

Technical education

- During the three decades immediately preceding the present (1961 to 1991), the number of technical higher education institutions had increased five times to go up from 53 to 277.
- During the same period, enrolment in technical higher education had increased six times 0.37 lakh to 2.16 lakh. Importantly, most of the growth has been in the government sector.
- During the past three decades (1991-2020) the institutions have gone up by 40 times (at 10,990), with the intake capacity rising 15 times to touch 32.85 lakh.
- The AICTE prescribes a minimum specific student-teacher ratio (STR), ranging from 7.5 to 20, depending on the type and level of programmes and disciplines under its domain.
- As an overwhelming majority of the institutions are unable to admit students to capacity, their STR, at least on paper, has gone down from 5.5 in 2012-13 to 3.0 in 2020-21.
- A lower STR could mean better quality but in their case, this only means higher cost adversely impinging on their economic sustainability.
- Their revenue models adversely impacted, they are unable to create quality infrastructure and human resources and become trapped in a vicious cycle of mediocrity.
- Appealing to the regulator Instead, they prefer regulators coming to their rescue. In the past they urged doing away with the requirements of a certain percentage of marks in the school board.
- Recently, they could convince the regulator to abolish the condition of studying science and mathematics at the senior secondary/intermediate level in schools, though the AICTE retracted from the decision quickly.

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The Veblen Effect

- These apart, technical higher educational institutions are differentiated and highly hierarchical.
- The Indian Institutes of Technology, the National Institutes of Technology, the Indian Institutes of Information Technology, the Schools of Planning and Architecture, the National Institutes of Design, the National Institute of Pharmaceutical Education and Research and a few select universities are the most sought after.

- Taken together, they can admit a maximum of 40,000 students.
- An equal number of seats may be available in high quality private institutions. Being highly selective, they are the price makers.
- Left to market forces, they may resort to an exploitative pricing policy.
- They generally resist capacity expansion ostensibly out of fear of dilution in quality.
- Artificial scarcity suits them fine and at times enables them to use higher fees as a strategy for brand building.
- After all, the Veblen Effect (what is expensive is perceived to be excellent), is as applicable to higher education as it is to luxurie.
- , the AICTE Act mandates it “to take necessary steps to prevent commercialisation of (in) technical education”.
- Finally, would it be advisable for the AICTE to prescribe fees for all technical higher educational institutions spread across the length and breadth of the country?
- Cannot it just provide a broad framework and guidelines for determining the permissible level of fees?
- The rest could be left to the State level fee fixation committees.

Public health engineers

- Globally, around 80% of wastewater flows back into the ecosystem without being treated or reused, according to the United Nations.
- This can pose a significant environmental and health threat.
- In the absence of cost-effective, sustainable, disruptive water management solutions, about 70% of sewage is discharged untreated into India’s water bodies.
- A staggering 21% of diseases are caused by contaminated water in India, according to the World Bank, and one in five children die before their fifth birthday because of poor sanitation and hygiene conditions, according to Start-up India.
- The availability of systemic information and programmes focusing on teaching, training, and capacity building for this specialty cadre is currently limited.
- Both as professions and as practice, engineering and public health have been traditionally understood as different fields.
- However, together, these fields can offer a wide range of opportunities for the development of advanced wastewater treatment systems, for understanding complex quality and monitoring processes, designing and managing septic tank systems,

supplying good quality water in adequate quantities, maintaining hygiene and access to water, and ensuring that water supply is sustainable, including the study of relevant industry standards and codes of practices.

- The goal of reaching every rural household with functional tap water can be achieved in a sustainable and resilient manner only if the cadre of public health engineers is expanded and strengthened.
- Following international trends In India, public health engineering is executed by the Public Works Department or by health officials. This differs from international trends.
- To manage a wastewater treatment plant in Europe, for example, a candidate must specialise in wastewater engineering.
- With the Government of India starting to think along these lines, introducing public health engineering as a two-year structured master's degree programme or through diploma programmes for professionals working in this field must be considered to meet the need of increased human resource in this field.
- Public health engineering's combination of engineering and

public health skills can also enable contextualised decision-making regarding water management in India.

- For example, wastewater management systems, especially decentralised and onsite systems, have to be designed based on hydro-geological data and observations of climate patterns.
- From promoting a robust understanding of processes, trends, and the latest technology in water and wastewater quality monitoring, treatment, and management, public health engineering can help decision/policy makers explore the available options.

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SDG

- NITI Aayog's 2020-21 Sustainable Development Goals (SDGs) India Index detailed the implementation of the United Nations' SDGs in the country, States and Union Territories (UTs). It gave marks, between 0 and 100 points, to each region.
- In a significant marker of improvement, no State fared in the 'Aspirant' category, the lowest in the index.
- All the States managed to score above 50 points in SDG

implementation, with 13 States featuring in the 'Performer' category and 15 in the 'Front Runner' category (the second highest position).

- There was improvement in the overall performance of the country towards SDG implementation.
- India stepped into the 'Front Runner' category with a score of 66 points, though it dropped two ranks in the ordinal scale. However, our neighbouring countries performed better than us.
- India did well in implementing SDGs 6,7, 11 and 12, which are 'clean water and sanitation', 'affordable and clean energy', 'sustainable cities and communities', and 'sustainable consumption and production', respectively, but did not do well in many others.

Odisha's good show

- While the national ranking dropped, Odisha saw a three-point improvement in its overall score and settled at 61 points. It topped in the implementation of two SDGs 13 and 14, which are 'climate action' and 'life below water', respectively
- Odisha managed to save 120.07 tonnes of CO₂ per 1,000 population, by using LED bulbs, against India's 28.04 tonnes. In the 'life below'

water SDG, which aims to conserve oceans, seas and marine resources by preventing marine pollution and illegal fishing practices, Odisha scored 82.

Hard work ahead

- The NITI Aayog report presents myriad concerns to policymakers. Even with a significant improvement in many goals, India continues to be in the 'Aspirant' category for the implementation of 'gender equality' and 'zero hunger'.
- Many others, such as 'no poverty', 'quality education', 'decent work and economic growth', 'industry, innovation and infrastructure', and 'climate action', need a lot more work so that the country can be pulled up to the 'Front Runner' category from the 'Performer' category.
- Partnership is the key to achieve this.
- The current level of collaboration with States, UTs, civil society organisations and businesses should be further enhanced by overlooking any differences in political ideologies.
- There is a need to aggressively implement SDG localisation efforts at the district, panchayat and village levels so that implementation feedback from the field is available,

besides enabling true internalisation of the SDGs by the community.

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Repo rate

The story so far:

- On May 4, the Reserve Bank of India, in a surprise move, announced that the bank's Monetary Policy Committee (MPC) had held an 'off-cycle' meeting at which it had decided unanimously to raise the "policy repo rate by 40 basis points to 4.40%, with immediate effect".
- Citing 'inflation that was rising alarmingly and spreading fast' globally, amid geopolitical tensions, RBI Governor Shakti kanta Das said that the MPC had judged that the 'inflation outlook warranted an appropriate and timely response through resolute and calibrated steps to ensure that the second-round effects of supply side shocks on the economy were contained and long-term inflation expectations were kept firmly anchored.

What is the repo rate?

- The repo rate is one of several direct and indirect instruments that are used by the RBI for implementing monetary policy.

- Specifically, the RBI defines the repo rate as the fixed interest rate at which it provides overnight liquidity to banks against the collateral of government and other approved securities under the liquidity adjustment facility (LAF).

How does the repo rate work?

- Besides the direct loan pricing relationship, the repo rate also functions as a monetary tool by helping to regulate the availability of liquidity or funds in the banking system.
- For instance, when the repo rate is decreased, banks may find an incentive to sell securities back to the government in return for cash.
- This increases the money supply available to the general economy.
- Conversely, when the repo rate is increased, lenders would end up thinking twice before borrowing from the central bank at the repo window thus, reducing the availability of money supply in the economy.

What impact can a repo rate change have on inflation?

- Inflation can broadly be: mainly demand driven price gains, or a result of supply side factors that in turn push up the costs of inputs used

by producers of goods and providers of services, thus spurring inflation, or most often caused by a combination of both demand and supply side pressures.

- Changes to the repo rate to influence interest rates and the availability of money supply primarily work only on the demand side by making credit more expensive and savings more attractive and therefore dissuading consumption.

What other factors influence the repo rate's efficacy

- In February 2021, the RBI in its annual 'Report on Currency and Finance' observed that "the challenge for an efficient operating procedure [of monetary policy] is to minimise the transmission lag from changes in the policy rate to the operating target", which in this case is the mandate to keep medium-term inflation anchored at 4%, and bound within a tolerance range of 2% to 6%.
- The RBI noted in the report that there were several channels of transmission, 'the interest rate channel; the credit or bank lending channel; the exchange rate channel operating through relative prices of tradables and non-tradables; the asset price channel impacting

wealth/income accruing from holdings of financial assets; and the expectations channel encapsulating the perceptions of households and businesses on the state of the economy and its outlook.

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CDS

What is the role of the Chief of Defence Staff?

- The Government's decision in 2019 to create the post of a CDS, a long-pending demand to bring in tri-service synergy and integration, is the biggest top-level military reform since independence.
- In December 2019, the Union Cabinet chaired by Prime Minister Narendra Modi had given approval to create the post of CDS in the rank of a four-star General with salary and perquisites equivalent to a Service Chief and then Army Chief Gen.
- Rawat was appointed to the post.
- The CDS would also be the Principal Military Adviser to the Defence Minister and Permanent Chairman Chiefs of Staff Committee (CoSC).
- In addition, the DMA was created as the fifth department in the Ministry of Defence (MoD) with the CDS functioning as its Secretary.

- The broad mandate of the CDS includes bringing about jointness in “operations, logistics, transport, training, support services, communications, repairs and maintenance of the three Services, within three years of the first CDS assuming office.
 - He will act as the Principal Military Adviser to Defence Minister on all tri-Services matters.
 - However, the three Chiefs will continue to advise the Defence Minister on matters exclusively concerning their respective Services,” a Government statement had said while adding that the CDS will not exercise any military command, including over the three Service Chiefs.
 - The CDS is also meant to bring about synergy and optimise procurements, training and logistics and facilitate restructuring of military commands for optimal utilisation of resources by bringing about jointness in operations, including through establishment of joint/ theatre commands.
 - The CDS will also evaluate plans “for ‘Out of Area Contingencies’, as well other contingencies such as Humanitarian Assistance and Disaster Relief (HADR),” officials had stated.
 - The specialised tri-service divisions special operations, defence cyber and defence space were also brought under the ambit of the CDS.
- Why the rethink?**
- Official sources said that with the experience of the last few years of having a CDS, there is a rethink that the appointment of a CDS in itself wasn’t enough and there are several issues with respect to roles and responsibilities, issues of equivalence among others.
 - “This made the Government pause, look back and reassess the entire reform process,” one official said on condition of anonymity.
 - There is also dichotomy in the roles and responsibilities with the several hats worn by the CDS and also overlap in responsibilities between the DMA and DoD, officials stated while also adding that there is also a rethink on the ambitious timelines set for the creation of theatre commands and also the number of commands and their envisaged format.
 - While several options are being looked at, one of the ways to go forward would be to have a CDS with operational powers who will after due legislative changes have theatre commanders report to him while the

Service Chiefs will look after the raise, train and sustain functions of respective Services.

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