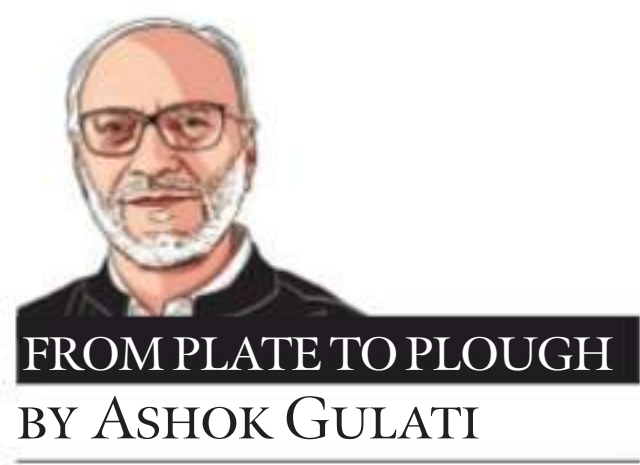
UNREST IN SHANGHAI
SIXTEEN AFRICANS AND Arabs were injured, four of them seriously, in violent scuffles between students of third world countries and Chinese students at the Textile Institute in Shanghai, from July 3 to 5, according to BBC. Following the incidents, the foreign student community has decided to go on a strike, and the atmosphere is tense in Shanghai. The incident started when some African students playing loud music on the night of July 3, were called “Black devils” by the Chinese, according to the students. It was the second time this year that quarrels broke out between Chinese and foreign students.

SKYLAB FALL
AT 160 KM UP, Skylab will begin to glow, the first sign that it has begun its fiery death dive into earth's thickening atmosphere. At 110 km it will begin to break apart. NASA says the space station's much-heralded and discussed return to our planet will happen this week, probably on Wednesday. First to rip away will be four windmill-shaped solar wings atop a telescope mount, followed by a single large solar panel on the side of the craft. Then, streaming flames like a meteor, Skylab will lose its telescope mount at 96 km. Next to fall away will be a section containing a control centre and a spaceship docking port.



On the water front

Farmers can be given monetary rewards for saving electricity and water.
Water-guzzling crops need to shift to geographically sustainable areas



FROM PLATE TO PLOUGH
BY ASHOK GULATI

A ONE-WEEK DELAY in the monsoon's arrival has laid bare the precariousness of India's water situation. The images of thousands of Chennai residents running after water tankers were telecast by BBC and CNN. Several people had to walk for miles to get drinking water in parched lands. If this was the condition of humans, one can imagine the condition of cattle. These images clearly exposed that the Indian lion, the symbol of Make in India, has feet of clay.

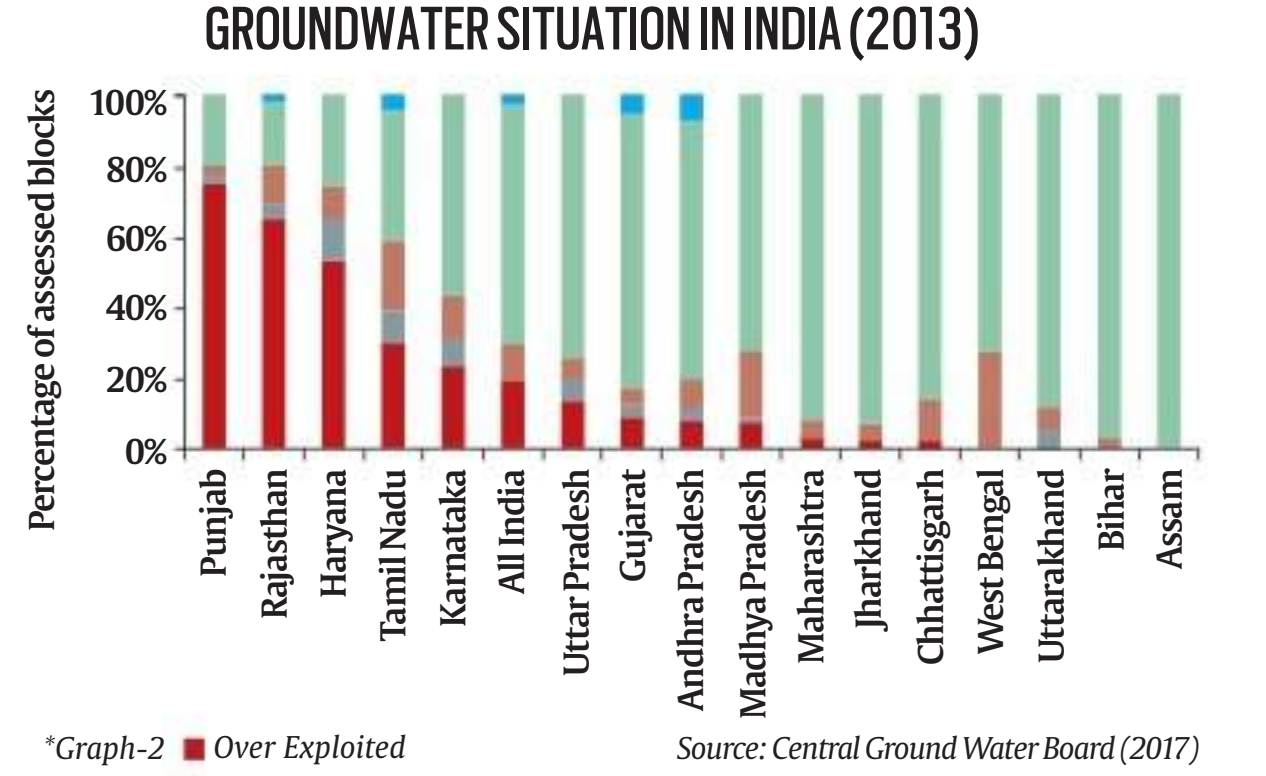
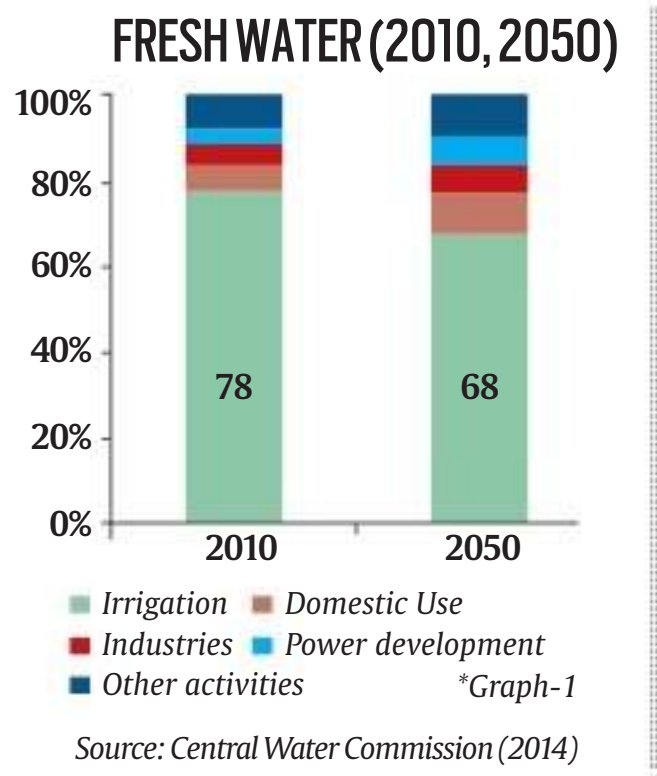
It is no wonder that Prime Minister Narendra Modi, in the first 'Mann ki Baat' of his second term, gave a clarion call to save every drop of water, and to make water conservation a mass movement on the lines of the Swachh Bharat Abhiyan. He already has given a commitment to deliver tap water, hopefully safe for drinking, to every household by 2024 under the "Nal se Jal" programme. These are commendable measures and one hopes they can deliver quality results in time.

But the issue that we want to dwell on here is: How did we reach the current situation? And how best, and how fast, can we get out of it for sustainable water-use in the country?

First, let us note a few facts about water availability and use in India. India has only 4 per cent of the global fresh water resources while it has to quench the thirst of about 18 per cent of the world population. Of the total fresh water resources available in the country, as per the Central Water Commission, 78 per cent was being used for irrigation in 2010, which is likely to be reduced to 68 per cent by 2050. For domestic use, it was just 6 per cent in 2010, likely to go up to 9.5 per cent by 2050 (graph 1). So, by far, agriculture will remain the biggest user of water to produce enough food, feed and fibre for the foreseeable future. And unless this sector is geared to improve in terms of the supplies of and efficiency in water use, the situation is not going to improve significantly.

Second, of the total of about 198 million hectares of India's gross cropped area, roughly half is irrigated. And the major source of this irrigation is groundwater (63 per cent), canals accounting for 24 per cent, tanks 2 per cent and all other sources accounting for about 11 per cent. So, the real burden of irrigating Indian agriculture lies with groundwater, driven by private investments from farmers.

There is hardly any effective regulation of groundwater. The policy of cheap or free power supply for irrigation has led to a situation of near-anarchy in the use of groundwater. On the one hand, power subsidies to agriculture cost the exchequer roughly Rs 70,000 crore each year and on the other, this is depleting groundwater in an alarming manner. Overall, about 1,592 blocks in 256 districts are either critical or overexploited. In places like Punjab, the water table is going down by almost a metre a year, and this has been going on for nearly two decades. Almost 80 per cent of the blocks in Punjab are over-exploited or critical (see graph 2). This only shows how indifferent and short-sighted we are while tak-



ing away the rights of our own future generations.

Paddy and sugarcane, both water-guzzling crops, take away almost 60 per cent of India's irrigation water. One kilogram of rice produced in Punjab requires almost 5,000 litres of water, and one kg of sugar, say in Maharashtra, requires about 2,300 litres of water for irrigation. Estimates vary on how much water the plant really consumes, how much evaporates, and how much of it goes back into groundwater. But traditionally, say a hundred years ago, eastern Uttar Pradesh and Bihar used to be the hubs for sugarcane, and rice was grown largely in eastern and southern India, where rainfall was high and water plentiful. All that changed with new technology and populist policies like free power.

No political party wants to touch the rationalisation of power pricing for agriculture. Technological solutions like drip irrigation, sprinklers, etc. cannot make much headway unless policies are put on the right track. Israel has perhaps the best water technologies and management systems, ranging from drips to desalination to recycling (87 per cent) of urban waste water for agriculture. PM Modi visited Israel to find solutions to our water woes. But my visits to Israel revealed one thing clearly: Technologies cannot take you far enough unless the pricing of power and irrigation water is put on track.

The existing situation can be taken as a sort of current entitlement, and those who agree to get their power supply metered and if they save on power consumption compared to current levels, can be rewarded. Along with that, there could be an income support (of say Rs 15,000/ha) for crops that guzzle less water, say maize or soyabean in Punjab during the kharif season. This would provide savings on the power subsidy, but more importantly, in terms precious groundwater. At least one million hectares of paddy cultivation needs to shift away from the Punjab/Haryana belt.

One possible way out is to give monetary rewards to farmers for saving water and power for irrigation. The existing situation can be taken as a sort of current entitlement, and those who agree to get their power supply metered and if they save on power consumption compared to current levels, can be rewarded. Along with that, there could be an income support (of say Rs 15,000/ha) for crops that guzzle less water, say maize or soyabean in Punjab during the kharif season. This would provide savings on the power subsidy, but more importantly, in terms of precious groundwater. At least one million hectares of paddy cultivation needs to shift away from the Punjab/Haryana belt to eastern India. Eastern India can develop better procurement facilities for paddy for the PDS, and procurement from Punjab-Haryana needs to be discouraged/curtailed.

Similarly, sugarcane needs to be contained in the Maharashtra-Karnataka belt and expanded in the UP-Bihar belt. With new Co 0238 varieties that give recovery rates of more than 10.5 per cent, there is a good case that cane can be developed for ethanol from this belt. Will Modi 2.0 move in this direction to save water? Only time will tell.

Gulati is Infosys Chair Professor for Agriculture at ICRIER

WHAT THE OTHERS SAY

"The menace of criminal charges humanitarian workers is of a piece with Trump's approach to immigration."

— WASHINGTON POST

When countries moonwalk

There is renewed global interest in the moon. India must leverage its space legacy to gain lunar advantage



RAJA MANDALA
BY C RAJA MOHAN

INDIA'S MOST AMBITIOUS space mission to date, Chandrayaan 2, is set for lift off next week and promises to make India the fourth country to soft-land a vehicle on the moon. Only the US, Russia and China have done that before. For India, more than symbolism is at stake in the success of Chandrayaan 2.

As outer space re-emerges as an arena for exciting scientific exploration and major technological innovation, India, as one of the earliest spacefaring nations, must necessarily be in the vanguard. At the same time, Chandrayaan is also about India carving out a potential niche for itself in the unfolding geopolitical scramble for the moon.

The launch of Chandrayaan 2 coincides with the 50th anniversary of the first man landing on the moon. In the five decades following America's Apollo 11 mission that got astronauts Neil Armstrong and Buzz Aldrin walking on the moon, just 10 others have roamed the surface of earth's satellite. All of them have been American men.

The next few years are likely to see men returning to the moon and women joining them. A lot of them will be non-Americans. Many of them will be Chinese and, hopefully, some of them Indian. The Europeans, Russians, Japanese and many others are also joining the moon scrum.

Soon after the first landing, the exorbitant costs of the Apollo programme led to its shut down. The last human (and American) landing was by Apollo 17 in December 1972. Recent years, however, have seen the revival of the worldwide interest in the moon.

During the Cold War, scientific prestige and claims for superior soft power drove America and Russia towards the moon. Today, commercial and strategic objectives are among the reasons propelling a new moon race among the nations. The race is not about repeating what Americans did half a century ago on the moon. It is about establishing a sustainable human presence on the moon. A lot of the hard work will be done by robots.

Finding water resources on the moon, then, has become the key to a credible long-term engagement with the Earth's satellite. Some of the most inviting real estate from that perspective are near the moon's north and south poles. Most of the current moon-landing missions are aiming for the poles. So is India's Chandrayaan 2. If all goes well, Chandrayaan 2 will deliver India's Vikram lander and Pragyan rover to the moon's south polar region.

While Indians will be proud to see their national flag on the moon, the world's missions to the moon are increasingly collaborative. Space is one arena that saw America and Russia collaborate even during the worst years of the Cold War.

Although the logic of international cooperation on the moon is more compelling than ever, competition too is becoming an unfortunate reality as countries jockey for unilateral gains on the moon.

Meanwhile, many private corporations have big plans to exploit the moon for commercial profit. To make matters worse, there are many ambiguities in the current international law on outer space that could encourage nations and companies to seek first-mover advantage on the moon.

At present, Beijing has one of the most advanced moon programmes. Its Chang'e missions, named after the Chinese moon goddess, began in 2007. Since then, China has put two spacecraft in lunar orbit (Chang'e 1 and 2) and landed two rovers on the moon (Chang'e 3 and 4). Chang'e 4 had the distinction of being the first landing on the far side of the moon that can't be seen from the earth.

Beijing has sent a prototype capsule (Chang'e 5 T1) to rehearse brining lunar material back to the earth. Chang'e 5, set for launch later this year, will do precisely that. China is expected to land crews to the moon in the early 2030s. The US, which turned its back on the moon in the early 1970s, has announced plans to return. In a major speech earlier this year, the US vice-president Mike Pence, declared the intent to land Americans back on the moon in 2024. Many experts believe that might be an unrealistic ambition. The plans of US National Aerospace Administration had been looking at 2028 for such a mission.

Pence's motivation in accelerating American moon plans is based on the sense that China might be about to capture the pole position in the Moon race. "Urgency must be the watchword", Pence told the US National Space Council in March this year. Like in so many other areas of technology, Washington is now trying to push back against China's challenge to the extended American dominance in outer space.

But the US private companies, which have brought great innovation to outer space technologies, are ramping up their ambitions for the moon. Amazon's Jeff Bezos wants to land crews on the Moon in the next five years. Tesla, Moon Express and Astrobotic Technology are other US companies aiming for the moon. While the target dates might slip, there is no doubt about the direction. The moon will see more and more of humans, from states as well as corporations.

India played an important role in the 1960s in drafting modern international law applicable to outer space and the moon. That role was rooted not in India's weight as a space power. Strong interest in issues relating to technology and international law, political enthusiasm for international scientific cooperation and some diplomatic influence in the United Nations helped India insert itself into the global debate on outer space. Today India needs something more — an ambitious and successful lunar programme — to shape the new rules of the road for the moon.

The writer is director, Institute of South Asian Studies, National University of Singapore and contributing editor on international affairs for The Indian Express



S MAHENDRA DEV

Getting the GDP numbers right

Estimates are not perfect, but the process is revised and fine-tuned

FORMER CHIEF ECONOMIC Adviser Arvind Subramanian's recent paper claims that the Indian GDP growth may have been overestimated by 2.5 per cent per annum between the period 2011-12 and 2016-17. A note by Prime Minister's Economic Advisory Council (PMEAC) rejects the methodology, arguments and conclusions of Subramanian's paper. A study done at our institute by Ashima Goyal and Abhishek Kumar show that after removing various flaws in Subramanian's data and procedures used, these indicators suggest official growth rates are overestimated before 2011 too. This study also shows that the GDP growth in a large number of countries is either overestimated or underestimated using these indicators. Therefore, the study rightly says that "these regressions cannot be used for predicting growth or for concluding Indian growth is overestimated or for pointing to problems in the estimation methodology". It is better now to concentrate on the next base revision by focusing on methodology, coverage and data in estimating GDP. There is no point in saying that GDP estimation has problems because ground level realities are different using some indicators.

I was a member of the National Statistical Commission (NSC) during 2013 to 2016 (Pronab Sen was the chairman) and was part of the process in base revision. In 2015, CSO introduced a new series of National Accounts Statistics (NAS) with 2011-12 as the base year.

The guiding principles for change in base are: One, revision of base year to a more recent year; two, complete review of existing data base and methodology employed in the estimation of various macro-economic aggregates and alternative data bases; and three, implementation of the international guidelines based on SNA, the System of National Accounts 2008 to the extent possible. Therefore, it was not just base revision but there were significant changes in methodologies, coverage and data.

The base revision for 2011-12 was undertaken by CSO under the guidance of the Advisory Committee on National Accounts Statistics, which constituted five sub-committees for the purpose. The reports of these committees provide a comprehensive assessment of the changes and their rationale. Improvements in GDP estimation is a continuous process. In fact, Rangarajan's commission on NAS was appointed 20 years back to give recommendations on significant deficiencies and improving credibility of official statistics. There have been several changes in recent GDP estimation. We focus here on two issues: Ministry of Corporate Affairs (MCA) 21 data base; estimation of household sector.

First, it is known that for the corporate sector, the old series used the RBI study on company finances from a sample of around 2,500 companies. There has been a long-standing demand to change this data. In 2011-12 series, corporate sector, both in manufacturing and

services, has been comprehensively covered by MCA 21 data. For the "manufacturing" enterprises, MCA 21 data base has been used to supplement the information available in the Annual Survey of Industries. In the new series, the CSO used the MCA 21 data set which had about five lakh non-financial private companies. The new series also adopted the concept of enterprise in place of establishment. This led to a big change in manufacturing sector value added. One major issue is on the blow-up method for non-responding companies. Critics say this method is leading to overestimation of GDP. This may impact the level of GVA, but it is not clear about the impact on growth rates. However, there are some suggestions on the alternative indicators for blow-up method and also on having sample surveys for companies not submitting accounts.

Second, there are changes in the estimation of value added in household sector. NSS establishment surveys and the NSS employment surveys are used to get value added in household sector. Earlier, workers were treated as a single homogeneous group. In the base revision, a concept called "effective labour input" was developed. Another change in tune with SNA is that quasi-corporations have been separated from the household sector and added to the corporate sector in the new series.

The use of MCA data and other changes in household sector led to increase in the share

of value added in corporate sector and decline in the share of household sector. But, it has not been established that overall GDP growth rates are overestimated.

Another issue is double deflation method — that is, deflating output and input separately while arriving GDP at constant prices. Single deflation has been in practice due to absence of separate deflators for inputs. An exercise done by G C Manna on manufacturing GVA with ASI data using double deflation method showed that it resulted in lower growth for the year 2012-13, and higher growth for the year 2013-14. Therefore, one cannot conclude that it is overestimation or underestimation if we use single deflation.

On 2011-12 base revision, it was a conscious and consensus (may not be unanimous) decision of CSO, NSC and various expert committees to have methodological revisions on the lines of UN SNA 2008. One cannot say GDP estimates are perfect as one has to operate on the data available in different domains. We have improved with each round of revision and with each improvement in data sources. We should now focus on methodology and data of CSO rather than saying ground-level realities are different using few indicators.

The writer is director, IGIDR, Mumbai and was member of the National Statistical Commission

LETTERS TO THE EDITOR

AFTER RAHUL

THIS REFERS TO the editorial, 'Crisis and opportunity' (IE, July 8). Rahul Gandhi is to be applauded for his far-sighted decision to relinquish the post of Congress president. But his task is not finished; he needs to navigate the party through impending hurdles to reposition it as a formidable force nationwide. On the plus side, India needs a strong Opposition to balance the democratic process and the Congress still has a high mass appeal. The hurdle is how to build on this goodwill.

Y G Chouksey, Pune

STRONG RUPEE

THIS REFERS TO the article, 'Opening a window' (IE, July 8). Now that the current account deficit and inflation are under control, key rates need to be brought down to aid domestic consumption even as the rupee needs to be strengthened in anticipation of increased imports to sustain higher growth levels. The idea of sovereign bonds was mooted in July 2013 when the rupee was at its lowest. Given the present stable political environ, there is a case for strengthening the rupee.

R Narayanan, Navi Mumbai

LAISSEZ FAIRE POLICY

THIS REFERS TO the editorial, 'Don't pick & choose' (IE, July 8). The govern-

LETTER OF THE WEEK AWARD

To encourage quality reader intervention, The Indian Express offers the Letter of the Week award. The letter adjudged the best for the week is published every Saturday. Letters may be e-mailed to editpage@expressindia.com or sent to The Indian Express, B-1/B, Sector 10, Noida-UP 201301. Letter writers should mention their postal address and phone number.

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ment must refrain from going overboard in its endeavour to promote electric vehicles and other such manufacturing sectors. Such sops need not necessarily work and even if they do, it might just kill entrepreneurship in other allied sectors. To make big-ticket investments happen, the government should focus on ease of doing business.

Kamna Chhabra, Gurugram