

● POLITY

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INTERNATIONAL RELATIONS

30 KILLED IN TWIN EXPLOSIONS ON THE EVE OF PAKISTAN GENERAL ELECTION

CONTEXT: At least 30 persons were killed and more than 40 others injured on Wednesday in twin blasts targeting election offices in Pakistan's restive Balochistan province, a day before the general elections in the country.



In the first incident, a powerful blast outside the office of independent candidate Asfandiyar Khan Kakar in Pishin district killed 20 people and wounded 30 others. Less than an hour later, another blast took place outside the election office of a Jamiat Ulema-e-Islam Pakistan in the Killa Abdullah area claiming the lives of 10 people and injuring 22 others. No group or individual claimed responsibility for the twin blasts.

'To deter people'

The front runner for the polls is former Prime Minister Nawaz Sharif who is believed to have the backing of the powerful military. Pakistan Muslim League-Nawaz is tipped to emerge as the single largest party in the elections. If elected Mr. Nawaz Sharif, 74 will be eyeing the premiership for a record fourth time in Thursday's election.

Mr. Khan's Pakistan Tehreek-e-Insaf candidates are contesting the polls independently after the Supreme Court upheld the decision of the election commission to deprive his party of its iconic election symbol of cricket 'bat'.

The contest also involves the Pakistan People's Party of Bilawal Bhutto Zardari, who has been declared as the party's Prime Minister face.



"Education is the ability to listen to almost anything without losing your temper or your self-confidence." - Robert Frost

INTERNAL SECURITY

MIXED REACTIONS IN NE TO CENTRE'S MOVE TO FENCE INDIA-MYANMAR BORDER

CONTEXT: Home Minister Amit Shah's announcement that the Centre would fence the India-Myanmar border to facilitate better surveillance and pave a patrol track has evoked mixed reactions from the rulers of five north-eastern States.



While the Chief Ministers of Arunachal Pradesh, Assam, and Manipur have welcomed the decision, their Mizoram and Nagaland counterparts are against putting up a barbed wire fence along the 1,643 km border between the two countries. Of these States, only Assam does not share its border with Myanmar

First to raise demand

Manipur Chief Minister Nongthombam Biren Singh was the first to demand barbed wire fencing along the border with Myanmar. In September 2023, he appealed to the Centre to scrap the Free Movement Regime (FMR) agreement between the two countries that allows border residents to travel up to 16 km in each other's territory without any visa.

Arunachal Pradesh Chief Minister Pema Khandu also expressed confidence that the fencing project would "check the movement of unscrupulous elements" between Arunachal Pradesh and Myanmar.

Assam Chief Minister Himanta Biswa Sarma also said fencing would reduce incidents of cross-border insurgency and infiltration.

Reactions

The extremists had been exploiting the Free Movement Regime (FMR) to stoke ethnic violence in Manipur since May 3, 2023. Fencing could prevent Myanmar nationals from entering his State illegally.

Members of extremist groups such as the United Liberation Front of Asom (Independent) have been carrying out hit-and-run operations in Assam from Myanmar by travelling through a mostly jungle stretch of hilly land straddling Arunachal Pradesh and Nagaland.

Based primarily in Manipur and Nagaland, the Isak-Muivah faction of the NSCN has opposed the fencing plan that it said would cut off Nagas living on either side of the border. Similarly, the Myanmar-based Khaplang-Yung Aung faction is against the fencing.

'Right to live together'

Mizoram Chief Minister Lalduhoma and his Nagaland counterpart Neiphiu Rio are against erecting a barbed wire fence along the border. The plan is unacceptable, adding that people of the Zo community inhabiting both Mizoram and Myanmar have a right to live without any barrier between them.



HISTORY

390-YEAR-OLD LAMP POST IN NALGONDA UNRAVELS TRADE LINKS OF TELANGANA

CONTEXT: Archaeologists working in the area found the 20-foot-tall pillar 390-year-old Deepastambham (lamp post) with hollows for lamps and a multi-lingual inscription in Mudimanikyam village of Nalgonda on the edge of River Krishna in Nalgonda district of Telangana casts a fresh light on trade ties in the region in early medieval times.



While Dhvajasthambam (flag pole) is part of temple architecture, lamp posts are rare in the Deccan while they are common in temples in the west coast, including Goa.

Dated to June 1635

Based on the inscription engraved on the lamp post near the ruined Śiva temple, the pillar can be dated to June 1635 and it is written in Telugu mixed with Tamil language. It is dedicated to Kasi Viswanatha and because of its height, it would have served as a

lighthouse on the riverine trade route. The inscription was engraved by Madiraju Narasayya of Yidupulapāti and erected by Polinedu, son of Vali Munulayya.

The village is about 180 kilometres from Hyderabad which was ruled by the Qutb Shahi rulers at that time. European travellers, including the French diamond trader Tavernier who made five trips to the Hyderabad kingdom in the same period, describe land trade routes. But make reference to riverine trade.

The team of archaeologists also discovered an eighth century inscription recording a grant during Badami Chalukya rule in the region showing that the village was part of trade route over the millennia.

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INTERNAL SECURITY

KUKI-ZO DELEGATION MEETS HOME MINISTRY OFFICIALS

CONTEXT: A nine-member delegation of Kuki-Zo groups met a team of officials from the Union Home Ministry on Wednesday.

The meeting was led by A.K Mishra, Adviser, Northeast, Ministry of Home Affairs, and Intelligence Bureau officials. The delegation of Kuki-Zo groups raised the scrapping of the Free Movement Regime (FMR) with Myanmar, and the January 24 Kangla Fort incident in Imphal when Arambai Tenggol, a radical Meitei group, administered oath to elected representatives to “protect the integrity of Manipur. The tribal delegation also raised the issue of continued power outages in the hill districts of Churachandpur and Pherzawl.

On Tuesday, Mr. Shah said that the government had decided to construct a fence along the 1,643-km border with Myanmar, effectively ending the FMR.

Under the FMR, every member of the hill tribes, who is either a citizen of India or a citizen of Myanmar, residing within 16 km of either side of the border, can cross the border on the production of a border pass, usually valid for a year, and can stay up to two weeks per visit.

India and Myanmar share an unfenced border and people on either side, including the Kuki-Zo people, have familial and ethnic ties that prompted the arrangement in the 1970s. The Free Movement Regime was last revised in 2016.

INTERNAL SECURITY

CDS URGES INDUSTRY TO WORK ON COUNTER-SPACE CAPABILITIES

CONTEXT: Chief of Defence Staff (CDS) General Anil Chauhan emphasised that the government is encouraging all the stakeholders, including start-ups, for the development of a dependable space ecosystem within the country as a deterrent for safeguarding India’s space assets.



The number of start-up in space sector increased from one in 2014 to 204 start-ups with 54 additions in 2023 itself. In 2023, the start-ups received \$123 million in funding, bringing the total funding to \$380.25 million.

Space economy

The Indian space economy is currently estimated to be around \$ 8.4 billion. The indigenous space economy is expected to grow to \$ 44 billion by 2033.

The government initiatives like seed fund scheme, 0% GST regime, sharing of testing facilities, technology transfer have provided the rightful support to the private industry.

The CDS referred to the 75 space-related challenges as part of Mission DefSpace-2022 under the iDEX initiative mentioning the government’s major initiatives in the space domain towards strengthening the capabilities of the armed forces.

Under this initiative, a total of five contracts have been signed and an additional four contracts are at various stages of documentation. In similar timelines, a feasibility study of 12 Make-I (Make In India) challenges is also being progressed.

SCIENCE AND TECHNOLOGY

IN BREAKTHROUGH, NEURAL NETWORK ‘EXPLAINS’ HOW IT FOUND NEW ANTIBIOTIC



‘Enhancing drug development’

Researchers used deep-learning identify the chemical motifs – technically called substructures – their model used to check whether a given compound could be an antibiotic. The team also demonstrated the efficacy of two compounds from this novel class of antibiotics in mice infected with methicillin-resistant *Staphylococcus aureus* (MRSA). MRSA infections were responsible for more than 100,000 human deaths in 2019.

The study would help in advancing “our understanding in specific antibiotic research” and providing “a broader model for enhancing drug development strategy. Being able to isolate substructures that have a certain tested property may be critical in scientific understanding as well as expediting drug discovery efforts.

Deep-learning, explain yourself

All artificial neural networks are made of artificial ‘neurons’. These are algorithms that receive an input, perform

a computation, and relay the output. Deep-learning neural networks have three or more layers of such 'neurons'.

Using these neural networks to make predictions has two steps: training and testing. In training, the network is provided with a large amount of annotated inputs.

With most deep-learning networks, researchers have not been able to identify which aspects of the novel input the network used to make its evaluation. This renders most deep learning models a black box.

On the other hand, an explainable deep-learning network can identify potential antibiotics and also explain what substructures may contribute to its antibiotic activity, scientists can synthesise and test compounds with these substructures faster.

Predictions and rationales

Felix Wong, a researcher at the Broad Institute, co-founder of Integrated Biosciences, and lead author of the paper, started by experimentally screening more than 39,000 compounds for their ability to inhibit the growth of *S. aureus*. These contained "most known antibiotics, natural products, and structurally diverse molecules". They finally shortlisted 512 compounds. Testing the 512 active compounds on lab-grown human cells, the researchers found 306 compounds that don't harm human cells.

The team trained a Graph Neural Network (GNN) representing atoms as "nodes" and the bonds between them as "edges" on a mathematical graph on this dataset to identify cytotoxic compounds. In the testing phase, the GNNs were exposed to a database of more than 1.2 crore compounds, and the networks identified 3,646 compounds that could be antibiotic.

Researchers hypothesised that the GNNs made their predictions based on a molecule's substructures. (For example, several antibiotics have substructures called beta-lactam rings.) The team dubbed those substructures directly responsible for a compound's antibiotic property 'rationales'.

Using a different algorithm, the team determined the rationales of the 3,646 compounds – including previously known ones like beta-lactam rings, cephalosporin, and quinolone bicyclic rings.

Against MRSA and VRE

While determining the rationales for 380 compounds from the set of 3,646, the team found some that had not been previously reported and which the GNNs predicted could confer antibiotic properties to molecules. One such rationale was N-[2-(2-chlorophenoxy) ethyl]aniline (shown above). On further tests, two compounds containing this rationale were found to inhibit the growth of MRSA cultures by changing the concentration of hydrogen ions across the bacterial cell membrane.

Notably, the compounds were also effective against vancomycin-resistant enterococci (VRE), a bacteria responsible for more than 5,400 deaths in the U.S. in 2017.

Finally, the team tested one compound in mouse models of MRSA-related skin and thigh infections and found that it effectively reduced the extent of infection.

ECONOMICS AND DEVELOPMENT

FINANCE PANEL MOOTS 'OPEN ARCHITECTURE' FOR INSURANCE AGENTS

CONTEXT: The Standing Committee on Finance headed by BJP MP Jayant Sinha in a report titled "Performance Review and Regulation of Insurance Sector" has recommended the introduction of an "open architecture" concept for insurance agents so as to facilitate a larger outreach of insurance products and a stronger distribution infrastructure in the country.

Currently, under the Insurance Act 1938, an insurance agent can associate with one life, one non-life and one health insurance company for distribution of insurance products. An "open architecture" would pave the way for insurance agents to associate with multiple insurance firms.

Better expansion

An 'Open Architecture' for agents would result in higher insurance penetration while accelerating financial inclusion and lower distribution costs. It will also provide an equitable footing for the insurance agents vis-a-vis the insurance intermediaries.

Also, customers would have access to more options at a competitive price. However, the Committee recommend extensive industry consultations to ensure policies provide a level-playing field to all players and do not unduly disadvantage incumbents.

Additionally, any changes should be implemented over a period of time to enable all participants to prepare for these major changes, as per the report.

Regulator IRDAI, in 2022, widened the open architecture for bancassurance by allowing a bank to distribute products of nine insurers (earlier three) each of life, general and health segments.

Low coverage

Although the insurance industry in India has shown dynamic growth in recent years, with total insurance premiums increasing rapidly, the penetration and density of Indian insurance products are still low, reflecting the under development of the sector.

Comprising about 2% of the global insurance market in 2020, the Indian insurance sector has a long way to go compared with those in advanced economies, the Panel noted

The Panel has also recommended insurance companies may be permitted to provide risk management and other value added services ancillary to the insurance business as insurance is not just about the underwriting of risk but also the management of risk and value-added services.



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ECONOMICS AND DEVELOPMENT

'RETAIL INFLATION LIKELY EASED IN JAN.'

CONTEXT: Price trends for food plates and essential commodities for the last month indicate cooling of India's consumer price inflation (CPI) in January from the four-month high of 5.7 % recorded in December.



Significant drop

The RBI predicted a likely 'uptick' in in headline retail inflation. The National Statistical Office's provisional reading of headline inflation shows the Consumer Price Index rose by 5.55 % year-on-year to a three-month high, from October's 4.87 %, food price gains measured by the Consumer Food Price Index accelerated by a steep 209 basis points to 8.7 % last month.

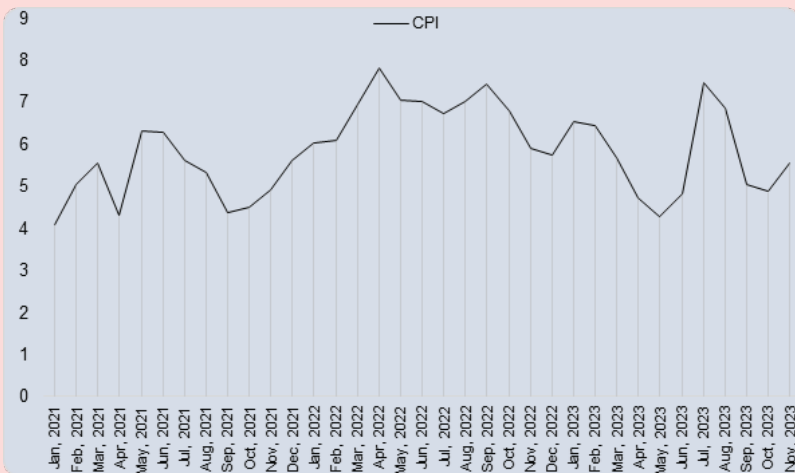


FIGURE: Line chart representation of retail price index-based inflation rates. Inset. Bar chart representation of the of All India Retail Price Indices for food articles and Rates of Inflation (Base Year: 2011-12=100) for December, 2023.

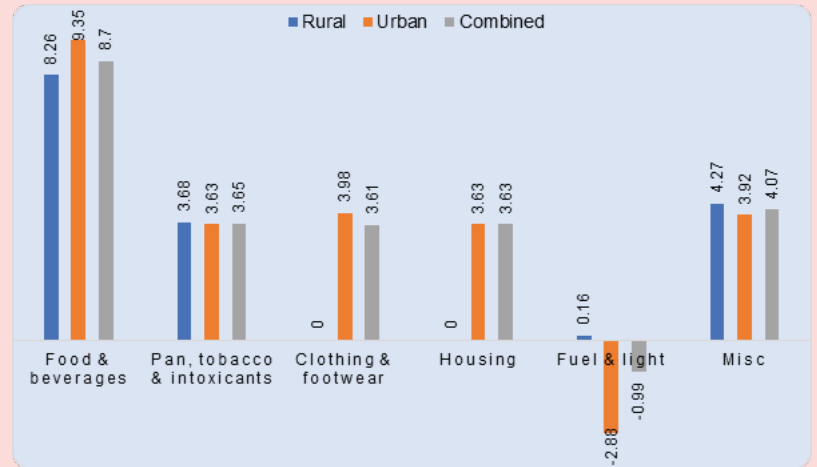


FIGURE: Column chart representation of All India Consumer Price Indices based rates of Inflation (Base Year: 2011-12=100) for December, 2023.

Among the 22 major States that the National Statistical Office computes inflation rates for, Odisha recorded the highest inflation at 7.65 % in November, followed by Rajasthan at 7 %, and Haryana with 6.8 %.

The inflation rate was above the central bank's tolerance threshold of 6 % in eight States, including Gujarat, Bihar, Punjab, Karnataka and Telangana. Uttar Pradesh, with a 5.56 % inflation, was the only other major State to witness higher inflation than the national average of 5.55 %.

WHOLESALE PRICE INFLATION

In December 2023, the Wholesale Price Index (WPI)-based inflation surged to a nine-month high of 0.73 %, marking a significant rebound from the negative zone observed from April to October. This positive trajectory, a continuation from November's 0.26%, was primarily driven by notable increases in food prices.

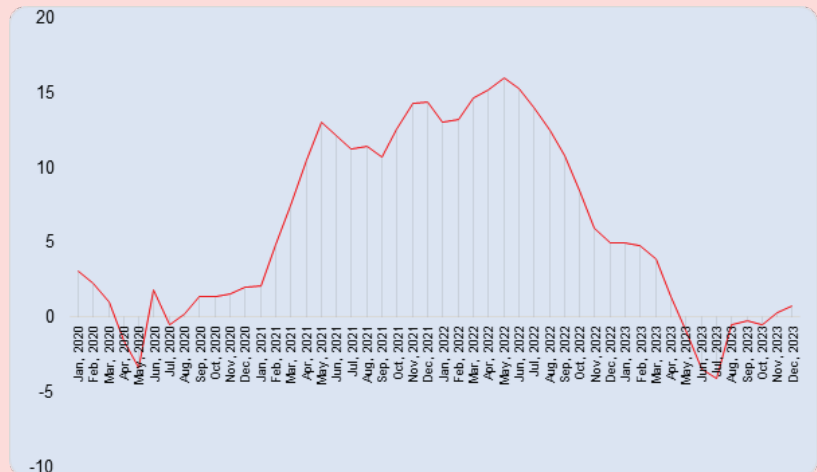


FIGURE: Line chart representation of wholesale price index-based inflation rates. Inset. Bar chart representation of the of All India Wholesale Price Indices for food articles and Rates of Inflation (Base Year: 2011-12=100) for December, 2023.

The spike in WPI inflation is attributed to a sharp rise in prices of food articles, machinery & equipment, other manufacturing, other transport equipment, and computer, electronics & optical products. Food inflation soared to 9.38 % in December, up from 8.18 % in November. Notably, vegetable

prices witnessed a remarkable increase of 26.30 %, while pulses recorded a 19.60 % inflation rate.

Simultaneously, the retail or Consumer Price Index (CPI) for December reached a four-month high of 5.69 %, as revealed in recent data. In response to the inflationary trends, the Reserve Bank, in its bi-monthly monetary policy last month, maintained interest rates, flagging concerns over the escalating food inflation observed in November and December.

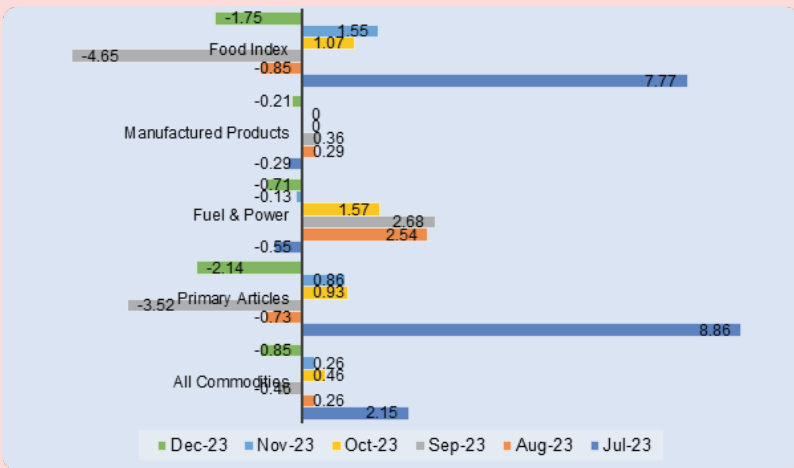


FIGURE: Line chart representation of topic-based wholesale price index-based inflation rates. Inset. Bar chart representation of the of **All India Wholesale Price Indices for and Rates of Inflation (Base Year: 2011-12=100) for December, 2023**

a blowout U.S. jobs number and a cautious message from the Fed cautioned of a rebound in inflationary rates with interest rate cuts by Federal Reserves. Yields on the benchmark 10-year Treasury, which move inversely to price, have surged in recent days and now stand 20 basis points above December's lows.

Fed Holds Steady, Signaling Rate Cuts for 2024

Upper limit of the U.S. federal funds target rate range*



* Dotted lines indicate median projections of the midpoint of the appropriate target rate range at the end of the specified calendar year
Source: U.S. Federal Reserve



ECONOMICS AND DEVELOPMENT

UNCERTAINTY CREEPS BACK INTO TREASURY MARKET AFTER FED, BLOCKBUSTER DATA

CONTEXT: Federal Reserve cutting interest rates reverberated through the fixed income market, heightening risk for those betting the explosive rally that took bonds higher at the end of 2023 will continue this year.



Investors piled into Treasuries late 2023 expecting cuts in Fed interest rates as soon as the first quarter of this year, sending government bond prices roaring back from 16-year lows. Many are now recalibrating those bets following

Investors are less certain of the Federal Reserves' timeline and degree regarding interest rate cuts. Worries over an expected surge of bond supply resulting from government issuance are also sapping bulls' enthusiasm. Futures tied to the Fed's policy rate late Tuesday showed investors assigning about a 20% chance of the Fed cutting interest rates in March, down from 64 % a month ago.

'No March cut'

Fed Chair Jerome Powell shot down expectations of a March cut at the end of last week's monetary policy meeting, citing the need for greater confidence of inflation to move towards its 2% target.

The probability of a first rate cut coming in May, meanwhile, has increased to 55 % from 37 % a month ago. Investors are now pricing in a total of 122 basis points in cuts in 2024, from around 150 in mid-January.

Less risk

Nearly \$2 trillion in expected new U.S. government bond issuance this year is also keeping investors wary, as many believe yields will have to rise in order to attract buyers. U.S. fiscal worries exacerbated the Treasury selloff in October, and rating agencies Fitch and Moody's warned last year about the burden of higher interest rates on state coffers.

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POLITY AND GOVERNANCE

OVER 20,000 FCRA LICENCES CANCELLED, MOST FROM T.N.

Denying foreign funding

The data for charts and tables were sourced from Foreign Contribution (Regulation) Act portal maintained by the Ministry of Home Affairs and Rajya Sabha answers



Chart 1: The chart shows the year-wise break-up of licence cancellations

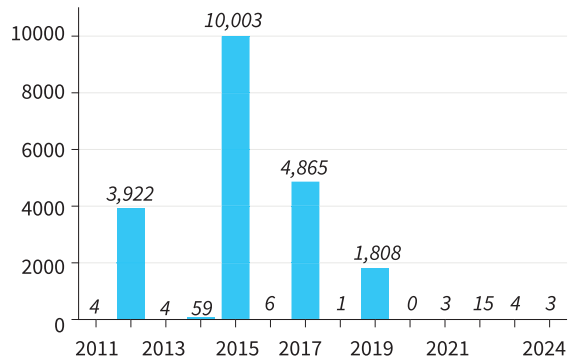


Chart 2: The chart shows the State-wise number of active, expired and cancelled FCRA licences till date

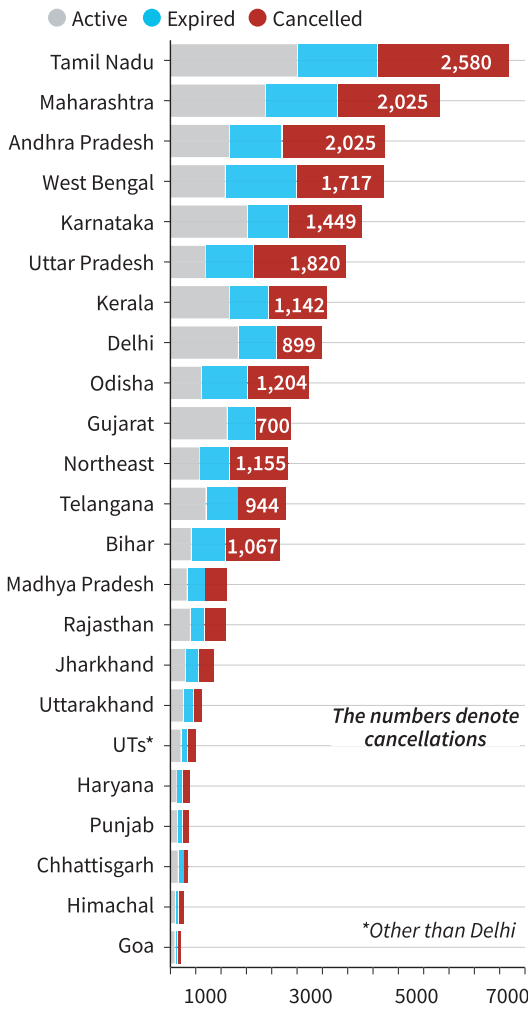
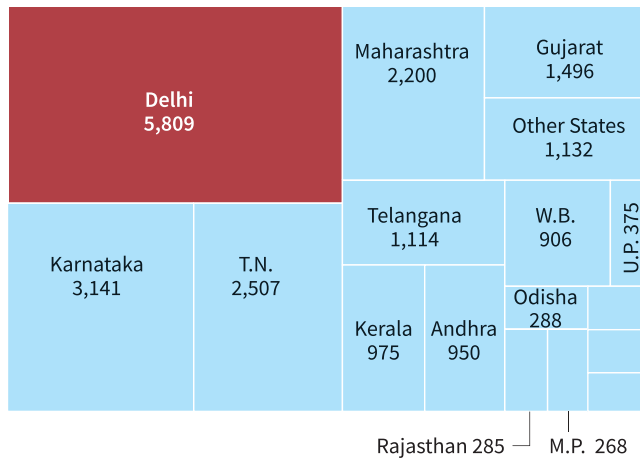


Table 3: The table shows the break-up of organisations with an active FCRA licence

State	Religious (non-christian)	Religious (Christian)	Educational	Social
T.N.	95	515	1,680	2,174
Maharashtra	65	213	1,295	1,489
Karnataka	83	448	1,020	1,215
Delhi	44	115	783	1,114
Kerala	28	619	603	856
Andhra	27	326	811	1,094
Gujarat	127	153	845	863
W.B.	92	128	739	956
Telangana	20	149	465	628
U.P.	63	98	417	595

Chart 4: The chart shows State-wise foreign contribution received in FY 2021-22 (in ₹ crore)



Last week, the Central Bureau of Investigation (CBI) registered a case of alleged Foreign Contribution (Regulation) Act (FCRA) violation against human rights activist Harsh Mander and his NGO Centre for Equity Studies (CES). FIRs were registered based on a complaint from the Union Home Ministry. The agency allegedly found that the NGO transferred some amount to certain individuals from the FCRA account, apart from salary/wages/remuneration, which is a violation of the Act.

The action against CES is the latest incident in a series of measures against civil society and NGOs. Last month, FCRA registrations of Delhi-based Centre for Policy Research (CPR) and World Vision India were cancelled. In 2023, the Home Ministry had recommended a CBI investigation into Oxfam India for allegedly violating FCRA provisions. CBI also conducted searches and registered a case against news portal NewsClick for violating FCRA in December 2023.

The government uses FCRA to regulate the foreign funds received by NGOs "to prevent any possible diversion for activities detrimental to national interest." Organisations have to compulsorily register under the Act if they wish to receive foreign funding. Over 20,000 FCRA licences have been cancelled till February 4.



"If you invest more in your education, then you are likely to get more interest in it."
—Benjamin Franklin

ECONOMICS AND DEVELOPMENT

UAE WEALTH FUND SAID TO PLAN \$4-5 BN INVESTMENTS VIA INDIA'S NEW FINANCE HUB

CONTEXT: Abu Dhabi Investment Authority (ADIA), the largest sovereign wealth fund in the United Arab Emirates (UAE), is setting up a \$ 4-5 billion fund to invest in India through a tax-neutral finance hub.

The regulatory authority for financial services at Gujarat International Finance Tec-City, or GIFT City, has granted in-principle approval to ADIA to set up the fund, sources said, declining to be identified as they are not authorised to speak to media.

ADIA's intention to establish a presence in the hub was first announced last July. With the approval, ADIA will become the first sovereign wealth fund to begin investing in India via GIFT City.

Trade between India and the UAE totalled \$ 85 billion for the financial year ending March 2023. The Arab nation is host to one of the largest Indian diaspora populations in the world at 3.5 million, which constitute almost 35 % of UAE's total population.

Funds which set up at GIFT City can invest in Indian and foreign equities and debt securities, among other assets. In recent months tried to boost activity at the GIFT City, including by allowing firms which are unlisted in India to list shares directly at exchanges there.



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