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Economy likely to grow by 7% this year: Survey

The document, released on the eve of Budget, says that the economy has broadly caught up with pre-COVID growth trends; it stresses the need to address unemployment and inequality, as a policy priority; CEA Nageswaran, lead author of the Survey, calls for Union and States to let go of their myriad regulatory powers to ease burden on businesses

VI GS Paper III: Economic Survey NEW DELHI

The Indian economy has broadly caught up with pre-COVID growth trends, averting any permanent scarring, and is likely to grow by 6.5% to 7% this year with prospects of clocking 7%+ growth in coming years, as per the Economic Survey for 2023-24 that also drew attention to the need to address inequality and unemployment as a policy priority.

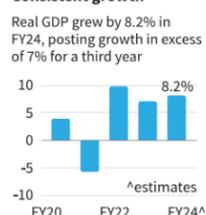
Chief Economic Adviser (CEA) V. Anantha Nageswaran, the lead author of the Survey, made a pitch for the Union and State governments to let go of their myriad regulatory powers to ease the burden on businesses.

He also prodded the corporate sector, "swimming in excess profits", to take responsibility of generating productive jobs in its

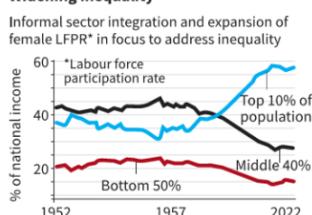
Going strong, concerns remain

While the 2024 Economic Survey said the economy is resilient, it warned about widening inequality and the need to add lakhs of jobs annually

Consistent growth

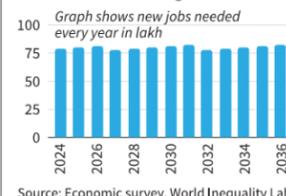


Widening inequality



Quantum of new jobs needed

India needs to generate nearly 78.5 lakh jobs annually until 2030 in the non-farm sector to cater to the rising workforce



own "enlightened self-interest".

Noting that IT sector hiring has slowed significantly in the last two years, the CEA urged Indian industry to think harder about how AI can augment labour rather than displace workers and wrote: "Deploying capital-intensive and energy-intensive AI is probably one of the last things a growing, lower-middle-income economy needs."

The authors of the Survey, which was tabled by

Finance Minister Nirmala Sitharaman in Parliament on Monday, mooted steps to tackle inequality, improve the young population's health in the short to medium term, and bridge the education-employment gap.

Skilling initiatives

They also sought a reboot of skilling initiatives to help the industry find people with the "right attitude and skills".

The corporates benefit

from the higher demand generated by employment and income growth, while the financial sector benefits from channelling household savings for investment purposes, but "short-termism" can weaken these linkages, the CEA sought to convey to the industry.

"For India's working-age population to be gainfully employed, they need skills and good health. Social media, screen time, sedentary habits, and unhealthy

food are a lethal mix that can undermine public health and productivity and diminish India's economic potential. The private sector's contribution to this toxic mix of habits is substantial, and that is myopic," he asserted.

Arguing that structural reforms such as the GST and the Insolvency and Bankruptcy Code have matured and are delivering envisaged results, the Survey's authors said such supply side reforms must

Cherry-picked view and fudged data: Opposition

NEW DELHI

Alleging that the Survey presented a "cherry-picked view" of the economy, Opposition parties criticised the Centre, saying the government was disconnected from reality. » PAGE 5

now make way for "next-gen reforms that are bottom-up in nature to yield strong, sustainable, balanced and inclusive growth".

Different approach

"What has got us here will not get us to where we want to be," Mr. Nageswaran said, explaining that India's per capita income GDP has risen seven times since 1990 to \$2,500, but the journey to raise it to \$10,000 and make India a

developed nation by 2047 needs a different approach.

"Open minds are a good place to start... Our knowledge and attitudes have to continually evolve..." reads the preface to the Survey's six-pronged strategy prescription that gives primacy to boosting private sector investments "organically and steadily, delivering endogenous growth in jobs and a fair share of income for workers".

Financing the green transition, removing hindrances for micro, small and medium enterprises (MSMEs), tapping the potential of agriculture to be a growth engine by removing policy impediments and "intelligent farmer-friendly policies", also figure in the Survey's wish list.

MORE REPORTS » PAGES 5, 6 & 12

Economy likely to grow by 7% this year: Survey (23 July)

The document, released on the eve of Budget, says that the economy has broadly caught up with pre-COVID growth trends; it stresses the need to address unemployment and inequality, as a policy priority; CEA Nageswaran, lead author of the Survey, calls for Union and States to let go of their myriad regulatory powers to ease burden on businesses

- The Indian economy has largely recovered to pre-COVID growth levels and is projected to grow by 6.5% to 7% this year, with potential for higher growth in future years.
- The Economic Survey for 2023-24 emphasizes addressing inequality and unemployment as key policy goals.
- Chief Economic Adviser V. Anantha Nageswaran recommended that both Union and State governments reduce their regulatory controls to ease the burden on businesses.
- He urged the corporate sector, which is currently very profitable, to focus on creating productive jobs for the benefit of the economy.
- With IT sector hiring slowing down, Nageswaran advised that AI should be used to support labor rather than replace it and cautioned against investing in expensive AI technologies.
- The Survey calls for tackling inequality, improving youth health, and addressing the gap between education and employment.
- It suggests revamping skilling programs to better align with industry needs.
- The report highlights that higher demand from employment and income growth benefits corporates, while the financial sector gains from channeling household savings into investments.
- It warns against short-term thinking, which can undermine these economic benefits.
- The CEA stressed that good health and skills are essential for the working-age population and criticized the impact of unhealthy lifestyle habits promoted by the private sector.
- The Survey noted that while structural reforms like GST and the Insolvency and Bankruptcy Code have matured, there is a need for new, bottom-up reforms to ensure sustainable and inclusive growth.

Different approach

- To achieve the goal of making India a developed nation by 2047, a new approach is needed beyond what has brought us to this point.
- India's per capita income has increased sevenfold since 1990, reaching \$2,500, but to reach \$10,000, different strategies must be employed.
- The Survey emphasizes the importance of having open minds and evolving knowledge and attitudes.
- It proposes a six-pronged strategy:
 - Increase private sector investments gradually to foster organic growth in jobs and fair wages.
 - Focus on financing the green transition to support sustainable development.
 - Remove obstacles faced by micro, small, and medium enterprises (MSMEs) to enhance their growth.
 - Leverage agriculture as a growth engine by addressing policy barriers and implementing farmer-friendly policies.

SC stays order to display owners' names on stalls along Kanwar Yatra route

GS Paper II:
Fundamental Rights

Krish
NEW DELHI

The Supreme Court on Monday prohibited the enforcement of directives issued by the Uttar Pradesh and Uttarakhand governments requiring food stalls *en route* the Kanwar Yatra to prominently exhibit the names and other identity details of their owners and employees.

A Bench of Justices Hrishikesh Roy and S.V. N. Bhatti said stalls, hawkers, vegetable sellers, *dhaba* owners, etc., on the Kanwariya route were free to display the kind of food they sold but should not be compelled by the police to display the names or, for that matter, the caste or religious identity of their owners or employees.

The court said it was permissible for authorities to ensure that *Kanwariyas* were served vegetarian food, conforming to standards of hygiene and according to their dietary preferences. However, the police could not usurp the powers of municipal authorities through orders that restrict freedoms without the support of law.

The court acknowledged that the impact of the directives was spread across multiple States, requiring it to judicially intervene immediately.

The Bench issued notice to States through which the yatra traverses, including Uttar Pradesh, Uttarakhand, Delhi and Madhya Pradesh. It said States not impleaded, but through which the yatra would pass, shall be issued *suo motu* notice. The court listed the case on Friday.



Devotees during the Kanwar Yatra in Varanasi on Monday. AFP

The order came on separate petitions filed by the Association for Protection of Civil Rights, represented by senior advocate C.U. Singh and others, including Trinamool Congress MP Mahua Moitra, academic Apoorvanand Jha, and columnist Aakar Patel.

Affecting secularism

The petitioners argued that the directives affected the secular character of the nation, infringed the secular values enshrined in the Preamble to the Constitution, and violated fundamental rights of equality, caste non-discrimination, and dignity of life.

The directives had led to the forcible retrenchment of employees working in the shops *en route* the Kanwar Yatra, amounting to the violation of the fundamental right to earn a livelihood or do business or trade. "It would require very large boards to display the names, caste and other identity details of the own-

ers and all the employees. This is sheer exclusion by identity," senior advocate A.M. Singhvi submitted.

Those who ignored the directives either had to pay hefty fines or face legal proceedings. The directives were compulsory in nature though couched in language suggesting shop owners could make a voluntary decision.

"There is a Catch-22 situation here... If I don't put my name, I will be fined. If I put my name, I may be discriminated against owing to my religious identity or caste," Mr. Singhvi said.

Senior advocate Huzeifa Ahmadi, for Mr. Jha and Mr. Patel, said the directives formalised a "form of untouchability". "They created an apprehension in the minds of employees. They are made to feel that they are unsafe unless they display their names," Mr. Ahmadi argued.

ISSUE IN PARLIAMENT
» PAGE 4

SC stays order to display owners' names on stalls along Kanwar Yatra route (23 July)

- The Supreme Court has stopped the enforcement of rules from Uttar Pradesh and Uttarakhand that required food stalls along the Kanwar Yatra route to display the names and identities of their owners and employees.
- The court stated that food vendors can display their food offerings but should not be forced to show names or personal details of themselves or their staff.

- It is acceptable for authorities to ensure that food provided to Kanwariyas (pilgrims) is vegetarian, hygienic, and meets dietary preferences.
- However, police cannot impose restrictions that limit freedoms without legal backing and must not overstep municipal authorities' roles.
- The court recognized that these directives affect multiple states and decided to intervene promptly.
- Notices have been issued to states involved in or affected by the yatra, including Uttar Pradesh, Uttarakhand, Delhi, and Madhya Pradesh.
- The case has been scheduled for a hearing on Friday.
- The decision follows petitions from the Association for Protection of Civil Rights, along with individuals such as Trinamool Congress MP Mahua Moitra, academic Apoorvanand Jha, and columnist Aakar Patel.

Affecting secularism

- Petitioners argued that the directives compromised the secular nature of the nation and violated fundamental rights such as equality, non-discrimination, and dignity.
- The directives led to the forced removal of employees from shops along the Kanwar Yatra route, violating their right to earn a livelihood or conduct business.
- Senior advocate A.M. Singhvi highlighted that the requirement to display names, caste, and other details would need large boards, which could lead to exclusion based on identity.
- Shop owners faced heavy fines or legal action if they did not comply with the directives, which were framed as voluntary but were actually compulsory.
- Singhvi pointed out that shop owners faced a dilemma: if they complied, they risked discrimination; if they did not, they faced penalties.
- Senior advocate Huzeifa Ahmadi argued that the directives institutionalized a form of untouchability and made employees feel unsafe unless they displayed their personal details.

Supreme Court directs IIT-Delhi experts to solve 'ambiguous' question from NEET Physics paper

Krishnadas Rajagopal
NEW DELHI

The Supreme Court on Monday asked the Indian Institute of Technology-Delhi Director to assign three of its finest professors to solve a tricky and "ambiguous" question in the NEET-UG 2024 exam's Physics paper within 24 hours and report back.

Their answer would impact the total marks of over four lakh candidates, including 44 students who got perfect scores in the exam.

The order came at the end of a day-long hearing of petitions seeking a re-examination amidst allegations of question paper leaks and other irregularities that have plagued the exam held on May 5.

The NEET question under the lens deals with two statements about the na-

ture of atoms. The first statement is "atoms are electrically neutral as they contain an equal number of positive and negative charges". The second is "atoms of each element are stable and emit their characteristic spectrum". The students were given four options on the correctness of the two statements.

Two answers

Over 4.2 lakh students went for the second option, which was correct according to an old version of the standard National Council of Education Research and Training (NCERT) textbook, while 9.28 lakh students chose the fourth option as their answer, which is right according to the new edition of the NCERT textbook.

Petitioners have argued that two answers cannot be right. The NTA cannot



Students outside the Supreme Court on Monday during the hearing of pleas on the alleged irregularities in the conduct of NEET. PTI

give full marks to both answers. The NEET instruction has been to select the correct answer according to the latest NCERT edition. Forty-four students got perfect scores because the NTA chose to grant them grace marks for this ambiguous question. "By giving marks to the second option, you (NTA) went against your own rule that the old edition cannot be

followed... On the other hand now, 4.20 lakh students would lose four marks and also get one negative mark each if the second option is treated as wrong," Chief Justice of India D.Y. Chandrachud observed orally.

Solicitor-General Tushar Mehta, for NTA, justified giving grace marks to those who chose the second option, saying these were

poor children who may have borrowed their older siblings' textbooks to study for NEET. A counsel appearing for one of the petitioners said she had personally searched high and low for an old edition, that is, pre-2018 edition, but had found none available.

To resolve the conundrum, the Bench has sought the expertise of the IIT-Delhi. "We request the Director at IIT (Delhi) to constitute a team of three experts of the subject concerned. The team is requested to formulate its opinion on the correct option for the above question and remit its opinion to the Secretary General of this court, preferably by noon on July 23," the court said.

OPPOSITION SLAMS GOVT.

» PAGE 4

QUESTION EXPLAINED

» PAGE 11

Supreme Court directs IIT-Delhi experts to solve 'ambiguous' question from NEET Physics paper (23 July)

- The Supreme Court directed the IIT-Delhi Director to assign three top professors to review a problematic question from the NEET-UG 2024 Physics paper within 24 hours.
- Their findings will affect the scores of over four lakh candidates, including 44 who scored perfectly.
- The issue revolves around a question with two statements about atoms:
 1. Atoms are electrically neutral because they have equal positive and negative charges.
 2. Atoms of each element are stable and emit their characteristic spectrum.
- Students had to choose one of four options on the correctness of these statements.
- Over 4.2 lakh students chose the second option, which was correct according to an older NCERT textbook version.
- 9.28 lakh students chose the fourth option, which is correct according to the latest NCERT textbook edition.
- Petitioners argue that both answers cannot be correct and that awarding full marks for both options is unfair.

- The NEET instructions specify that the latest NCERT edition should be followed.
- 44 students received full marks due to the ambiguity of the question, but this also meant that 4.2 lakh students might lose marks if the second option is deemed incorrect.
- Solicitor-General Tushar Mehta defended giving grace marks to students who chose the second option, arguing that these students might have used older textbooks borrowed from older siblings.
- A petitioner's lawyer said they searched extensively for an old textbook (pre-2018 edition) but could not find one.
- To resolve the issue, the Supreme Court has asked IIT-Delhi to form a team of three experts to review the question and determine the correct answer.
- The team's opinion is to be submitted to the court's Secretary General by noon on July 23.

Bureaucrat's post on disability quota sparks debate online

The Hindu Bureau
HYDERABAD

A post by Member-Secretary in the Telangana Finance Commission **Smitha Sabharwal** on 'X' about "Civil Service Examination and the need for disability quota" on Sunday has sparked a debate on social media.

"With all due respect to the Differently Abled. Does an Airline hire a pilot with disability? Or would you trust a surgeon with a disability. The nature of the #AIS (IAS/IPS/IFoS) is field-work, long taxing hours, listening first hand to people's grievances-which requires physical fitness. Why does this premier service need this Quota in the first place!" the post read.

The post blew up instantly and **garnered about 1.5 million views and several thousand engagements. While no prominent leaders in the government, the Opposition or activists from here reacted to it, Ra-**

Officer compares civil servants to pilots, surgeons, and calls for an end to such quota

Rajya Sabha member Priyanka Chaturvedi termed **Ms. Sabharwal's view "pathetic and exclusionary"**. Supreme Court advocate **Karuna Nundy** termed her **"fundamentally ignorant about disability"**.

Ms. Sabharwal went on to engage with users. "Should not be given," she replied when a user asked why children of civil servants should be given SC/ST and backward class reservations.

She maintained that her thoughts were from over 24 years of service, and the issue of "suitability for a ground job". "...To live in an inclusive society is a dream that we all subscribe to. Insensitivity has no place in my mind," her last post noted.

Bureaucrat's post on disability quota sparks debate online (23 July)

- **Smitha Sabharwal**, Member-Secretary of the Telangana Finance Commission, posted on 'X' questioning the need for a disability quota in civil services.
- She compared civil service roles to jobs like airline pilots and surgeons, arguing that these roles require physical fitness due to their demanding nature.
- The post received significant attention, with around 1.5 million views and many engagements on social media.
- **Rajya Sabha member Priyanka Chaturvedi** and Supreme Court advocate **Karuna Nundy** criticized her view, calling it exclusionary and ignorant.
- **Sabharwal** responded to users, asserting her position was based on her long service experience and concerns about job suitability.
- She emphasized that her intention was not to be insensitive but to express her views on job requirements.

Teenager survives infection from 'brain-eating' amoeba

The Hindu Bureau

KOZHIKODE

A 14-year-old boy from Kozhikode in Kerala has recovered from primary amoebic meningoencephalitis (PAM).

Health Department sources said such recovery was rare as very few people had survived the infection globally. Afnan Jasim was being treated at Baby Memorial Hospital, Kozhikode, from July 1 and was discharged on Monday.

Abdul Rauf, consultant paediatric intensivist, BMH, told *The Hindu* that Jasim exhibited symptoms of the infection on June 30. "We could do the preliminary diagnosis within 24 hours of admitting him. That proved crucial in the treatment. A PCR test con-

Kerala Health

Department says very few people had survived the infection globally

firmed the presence of the amoeba later," said Dr. Rauf. The hospital followed the treatment protocol of the Centers for Disease Control and Prevention (CDC) in the United States.

Official sources said Health Minister Veena George had convened a meeting when the first case of PAM was reported in the State this year and issued guidelines for treatment. The staff at the primary health centre at Meladi, where Jasim was taken to initially on July 1, suspect-

ed the possibility of PAM. Jasim was shifted to BMH after he developed seizures.

PAM is caused by *Naegleria fowleri*, an amoeba found in warm freshwater lakes, ponds, and rivers. As it can infect the brain and destroy the tissues, it is also called 'brain-eating amoeba'.

Dr. Rauf claimed that only eight PCR test-confirmed patients had so far recovered from the disease across the world. Jasim's was the first such case in the country. He was given medicines for eight days and only then did his PCR test turn negative for the amoeba. "Jasim had been under treatment for 21 days. He will have to take medicines for at least one more week," he said.

Teenager survives infection from 'brain-eating' amoeba (23 July)

- A 14-year-old boy named Afnan Jasim from Kozhikode, Kerala, has recovered from primary amoebic meningoencephalitis (PAM), a rare and often fatal infection.
- Jasim was treated at Baby Memorial Hospital, Kozhikode, from July 1 and was discharged on Monday.
- The infection was diagnosed within 24 hours of his admission, which was crucial for effective treatment.
- A PCR test confirmed the presence of the *Naegleria fowleri* amoeba, which causes PAM.
- The hospital followed the CDC treatment protocol from the United States.
- Kerala's Health Minister Veena George had previously issued treatment guidelines after the first PAM case was reported this year.
- Jasim was initially treated at a primary health centre before being transferred to Baby Memorial Hospital due to worsening symptoms.
- PAM, caused by the 'brain-eating amoeba', infects the brain and destroys tissues.
- Dr. Rauf stated that only eight PCR-confirmed cases of recovery from PAM have been reported globally, and Jasim's case is the first recovery in India.
- Jasim was treated with medication for eight days, after which his PCR test became negative. He will need to continue medication for at least one more week.

170 Koya, Konda Reddi villages affected in Godavari Valley; 960 tribals evacuated

T. Appala Naidu
CHINTOOR

More than 170 villages have been affected by the Godavari flood in the four mandals of Chintoor Agency in the Alluri Sitharama Raju district in Andhra Pradesh by Monday.

Most of the villages are inhabited by the Koya and Konda Reddi tribes in the Chintoor, V.R. Puram, Kunavaram and Yetapaka mandals along the banks of the Sabari and the Godavari.

Integrated Tribal Development Agency (ITDA-Chintoor) Project Officer Kavuri Chaitanya said 960 people have been evacuated. The Konda Reddi tribals have been mostly



Cut off: A Konda Reddi hamlet inundated by flood water in the Papikonda hill range of Chintoor Agency in Alluri Sitarama Raju district in Andhra Pradesh on Monday. SPECIAL ARRANGEMENT

shifted to the relief camps on the hill tops.

ASR Collector A.S. Dinesh Kumar directed officials to intensify the drive to shift the affected tribals along the Sabari to the relief camps.

The second Godavari flood warning was in force

at Bhadrachalam by Monday. As a result, the tribes in the entire Godavari Valley face the threat of submergence due to the backwaters of the Polavaram irrigation project. As many as 149 relief camps have been readied for the affected people in the five man-

dals in the Chintoor Agency.

Collector A.S. Dinesh Kumar said 226 pregnant women have been admitted to the nearby government hospitals. The ITDA officials have also arranged 1,132 metric tonnes of rice for distribution.

- Alluri Sitarama Raju (4 July 1897 or 1898 – 7 May 1924) was an Indian revolutionary who waged an armed rebellion against British colonial rule in India.
- Born in present-day Andhra Pradesh.
- Opposed the **1882 Madras Forest Act**, which restricted adivasis' movement in their forest habitats and prevented traditional agriculture called 'podu'.
- The **non-cooperation movement (1920–1922) led to the Rampa Rebellion (1922–1924)**, with Alluri Sitarama Raju as the leader.
- Combined forces of tribals and other sympathizers to engage in **guerilla campaigns** against British forces across Andhra Pradesh and Odisha.
- Given the title "**Manyam Veerudu**" (**Hero of the Jungle**) by local people.
- Born as Alluri Rama Raju and prefixed "Sita" to his name in memory of a girl he loved who died young.
- Took up sannyasa at age 18 and became a leader of downtrodden tribal people in colonial India.
- Conducted raids on imperial police stations to acquire firearms for his forces, leaving notes daring the police to stop him.
- Targeted police stations in Annavaram, Addateegala, Chintapalle, Dammanapalli, Krishna Devi Peta, Rampachodavaram, Rajavommangi, and Narsipatnam, causing significant police casualties.
- The British colonial authorities conducted a nearly two-year manhunt for him, spending over ₹4 million rupees.
- In 1924, he was trapped at Koyyuru village in Chintapalle forests, captured, tied to a tree, and executed by a firing squad.

Krishna Raja Sagara (KRS) Dam

- Krishna Raja Sagara (KRS) is a lake and the dam that creates it.
- Located close to the settlement of Krishna Raja Sagara in Karnataka, India.
- The gravity dam is made of surki mortar.
- Situated below the confluence of the river Kaveri with its tributaries Hemavati and Lakshmana Tirtha, in the Mandya district.
- Constructed by Krishna Raja Wadiyar IV, Maharaj of Mysore.
- Built during a famine despite the critical financial condition of the State.

Survey stresses syncing skilling with learning to boost job prospects

GS Paper III: Skilling

The Hindu Bureau
CHENNAI

The Economic Survey released on Monday stresses that implementing the New Education Policy to achieve learning outcomes and syncing that with skilling outcomes will boost the job prospects of India's youth. V. Anantha Nageswaran, the Chief Economic Adviser, said at the press meet marking the release of the Survey that only 51% of India's graduates were employable. The Survey notes that the median age of India's workforce is 28 and syncing learning outcomes with skilling outcomes is the best way to leverage that.

"The education sector is bustling with across-the-board transformation led by the NEP 2020, which is expected to yield Foundational Literacy And Numeracy for every child passing the third standard in the near future. That said, improving learning outcomes and undoing the COVID-in-



V. Anantha Nageswaran

duced learning loss is more urgent than ever," the Survey says. It notes that skilling is falsely taken as applying to dropouts and those who did not perform well in academics, but that perception needs to change to boost employability.

The Survey has flagged a concern that various reports have been highlighting the gap between class standard and learning level, which has widened since COVID. For instance, in comparison with the National Achievement Survey (NAS), 2017, student performance underwent a significant drop in NAS, 2021. Class 10 scores decreased by 13.4% in mathematics,

18.6% in science, and 9.1% in social science, while Class 3 scores decreased by 3.9% in language, 4.7% in mathematics, and 4.4% in environmental studies.

Regarding expenditure on education, the Survey notes that in the financial year 2023-24, the total expenditure was ₹60,000 crore lower than Budget estimates. Rural development and education expenditures took the brunt. Overall, it says, the total Central expenditure has been hovering at 2.8% of the GDP over the years and last year saw a slight dip.

The survey says as of July 2024, 2,037 higher education institutions have onboarded the Academic Bank of Credits and 30.13 crore APAAR (Automated Permanent Academic Account Registry, an identification system for all students in India) IDs have been created for higher and school education and skill institutes. The ABC seeks to boost mobility across institutions.

tion of government primary healthcare facilities.

It notes an increase in the social security expenditure on health, from 5.7% in 2014-15 to 9.3% in 2019-20. It notes a decline in out-of-pocket expenditure as a percentage of total health expenditure.

expenses as a percentage of total health spending have decreased.

Survey stresses syncing skilling with learning to boost job prospects (23 July)

- The Economic Survey emphasizes that implementing the New Education Policy (NEP) will improve learning outcomes and job prospects for Indian youth.
- Only 51% of India's graduates are currently employable.
- The median age of India's workforce is 28, and aligning education with skills

training is key to leveraging this demographic.

- NEP 2020 aims to achieve foundational literacy and numeracy by third grade, but addressing COVID-induced learning losses is urgent.
- Skilling should be seen as relevant for all, not just dropouts or low achievers, to improve employability.
- Reports show a widening gap between class standards and learning levels since COVID, with significant drops in student performance.
- For example, Class 10 scores fell by 13.4% in math, 18.6% in science, and 9.1% in social science, while Class 3 scores dropped by around 4% in various subjects.
- In 2023-24, education expenditure was ₹60,000 crore lower than budget estimates, with rural development and education suffering the most.
- Central government expenditure has been around 2.8% of GDP, with a slight decrease last year.
- As of July 2024, 2,037 higher education institutions have adopted the Academic Bank of Credits (ABC), and 30.13 crore Automated Permanent Academic Account Registry (APAAR) IDs have been created to improve mobility across institutions.

Survey notes rise in primary healthcare expenditure (23 July)

- The Economic Survey notes that the share of government health expenditure in GDP and total health spending has increased.
- Government spending on primary healthcare grew from 51.3% in 2014-15 to 55.9% in 2019-20.
- Spending on primary and secondary care combined rose from 73.2% to 85.5%.
- The share of primary and secondary care in private health spending fell from 83% to 73.7%, due to increased tertiary care needs and more use of government primary healthcare services.
- Social security spending on health increased from 5.7% in 2014-15 to 9.3% in 2019-20.
- Out-of-pocket

‘India has shifted to women-led development; female labour force participation rate rising’

GS Paper III:
Inclusive growth

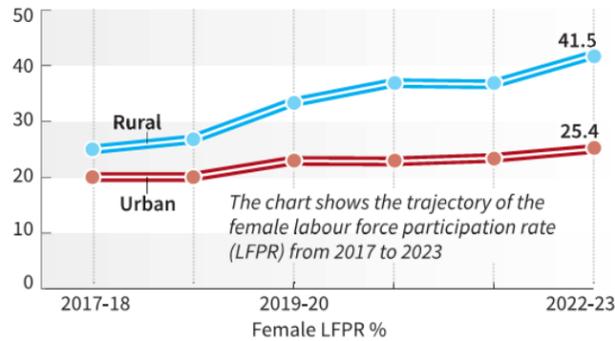
NEW DELHI

Observing that India is transitioning from women’s development to women-led development, Chief Economic Adviser V. Anantha Nageswaran on Monday said there had been a 218.8% increase in budgetary allocation for schemes for the welfare and empowerment of women even as he acknowledged that women in India faced the “motherhood penalty” with a drop in female labour force participation rate around child-bearing years.

“The share of the Gender Budget in the total Union Budget has increased to 6.5% in financial year 2025, the highest since the introduction of Gender Budgeting Scheme in fi-

Women at work

According to the Economic Survey, rural women have driven an increase in the female labour force participation rate (LFPR)



“The share of the Gender Budget in the total Union Budget has increased to 6.5% in financial year 2025, the highest since the introduction of Gender Budgeting Scheme in fi-

employment opportunities for women in various fields.

The Survey said that skilling schemes had put a dedicated emphasis on covering women, and the number of women trained under the Pradhan Mantri Kaushal Vikas Yojana

(PMKVY) had increased from 42.7% in the financial year 2015-16 to 52.3% in the financial year 2023-24. Under the Jan Shikshan Sansathan (JSS) scheme, women constituted about 82% of the total beneficiaries and in institutes such as the ITIs and the National Skill Training Institutes, the participation of women had gone up from 9.8% to 13.3% during the period.

With rural India propelling the trend, the survey observed that the female labour force participation rate (LFPR) rose to 37% in 2022-23 from 23.3% in 2017-18. The Pradhan Mantri Jan Dhan Yojana had facilitated the opening of 52.3 crore bank accounts, of which 55.6% account holders were women, as of May 2024.

Delving into the crucial

aspect of care economy, the Survey estimated that direct public investment equivalent to 2% of the GDP had the potential to generate 11 million jobs in the sector, nearly 70% of which would go to women. It flagged models of Australia, Argentina, Brazil, and the U.S. in this sector.

“The economic value of developing a care sector is two-fold – increasing female labour force participation rate (FLFPR) and promoting a promising sector for output and job creation. According to International Labour Organisation (2018), the care sector is one of the fastest-growing sectors globally, and investments in the care services sector are estimated to generate 475 million jobs globally by 2030,” it said.

India has shifted to women-led development; female labour force participation rate rising (23 July)

- India is shifting from focusing on women’s development to women-led development.
- There has been a 218.8% increase in the budget for women's welfare and empowerment schemes.
- The share of the Gender Budget in the total Union Budget has reached 6.5% for the financial year 2025, the highest since 2006.
- Despite this, women in India face challenges like the "motherhood penalty," which affects their labor force participation around childbearing years.
- Skilling schemes have increasingly targeted women: women trained under the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) rose from 42.7% in 2015-16 to 52.3% in 2023-24.
- Women made up about 82% of beneficiaries under the Jan Shikshan Sansthan (JSS) scheme, and their participation in ITIs and National Skill Training Institutes increased from 9.8% to 13.3%.
- Female labor force participation rate in rural India increased to 37% in 2022-23 from 23.3% in 2017-18.
- The Pradhan Mantri Jan Dhan Yojana led to 52.3 crore bank accounts being opened, with 55.6% of the account holders being women as of May 2024.
- Investing directly in the care economy could potentially generate 11 million jobs, with nearly 70% of these jobs going to women.
- The care sector, modeled after practices in Australia, Argentina, Brazil, and the U.S., could boost female labor force participation and job creation.
- The care sector is one of the fastest-growing sectors globally, with projections of 475 million jobs globally by 2030 according to the International Labour Organisation (2018).

'Mental health a key driver of individual, national development'

GS Paper II: Health sector
NEW DELHI

Acknowledging mental health as a principally impactful driver of individual and national development, the Economic Survey, for the first time, extensively highlights its significance and implications on policy recommendations.

The Survey mentions that at an aggregate economic level, mental health disorders are associated with significant productivity losses due to absenteeism, decreased productivity, disability, increased healthcare costs, and so on. There is also evidence of poverty exacerbating the risk of mental health due to stressful living conditions, financial instability, and lack of opportunities for upward mobility, which contribute to heightened psychological distress, it adds.

Alarming, the Survey states that according to the National Mental Health Survey (NMHS) 2015-16, 10.6% of adults in India suffer from mental disorders, while the treatment gap ranges between 70% and 92% for different disorders. Further, the prevalence of mental morbidity is higher in urban metropolitan regions (13.5%) than in rural areas (6.9%) and urban non-metro areas (4.3%).

Citing a study of mental health and well-being of school students by the National Council of Educational Research and Training, the Survey highlights an increasing prevalence of poor mental health among adolescents exacerbated by the COVID-19 pandemic. During the study, 11% of students reported feeling anxious, 14% ex-

Survey notes that mental disorders are associated with significant productivity losses

treme emotion, and 43% mood swings.

Recognising mental health as a fundamental aspect of overall well-being, the Survey recommends proper implementation of healthcare programmes to accelerate improvements made in mental healthcare on the ground, and addressing gaps in existing programmes to maximise their effectiveness.

It lists out key initiatives and policies taken by the government, including the National Mental Health Programme, the National Tele Mental Health Programme, increasing the number of mental health personnel, the Rashtriya Kishor Swasthya Karyakram's adolescent-friendly health clinics and peer education programmes.

The initiatives include efforts to raise the number of psychiatrists from 0.75 per lakh population in 2021 to the World Health Organization norm of three per lakh population.

The Survey notes that the government is working on standardising guidelines for mental health services across the government and private sectors, and bringing effective pathways for integrating mental health interventions in schools, including developing an age appropriate mental health curriculum, encouraging early intervention and positive language in schools, promoting community-level interactions, and balancing the role of technology.

Mental health a key driver of individual, national development (23 July)

- The Economic Survey has highlighted the importance of mental health for both individuals and national development for the first time.
- Mental health issues lead to significant economic losses due to absenteeism, reduced productivity, disability, and increased healthcare costs.
- Poverty can worsen mental health by increasing stress, financial instability, and limiting opportunities, leading to more psychological distress.
- According to the National Mental Health Survey (NMHS) 2015-16, 10.6% of adults in India have mental disorders, with a treatment gap of 70% to 92% for different disorders.
- Mental health issues are more prevalent in urban areas (13.5%) compared to rural areas (6.9%) and urban non-metro areas (4.3%).
- A study by the National Council of Educational Research and Training found increased poor mental health among school students, worsened by the COVID-19 pandemic.
- The study reported that 11% of students felt anxious, 14% experienced extreme emotions, and 43% had mood swings.
- The Survey emphasizes the importance of mental health and recommends better implementation of healthcare programs to improve mental healthcare and address existing gaps.
- Key government initiatives include:
 - The National Mental Health Programme
 - The National Tele Mental Health Programme
 - Increasing the number of mental health professionals
 - Rashtriya Kishor Swasthya Karyakram's adolescent-friendly health clinics and peer education programs
- Efforts are being made to raise the number of psychiatrists from 0.75 per lakh population to the World Health Organization's standard of three per lakh.
- The government is working on:
 - Standardizing mental health service guidelines for both public and private sectors
 - Integrating mental health interventions in schools
 - Developing age-appropriate mental health curricula
 - Encouraging early intervention and positive language in schools
 - Promoting community-level interactions and balancing technology's role in mental health.

Narrative has changed, says Survey on defence exports

Dinakar Peri
NEW DELHI

Between 2015 and 2019, India held the distinction of being the world's second-largest arms importer, but the narrative has changed, the Economic Survey says while noting that the country's defence production grew substantially from ₹74,054 crore in the financial year 2016-17 to ₹1,08,684 crore in 2022-23, boosting defence exports.

"India has transitioned from an arms importer and found a place in the list of the top 25 arms exporter nations," the Survey says. "The defence industry, including the private sector and Defence Public Sector Undertakings (DPSUs), has made tremendous efforts to achieve the highest-ever defence exports."

"From 1,414 export authorisations in FY23, the number has increased to 1,507 in FY24."

Nearly 100 domestic companies are exporting a wide range of defence products and equipment including aircraft such as Dornier-228, artillery guns, BrahMos missiles, Pinaka rockets and launchers, radars, simulators, and armoured vehicles, it noted. Export procedures have been simplified and made industry-friendly, with end-to-end online export authorisation curtailing delays and facilitating ease of doing business. "Further, the Aatmanirbhar Bharat initiatives have helped the country by encouraging indigenous design, development and manufacture of defence equipment, reducing dependency on imports in the long run," it added.

Narrative has changed, says Survey on defence exports (23 July)

- Between 2015 and 2019, India was the world's second-largest arms importer.
- The situation has changed, with India now being among the top 25 arms exporters.
- Defence production in India grew from ₹74,054 crore in 2016-17 to ₹1,08,684 crore in 2022-23.
- Efforts by the defence industry, including private companies and Defence Public Sector Undertakings (DPSUs), have increased defence exports.
- The number of export authorizations grew from 1,414 in FY23 to 1,507 in FY24.
- Nearly 100 domestic companies are exporting various defence products such as aircraft, artillery guns, BrahMos missiles, radars, and armoured vehicles.
- Export procedures have been simplified with online authorizations to reduce delays and improve ease of business.
- The Aatmanirbhar Bharat initiatives promote the design, development, and manufacture of domestic defence equipment, reducing import dependency.

'MGNREGS job demand no indicator of distress'

GS Paper III:
Employment

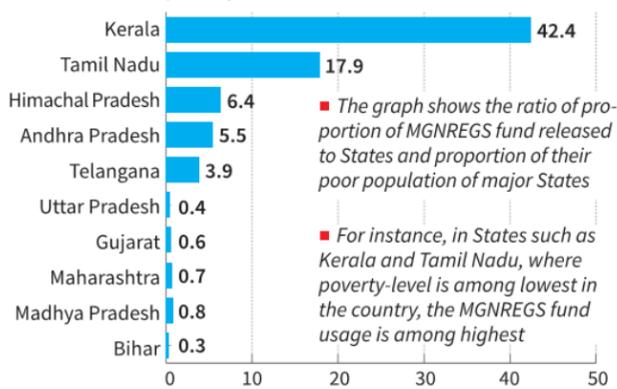
Laying the groundwork for revisiting the Mahatma Gandhi Rural Employment Guarantee Scheme as a poverty alleviation tool, Chief Economic Adviser V. Anantha Nageswaran on Monday noted in the Economic Survey that demand under the scheme was not a "real indicator" of rural distress.

While there is a marked variation in the performance of the scheme across States, he said that none of the studies conducted so far had come up with a satisfactory explanation on the unevenness in outcomes.

While Tamil Nadu has less than 1% of the poor population in the country,

A closer look

According to the Economic Survey, MGNREGS fund usage does not indicate the poverty-level of a State



it accounted for nearly 15% of all the MGNREGS funds released in the financial year 2023-24. Kerala, with only 0.1% of the poor population, used almost 4% of the total funds allocated.

Together, they generated 51 crore person-days of employment. In contrast, Bihar and Uttar Pradesh, with about 45% of the poor population, accounted for only 17% of the MGNREGS

funds and generated 53 crore person-days.

The correlation coefficient, as per the survey, between State-wise multi-dimensional poverty index and person-days generated was only 0.3, indicating that the MGNREGS fund usage and employment generation were not proportional to poverty levels. (A coefficient of 1 would indicate that the poorer a State, greater the number of person-days it would generate, while a coefficient of 0 would indicate no relationship between poverty and person-days.)

In this context, the Survey concludes that "demand under MGNREGS is not a real indicator of rural distress but is rather predominantly linked with the

State's institutional capacity and to some extent also different minimum wages and other considerations".

At the same time, it concedes that the variation in fund usage can be attributed to the varying MGNREGS wage rates in each State. States such as Haryana, Kerala, Tamil Nadu, and Karnataka have relatively high notified wage rates under the MGNREGS.

The difference in registering the demand for the scheme is heavily dependent on the efficiency of State administration. This is reflected in the fact that despite provisions mandating States to grant unemployment allowance, only ₹90,000 was released in FY24 and ₹7.8 lakh in FY23 across all States.

MGNREGS job demand no indicator of distress (23 July)

- Chief Economic Adviser V. Anantha Nageswaran suggested re-evaluating the Mahatma Gandhi Rural Employment Guarantee Scheme (MGNREGS) as a poverty alleviation tool.
- He noted that demand for the scheme doesn't accurately reflect rural distress.
- Performance of the scheme varies widely across states with no clear explanation for the differences.
- Tamil Nadu and Kerala, which have very small poor populations, received a large share of MGNREGS funds and created significant employment.
- In contrast, Bihar and Uttar Pradesh, with a high percentage of the poor population, received less funding and generated less employment.
- The correlation between poverty levels and employment generated under MGNREGS was low (0.3), meaning fund usage and employment are not strongly linked to poverty.
- The Survey concludes that MGNREGS demand is more related to state administrative capacity and wage rates rather than actual rural distress.
- States with higher MGNREGS wage rates, such as Haryana, Kerala, Tamil Nadu, and Karnataka, show different demand levels.
- The efficiency of state administration affects how demand for the scheme is registered.
- Despite rules for unemployment allowances, very little has been disbursed across states.

Slow progress on railway safety: Economic Survey

Kavach system deployed in just 2.14% of India's rail track coverage; capex deployment increased by 77% over past five years; electronic interlocking systems in 46% stations, the document says

GS Paper III:
Railways

NEW DELHI

Safety issues are a concern after a spate of railway accidents, but the Economic Survey, 2023-24, released on Monday, indicates limited progress on safety-related works such as deployment of the automatic train protection system Kavach and overhaul of signalling systems at all stations.

Kavach has been deployed on 1,465 route km in South Central Railway, the Survey says. This is just 2.14% of the total railway network of 68,426 route km and 7,349 railway stations.

So far, of the 17 operational railway zones in India, eight have become free from mechanical signalling, the Survey says.

Capex deployment

The Survey also states that the capital expenditure deployment in the Railways has increased by 77% over the past five years, to ₹2.62 lakh crore in 2023-24 with significant investments in construction of new lines,



Safety signal: A locomotive with Kavach that applies the brakes automatically in case of a collision threat. NAGARA GOPAL

gauge conversion and doubling.

However, till 2022-23, 2,981 railway stations had made the switch from mechanical signalling to electronic interlocking system. This comes to only 40% of India's 7,325 railway stations.

The Survey points out that in 2023-24, 443 additional stations made the switch, with 46% of the stations now having electron-

ic interlocking system.

The system was introduced in India 12 years ago. "Until March 31, 2024, EI has been provided at 3,424 stations," the Survey says.

Yet another signalling intervention, automatic block signalling, is a system that controls the movement of trains between the blocks using automatic signals, which helps trains operating in one direction move safely

without any risk of collision from the rear.

The Survey says this proven low-cost signalling solution has been provided on 582 route km during 2023-24. Until March 31, since the time it was commissioned, the system has been commissioned on 4,431 route km on high-density network routes. This comes to a 6.47% coverage across the length of Indian Railways.

Slow progress on railway safety: Economic Survey (23 July)

Kavach system deployed in just 2.14% of India's railtrack coverage; capex deployment increased by 77% over past five years; electronic interlocking systems in 46% stations, the document says

- The Economic Survey 2023-24 highlights concerns about railway safety after recent accidents.
- Progress on safety improvements, like the automatic train protection system Kavach and signalling system updates, is limited.
- Kavach has been installed on 1,465 route kilometers, which is only 2.14% of India's total railway network.
- Of the 17 railway zones, eight have removed mechanical signalling.
- Capital expenditure in the Railways increased by 77% over the past five years, reaching ₹2.62 lakh crore in 2023-24 for projects like new lines and gauge conversion.
- By 2022-23, 2,981 railway stations had switched from mechanical to electronic signalling, covering 40% of the total stations.
- In 2023-24, 443 more stations switched to electronic interlocking, making it 46% of all stations.
- Automatic block signalling, which prevents collisions by controlling train movement, was added to 582 route kilometers in 2023-24.
- As of March 31, 2024, this system covers 4,431 route kilometers, or 6.47% of the railway network.

‘Proposed EU Carbon Border Adjustment Tax is protectionist’

GS Paper III:
Economics

Echoing the Centre’s concerns on “protectionism”, the Economic Survey has noted that the forthcoming Carbon Border Adjustment Tax (CBAT) mooted by the European Union “went against the spirit of the Paris Agreement”.

The Carbon Border Adjustment Mechanism (CBAM), as it is called, are tariffs that will apply on energy-intensive goods imported into the European Union.

This is to ensure that local manufacturers of iron, steel and aluminium, which consume enormous fossil fuel, are not at a competitive disadvantage from similar goods produced in developing countries whose industries have more permissive fossil fuel emission norms.

“India not only has to deal with climate change and undertake energy transition but also deal with the protectionism of the developed countries. Europe is on course to implement its Carbon Border Adjustment Tax and both the United Kingdom and the United States are in different stages of imposing



India is among the top eight countries that will be adversely affected by the CBAM, say reports. SUSHIL KUMAR VERMA

their versions of it in due course. These taxes are in contravention to the spirit of the Paris Agreement that recognised ‘Common but Differentiated Responsibilities’,” the Survey says.

The CBAM is expected to come into force on January 1, 2026. India is among the top eight countries that will be adversely affected by CBAM, as per the Global Trade Research Initiative report. In 2022, 27% of India’s exports of iron, steel and aluminium products worth \$8.2 billion went to the EU.

It is estimated that a few of its core sectors, such as steel, will be “greatly affected” by CBAM.

- The RSS had previously expressed dissatisfaction with the BJP’s political decisions, including the inclusion of the Ajit Pawar faction in Maharashtra’s alliance.
- BJP president J.P. Nadda had commented that the BJP used to rely on the RSS for organization but now manages elections independently.
- RSS chief Mohan Bhagwat's recent comments on arrogance and ongoing violence in Manipur highlighted ongoing strains in their relationship.

In painstaking steps, scientists piece the neutrino universe together (23 July)

Researchers conducting an experiment with the Large Hadron Collider reported observing electron-neutrinos in a particle collider for the first time. Understanding these particles could transform what we know about our universe, the tools we use to study it, and the technologies in our lives

- Neutrinos are subatomic particles that have no electric charge, very small mass, and spin in a direction opposite to their motion.
- They are extremely abundant, second only to photons, and are the most common particles in matter.
- Neutrinos are produced when leptons, like muons, electrons, and taus, interact with matter. Each type of lepton produces a specific type of neutrino (muon-neutrino, electron-neutrino, tau-neutrino).
- Neutrinos rarely interact with matter, making them difficult to study. For instance, a muon-neutrino might only interact with an atom’s nucleus once in a million attempts.
- To detect neutrinos, scientists use large detectors with precise tracking capabilities to maximize the chance of interaction.

Proposed EU Carbon Border Adjustment Tax is protectionist (23 July)

- The Economic Survey expresses concerns about the European Union’s planned Carbon Border Adjustment Tax (CBAT), which it views as protectionist.
- The CBAT, also known as the Carbon Border Adjustment Mechanism (CBAM), will impose tariffs on energy-intensive goods like iron, steel, and aluminium imported into the EU.
- The goal is to protect local EU manufacturers from competition with goods produced in countries with less strict emission norms.
- The Survey argues that such measures go against the spirit of the Paris Agreement, which promotes “Common but Differentiated Responsibilities” for climate action.
- The CBAT is set to be implemented on January 1, 2026.
- India is one of the top eight countries that will be negatively impacted by the CBAT.
- In 2022, India exported 27% of its iron, steel, and aluminium products, worth \$8.2 billion, to the EU.
- The CBAT is expected to significantly affect India’s steel sector and other core industries.

Allowing public servants to join RSS signals thaw between BJP, mothership (23 July)

- On July 9, the Union government lifted a 58-year-old ban that prevented public servants from joining the Rashtriya Swayamsevak Sangh (RSS).
- This move suggests that the RSS and the Bharatiya Janata Party (BJP) are mending their relationship after recent tensions.
- The Opposition views this decision as an attempt by the BJP to create a bureaucracy aligned with its ideology.
- The RSS welcomed the decision, with spokesperson Sunil Ambekar praising it as strengthening India’s democratic system.
- The RSS believes the ban was unjust and politically motivated.
- The move is seen as a gesture to resolve past issues between the BJP and RSS.

- The NOvA experiment in Minnesota creates a neutrino beam and directs it towards a large detector 800 km away.
- The latest results from NOvA, presented in Italy on June 17, show that the collaboration has doubled the amount of data compared to the previous four-year run, offering more precise results.
- NOvA aims to understand the mass of different types of neutrinos, which may differ from the mass mechanisms of other particles.
- On July 11, the Large Hadron Collider in Europe reported detecting electron-neutrinos for the first time, contributing to this research.

The surprise of mass

- In 1987, physicists detected extraterrestrial neutrinos from a supernova explosion 150,000 light years away, marking the beginning of neutrino astronomy.
- Before this, neutrinos were believed to be massless, similar to photons. According to the special theory of relativity, massive particles can't travel at the speed of light, so if neutrinos were massless, they should be right-handed when their spin aligns with their motion.
- However, right-handed neutrinos were never detected, leading to the belief that neutrinos were massless.
- In the late 1990s, scientists in Japan and Canada discovered that neutrinos have mass. They found that neutrinos can change types as they travel, a property massless particles don't have.
- The Standard Model of particle physics, which describes particle behavior, didn't predict massive neutrinos. Incorporating them requires significant changes to the model.
- Physicists study neutrino oscillation, where neutrinos change their type as they travel long distances. For example, neutrinos from the Sun are primarily electron-neutrinos but are detected as muon-neutrinos on Earth.
- Theoretical models propose two solutions for the neutrino mass hierarchy problem: normal and inverted orders. In normal order, one type of neutrino is much heavier, and the other two are lighter. In inverted order, one type is lighter, and the other two are heavier.
- New data from NOvA supports the normal order, but the evidence is not yet conclusive.
- Understanding neutrino mass hierarchy helps us learn about the universe's evolution. Neutrinos are key carriers of information from cosmic events like supernovae, which release 99% of their energy as neutrinos in a brief burst.
- Studying these neutrinos helps us understand how light or radio waves from such explosions diffuse over distance.

The best information carriers

- Neutrinos can pass through most matter without interacting, making them useful for transmitting information across vast distances.
- Electromagnetic waves are commonly used for communication but are less effective in some situations, like underwater where certain frequencies can't penetrate seawater.
- Neutrinos can travel through extremely dense materials, such as 1,000 light years of lead, meaning they can pass through oceans easily.
- If scientists can figure out how to transmit and detect neutrinos, they might replace electromagnetic waves with neutrino beams for communication in the future.
- Many countries are investing in neutrino research to explore their potential. Notable experiments include:
 - Super-K III in Japan
 - Sudbury Neutrino Observatory (SNO+) in Canada
 - MiniBOONE, MicroBOONE, and NOvA in the U.S.
 - Double CHOOZ in France
 - Jiangmen Underground Neutrino Observatory in China
 - OPERA experiment in Switzerland
 - IceCube Neutrino Observatory in Antarctica
- India's India-based Neutrino Observatory, planned for Tamil Nadu, faces delays and political issues.
- More experiments increase the likelihood of solving key neutrino mysteries, such as their mass hierarchy, and help us better understand the universe.

In the context of modern scientific research, consider the following statements about 'IceCube', a particle detector located at South Pole, which was recently in the news: **(UPSC 2016)**

1. It is the world's largest neutrino detector, encompassing a cubic kilometre of ice.
2. It is a powerful telescope to search for dark matter.
3. It is buried deep in the ice.

Which of the statements given above is/are correct ?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3



Genetically modified pigs stand inside the protective barrier at the company's designated pathogen-free facility in Christiansburg (United Therapeutics Corporation)





A genetically modified pig inside a protective barrier at a United Therapeutics designated pathogen-free facility in Christiansburg, Virginia. These pigs will eventually supply organs for clinical trials. SHELBY LUM/AP

Cleanest pigs ever are raised to grow organs for humans

GS Paper III: Science & Technology

The first gene-edited pig organs ever transplanted into people came from animals born on a special research farm in the Blue Ridge Mountains – behind locked gates, where entry requires washing down your vehicle, swapping your clothes for medical scrubs, and stepping into tubs of disinfectant to clean your boots between each air-conditioned barn.

“These are precious animals,” said David Ayares of Revivacor Inc., who spent decades learning to clone pigs with just the right genetic changes to allow those first audacious experiments.

The biosecurity gets even tighter just a few kilometres away in Christiansburg, Virginia, where a new herd is being raised: pigs expected to supply organs for formal studies of animal-to-human transplantation next year.

This massive, first-of-its-kind building bears no resemblance to a farm. It’s more like a pharmaceutical plant. And part of it is closed to all but certain carefully chosen employees who take a timed shower, don company-provided clothes and shoes, and then enter an enclave where piglets are growing up.

Behind that protective barrier are some of the world’s cleanest pigs. They breathe air and drink water that’s better filtered against contaminants than what’s required for people. Even their feed gets disinfected – all to prevent them from picking up any possible infections that might ultimately harm a transplant

They breathe air and drink water that’s better filtered against contaminants than what’s required for people. Even their feed gets disinfected

recipient.

Several thousand people die each year waiting for a transplant, and many experts acknowledge there will never be enough human donors to meet the need. Animals offer the tantalising promise of a ready-made supply.

So far in the U.S. there have been four “compassionate use” transplants, last-ditch experiments on dying patients – two hearts and two kidneys. Revivacor provided both hearts and one of the kidneys. While the four patients died within a few months, they offered valuable lessons for researchers ready to try again with people who aren’t quite as sick.

Now the U.S. Food and Drug Administration is evaluating promising results from experiments in donated human bodies and awaiting the results of additional studies of pig organs in baboons before deciding next steps. The main challenges are how to avoid rejection and whether the animals might carry some unknown infection risk.

Twice a week, slaughterhouses ship Revivacor hundreds of eggs retrieved from sow ovaries. Working in the dark with the light-sensitive eggs, scientists peer through a microscope while suctioning out the maternal DNA. Then they slip in the genetic modifications. Mild electric shocks fuse the new DNA and activate embryonic growth.

Revivacor’s first modified pig is now bred instead of cloned. If xenotransplantation eventually works, other pigs with the desired gene combinations would, too.

Cleanest pigs ever are raised to grow organs for humans (23 July)

Heat stress is more than a degree of concern

GS Paper III: Environment

In recent periods, climate change and environmental degradation have significantly affected the safety and the health of workers worldwide. Heat stress is anticipated to affect labour efficiency and productivity, in turn reducing work hours and hindering the International Labour Organization's (ILO) objective of promoting fair and decent employment. Workers, who are particularly vulnerable to climate change hazards, sometimes cannot cease working despite hazardous conditions because of financial constraints.

The main health effects of heat stress on workers include heat stroke, heat cramps, cardiovascular disease, acute kidney injury, and physical injury. The Intergovernmental Panel on Climate Change (IPCC) states that to retain normal physiological activities, it is necessary to maintain a core body temperature of roughly 37°C. Temperature elevations over 38°C have a deleterious effect on one's cognitive and physical capabilities. During various life stages, women who are employed in heat-exposed sectors, such as subsistence agriculture, may be at risk for pregnancy-related complications, including hypertension, miscarriages, and premature births. An increase in temperature can diminish work productivity due to excessive heat that makes it difficult to work. Or, there is a need for personnel to operate at a slower pace.

ILO study findings

The ILO study (2019) estimated that "Heat stress is projected to reduce total working hours worldwide by 2.2 percent and global GDP by US\$2,400 billion in 2030... Agricultural and construction workers are expected to be the worst affected, accounting for 60 percent and 19 percent, respectively of working hours lost to heat stress in 2030". Agricultural workers face a significantly higher risk from heat than workers in other occupations, with farmworkers being 35 times more susceptible to heat-related fatalities. Recent ILO (2024) estimates that 2.41 billion workers worldwide are exposed to extreme heat. Further, exposure to extreme heat at work is directly associated with about 22.85 million injuries and 18,970 fatalities annually. The Asia and the Pacific regions experience the highest Gross Domestic Product (GDP) losses due to heat stress affecting labour productivity. In 1995, the region's GDP was estimated to have decreased by 1.4%, which is forecast to decrease by 2.3% in 2030 due to climate change. Projections indicate that Thailand, Cambodia, and India will experience significant declines in their national GDP in 2030, with a decrease of over 5%.

Asia and the Pacific exhibit exceptional diversity in terms of climate and the varying levels of economic development among various countries. The geographical distribution of heat stress impact is not uniform. It is projected that

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The Asia and Pacific regions could experience significant economic losses due to heat stress affecting labour productivity

by 2030, there would be a decrease of almost 5% in working hours in southern Asia and western Africa, while the reduction in the European subregions will be only 0.1%.

Further, southern Asia and sub-Saharan Africa are most susceptible to experiencing declines in labour productivity due to heat stress; these regions are already vulnerable to climate change and home to most of the world's poor population, which counteracts efforts to reduce inequalities. The countries that are most susceptible to experiencing decreases in productivity are those having a significant proportion of their workforce employed in the agricultural and/or construction sectors, as well as those situated in the tropical and subtropical latitudes. The decline in available working hours and output among small-scale and subsistence farmers is expected to affect household food security. Heat stress significantly impacts labour hours and productivity, and the impact is not uniform across regions and genders. Heat stress poses concerns that have the potential to exacerbate gender disparities in the workforce, particularly by deteriorating working conditions for the numerous women engaged in subsistence agriculture. Excessive heat stress is expected to impact the achievement of various Sustainable Development Goals (SDGs).

Impact in India

India is undergoing a consistent increase in temperatures annually. By 2030, an estimated 160 million-200 million individuals around the nation may face the risk of experiencing deadly heat waves every year. Approximately 34 million people in India will experience job losses due to reduced productivity caused by heat stress. A study in West Bengal shows that as the temperature increases by 1°C, there is a corresponding decrease of approximately 2% in the productivity of female brickmaking workers. India is the country that experiences the most impact from heat stress; in 1995, it lost 4.3% of its working hours, which is anticipated to increase to 5.8% by 2030.

In addition, India is expected to experience a significant decline in full-time employment by 2030 as a result of heat stress, which can be attributed to its large population. Further, migrant workers often work in hazardous and physically demanding jobs, primarily in the informal economy. They are particularly vulnerable to the risks posed by climate change, as they usually lack occupational safety and health protections, essential services, and infrastructure.

Informal workers may continue working despite the risk to their health from extreme climate events due to financial constraints. Thus, there is a need to strengthen adaptation and mitigation measures at the global, national, and workplace levels to reduce the detrimental

impact of heat stress on workers.

There are national guidelines under the title, 'Preparation of Action Plan - Prevention and Management of Heat Wave', by the National Disaster Management Authority in collaboration with the Ministry of Home Affairs. These guidelines are designed to protect the Indian workforce from the negative impacts of extreme heat. They are designed to help public officials create heatwave action plans for both urban and rural areas, with a focus on the general population.

The importance of the following factors is highlighted: providing education to workers; ensuring proper hydration; managing work schedules, and offering necessary medical facilities. The General Discussion Committee of the International Labour Conference, in June 2023, highlighted the urgent need to implement measures to ensure the safety and the health of workers impacted by climate-related risks and extreme weather events. This involves tackling the effects on their mental and physical well-being and the advocating of secure and conducive working environments.

In this regard, it is crucial for all stakeholders, including governments, employers, and workers, to collaborate in implementing measures that prioritise the protection of the most vulnerable individuals. These measures should include the development of sufficient infrastructure and enhanced early warning systems for extreme weather events.

Additionally, there should be a focus on improving the implementation of international labour standards that are related to occupational safety and health. This will ensure that those affected by heat stress are provided with suitable working conditions. Further, effective communication between workers and employers is essential to facilitate the adjustment of working hours, guarantee adequate rest breaks, provide access to drinking water, and offer training on the identification and management of heat stress. This can help alleviate the adverse effects of heat stress.

Think of green jobs

The government may implement adequate regulatory and legislative measures in occupations that are susceptible to heat waves in order to ensure the safety and well-being of workers. Additionally, infrastructure-related measures, such as implementing construction standards, should safeguard indoor workers. Considering the current climate change scenario, decent and green employment emerges as a promising solution for the future of work. Green jobs are employment opportunities that help protect or restore the environment while also supporting economic and social well-being.

The views expressed are personal

Heat stress is more than a degree of concern (23 July)

- Climate change and environmental degradation are affecting worker safety and health globally.
- Heat stress impacts labor efficiency and productivity, reducing work hours.
- This hinders the ILO's goal of promoting fair and decent employment.
- Workers often continue working in hazardous conditions due to financial constraints.
- Health effects of heat stress include heat stroke, heat cramps, cardiovascular disease, acute kidney injury, and physical injury.
- The IPCC states maintaining a core body temperature of around 37°C is necessary for normal physiological activities.
- Temperatures over 38°C negatively impact cognitive and physical abilities.
- Women in heat-exposed jobs, like subsistence agriculture, risk pregnancy-related complications such as hypertension, miscarriages, and premature births.
- Increased temperatures reduce work productivity due to excessive heat, requiring slower work pace or reduced work hours.

ILO study findings

- The ILO study (2019) estimated heat stress will reduce global working hours by 2.2% and global GDP by US\$2,400 billion in 2030.
- Agricultural and construction workers will be the worst affected, losing 60% and 19% of working hours respectively.
- Agricultural workers are 35 times more susceptible to heat-related fatalities than other occupations.

- ILO (2024) estimates 2.41 billion workers worldwide are exposed to extreme heat.
- Extreme heat at work is linked to about 22.85 million injuries and 18,970 fatalities annually.
- Asia and the Pacific regions face the highest GDP losses due to heat stress affecting labor productivity.
- The region's GDP decreased by 1.4% in 1995 and is forecast to decrease by 2.3% in 2030 due to climate change.
- Thailand, Cambodia, and India are projected to experience significant GDP declines of over 5% by 2030.
- The geographical impact of heat stress varies, with southern Asia and western Africa projected to lose almost 5% of working hours, while European subregions will lose only 0.1%.
- Southern Asia and sub-Saharan Africa are most vulnerable to labor productivity declines due to heat stress.
- These regions house most of the world's poor population, counteracting efforts to reduce inequalities.
- Countries with significant workforces in agriculture and construction, especially in tropical and subtropical latitudes, are most susceptible to productivity declines.
- Heat stress will affect household food security among small-scale and subsistence farmers by reducing available working hours and output.
- The impact of heat stress is not uniform across regions and genders, potentially exacerbating gender disparities in the workforce.
- Women in subsistence agriculture are particularly affected.
- Excessive heat stress is expected to hinder the achievement of various Sustainable Development Goals (SDGs).

Impact in India

- India is experiencing consistent annual temperature increases.
- By 2030, 160-200 million people in India may face deadly heat waves every year.
- About 34 million people will lose jobs due to heat stress reducing productivity.
- A study in West Bengal shows a 1°C increase in temperature decreases female brickmaking workers' productivity by 2%.
- India lost 4.3% of its working hours due to heat stress in 1995, expected to rise to 5.8% by 2030.
- Full-time employment in India is expected to decline significantly by 2030 due to heat stress.
- Migrant workers in hazardous jobs are particularly vulnerable to climate change, lacking safety and essential services.
- Financial constraints force informal workers to continue working despite health risks from extreme climate events.
- There is a need to strengthen adaptation and mitigation measures at all levels to reduce heat stress impact on workers.
- National guidelines exist for heatwave prevention and management, designed by the National Disaster Management Authority and Ministry of Home Affairs.
- These guidelines help officials create heatwave action plans for urban and rural areas, focusing on the general population.
- Important factors include worker education, hydration, work schedule management, and medical facilities.
- The International Labour Conference (June 2023) emphasized the need for measures to ensure worker safety and health from climate-related risks.
- Collaboration among governments, employers, and workers is crucial to protect vulnerable individuals.
- Measures should include developing infrastructure and early warning systems for extreme weather events.
- Improving the implementation of international labour standards related to occupational safety and health is essential.
- Effective communication between workers and employers is needed to adjust working hours, provide rest breaks, access to drinking water, and training on heat stress management.
- These steps can help alleviate the adverse effects of heat stress on workers.

Think of green job

- The government may implement regulatory and legislative measures to protect workers in heat wave-prone occupations.
- Infrastructure measures, such as construction standards, should safeguard indoor workers.
- Given climate change, decent and green employment is a promising solution for the future of work.
- Green jobs protect or restore the environment while supporting economic and social well-being.

23rd July 2024

MAINS PRACTICE QUESTIONS

GS Paper III: Environment and Climate change.

Question: Analyze the impact of heat stress on the achievement of Sustainable Development Goals (SDGs), with a focus on India. (250 Words/15 Marks)

ANSWER APPROACH

- Introduce with a briefly explanation of heat stress in the recent context of India.
- **Then bring the Impact on Specific SDGs:**
 - SDG 2 (Zero Hunger) - Reduced crop yields due to heat and drought.
 - SDG 3 (Good Health and Well-being) - Increased heatstroke, dehydration, and mortality.
 - SDG 8 (Decent Work and Economic Growth) - Reduced labor productivity due to heat exhaustion.
 - SDG 10 (Reduced Inequalities) - Unequal impacts on vulnerable populations like outdoor workers and those in inadequate housing.
- In the last conclude with reiterating importance of addressing heat stress for sustainable development.

ANSWER

India is currently grappling with unprecedented heatwave conditions, with temperatures reaching new highs and posing severe risks to public health, economic stability, and overall well-being. This issue is particularly critical in a country like

India, where a significant portion of the population relies on labor-intensive sectors such as agriculture and construction, which are highly susceptible to heat stress. The increasing frequency and intensity of heatwaves have highlighted the urgent need to address heat stress and its implications on achieving the Sustainable Development Goals (SDGs).

Impact on Labor Productivity and Economic Growth (SDG 8: Decent Work and Economic Growth):

- Heat stress directly reduces labor productivity by causing heat-related illnesses such as heat stroke, cardiovascular diseases, and physical injuries.
- In India, heat stress is expected to lead to job losses for approximately 34 million people by 2030 due to decreased productivity.
- The reduction in work hours and economic output is anticipated to escalate from a loss of 4.3% of working hours in 1995 to 5.8% by 2030, significantly affecting economic growth.

Impact on Health and Well-being (SDG 3: Good Health and Well-being):

- Heat stress exacerbates health issues among workers, particularly those in outdoor and manual labor sectors. It increases the risk of heat cramps, kidney injuries, and cognitive impairments.
- Women working in heat-exposed sectors, such as subsistence agriculture, are at higher risk of pregnancy-related complications, including hypertension and miscarriages.
- The IPCC indicates that maintaining a core body temperature of around 37°C is essential for normal physiological activities, and temperatures above 38°C can impair cognitive and physical functions.

Impact on Gender Equality (SDG 5: Gender Equality):

- Heat stress disproportionately affects women, especially those engaged in subsistence agriculture and other heat-exposed sectors.
- As temperatures rise, women face increased risks of health complications and reduced productivity, exacerbating existing gender disparities. In West Bengal, for instance, a 1°C increase in temperature correlates with a 2% decrease in productivity among female brickmaking workers.
- This gendered impact of heat stress undermines efforts to achieve gender equality and empower all women and girls, as outlined in SDG 5.

Impact on Poverty and Inequality (SDG 1: No Poverty and SDG 10: Reduced Inequalities):

- Regions most susceptible to heat stress, such as southern Asia and sub-Saharan Africa, are home to a large portion of the world's poor population.
- Heat stress reduces labor productivity, which in turn affects household income, food security, and economic stability, perpetuating poverty and inequality.
- The adverse effects on small-scale and subsistence farmers further deepen the vulnerability of marginalized communities, hindering efforts to eradicate poverty (SDG 1) and reduce inequalities (SDG 10).

Thus, heat stress significantly impacts the achievement of multiple SDGs in India by reducing labor productivity, exacerbating health issues, widening gender disparities, and perpetuating poverty and inequality. Addressing heat stress requires a multifaceted approach involving adaptation and mitigation measures at global, national, and workplace levels. Strengthening infrastructure, implementing early warning systems, and promoting green jobs are essential steps to mitigate the adverse effects of heat stress and ensure sustainable development.

The long simmer of political violence in America (23 July)

- Nearly five decades since a U.S. presidential candidate was injured or assassinated in an attack.
- Recent attempt on Donald Trump at a rally in Butler County, Pennsylvania, on July 13 shocked people.
- At least 15 assassination attempts on presidential nominees and Presidents; five resulted in deaths.
- Political violence is linked to American society and affects both political parties.
- The attempt on Trump's life comes during a deeply polarized and divided time in American history.
- Growing tribalism and polarization have brought political violence back into American politics, now more partisan.
- In the 1960s and 1970s, political violence was common, with far-left groups using it for social justice issues.
- From the 1980s to 2010s, the right used political violence for issues like female reproductive rights, environment, and animal rights, more ideological than partisan.
- Currently, political violence is more mainstream and often carried out by individuals not linked to extremist groups.
- Recent examples include the 2011 shooting of Arizona Democrat Gabby Giffords, the 2017 attack on Republican whip Steve Scalise, and the 2022 attempt to murder Justice Brett Kavanaugh.

Views and reasons

- A small but significant group of Americans support political violence for forwarding political ideas.
- October 2023 research: 8% of respondents justified political violence in a democracy.
- University of Chicago study: post-January 6, 2021, 10% supported violence to prevent Trump's re-election, 7% to restore him in office.
- Factors increasing political violence permissiveness:
 - Highly competitive elections since 2010 with uncertain outcomes.
 - Sharp partisan division between Democrats and Republicans, creating in- and out-groups.
 - Circulation of dehumanizing rhetoric and a Manichean worldview.
- American electoral institutions and party politics have heightened ideological and policy differences.
- Since 2016, both parties have morally disengaged and justified violence.
- Politicians have incited violence to achieve political outcomes and increase voter engagement.
- Weak institutional constraints and politicization of judiciary and law enforcement allow political violence.
- Impasses between legislative and executive branches have sometimes been resolved through political violence.

- Recent legal pronouncements have strengthened state legislatures' voting influence, weakening federal institutional guardrails.

What can be done

- Bipartisan condemnation of the attack on Trump by U.S. leaders is crucial for de-escalating and deterring violence.
- Long-term solutions include:
 - Systematic reforms in the electoral process.
 - Compassionate, even-handed, and transparent policing.
 - Conciliatory political speech by politicians.
- These measures are essential to bridge the growing rift in a polarized society.

Democratic departure (23 July)

Biden's withdrawal from the race can open up the presidential election

- President Joe Biden has withdrawn from the 2024 U.S. election and endorsed Vice-President Kamala Harris.
- Biden's exit follows calls for him to step down due to age-related public mistakes.
- Biden's decision surprised many, including Democratic Party members.
- Biden's campaign chair had previously stated he would not quit.
- Senior Democrats privately suggested Biden step down for a stronger candidate.
- Kamala Harris is now favored to become the Democratic nominee.
- Harris could make history as the first Indian-origin and woman-of-color nominee for President.
- She would gain access to significant campaign funds but is less known nationally.
- Republicans have labeled Harris as a left-wing political figure.
- Harris's approval rating is similar to Biden's, lower than Trump's.
- Democrats are expected to unite around Harris to avoid factional infighting.
- Potential running mates for Harris include Michigan Governor Gretchen Whitmer, California Governor Gavin Newsom, and Transportation Secretary Pete Buttigieg.
- Republicans, led by Trump, are seen as having a strong chance to win over independent voters in swing states.

Quest for quota (23 July)

Bangladesh needs to address its booming unemployment crisis

- Violent student protests in Bangladesh against the job quota system have resulted in at least 163 deaths.
- The protests were triggered by a High Court decision to reintroduce the old quota system.
- The old system reserved 56% of government jobs for various categories, including 30% for descendants of freedom fighters.
- Prime Minister Sheikh Hasina's handling of the crisis worsened the situation by dismissing protesters and allegations of attacks by her party's student wing.
- The protests brought Dhaka to a standstill.
- The Bangladesh Supreme Court scaled back the quota system, reducing the 30% quota to 5% and opening 93% of jobs to all Bangladeshis.
- The quota system, established in 1972, has been a sensitive issue for years.
- Despite economic growth, youth unemployment in Bangladesh is around 20%, making government jobs highly sought after.
- The protesters and opposition claim the quota system benefits the ruling Awami League.
- The Supreme Court's order is a relief for both sides.
- Ms. Hasina should engage in dialogue with protesters and opposition to reform the reservation system.
- Her high-handed approach and hostility with the opposition are weakening the country's institutions.
- An independent investigation into the protester deaths is needed.
- The government should address the unemployment crisis to prevent future unrest.

दिल्ली से भी बेहतर

आपके शहर गोरखपुर में

Patriotic IAS

IAS/PCS wali Pathshala

पैडलेगंज, गोरखपुर **Mob. 9971932488**



Team Led by:
Amit Kumar

(More than 4 Years of Teaching Experience
In Vision IAS Delhi & Qualified 4
Times For The IAS Mains).





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More than 3 years Working
experience with Vision IAS Delhi
and Qualified 2 times for IAS mains and
2 times for CAPF interview.

A green wealth tax in Budget 2024 (23 July)

A wealth tax-financed Indian Green Deal would be able to tackle climate change as well as address inequality and unemployment

- The new government is presenting its first Budget, focusing on unemployment and inequality.
- To utilize India's young population, the government should prioritize long-term employment, including budget provisions and incentives for private sector job creation.
- To address inequality, a tax and expenditure policy can be devised, benefiting social, democratic, and climate change issues.
- Bold steps are necessary to rethink the development model and create a just, inclusive, and sustainable path through an Indian Green Deal (IGD).
- Over two decades, there has been a significant rise in wealth and income inequality in India.
- Increased consumption by the Indian elite has led to higher carbon emissions.
- The top 10% of the Indian population has a per capita carbon footprint similar to that of a first-world citizen.
- The Indian elite's high emissions are due to their consumption of carbon-intensive commodities like housing, industrial goods, transport (airlines, SUVs), and clothing.
- Rising emissions are directly linked to wealth inequality.
- A wealth tax could help address multiple problems, including reducing carbon emissions and inequality.
- India could consider a wealth tax to fund a new initiative focused on green energy, infrastructure, and the care economy (health and education).
- In 2020, the government promised 10% of the GDP as a self-reliance package for Covid-19 recovery.
- The proposed initiative suggests using this 10% GDP package in a more beneficial way over a 10-year period.
- The allocation would be 5% for infrastructure, 3% for the care economy, and 2% for green energy.
- This plan aims to generate 38.7 million jobs, equating to 8.2% of the Indian labor force.
- Funding 10% of the GDP is challenging, but a wealth tax of about 1.7% could start the program.
- As the wealth of the Indian elite grows, the tax rate could decrease to 1.3% by 2032.
- This initiative would position India as a leader in addressing climate change, inequality, and unemployment.
- The June 2024 mandate calls for change, and it remains to be seen if the government will use the Budget to implement this new strategy.

A case for regulating gig-based work (23 July)

Karnataka's draft Bill introduces provisions that mandate fair contracts and income security for platform workers. These provisions strengthen the position of workers who are at the same time not considered employees, nor do they enjoy the freedom and flexibility of being independent contractors

- Karnataka plans to introduce a law to support gig workers, which is seen as a positive and necessary move.

- The law addresses three common myths about gig work.
- First myth: Gig workers are portrayed as having no boss and being independent, but in reality, they are controlled by algorithms and local managers.
- Algorithms set work hours, manage orders, enforce ratings, and decide when workers are deactivated or fired.
- Workers feel like they are trapped in a maze trying to understand and cope with these algorithms.
- The terms and conditions for gig work show that workers are not truly independent contractors but are closely monitored and controlled.
- The proposed Bill will require aggregators to share information about how algorithms work, including how work is allocated, how denial of work is decided, and how workers' personal data is used.
- This Bill aims to reduce the algorithmic control companies have and give gig workers more control over their work.

The myth of flexibility

- The second myth is that gig work offers flexible work arrangements, but in reality, the flexibility only benefits employers, not workers.
- Gig workers must follow strict login hours and performance metrics to earn incentives, leaving them with little actual flexibility.
- Workers face penalties if they are inactive or log in late, affecting their earnings and incentives.
- Karnataka's draft Bill aims to ensure fair contracts, income security, and the right for workers to refuse work without penalties.
- The Bill strengthens the position of gig workers, who are neither traditional employees nor fully independent contractors.
- The third myth is that gig workers are part-time and use gigs for extra income. In reality, many depend entirely on gig work for their income.
- Studies show that a significant majority of cab drivers and delivery workers earn all their daily income from gigs and work long hours.
- The Karnataka Law introduces mandatory social security measures to support gig workers in cases like old age, death, or health issues.

India's stand

- The Indian government made a positive statement about platform workers at the G-20, but its Code on Social Security is not effective.
- The Code only briefly mentions gig workers and does not provide minimum protections for wages, safety, and health.
- State governments are leading the way with new laws for gig workers.
- Rajasthan was the first state to pass such a law, followed by Karnataka, Jharkhand, Tamil Nadu, Haryana, and Telangana.
- This development is important as it shows that social security for workers should also involve market funding and hold private companies accountable.
- The current Bill could be improved in areas like minimum wage, safety, health, working hours, and collective bargaining rights.
- Despite these gaps, the law helps workers organize and push for better conditions.

How and when can a bill be defined as a money Bill? (23 July)

Why do money Bills have a special procedure for approval? What is the way forward?

The Chief Justice of India has agreed to review petitions challenging the use of the money Bill route for passing controversial laws.

Money Bills are defined by the Constitution as bills that deal only with specific financial matters:

- Taxation
- Government borrowing
- Custody and management of government funds
- Appropriation of funds
- Expenditure charged on government funds
- Receipt or audit of government funds

Any bill dealing with these matters, along with related incidental matters, is classified as a money Bill.

Examples: Finance Act (taxation) and Appropriation Act (spending from government funds).

Financial Bills are divided into two categories:

- **Category I:** Includes any of the six financial matters plus other matters.
- **Category II:** Involves expenditures from the government fund but does not include the six financial matters.

Procedure for Money Bills:

- Can only be introduced in the Lok Sabha.
- After passing in the Lok Sabha, the Rajya Sabha has 14 days to recommend changes, which the Lok Sabha may accept or reject.

- Money Bills deal with crucial financial matters and require only Lok Sabha approval, where the ruling government usually has a majority.
- This procedure is similar to the UK system where the House of Commons, elected by the people, controls the Budget.

Certification: The Speaker of the Lok Sabha certifies a bill as a money Bill.

Financial Bills (Category I and II) do not follow the same special procedure as money Bills.

What are the issues?

- The certification of a bill as a 'money Bill' by the Speaker was reviewed by the judiciary in relation to the Aadhaar Act of 2016.
- The Aadhaar Act included provisions for enrolment, authentication, authority establishment, safeguards, and penalties.
- Section 7 of the Act required Aadhaar authentication for accessing subsidies or services funded by the government.
- The Act was classified as a 'money Bill,' with the main purpose being the management of government funds, despite other provisions.
- The Supreme Court upheld this classification with a 4:1 majority, but the current Chief Justice of India disagreed, stating it didn't meet the 'money Bill' definition.
- The Finance Act, 2017, faced controversy for using the 'money Bill' route to amend laws related to tribunals, which was challenged in court.
- In the Rojer Mathew vs. South Indian Bank (2019) case, a five-judge Bench found that the Aadhaar case didn't adequately address the definition of 'money Bill.'
- The court suggested forming a seven-judge Bench for a definitive judgment on the definition of money Bills.
- It is important for Speakers to adhere to the intended definition of 'money Bill' when certifying a bill.

Which of the following statements are correct in respect of a Money Bill in the Parliament? (UPSC 2024)

1. Article 109 mentions special procedure in respect of Money Bills.
2. A Money Bill shall not be introduced in the Council of States.
3. The Rajya Sabha can either approve the Bill or suggest changes but cannot reject it.
4. Amendment to a Money Bill suggested by the Rajya Sabha have to be accepted by the Lok Sabha.

Select the correct answer using the code given below :

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1, 2 and 3
- (d) 1, 3 and 4

With reference to Finance Bill and Money Bill in the Indian Parliament, consider the following statements: (UPSC 2023)

1. When the Lok Sabha transmits a Finance Bill to the Rajya Sabha, it can amend or reject the Bill.
2. When the Lok Sabha transmits a Money Bill to the Rajya Sabha, it cannot amend or reject the Bill; it can only make recommendations.
3. In the case of disagreement between the Lok Sabha and the Rajya Sabha, there is no joint sitting for a Money Bill, but a joint sitting becomes necessary for a Finance Bill.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Regarding a Money Bill, which of the following statements is not correct? (UPSC 2018)

- (a) A bill shall be deemed to be a Money Bill if it contains only provisions relating to the imposition, abolition, remission, alteration, or regulation of any tax.
- (b) A Money Bill has provisions for the custody of the Consolidated Fund of India or the Contingency Fund of India.
- (c) A Money Bill is concerned with the appropriation of moneys out of the Contingency Fund of India.
- (d) A Money Bill deals with the regulation of borrowing of money or giving of any guarantee by the Government of India.

A case for regulating gig-based work

Karnataka's draft Bill introduces provisions that mandate fair contracts and income security for platform workers. These provisions strengthen the position of workers who are at the same time not considered employees, nor do they enjoy the freedom and flexibility of being independent contractors

GS Paper III: Employment

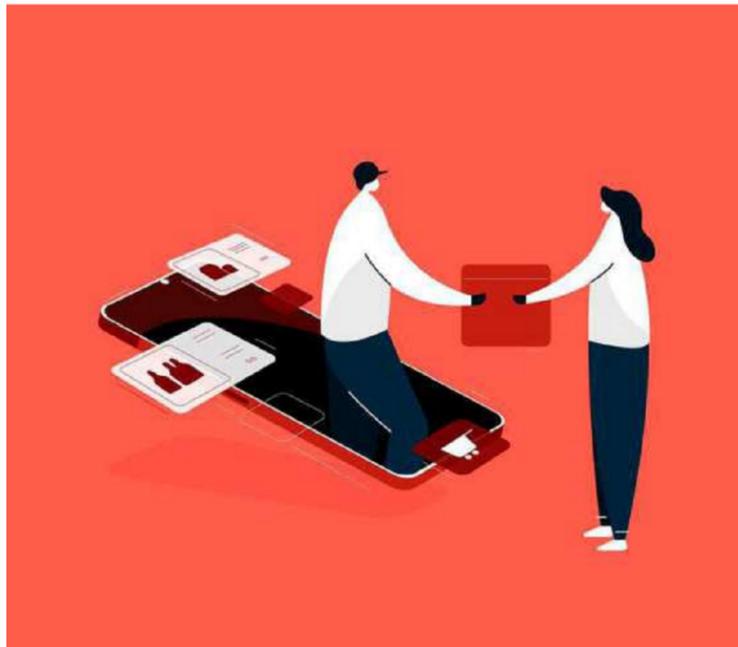
ECONOMIC NOTES

Rakshita Swamy
Biju Mathew

The Karnataka government's intent to introduce a legislation for the welfare of gig workers is a welcome and necessary step. It squarely addresses the three big myths propagated by the gig and platform industry. The first myth that aggregators sell to promote platform work is that they would have "no boss" and would be "partners" and "captains" – anything but workers. This drew in many people, particularly the young, to join platform-based gigs. However, it soon became clear that this was not the case. There was a big boss – the algorithm and a network of team managers deployed at the local level to enforce the algorithm.

Algorithms dictate the number of hours the worker needs to put in on weekends, the orders to be delivered, cancellations and rating scores that ought to be maintained in order for tasks to be continually allocated to the worker, and finally when a worker is deactivated or fired. Shaikh Salauddin from the Indian Federation of App-based Transport Workers put it succinctly when he said that "Gig workers spend hours trying to guess what the algorithm is doing and it feels like they are a rat in a maze". This is totally opposite to the idea of being one's own boss. A plain reading of the digitally generated terms and conditions that the worker has to invariably agree on to commence work dispels any notion of being an independent contractor. Every aspect of the work is monitored and dictated, with workers facing the consequences if they do not comply.

The Karnataka Bill recognises the pervasive role played by such algorithms and makes the aggregator responsible for sharing the parameters that are used by the algorithm to determine allocation of work, grounds for denial of work, the categorisation of workers and how



ISTOCKPHOTO

personal data of workers is being used to determine their ability to work and earn through the aggregator. The Bill breaks the algorithmic control the companies have and allows workers to take back control for at least some part of their work lives.

The myth of flexibility

The second myth that is perpetuated is that persons engaged in platform work enjoy flexible work arrangements. This assertion has enabled platforms to keep gig-based workers away from protections under labour laws. Multiple studies have shown how the term flexibility is abused in the industry. All flexibility in truth rests only with the employer and none with the worker. The payment structure consisting of a number of incentive schemes which enable workers to earn the minimum

surplus required to cover costs, in effect, leaves no flexibility with the workers. For instance, workers have to comply with mandatory login hours to be eligible for incentives. If they log in after gaps of being 'inactive', they have to make peace with disadvantaged rate cards and incentive schemes. Karnataka's draft Bill introduces provisions that mandate fair contracts, income security and the right of platform workers to refuse work without being slapped with sanctions. The above provisions strengthen the position of these workers who are at the same time not considered employees, nor do they enjoy the freedom and flexibility of being independent contractors.

The third myth is that these are 'part time' workers, who engage in platform-based gig work for additional income. According to a study of the

platform economy in India by PAIGHAM and the University of Pennsylvania, 96% of the cab drivers surveyed, secured 100% of their daily income from gigs. The corresponding figure for delivery workers was 90.7%. Average daily work hours for taxi drivers was in excess of 11 hours, and 10 hours for delivery workers. By making social security a mandatory requirement, the Karnataka Law takes a necessary step towards acknowledging this fact and makes room for an umbrella of schemes that can assist workers through events such as old age, death, health shocks etc.

India's stand

Even though the Government of India endorsed a progressive statement on the rights of platform workers at the G-20 last year, it's Code on Social Security, which is the only legislation that makes a passing reference to gig workers, has been detrimental as it delinks workers from minimum labour protections of wages, occupational safety and health. Significantly, it is the State Governments that are showing the way forward. Rajasthan is the first State to pass a legislation on the issue, closely followed by Karnataka. Jharkhand, Tamil Nadu, Haryana, Telangana are following suit.

In the political context of guarantees funded purely by the state exchequer, this law is an important development. It shows how social security for workers ought to also be financed from the market and that private actors should no longer be abdicated from their primary economic accountability towards workers. There are many things that could be improved in the Bill. These include the Bill's silence on critical issues such as minimum wage, occupational safety and health, working hours, and rights on collective bargaining. However, it is also true that this law allows workers to mobilise and assert for more.

Rakshita Swamy is Director, Social Accountability Forum for Action and Research and Biju Mathew is President, International Alliance of App Based Transport Workers.

THE GIST

The first myth that aggregators sell to entice people towards platform work is that they would have "no boss" and would be "partners" and "captains" – anything but workers.

The second myth that is perpetuated is that persons engaged in platform work enjoy flexible work arrangements. This assertion has enabled platforms to keep gig-based workers away from protections under labour laws.

The third myth is that these are 'part time' workers, who engage in platform-based gig work for additional income.

Text & Context

Text & Context pages will not be available on July 24, 2024

How and when can a bill be defined as a money Bill?

Why do money Bills have a special procedure for approval? What is the way forward?

GS Paper II: Money Bill

Kaugarajan.R

The story so far:

The Chief Justice of India (CJI) has agreed to list before Constitution Benches, the petitions challenging the money Bill route taken by the Centre to pass contentious laws/amendments.

What are money and financial Bills?

The Constitution defines certain categories of bills that deal with financial matters as money Bills and financial Bills. Article 110(1)(a) to (f) defines a money Bill as a bill that contains 'only' provisions dealing with one or more of six specific matters. They relate to taxation; borrowing by government; custody of consolidated fund or contingency fund and payment/withdrawal of money from such fund; appropriation out of consolidated fund; expenditure charged on consolidated fund; receipt on account of consolidated fund or public account or the audit of accounts of Union or States.

Clause (g) of Article 110 (1) provides that any matter incidental to these six matters can also be classified as a money Bill. Classic examples of money Bills include the Finance Act and the Appropriation Act that deal primarily 'only' with taxation and spending out of the consolidated fund respectively. Article 117 provides for two different categories of financial Bills. Category I contains any of the six matters mentioned in Article 110(1)(a) to (f) along with any other matter. Category II Bills do not contain any of those six matters but would involve expenditures from the consolidated fund.

What is procedure for a money Bill?

As per Article 109, a money Bill shall be introduced only in the Lok Sabha. After it is passed in the Lok Sabha, the Rajya Sabha has only 14 days to provide its recommendations on such a Bill which may or may not be accepted by the Lok Sabha. Money Bills deal 'only' with financial matters that are crucial for the administration of the country. Hence, the

Constitution provides for this special procedure that effectively requires only the approval of Lok Sabha where the ruling government enjoys a majority. It has its origin in the U.K., where in 1911 the powers of the unelected House of Lords over the Budget were curtailed. The Budget was required to be passed only by the House of Commons that reflected the will of the people. However, it must be noted that the operative word of the definition of a money Bill is the word 'only.' It is the Speaker of Lok Sabha who certifies a Bill to be a money Bill.

Financial Bills of Category I and II do not enjoy this special procedure.

What are the issues?

Certification of a Bill as a 'money Bill' by the Speaker came under judicial review during the scrutiny of the Aadhaar Act passed in 2016. This law contains provisions with respect to process for enrolment and authentication, establishment of authority for Aadhaar, mechanism for safeguards, and penalties

for offences under the Act. Section 7 of the Act provides that the Central or State government may require Aadhaar authentication of an individual as a condition for providing subsidy, benefit or service, for which expenditure is incurred from the consolidated fund. Stating the withdrawal of funds from the consolidated fund as the primary purpose of the Act, with all other provisions being incidental to it, this law was passed as a 'money Bill'. While this was a debatable classification, the Supreme Court upheld this with a majority of 4:1. The current CJI was the lone dissenting judge who held that the Aadhaar Act did not fulfil the definition of a 'money Bill'.

The Finance Act, 2017 was even more controversial, in passing amendments to various Acts for reorganisation of tribunals such as the National Green Tribunal, as a money Bill. These amendments were struck down in Rojer Mathew versus South Indian Bank (2019) wherein a five-judge Bench opined that the Aadhaar case judgment did not substantially discuss the effect of the word 'only' in the definition of money Bill. It referred the matter to a larger Bench for consideration. A seven-judge Bench should be constituted for an authoritative judgment on the definition of money Bills. The Speakers should also uphold the spirit of the definition while certifying a 'money Bill.'

Rangarajan. R is a former IAS officer and author of 'Polity Simplified'. Views expressed are personal.

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India may gain from Chinese FDI (23 July)

CEA highlights India's vulnerability to 'potential abrupt supply disruptions in input imports' from China as it seeks to boost its role in global supply chain; moots opening up to select investment from its neighbour that would bring tech know-how

- Chief Economic Adviser V. Anantha Nageswaran suggests that India could benefit from replacing some imports with investments from China.

- This strategy could help boost Indian manufacturing and integrate India into the global supply chain.
- It aligns with the global trend where economies are diversifying away from China, known as the 'China plus one' approach.
- Nageswaran's comments are part of a chapter in the Economic Survey discussing India's growth strategy.
- He seems to support reviewing the restrictions on Chinese investment that were imposed in 2020 to protect Indian firms during the COVID-19 pandemic.
- Nageswaran notes that India's economic relationship with China is complex and India's economy is still much smaller compared to China's.
- He suggests India could benefit by either integrating into China's supply chain or encouraging Chinese investment.
- He believes that foreign direct investment (FDI) from China could be more beneficial than relying on imports due to the large trade deficit between the two countries.
- Replacing some imports with Chinese investments could help build domestic expertise in the long term, despite potential risks.
- Nageswaran acknowledges that while there are risks, India must choose between less ideal options in a challenging situation.

Financial sector must brace for global vulnerabilities (23 July)

- India's banking and financial sectors performed well in FY24 but must prepare for global and local risks.
- The Finance Ministry's Economic Survey advises that the government and regulators need to be proactive with policy changes and regulatory actions.
- The financial sector is evolving: banks' role in credit is decreasing while capital markets are gaining importance.
- This shift is positive for India's goal of becoming a developed nation by 2047, but it also brings new challenges.
- In FY24, bank credit grew strongly, and banks' asset quality improved with fewer non-performing assets.
- Insurance and pension fund assets in India are lower compared to the USA, indicating room for growth.
- Artificial intelligence and machine learning could be the next major changes in the financial sector.

Consider keeping food prices out of inflation target: CEA (23 July)

- India's short-term inflation outlook is positive, with prices expected to align with the 4% target by 2025-26.
- Chief Economic Adviser V. Anantha Nageswaran suggests that an inflation-targeting framework should exclude volatile food prices.
- Food prices are often affected by supply issues rather than demand, so using monetary tools to manage food price inflation might not be effective.
- Instead, targeting inflation without considering food prices could be more practical.
- Support for low-income consumers affected by high food prices could come from direct benefit transfers or purchase coupons.
- Nageswaran recommends using high-frequency data on essential food items and a producer price index to better understand and manage inflation caused by rising production costs.

Formalisation, credit key MSME challenges (23 July)

- Micro, Small, and Medium Enterprises (MSMEs) face several challenges, including issues with formalization, access to finance, markets, technology, infrastructure, and skills.
- In FY22, MSMEs contributed 35.4% to India's manufacturing output.
- MSME products accounted for 45.7% of India's exports in FY24.
- The Economic Survey indicates that policies for MSMEs have not yet achieved the desired results.
- The Finance Ministry recognizes the difficulties in formalizing the MSME sector and urges the financial sector to support capital formation, trade, business, and investments in MSMEs.

Allow farmers to benefit from higher global prices, says CEA (23 July)

- Farmers should benefit from higher international prices, and food export bans should only be used in exceptional cases.
- Chief Economic Adviser V. Anantha Nageswaran suggests letting market forces and consumer substitution (like switching from sugar to jaggery) handle domestic supply issues.
- It's easier for consumers to adjust their consumption than for farmers to face losses from sudden export bans or large imports.
- The agriculture sector is vital for India's economy, growing at an average rate of 4.18% over the last five years.
- Agriculture supports 42.3% of the population and contributes 18.2% to GDP.
- Provisional estimates show the sector's growth rate dropped to 1.4% in 2023-24 from 4.7% in 2022-23 due to poor monsoons caused by El Niño.
- Allied sectors like animal husbandry, dairying, and fisheries are becoming more important for boosting farmers' incomes.

Coal India bags first critical mineral asset (23 July)

- Coal India has acquired its first critical mineral asset, a graphite block, in Madhya Pradesh.

Coal India bags first critical mineral asset



Green fillip: Graphite has its utility as an anode material in lithium-ion battery manufacturing. GETTY IMAGES/ISTOCK

Press Trust of India
NEW DELHI

State-owned Coal India on Monday said it has bagged the first critical mineral asset, a graphite block, in Madhya Pradesh. Owning a graphite asset will give Coal India an advantage in powering green energy transition momentum to an extent, according to a statement.

“Coal India Ltd. (CIL) has successfully opened its account in domestic critical mineral asset emerging as the preferred bidder for Khattali Chotti graphite block in Alirajpur district of Madhya Pradesh,” the PSU said in the statement.

The company accounts for more than 80% of domestic coal output.

“This was under tranche two forward auction held on 9th July by the Ministry of Mines,” it said.

The company won the bid quoting a mining premium of 150.05% of the value of mineral despatch. Further, a composite licence will be issued to CIL in a year after the firm meets the formalities under the notice inviting tender timeline. India imports about 69% of its graphite needs – natural, synthetic and end-use products.

Graphite has its utility as an anode material in lithium-ion battery manufacturing due to its relatively low cost and energy density. With the electric vehicle market and energy storage systems fast gaining traction, where lithium-ion cells are used, graphite has a big market.

The market size for graphite is projected to take a big leap with the absolute demand projected to shoot up at the rate of 25-27% by FY35 from the current level.

- This graphite block could help Coal India support green energy initiatives.
- Coal India emerged as the preferred bidder for the Khattali Chotti graphite block in Alirajpur district.
- The company won the bid with a mining premium of 150.05% of the mineral's value.
- A composite licence for mining will be issued after Coal India completes necessary formalities.
- India currently imports about 69% of its graphite needs.
- Graphite is important for making lithium-ion batteries used in electric vehicles and energy storage.
- The demand for graphite is expected to grow significantly, with an increase of 25-27% projected by FY35.

Junta chief takes over as acting president (23 July)

- Myanmar's acting President, U. Myint Swe, is on medical leave and has transferred his duties to the military chief, Min Aung Hlaing.
- Myanmar has been unstable since the military took over in 2021, removing Aung San Suu Kyi's government.
- U. Myint Swe is receiving treatment for health issues, including “psychomotor retardation and malnutrition.”
- He was Vice-President under Aung San Suu Kyi's government and was appointed acting President by the military junta.