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7 PM COMPILATION

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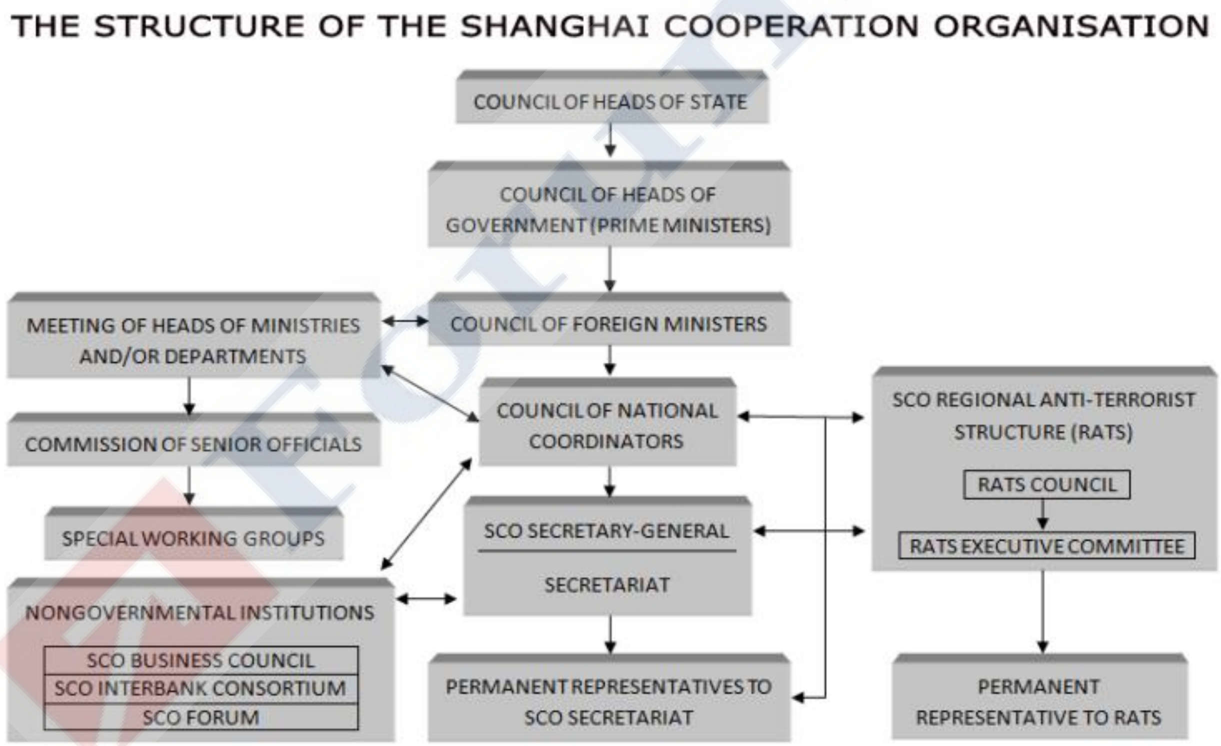
SCO (Shanghai Cooperation Organization) – Significance & Challenges – Explained Pointwise

The **25th SCO Summit** is being held from **August 31 to September 1, 2025**, in **Tianjin, China.** It marks the **fifth time China hosts the summit** and is expected to be the **largest gathering** in SCO history. Leaders from over **20 countries**, plus heads of about **10 international organizations**, will be present. PM Narendra Modi is also attending the summit – marks his first visit to China since 2019.
In this regard, let us understand the significance & challenges of the Shanghai Cooperation Organization (SCO).

What is SCO?

- **Shanghai Cooperation Organization (SCO)** is a Eurasian political, economic, international security, and defense organization. It was established on June 15, 2001, in Shanghai, China.
- SCO's roots lie in the **"Shanghai Five"** formed in 1996, consisting of **China, Russia, Kazakhstan, Kyrgyzstan, and Tajikistan.** This group was initially created to address security concerns and manage border issues after the dissolution of the Soviet Union. With the admission of **Uzbekistan** in 2001, the "Shanghai Five" was officially transformed into the SCO.
- At present, SCO comprise of 10 members: **People's Republic of China, Kazakhstan, Kyrgyzstan, Russia,** and **Tajikistan**, **Uzbekistan, India** and **Pakistan** (both joined in 2017), **Iran** (joined the in 2023), and **Belarus** (joined in 2024).



What is the SIGNIFICANCE of SCO?

1. Geopolitical and Strategic Influence:

- The SCO is the world's largest regional organization in terms of geographic scope and population. It covers approximately 80% of the Eurasian landmass and about 40% of the world's population.

- Its members range from nuclear powers (Russia, China, India, Pakistan, and now Iran) to resource-rich Central Asian states. This diversity of political systems, economies, and cultures makes it a unique platform for dialogue.

2. Economic and Connectivity Potential:

- SCO member states collectively account for about 30% of global GDP. The inclusion of major economies like India and resource-rich nations like Iran further enhances its economic weight.
- With the inclusion of Iran, the SCO members control a significant percentage of the world's oil (20%) and natural gas (44%) reserves. The **SCO Energy Club** promotes cooperation between major energy producers and consumers within the bloc.
- SCO emphasizes promoting connectivity and infrastructure development across Eurasia. It aligns significantly with China's Belt and Road Initiative (BRI) (though India has concerns about BRI), promoting projects that enhance trade networks and transportation routes, such as the Central Asia–China Gas Pipeline.

3. Counter-Terrorism and Security: A primary and highly successful initiative of the SCO is its focus on combating terrorism, separatism, and extremism. The **Regional Anti-Terrorist Structure (RATS)** based in Tashkent facilitates intelligence sharing and coordinated efforts against these threats, making it the primary security organization in Central Asia.

4. Regional Stability in Eurasia: The SCO plays a crucial role in maintaining peace, security, and stability across the vast Eurasian region, particularly in Central Asia, which is strategically vital. While not always directly intervening, the SCO provides a platform for its members to discuss and coordinate approaches to regional issues, including the instability in Afghanistan.

5. Platform for Dialogue: The SCO provides a crucial platform for high-level political and security dialogue among its diverse members, including those with bilateral tensions (e.g., India-China, India-Pakistan). This can help in de-escalating tensions and fostering understanding.

6. Consensus-Based Decision Making: While dominated by China and Russia, the SCO's consensus-based decision-making process means that all members (including India) have a voice, even if it sometimes leads to slower action.

7. Quad vs. SCO: India's membership in the Quadrilateral Security Dialogue (Quad) with the US, Japan, and Australia, which is often seen as a grouping to counter China's influence, creates a delicate balancing act. Thus, India maintains its strategic autonomy by being part of both "pro-Western" and "non-Western" blocs.

What are the LIMITATIONS/CHALLENGES of SCO?

1. Internal Conflicts and Bilateral Tensions:

- **India-China Border Disputes:** Ongoing border disputes and geopolitical tensions between India and China (e.g., the Ladakh standoff) frequently spill over into SCO discussions, making it difficult for the two major powers to fully cooperate on broader issues.
- **India-Pakistan Animosity:** The historical animosity and persistent issues between India and Pakistan create a challenging environment for consensus-building. India often expresses concerns about cross-border terrorism emanating from Pakistan, which Pakistan may try to deflect or downplay within the SCO forum.

- **Central Asian Border Disputes:** Conflicts and border disputes between Central Asian member states (e.g., Kyrgyzstan-Tajikistan) can also affect regional stability and divert the SCO's focus.
- **Lack of Conflict Resolution Mechanism:** The SCO lacks a formal and effective mechanism for resolving disputes between its member states, which means bilateral tensions often fester and can impede collective action.

2. Dominance of China and Russia: There is an inherent power imbalance within the organization, with China and Russia being the dominant players. This can lead to concerns among other members about disproportionate influence and decision-making, particularly from China due to its growing economic might e.g. The official languages of SCO are Russian & Chinese.

3. Lack of a Free Trade Area: Despite discussions, the SCO does not have a comprehensive free trade agreement among its members. This limits its potential for deep economic integration compared to other blocs like ASEAN or the EU.

4. "Anti-Western" Perception: Despite its claims of being an open and non-aligned organization, the SCO is often perceived by Western countries as a grouping aimed at challenging the US-led global order and a potential counter to NATO. This perception can limit its ability to engage with Western partners on global issues.

5. BRI Concerns: China's Belt and Road Initiative (BRI), particularly the China-Pakistan Economic Corridor (CPEC) which passes through Pakistan-Occupied Kashmir (PoK), remains a major sovereignty concern for India. While all other SCO members endorse BRI, India remains isolated in its opposition, which limits its participation in some economic connectivity initiatives within the SCO framework.

6. Limited Mandate: While expanding, the SCO's primary focus remains on security (the "three evils" of terrorism, separatism, extremism). This strong emphasis sometimes overshadows other crucial areas like economic and cultural cooperation, which could offer broader benefits.

What can be the WAY FORWARD?

1. Strengthening Trust and Dialogue: While the SCO is a multilateral forum, its most immediate utility for managing internal tensions often lies in providing opportunities for high-level bilateral meetings on its sidelines (e.g., India-China, India-Pakistan). These informal channels can be crucial for de-escalation and addressing specific grievances.

2. Unified Stance on Terrorism:

- **Zero Tolerance, No Double Standards:** The SCO must unequivocally condemn terrorism in all its forms and manifestations, without any justifications or differentiation between "good" and "bad" terrorists.
- **Actionable intelligence sharing:** SCO needs to actively utilize the **Regional Anti-Terrorist Structure (RATS)** for intelligence sharing, capacity building, and joint exercises & also push for RATS to be more effective and less susceptible to political maneuvering by individual members.

3. Deepening Economic and Connectivity Initiatives:

- Identify specific sectors for enhanced cooperation, such as energy (including renewables), agriculture (food security), pharmaceuticals, and digital technology, where members have complementary strengths.

- **Leverage Existing Corridors:** Fully utilize and expand existing and nascent corridors like INSTC, promoting their integration with regional transport networks.
- **Digital Connectivity:** Emphasize digital infrastructure development, cross-border e-commerce, and digital payment systems to foster seamless economic interaction e.g., sharing India's UPI success, digital public infrastructure models.

4. Non-Traditional Security Threats:

- **Counter-Narcotics:** Enhance cooperation through RATS to combat illicit drug trafficking, which often funds terrorism and organized crime in the region.
- **Cyber Security:** Push for joint initiatives and capacity building in cybersecurity, a growing threat to all member states.
- **Disaster Management:** Promote cooperation in disaster response and humanitarian assistance, drawing on India's expertise and resources.
- **Climate Change:** Advocate for greater cooperation on climate change mitigation and adaptation strategies, particularly given the shared environmental challenges like water scarcity and desertification in the region.

Conclusion:
For India, the SCO remains a platform of both opportunities and constraints. Thus, India needs to devise a strategy that is **assertive on core national interests (like terrorism and sovereignty), pragmatic in economic engagement, and diplomatically nimble in balancing competing geopolitical currents.**

Read more: The Indian Express, Wikipedia
UPSC GS Paper-2: International Relations

India-U.S. Relations – Significance & Challenges – Explained Pointwise

The India-U.S. relation is presently undergoing through a tough phase, especially after the US's decision to sharply raise the tariffs on Indian exports to 50% on a wide range of products – has caused deep concern & disappointment in India. However, India-US relationship is anchored in resilience, strategic convergence, and people-to-people ties. In this regard, let us broadly understand the importance, key areas of cooperation & challenges in India-U.S. relationship.

Source: ORF

What is the importance of India-US relations?

1. **Economic Importance:** The US is one of India's largest trading partners and investors, which supports economic growth, job creation, and technology transfer in India. The bilateral trade relationship offers opportunities for both nations to expand markets, collaborate in innovation sectors like technology, clean energy, and pharmaceuticals, and strengthen global supply chains.
2. **Strategic Importance:** India-US relations are crucial for regional stability and balance of power, especially in the Indo-Pacific, where both countries share concerns about China's growing influence and assertiveness. Their defense partnership strengthens India's military capabilities and enhances interoperability between the two armed forces, contributing to a free, open, and rules-based order in the region.
3. **Geopolitical Importance:** India and the US collaborate on global issues such as counter-terrorism, climate change, and non-proliferation, reflecting their shared democratic values and global interests. This partnership enhances their global influence and ability to address transnational challenges, making it a cornerstone for their respective foreign policy goals.
4. **Diaspora & Cultural Relations:** India has a 4.8mn strong diaspora in USA. The Indian diaspora in the US plays a significant role in strengthening bilateral ties through cultural exchange, education, and political influence, which deepens people-to-people connections and mutual understanding. Over 150 Indian origin CEOs now lead global corporations in the USA, Indian IT engineers drive Silicon Valley, while US entrepreneurs are investing in Bengaluru's startup ecosystem.

What are key areas of cooperation in India-US relations?

1. **Economic Cooperation:**

- **Trade and Investment:** U.S. is India's largest trading partner. American companies are major investors in India, particularly in technology, manufacturing, and services. At the same time, Indian companies have also significantly invested in the U.S.
- In 2024, India exported goods worth $87.3bn to the USA

2. **Defence & Security Cooperation:**
   - Both countries have deepened military-to-military cooperation with agreements like GSOMIA, LEMOA, COMCASA, and BECA facilitating intelligence sharing, logistics support, secure communications, and geospatial data exchange.
   - India is designated a **Major Defense Partner**, gaining access to advanced US defense technologies and streamlined defense trade.
   - Both countries have a shared vision for a free and open Indo-Pacific and regularly conduct joint military exercises, such as **Malabar** (a naval exercise that also includes Japan and Australia) and **Yudh Abhyas** (a joint military training exercise).
   - Initiatives like the **Defense Trade and Technology Initiative (DTTI)** promote co-development and production of defense technologies, including jet engines and drones, supporting India's "Make in India" goal.
3. **Science, Technology & Innovation Partnership:**
   - Collaborative projects in emerging and critical technologies such as artificial intelligence, quantum computing, cybersecurity, and semiconductors are prioritized.
   - Initiatives like **iCET (Initiative on Critical and Emerging Technologies)** create research and innovation bridges between the two countries.
   - **Space Exploration:** ISRO and NASA have a long history of collaboration, working together on missions and sharing expertise.
4. **Security & Counterterrorism Cooperation:** Shared efforts on counter-terrorism include intelligence sharing, capacity building, and coordinated diplomatic efforts to combat global terrorism threats. The partnership supports regional stability and global security frameworks.
5. **Climate Change & Clean Energy Cooperation:** Both countries collaborate on climate action, clean energy technology, and sustainability initiatives to meet global climate goals and energy transition challenges.

What are the challenges in India-US relations?

1. **Trade & Economic Challenges:**
   - **Tariff Disputes:** The U.S. has often raised concerns about India's high tariffs on certain goods, while India has its own apprehensions about U.S. visa policies, which can affect its IT professionals. Both countries have also had disagreements over intellectual property rights and market access, and these issues require continuous dialogue and negotiation to resolve. The US imposed sweeping tariffs on Indian exports, reaching up to 50% tariffs on many goods as of August 2025. These tariffs hurt India's export competitiveness, especially in key sectors like pharmaceuticals, textiles, gems, and electronics.
   - **Trade Imbalances:** Persistent trade imbalances and disputes over market access have led to retaliatory tariffs by India and restrictions by the US, straining economic ties.
   - **Investment Barriers:** India's foreign investment restrictions in certain sectors create tensions with the US, which advocates for more open markets.
2. **Defence & Geopolitical Differences:**
   - **Russia Relationship:** India's ties with Russia, including continued defense equipment purchases and energy imports, conflict with US sanctions and expectations. This divergence

challenges US-India strategic alignment, especially as the US sees India's multipolar diplomacy as a point of concern.
   - **Geopolitical Divergence:** Differences on regional and global issues, including India's neutral stance on the Russia-Ukraine conflict and its broader engagement with Iran and Russia, create friction in diplomatic alignment.
   - **Strategic Autonomy:** India's multipolar foreign policy approach, balancing relations with the West, China, and Russia, often contrasts with US hopes for closer alignment, creating strategic friction. India resists external pressure on its sovereign decisions, including on defense procurement and energy policy, which sometimes leads to disagreements.
3. **Immigration Issues:** Tightening US visa policies and caps on H-1B visas hit Indian IT professionals and tech companies relying on skilled worker migration, affecting economic opportunities and bilateral goodwill.
4. **Technology & Data Policy Issues:**
   - India's data localization and technology policies are seen by the US as barriers to American tech companies and digital trade, hampering cooperation in emerging technologies.
   - US limitations on advanced technologies like AI, drones, and missile components affect India's defense modernization and technological advancement.

What can be the way forward?

1. **Expanding Bilateral Trade & Investment:**
   - Pursue the "Mission 500" goal of doubling bilateral trade to $500 billion by 2030 through a multi-sector Bilateral Trade Agreement (BTA) that reduces tariffs and non-tariff barriers.
   - Strengthen supply chain integration, increase market access, and enhance trade in industrial and agricultural products.
   - Continue dialogue to resolve trade disputes and create a balanced and fair trade environment.
2. **Strengthening Security & Strategic Partnership:**
   - Build on the U.S.-India COMPACT initiative to catalyze military partnerships and expand defense industrial cooperation.
   - Accelerate negotiations on a Reciprocal Defense Procurement (RDP) agreement to facilitate defense trade and co-production.
   - Scale joint defense industry collaborations in autonomous systems and advanced technologies to enhance Indo-Pacific security.
   - Expand cooperation through forums like the Quad and India-Middle East-Europe Corridor to support economic connectivity and maintain a free, open Indo-Pacific.
3. **Advancing Technology & Innovation Collaboration:**
   - Launch new initiatives like **INDUS Innovation** for industry-academic partnerships in areas like space, energy, AI, and strategic minerals.
   - Develop a **U.S.-India Roadmap** on Accelerating AI Infrastructure and strengthen cooperation on critical and emerging technologies.
   - Enhance research collaborations through entities like the **U.S. National Science Foundation** and **Indian Anusandhan National Research Foundation**.
4. **Managing Differences through Dialogue:**
   - Address tariff issues and trade disputes constructively to restore trust and mutual benefit.
   - Encourage strategic communication to align geopolitical stances while respecting India's strategic autonomy.

Conclusion:
Though the tariffs may disrupt markets & unsettle industries, but they cannot limit the India-USA relationship which has endured Cold War suspicion, sanctions, and past trade disputes. India & USA should aim to build the mutual trust because trust defines partnerships, not tariffs, and trust – built by people & strengthened by strategy – ensures that even when trade faces turbulence, the relationship remains steady.

Read More: The Hindu
UPSC GS-2: International Relations

Regulatory Assets of DISCOMS – Explained Pointwise

The Supreme Court recently directed the State Electricity Regulatory Commissions (SERCs) and distribution companies (DISCOMs) to clear the existing regulatory assets within four years and liquidate any new assets within three years. The court also advised capping the regulatory asset at 3% of a DISCOM's Annual Revenue Requirement (ARR) and instructed regulators to set out transparent roadmaps for recovery, along with conducting intensive audits of DISCOMs that continue without recovering these assets. In this context, let us understand, what are regulatory assets, their impact & what can be done to recover them sustainably.

Source: IAS Express

What are Regulatory Assets?

- Regulatory assets constitute the unrecoverable revenue gap due to the difference between the **Average Cost of Supply (ACS)**, the expense incurred by a DISCOM to deliver a unit of electricity to consumers, and the **Annual Revenue Requirement (ARR),** which is the revenue collected by the DISCOM as consumer tariffs and subsidy payments from the government.
- If the ACS is greater than the ARR, the DISCOM effectively makes a loss on the sale of every unit of electricity. To avoid suddenly burdening consumers with an immediate tariff increase to recover the gap, SERCs allow the DISCOM to record the gap as a **Regulatory Asset.** This is essentially a deferred cost that the DISCOM is entitled to recover from consumers in the future, usually with interest.

What are the reasons behind ACS-ARR gap?

1. **Non-Cost Reflective Tariffs:** Tariffs charged to consumers often do not reflect the actual cost of power supply. Political considerations lead to setting retail tariffs lower than needed, especially for certain consumer categories like agriculture or low-income households.
2. **Delayed Subsidy Payments:** State governments promise to compensate DISCOMs for supplying electricity to subsidized sectors (e.g. agriculture), but the actual release of subsidies is often delayed. This causes a revenue shortfall that adds to the ACS-ARR gap.
3. **Power Purchase Cost Volatility:** Sudden increases in fuel costs (coal, gas) or reliance on expensive imported coal raise the cost of purchased power for DISCOMs, while tariffs are not adjusted swiftly enough to reflect these higher costs.
4. **Operational Inefficiencies:** High levels of Aggregate Technical & Commercial (AT&C) losses—including theft, technical losses in transmission/distribution, and poor billing efficiency—mean less revenue is realized compared to the cost incurred.
5. **Regulatory Lags & Deferred Tariff Adjustments:** Delays in tariff revisions and "true-up" processes (where actual costs are reconciled into tariffs after the fact) mean costs rise faster than regulated revenue. Revenue gaps are often deferred as "regulatory assets" instead of being recovered promptly.
6. **Mismatch in Tariff Structure:** Inadequate or distorted tariff structures (e.g., cross-subsidization without proper compensation) often prevent DISCOMs from recovering both fixed and variable costs of supply.

What are the impacts of ACS-ARR gap?

Impact on CONSUMERS:

1. **Steeper increase in Tariff:** To recover the gap, regulatory bodies eventually allow **tariff increases and surcharges**—sometimes suddenly rather than gradually, leading to "tariff shocks" for consumers. The deferred costs (recorded as regulatory assets) are eventually recovered from consumers, often with interest added.
2. **Decline in Service Quality:** With persistent losses, DISCOMs face **cash flow crises**, limiting their ability to invest in network maintenance, customer service, and grid modernization. Power outages, voltage fluctuations, and poor customer support often result for all consumers, especially in regions with large gaps.
3. **Financial Burden & Social Inequity:** If state governments fail to compensate DISCOMs through timely subsidies, the revenue gap is ultimately passed on to all users via higher bills. This can disproportionately impact vulnerable consumers if subsidy mechanisms are not well-targeted.

Impact on DISCOMs:

1. **Rising Losses and Debt:** Persistent ACS-ARR gaps mean that DISCOMs accumulate mounting losses and must borrow to cover ongoing expenses. Many are trapped in a **vicious debt cycle**: as of recent figures, total accumulated losses for public DISCOMs crossed ₹6.92 lakh crore with debt over ₹7.5 lakh crore.
2. **Underinvestment in Infrastructure:** Financial distress prevents DISCOMs from investing in modernizing grids and replacing aging, inefficient equipment—resulting in high technical losses and service unreliability.
3. **Loss of Financial Stability:** Inability to recover costs leads to **poor cash flows**, limiting the ability to pay for power purchases, maintenance, and modernization. Some states have had to take over DISCOM debts, straining state finances and breaching fiscal targets.

Other impacts:

1. **Fiscal Risk to States:** States stepping in to bail out DISCOMs risk breaching fiscal limits and diverting resources from other priorities.
2. **Difficulty Adopting Renewable Energy:** Financing transitions to green energy and open access becomes harder due to cash constraints. This hampers India's wider decarbonization goals and competitiveness.

How can ACS-ARR gap can be bridged?

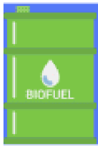
1. **Tariff Rationalisation:** Periodic, transparent **tariff setting processes** aligned with real cost of supply, while using targeted subsidies to protect vulnerable consumers, are needed to avoid deferred regulatory assets and to ensure timely recovery of costs. This will ensure that the burden is shared transparently rather than hidden in deferred recoveries.
2. **DBT for subsidies:** Instead of indirect tariff reduction, **DBT for electricity subsidies** ensures targeted segments (rural/agriculture) receive direct payments, reducing scope for misallocation and making revenue more predictable for DISCOMs. Lessons from DBT of subsidies for LPG demonstrate efficiency gains and reduced fiscal leakage.
3. **Timely Payment by State Govts:** State governments are also needed to release the subsidies on time so that DISCOMs are not left carrying the financial gap on their books.
4. **Automatic Fuel Cost Adjustment Mechanism:** Automatic Fuel Cost Adjustment Mechanisms, such as the fuel & power power purchase cost adjustment mechanism, can help tariffs respond quickly to sudden changes in input costs.
5. **Annual True-up Exercise:** Regular annual true-up exercises, where projected & actual expenses are reconciled, can prevent the build-up of large backlogs.
6. **Regulatory Reforms:** Regulatory Commissions play a critical role in maintaining discipline. By enforcing limits, ensuring transparency in accounting, and setting clear timelines for recovery, they can ensure regulatory assets remain an exceptional tool rather than a recurring feature.
7. **Reducing AT&C Losses:**
    - **Deployment of smart and prepaid meters** helps boost billing efficiency, minimize theft, and accurately track consumption. RDSS (Revamped Distribution Sector Scheme) pushes for mass installation of smart meters to cut AT&C losses.
    - **Investment in grid modernization** and better network management reduces technical losses and improves overall reliability.

Conclusion:
The SC's intervention is therefore a call for coordinated action & greater financial discipline across the sector, so that electricity remains affordable for households & sustainable for utilities.

Read More: The Hindu
UPSC GS-3: Economics – Infrastructure (Electricity)

Ethanol Blending Programme (E20 Blending)- Significance and Challenges- Explained Pointwise

Recently, the government has decided to lift all the restrictions on ethanol production from sugarcane juice, sugar syrup, and molasses for the year 2025-26. The decision demonstrates the government's commitment to achieve the target of 20% ethanol blending in petrol by 2025, with potential expansion to 30% thereafter. However, there are certain challenges that have been cropped up especially like the complaints by the users regarding the reduction in the performance of their vehicle due to the usage of ethanol blended fuel. In this regarded let us examine the significance & challenges of the ethanol blending programme of the government.



Biofuels

- Biofuels are the fuel derived from the biomass of plants or animal wastes. It is commonly produced from corn, sugarcane and animal waste like cow dung.

Generation of biofuels

1st Generation Biofuel	Produced from edible items like sugar,corn,starch.	Higher carbon content and emit greenhouse gases.
2nd Generation biofuel	Produced from leftover food crops like rice husk, wood chips	Greenhouse content less than 1st generation biofuel
3rd Generation biofuel	Produced from microorganisms like algae.	Carbon Neutral (CO_2 emitted=CO_2 sequestered)
4th Generation biofuel	Produced from genetically engineered crops like GM crops	Carbon Negative

Common biofuels used

Bioethanol	Produced from corn and sugarcane using fermentation process. E10 is the most common blend in which 10 per cent composition is Ethanol
Biodiesel	Produced from vegetable oils like soybean oil or palm oil, vegetable waste oils and animal fats using transesterification process.
Biogas	Produced from organic matter like sewage from animals and humans by anaerobic decomposition.

Created- Forum IAS

What is the Ethanol Blending Programme? What is the Status of the targets?

Ethanol Blending Programme:

- The Ethanol Blended Petrol (EBP) program was launched in January 2003. The program seeks to achieve blending of Ethanol with petrol with a view to reduce pollution, conserve foreign exchange and increase value addition in the sugar industry enabling them to clear cane price arrears of farmers.

- As per the programme targets, India has to achieve 10% blending rate (E10) by 2021-22 and 20% blending rate (E20) by 2025-26.

Sources of Bio Ethanol Production in India:

Sugarcane	Sugarcane gives rise to three main related products, in the order of decreasing sugar content. a. Sugarcane juice and syrup b. B-heavy molasses c. C-heavy molasses (Sugarcane juice and syrup, and B-heavy molasses typically go into making sugar, as they have higher sugar content.) In a bid to up the ethanol production, the government had started permitting the diversion of Sugarcane juice and syrup, and B-heavy molasses. However, in December 2023, the government restricted the diversion of Sugarcane juice, syrup, and B-heavy molasses, over fears of falling sugar stocks.
Maize	The use of maize for ethanol blending has been increasing to produce more fuel ethanol to compensate for restrictions on using Sugarcane juice, syrup, and B-heavy molasses.
Surplus rice & damaged grains	Surplus rice and damaged grains have been permitted by the government for use as a feed in grain-based distilleries.

Ethanol for blending

With the government restricting the use of B-heavy molasses and sugarcane juice for ethanol production from December 2023, grain-based ethanol production has increased to maintain blending percentages

Ethanol supplied to oil marketing companies

Supply-year	C-heavy molasses	B-heavy molasses	Sugarcane juice	Surplus rice	Damaged grains	Maize	Total in litre crore; blending % in brackets
2019-20	74	68	15	0	16	0	173 (5.00)
2020-21	39	183	39	2	39	0	302 (8.10)
2021-22	11	265	85	49	24	0	434 (10.02)
2022-23	6	235	128	74	32	32	506 (12.06)
2023-24*	39	95	56	0	76	135	401 (13.00)

Supply years are December-November, December to October for 2022-23 and November to October for 2023-24 *Data available only for November-June

Source- The Hindu

What is the significance of Ethanol Blending Programme?

1. Bolsters India's Energy security: India has a high dependence on imported fuel to meet its energy needs. India has over 87% crude oil import dependence. Such high import dependence, makes India's energy security vulnerable to global events like the Russia-Ukraine war or oil-cut decisions of OPEC countries. Ethanol blending programme reduces India's dependence on imported oil, and in turn bolsters the energy security.

2. Import Substitution: Ethanol blending can help in strategically reducing the dependence on imported fossil fuels and conserve foreign exchange reserves. As blending levels rise, India conserves substantial foreign exchange—over ₹1.4 lakh crore saved in the last decade—and substantially lowers its annual import bill. For E20 (20% ethanol), the annual savings are projected at $4 billion, directly improving the current account balance.

3. Reduction of emissions: Ethanol-blended fuels significantly reduce CO_2 emissions, carbon monoxide, hydrocarbons, and particulate matter compared to pure petrol. As per NITI Aayog, petrol blended with 20% ethanol would reduce carbon monoxide emissions by 50% in two-wheelers and 30% in four-wheelers.

4. Bolstering Rural Economy and Farmer's Income: It bolsters the rural economy by promoting the cultivation of various crops (like maize, paddy) through an assured market. Under Ethanol Blending Program, Oil Marketing Companies (OMCs) have paid sugar mills nearly Rs 81,796 crore for ethanol supplies in the last seven years (till 2022), which has helped mills to clear farmers' dues.

5. Job Creation: As per the Asian Development Bank (ADB), the ethanol blending programme can help in generating about 18 million rural jobs in India.

Read More- Significance of Biofuels-Explained,Pointwise

What are the Challenges to Ethanol Blending Programme in India?

1. **Engine Compatibility:** While most new cars are E20 compliant, older vehicles may not be. Using higher blends of ethanol in incompatible engines can damage engine components and fuel systems, raising concerns for consumers.
2. **Lower Energy Density:** Ethanol has lower calorific value than petrol, resulting in decreased fuel mileage with higher blends.
3. **Dispensing Infrastructure:** Petrol stations need to be equipped with the necessary infrastructure to store and dispense ethanol-blended fuels. The capital investment required for this upgrade is a challenge for many station owners.
4. **Financial vulnerability of Sugar Mills:** The lack of financial stability of the sugar mills to invest in biofuel plants, and their heavy concentration in certain regions, poses a significant challenge to the Ethanol Blending Programme.
5. **Barriers to Inter-state movement of ethanol:** The central government amended the Industries Development and Regulations Act to ensure smooth implementation and transportation of Ethanol across the country. But only 14 states have implemented the amended provisions. As a result, states that produce ethanol more than the requirement for blending cannot transport the Ethanol to other states.
6. **Impact on India's Food security:** The diversion of food crops, such as rice for ethanol production, will hamper India's food and nutritional security ambitions. **For ex-** In 2022, close to 1 million metric tonnes of rice fit for human consumption from FCI's stocks was sold at subsidised prices to produce ethanol.

7. **Diversion of Agricultural Land:** Excessive blending target can lead to the conversion of agricultural land used for growing food crops, to cultivating biofuel feedstocks like sugarcane, corn, or oilseeds.
8. **Impact on Water Availability:** Incentives for higher ethanol blending might encourage increased sugarcane and rice cultivation, which are water-guzzling crops. According to TERI, 400 billion litres of water would be needed additionally, which can exacerbate concerns about agricultural sustainability.
9. **Impact on Soil Health:** The practices of monocropping for biofuel feedstock crops (such as rice, sugarcane) can deplete the nutrients in the soil and make it infertile.
10. **Rise in import of maize:** Government restricted the diversion of Sugarcane juice, syrup, and B-heavy molasses for ethanol production, over fears of falling sugar stocks. This reduction has increased the import of maize from $39 million in 2022-23 to $103 million in FY 2024. As per NITI Aayog's estimates, ~ 4.8 million hectares will have to be added to maize cultivation area to meet the 20% target. This additional area is almost half of the current maize cultivation area in India.
11. **Increase in Import of Agricultural Crops:** The use of crops like maize for ethanol blending increases the import bill and impacts related agricultural sectors such poultry sector and livestock feed.

What should be the Way Forward?

1. **Diversification to higher generation of biofuels:** The government should diversify and move to 2G and 3G biofuels, that are more benign in terms of impact on food security as they are produced from agricultural waste and non-food biomass, such as rice straw and cotton stalks. This approach addresses concerns about food security and provides an additional source of income for farmers by monetizing their agricultural waste.
2. **Upgrading Logistics and Storage:** The country's logistics network needs significant investment to handle the increased demand for ethanol. This includes building more dedicated storage facilities and improving transport infrastructure to efficiently move ethanol from production sites to blending units.
3. **Vehicle Compatibility:** Continued collaboration between the government, oil companies, and the automotive industry is crucial to ensure that vehicles are compatible with higher ethanol blends. Automakers need to accelerate the production of **E20 compliant vehicles**, while the government can offer incentives to encourage consumers to switch to these models.
4. **Increase in grain based distilleries:** According to the roadmap for achieving ethanol blending targets, prepared by the NITI Aayog, India must invest to increase the capacity of Grain-based distilleries from 258 to 740 crore litres.
5. **Interest Subvention Programmes:** Two interest subvention programmes should be provided for establishment of new distilleries and ramping up of ethanol generation capacity.
6. **Streamlining supply chain:** The Oil Marketing Companies (OMCs) should sign more long-term contracts with distilleries. The inter-state movement of ethanol should be facilitated to streamline supply-chain.
7. **Promotion of maize cultivation in rotation with sugarcane:** Maize is not water intensive. However, it degrades soil and cannot be the sole crop either. It should be cultivated in rotation with sugarcane to ensure that soil fertility is not degraded.
8. **Increase in fuel ethanol pricing:** Increased price support for fuel ethanol can decrease its diversion towards liquor use.

Conclusion:

Ethanol blending programme is a strategic initiative that has the potential to reduce the petroleum imports, enhance energy security & promote cleaner combustion. However, there are certain supply-side & demand-side issues which must be addressed promptly by diversifying the feedstocks, enhancing the infrastructure, introducing technological upgrades to help India in successfully completing its sustainable energy transition.

Read More- The Hindu Business Line
UPSC Syllabus- GS 3 Environment Conservation

GST 2.0 – Significance & Challenges – Explained Pointwise

Just a few weeks after PM Narendra Modi announced, in his independence day speech, spoke about ushering in of the next generation GST reforms, the GST council has move towards restructuring the indirect tax regime – touted as GST 2.0.
Combined with the new Income Tax Bill & the rejig of income-tax slabs in this year's Budget, these GST reforms will mark 2025 as a 'Watershed Year' for Tax Reforms – direct as well as indirect – in economic history of India.

What is GST?

- Goods and Services Tax (GST) is an indirect, destination-based tax levied on the supply of goods and services in India.
- It was implemented on July 1, 2017, and replaced a complex web of multiple central and state taxes, aiming to create a single, unified national market.
- GST works on the principle of **"value addition"**. It's a multi-stage tax collected at every step of the supply chain, from manufacturing to the final consumer. The key mechanism is the **Input Tax Credit (ITC).**
- GST has five main rate slabs: **0%, 5%, 12%, 18%, and 28%**.
- India follows a dual GST model:
    - **CGST** (Central GST) – for intra-state transactions
    - **SGST** (State GST) – for intra-state transactions
    - **IGST** (Integrated GST) – for inter-state or inter-country transactions

What are the challenges faced by GST regime in India?

1. **Multiple Tax Slabs:** Instead of a single, simple tax rate, India's GST has multiple slabs (0%, 5%, 12%, 18%, and 28%), along with special rates for certain goods. This complexity creates confusion and makes it difficult for businesses to correctly classify their products and services.
2. **Compliance Burden:** Extensive filing requirements (monthly, quarterly, annual returns), e-invoicing, and reconciliation of input tax credits (ITC) make GST compliance cumbersome. For small businesses with limited resources and expertise, this extensive documentation and online filing process is a significant financial and administrative burden – increasing their operational cost & need for professional help to file accurately.
3. **Exclusion of Key Sectors:** Petroleum, real estate, and alcohol are kept outside GST, resulting in a cascading effect and loss of potential efficiency.
4. **Centre v/s States:**
    - **Coordination between Centre & States:** Differences in priorities and political disagreements between the central and state governments delay decision-making and policy implementation.
    - **Revenue Concerns for States:** The GST system has limited the fiscal autonomy of states, as tax rates and policies are now decided by the GST Council. While the central government

provided compensation to states for revenue losses for the first five years, the end of this compensation has created tension and financial strain for some states.

5. **Tax Evasion:** Despite the digital framework, tax evasion and fraud, including the use of fake invoices and fraudulent e-way bills, continue to be a significant challenge, leading to substantial revenue losses for the government.
6. **Technological Hurdles:** The GST system is heavily reliant on a digital infrastructure (GSTN). Many small and rural businesses lack the necessary IT infrastructure, digital literacy, and access to affordable accounting software to comply with the online filing requirements.

What is the new GST Structure (GST 2.0)?

- **Two Main Slabs:**
  - **5% GST:** Applies to essential goods and services like packaged food, footwear, medicines, daily-use items, agriculture inputs, and small household goods. Also includes items like hair oil, toiletries, and stationery.
  - **18% GST:** Standard rate applied to most goods and services such as restaurant and telecom services, financial services, electronics (TVs, washing machines, laptops), motorcycles below 350cc, small cars below 1200cc, and industrial goods.
- **New 40% De-merit Rate:** Introduced for luxury and sin goods such as high-end cars, premium bikes, aerated beverages, tobacco products, and gambling services. This replaces the previous highest slab of 28% plus cess.
- **Exemptions:** Some items remain exempt (0%) such as fresh fruits, vegetables, milk, bread, along with new exemptions on personal health and life insurance, exercise books, and notebooks.

GST reform lightens load on common man

The GST Council on Wednesday approved a two-tier rate structure of 5 and 18 per cent, which will be implemented from September 22. The marathon 56th meeting of the GST Council lasted for 10.5 hours, in which the Centre and states thrashed out key tax proposals. Here are some of the key items for which GST rates were revised:

DAILY ESSENTIALS	FROM	TO
Hair Oil, Shampoo, Toothpaste, Toilet Soap Bar, Tooth Brushes, Shaving Cream	18%	5%
Butter, Ghee, Cheese & Dairy Spreads	12%	5%
Pre-packaged Namkeens, Bhujia & Mixtures	12%	5%
Utensils	12%	5%
Feeding Bottles, Napkins for Babies & Clinical Diapers	12%	5%
Sewing Machines & Parts	12%	5%

AUTOMOBILES	FROM	TO
Petrol & Petrol Hybrid, LPG, CNG Cars (not exceeding 1200 cc & 4000mm)	28%	18%
Diesel & Diesel Hybrid Cars (not exceeding 1500 cc & 4000mm)	28%	18%
3 Wheeled Vehicles	28%	18%
Motor Cycles (350 cc & below)	28%	18%
Motor Vehicles for transport of goods	28%	18%

HEALTHCARE SECTOR	FROM	TO
Individual Health & Life Insurance	18%	Nil
Thermometer	18%	5%
Medical Grade Oxygen	12%	5%
All Diagnostic Kits & Reagents	12%	5%
Glucometer & Test Strips	12%	5%
Corrective Spectacles	12%	5%

FARMERS & AGRICULTURE	FROM	TO
Tractor Tyres & Parts	18%	5%
Tractors	12%	5%
Specified Bio-Pesticides, Micro-Nutrients	12%	5%
Drip Irrigation System & Sprinklers	12%	5%
Agricultural, Horticultural or Forestry Machines for Soil Preparation, Cultivation, Harvesting & Threshing	12%	5%

EDUCATION	FROM	TO
Maps, Charts & Globes	12%	Nil
Pencils, Sharpeners, Crayons & Pastels	12%	Nil
Exercise Books & Notebooks	12%	Nil
Eraser	5%	Nil

ELECTRONIC APPLIANCES	FROM	TO
Air Conditioners	28%	18%
Television (above 32") (including LED & LCD TVs)	28%	18%
Monitors & Projectors	28%	18%
Dish Washing Machines	28%	18%

Source: CBIC

Source: The Hindu

What was the need to rationalize the GST tax slabs?

1. **Simplification & Ease of Compliance:** The multiple tax slabs in the current GST regime makes classification complex for businesses and administrators. It leads to constant legal disputes between taxpayers and tax authorities over which category a specific product or service falls into. For example, a food item might be taxed at 5% if it's "unbranded" but at 12% or 18% if it's "branded" or processed. Fewer slabs help minimize ambiguity in product/service classification, lowering risks of misinterpretation, non-compliance, and litigation.
2. **Enhanced Efficiency**: A simpler structure makes filing, invoicing, and input tax credit reconciliation easier for taxpayers, especially MSMEs. Fewer slabs improve system efficiency and reduce technical glitches.
3. **Reduction in Tax Burden:** A simpler, two-slab structure (e.g. a "standard" and a "merit" rate) would significantly reduce the compliance burden, save administrative costs, and make the tax system more transparent and business-friendly. For e.g. the proposed reform to shift 99% of the items in the 12% slab to 5% tax rate, and 90% of the items in the 28% slab to 18% will substantially reduce the tax burden on most consumers.
4. **Prevent Tax Evasion:** With a large number of items set to be taxed at just 5%, the incentives for input tax credit scams & tax evasion will also be substantially removed.
5. **International Practice:** Most successful GST systems worldwide have 1–3 rates, helping tax administrators track and audit transactions more efficiently.
6. **Boost to consumption & economic growth:** By reducing taxes on common goods, especially those currently in the 12% and 28% slabs, the government can make these items more affordable for the common person. This would increase disposable income and potentially stimulate consumption and demand, leading to higher economic activity.

What are the challenges to the rationalisation of tax slabs?

1. **Risk of Revenue Loss:** Any move to rationalize the slabs will inevitably result in some goods moving to a lower tax bracket. While this can boost consumption, it also risks a **short-term revenue loss** for the government, particularly for states (Two years ago, RBI had estimated that the avg GST rate was 11.6%, which is expected to fall substantially if 2 slab structure is adopted).
2. **Political Consensus:** Since the GST Council makes decisions by consensus, with states having a two-thirds voting share, it's difficult to get all states to agree to a plan that might negatively impact their fiscal health. The end of the GST compensation cess for states has made them even more cautious about any changes that could lead to revenue shortfalls.
3. **Classification & Fitment Issues:** Even with a reduced number of slabs, there will still be disputes over where a product or service should be placed. Tax authorities and businesses will have to decide whether to place a good in the "merit" (lower) or "standard" (higher) slab. This can lead to new legal battles and administrative complexities.
4. **Implementation & Technical Hurdles:** The entire GST network (GSTN) and the systems of millions of businesses are configured to the current tax structure. A major overhaul to the slab system would require a significant **technological and administrative exercise**. Businesses would need to update their accounting software and pricing, while the government would have to reconfigure the GSTN. This is a time-consuming and expensive process that could cause initial disruption and compliance challenges for many businesses, especially SMEs.
5. **Inclusion of Petroleum Products:** The tax cuts required for rationalisation of tax slabs will make it even more unlikely that petroleum products – a major source of States' revenues – will be included in the GST any time soon.

What can be the way forward with regards to rationalisation of tax slabs?

1. **Managing Revenue Loss:** To address states' concerns about a potential revenue shortfall, the government must ensure that any reduction in rates is offset by a **rise in consumption** and **improved tax compliance**. By making goods more affordable, especially those currently in the 12% and 28% slabs, demand is expected to increase, which could lead to higher overall tax collections in the long run.
2. **Correcting Inverted Duty Structure:** Rationalization offers a crucial opportunity to fix the inverted duty structure in many sectors where the tax on inputs is higher than on the final product. Aligning these rates will prevent the accumulation of **Input Tax Credit (ITC)** and improve the cash flow for businesses.
3. **Use of Technology:** Use technological improvements and compliance simplification to offset potential short-term revenue loss.
4. **Ensure Transparency & Clarity:** Provide long-term clarity on rates and policy direction to confidently support business planning and investment. Communicate changes transparently, including timelines and potential impacts on businesses and consumers.
5. **Monitor impact & Make data-driven adjustments:** Track demand, prices, compliance levels, and revenue after rationalisation. Make incremental or corrective changes if needed for growth and equity.

Conclusion:
Reforms to simplify the current GST regime must not only be limited to reducing the multiplicity of rates but should also be about making it easier & less-time consuming for tax payers to navigate the system, easing registration, simplifying returns & speeding-up refunds as well as addressing the issue of compliance & classification. Therefore, rationalizing the multiple tax slabs is definitely a welcome step, but GST requires more comprehensive reforms.

Read More: The Hindu
UPSC GS-3: Economy – Tax Revenue

National Infrastructure Pipeline – Significance & Challenges – Explained Pointwise

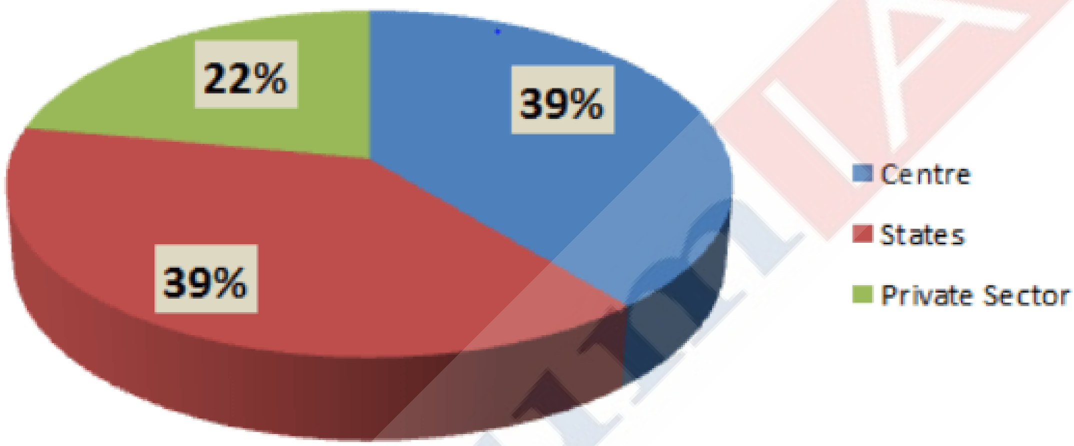
According to the Economic Survey 2024-25, India needs a continued step-up of infrastructure investment over the next two decades to sustain a high rate of growth. The Economic Survey states that building infrastructure – physical, digital and social – has been a central focus area for the Government in the last five years. This has had various dimensions – increase in public spending on infrastructure, creation of institutions to de-bottleneck approvals and execution and innovative modes of resource mobilization. It states that public capital alone cannot meet the demands of upgrading the country's infrastructure commensurate with the requirements of Viksit Bharat@2047.
To meet the need of infrastructure, the govt had launched National Infrastructure Pipeline (NIP). In this regard, let us understand the key features, significance & limitations of NIP.

What is the National Infrastructure Pipeline?

- The National Infrastructure Pipeline (NIP) is a flagship initiative by the Government of India aimed at providing a comprehensive roadmap for infrastructure development across the country over a period of five years (2020-2025).
- It was launched in 2019 with the aim to provide world-class infrastructure, improve ease of living, and make India a $5 trillion economy.

What are the key Features of NIP?

- **Massive Investment Outlay:** The NIP initially projected a total investment of **₹111 lakh crore** for infrastructure projects over a five-year period (2020-2025).
- **Comprehensive Scope:** The NIP covers a wide range of social and economic infrastructure projects. These include both **greenfield** (new projects) and **brownfield** (existing projects) and are spread across various sectors.
- **Multi-Stakeholder Funding:** The NIP is designed with a joint funding model to ensure financial viability. The capital expenditure is planned to be shared among the **Centre, States, and the private sector**. The original target for this split was roughly 39%, 39%, and 22% respectively, with a strong emphasis on attracting private investment.

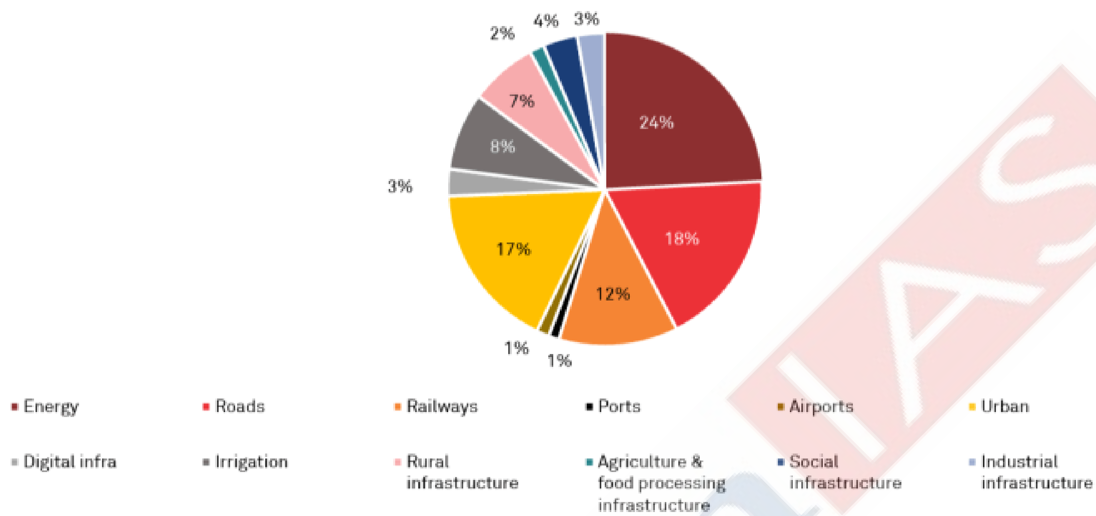


- **Project Monitoring:** To ensure timely completion and to avoid cost overruns, a task force was established to monitor the progress of the NIP. The India Investment Grid (IIG) was also launched to provide real-time updates on the implementation of these projects, enhancing transparency and attracting domestic and foreign investors.
- **Complementary Initiatives:** The NIP is closely linked with other government initiatives like the **National Monetization Pipeline (NMP)**, which aims to generate funds by monetizing existing public infrastructure assets, and the **PM Gati Shakti** program, which provides a digital platform for integrated and seamless planning and execution of projects.

What are the sectors covered under NIP?

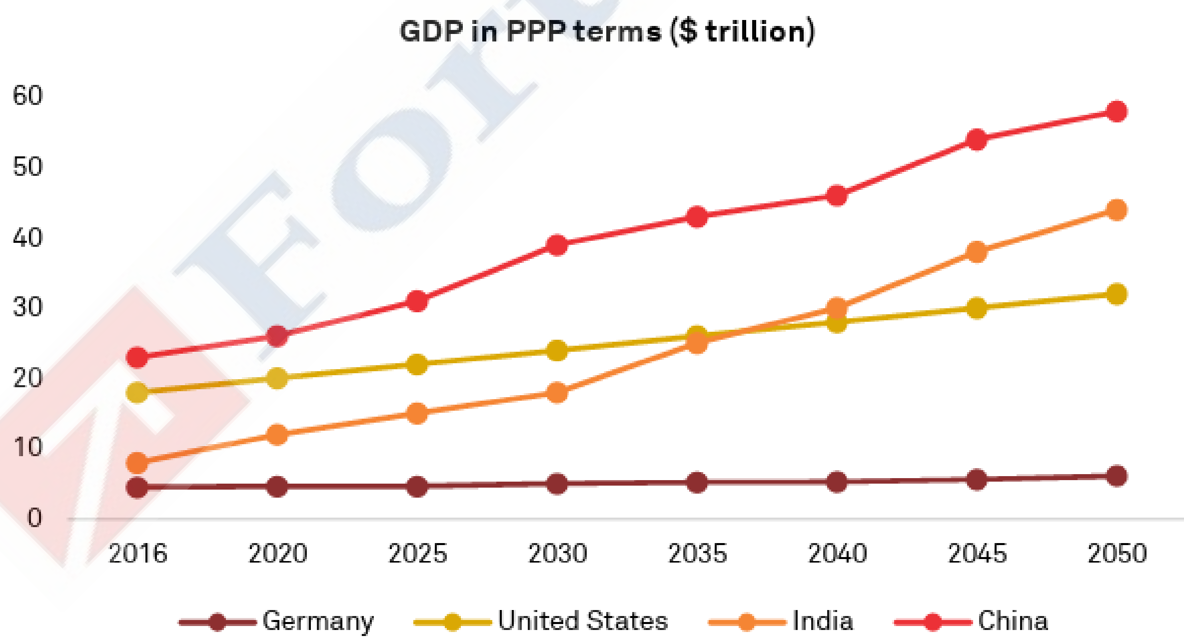
- Energy- 24%
- Roads- 19%
- Railways- 13%
- Ports- 1%
- Airports-1%
- Urban-16%
- Digital Communication- 3%
- Irrigation-8%
- Rural Infrastructure-8%

- Agriculture and Food Processing Infrastructure-1%
- Social Infrastructure-3%
- Industrial Infrastructure-3%



What are the benefits of NIP?

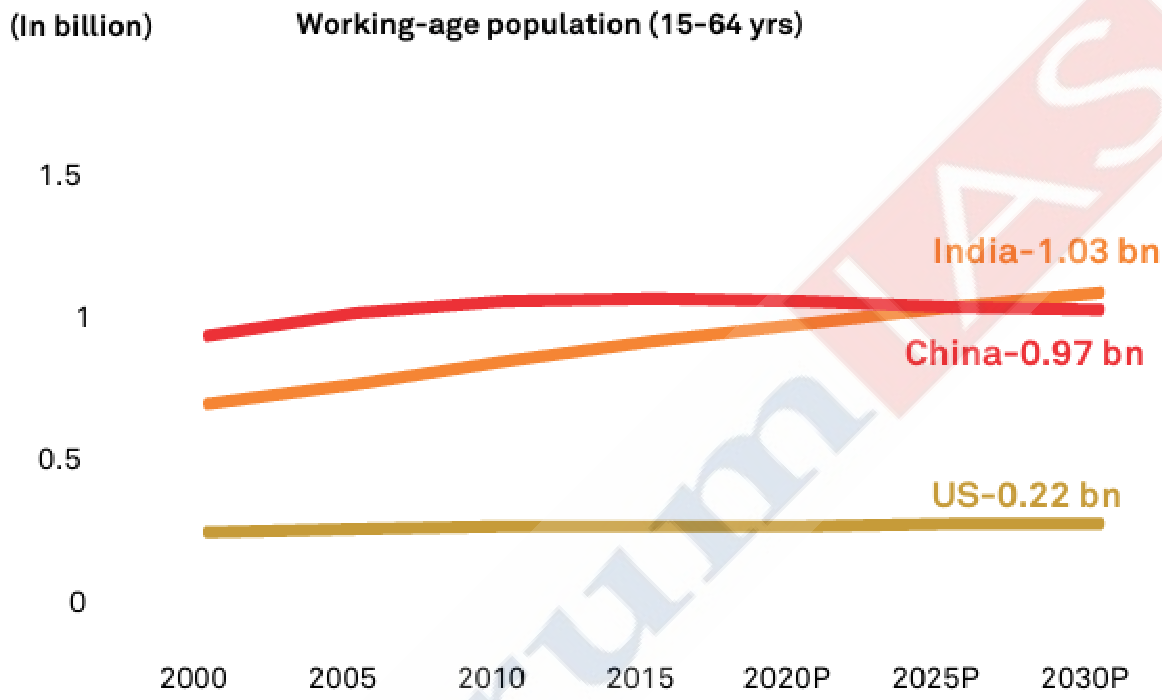
1. **Boost to Economic Growth:**
    - Infrastructure development under NIP is critical to achieving India's goal of becoming a $5 trillion economy by 2025 & 2nd largest economy in the world in PPP terms.



Source: The World in 2050, PwC

  - Improves competitiveness by enhancing transportation, energy, and urban infrastructure, promoting industrial and commercial activities.
  - Expected to increase GDP growth through better connectivity and efficient resource utilization.

2. **Job Creation & Employment:**
  - The large-scale infrastructure projects generate millions of direct and indirect jobs across sectors such as construction, manufacturing, and services.

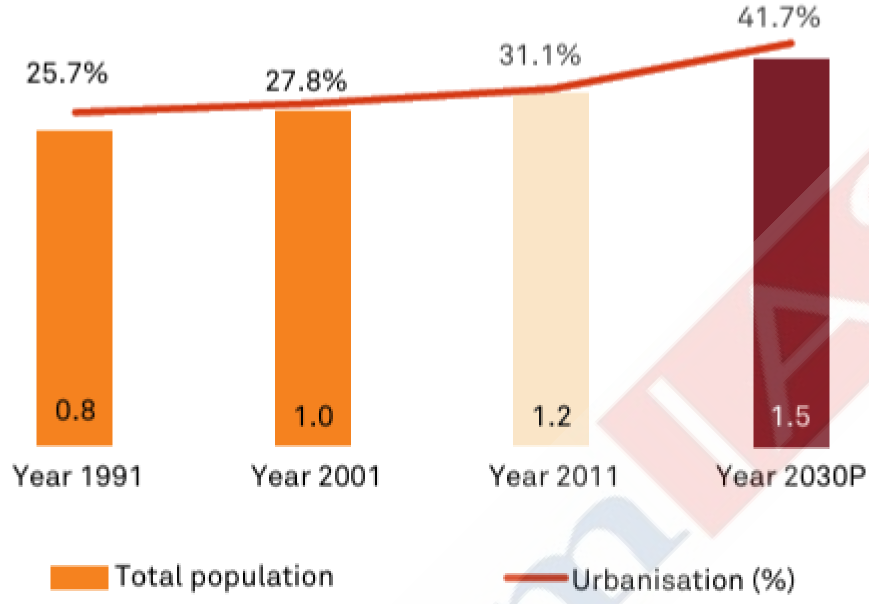


Note: P-Projected
Source: United Nations Population Division (UNDP)

  - Employment growth supports increased income and domestic demand, further boosting economic expansion.

3. **Improved Quality of Life & Inclusive Growth:**
  - Enhances access to essential services including roads, energy, healthcare, education, and urban amenities.

(In billion)



Note: P-Projected
Source: CRIS estimates, McKinsey Global Institute

- Facilitates rural connectivity and infrastructure, promoting inclusive development across regions.

4. **Investor confidence & Project Efficiency:**
    - NIP's well-defined pipeline improves project preparation, timely execution, and monitoring, reducing risks and failures.
    - Attracts private sector and foreign investment by providing a transparent, accessible project database via platforms like the India Investment Grid (IIG).
5. **Fiscal Space & Revenue Enhancement:**
    - Better infrastructure improves economic activity, expanding the government's revenue base and enabling productive expenditure.
    - Asset monetization of completed projects under NIP creates additional fiscal resources.
6. **Agriculture & Rural Development:** Significant allocation to irrigation and rural infrastructure strengthens the agricultural sector and boosts rural livelihoods. It also enhances supply chains and market access for farmers.

What are the challenges/limitations of NIP?

a. **Funding & Financial Constraints:** The biggest challenge is securing the massive investment of **₹111 lakh crore**. While the plan relies on a multi-stakeholder funding model (Centre, states, and the private sector), there are significant hurdles:
    - **State Finances:** Many states have limited fiscal space and are already burdened with high debts, making it difficult for them to contribute their share of the funding.

  - **Attracting Private Investment:** While the NIP aims to attract private capital, a number of factors could deter investors, including regulatory uncertainties, land acquisition issues, and long gestation periods for projects. The global economic slowdown could also make investors more cautious.
  - **Inflation and Cost Overruns:** Large-scale infrastructure projects are highly vulnerable to inflation and cost overruns, which could push the final bill far beyond the initial estimates.

b. **Implementation & Bureaucratic Hurdles:**
  - **Land Acquisition:** This is a persistent bottleneck for large-scale projects in India. Delays in acquiring land can stall projects, leading to significant cost overruns and public protests.
  - **Lack of Timely Clearances:** Obtaining various clearances—environmental, forest, and local—is a time-consuming and complex process. Delays in these approvals can severely impact the project timeline.
  - **Inadequate Project Management:** A lack of skilled project managers and poor coordination between different government agencies can lead to inefficiency and delays. While initiatives like **PM Gati Shakti** aim to address this, on-ground implementation remains a challenge.

c. **Political & Governance Issues:**
  - **Centre-State Coordination:** The NIP's multi-stakeholder model requires seamless cooperation between the central government and state governments, regardless of political affiliation. Any political friction can lead to delays in approvals and funding.
  - **Uneven Distribution:** There is a risk that the allocation of funds may be politically motivated, leading to a skewed distribution of projects across states, with some regions receiving a disproportionately high share of investment while others are neglected.
  - **Regulatory Challenges:** A lack of consistent and transparent regulatory frameworks can make it difficult for investors to operate. Changes in policy, particularly regarding public-private partnerships, can create uncertainty and deter investment.

What can be the way forward?

1. **Enhance Financial Innovation:** India needs to move beyond traditional bank-based financing for infrastructure projects. The government should encourage the development of the corporate bond market and promote innovative financing instruments, such as infrastructure investment trusts (InvITs), which allow a wide range of investors to participate in infrastructure projects and provide stable long-term funding.
2. **Asset Monetization:** The **National Monetization Pipeline (NMP)** is a crucial part of the strategy. By monetizing existing public assets like roads, railways, and power transmission lines, the government can generate new funds that can be reinvested into greenfield and brownfield projects under the NIP.
3. **Use of PM Gati Shakti:** The **PM Gati Shakti** platform is the central tool for integrated infrastructure planning and execution. PM Gati Shakti should fully utilize its potential to ensure seamless coordination between different ministries and state governments. The platform provides a digital, data-driven approach to planning, which can help in reducing delays, preventing cost overruns, and ensuring that projects are executed on time.
4. **Dispute Resolution:** A fast and effective dispute resolution mechanism is vital for investor confidence. Establishing a dedicated **GST Appellate Tribunal** and other such specialized bodies can help in resolving contractual disputes efficiently, reducing the burden on courts.
5. **Focus on States:** Since states are expected to contribute a significant portion of the funding, the central government must work with them to improve their fiscal health and help them in the effective planning and execution of projects.

6. **Inclusive & Social Infrastructure:** Greater focus should be put on social infrastructure (health, education, water), rural connectivity, and climate-resilient projects to ensure equitable growth.

Read More:
UPSC GS-3: Economy (Infrastructure)

Inflation Management in India – Objectives & Challenges – Explained Pointwise

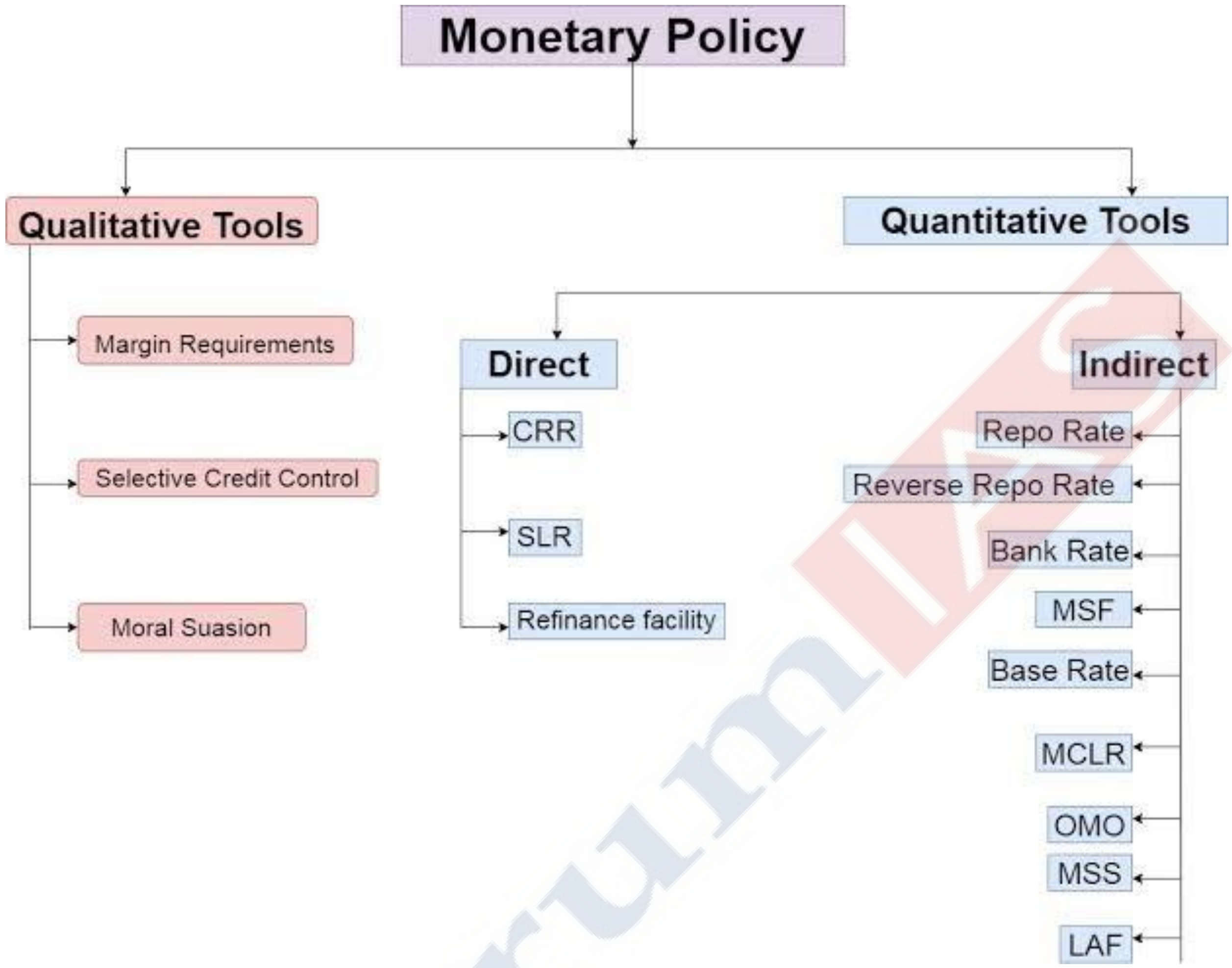
A new analysis by Climate Trends, a Delhi-based organisation, has connected the dots between climate change, crop losses and rising food prices. The study shows how extreme heatwaves and erratic rainfall have severely impacted TOP production over the past five years, pushing up prices of these staples and driving food inflation to alarming levels.
In this regard, let us understand the inflation management in India.

What is inflation management?

- Inflation management refers to how governments and central banks contain the rise in prices to maintain economic stability, protect purchasing power, and support sustainable growth.
- In India, inflation is mainly managed by the Reserve Bank of India (RBI) through monetary policy, supplemented by fiscal, administrative, and supply-side interventions.

Instruments of inflation management:

- **Monetary Policy (by RBI):**
    - **Repo Rate** ↑ (borrowing cost ↑) → reduces money supply → controls inflation.
    - **Repo Rate** ↓ (borrowing cost ↓) → increases money supply → boosts growth.
    - **CRR (Cash Reserve Ratio)** & **SLR (Statutory Liquidity Ratio):** Adjust liquidity with banks.
    - **Open Market Operations (OMO):** RBI buys/sells government securities to regulate money supply.
    - **Inflation Targeting:** India follows a **flexible inflation targeting regime** (4% ± 2%).



- **Fiscal Policy (by Government):**
  - **Reduce Fiscal Deficit:** Control excessive government spending.
  - **Rationalise Taxes:** Adjust GST/excise duties to regulate commodity prices (e.g., on fuel).
  - **Subsidies & Cash Transfers:** To protect the poor during inflation.
  - **Control Public Borrowing:** To avoid excess money circulation.
- **Supply Side Measures:**
  - **Boost agricultural output** (irrigation, storage, MSP reforms).
  - **Reduce supply bottlenecks** (transport, logistics, imports of essential goods).
  - **Strengthen supply chains** to control food inflation.
- **Administrative Measures:**
  - **Price controls & anti-hoarding laws** (check black marketing).
  - **Buffer stock management** by FCI for food grains.
  - **Regulating essential commodities** under Essential Commodities Act.

What are the objectives of inflation management?

1. **Price Stability:** Maintain a predictable and moderate rate of inflation to avoid excessive price fluctuations, which is crucial for household budgeting and business planning.

2. **Safeguarding Purchasing Power:** Prevent erosion of real income for salaried employees, pensioners, and low-income groups, as unchecked inflation disproportionately impacts the poor and vulnerable. Ensure essential goods, especially food and fuel, remain affordable, given their large share in Indian household expenditure.
3. **Supporting Sustainable Economic Growth:** Balance inflation control with the need for investment and job creation; extremely tight policies can stifle growth, while loose policies can trigger runaway inflation.
4. **Ensuring Financial Stability:** Stabilize domestic currency and control interest rates to limit risks such as asset bubbles and harmful volatility in financial markets.
5. **Policy Coordination:** Coordinate monetary, fiscal, and trade policies to address structural supply shocks and volatile commodity and food prices, which are frequently significant factors in India.

What are the challenges in inflation management?

1. **Neglect of economic reality-** In India, food accounts for nearly 50% of Indian household expenditure. It is crucial to most people's cost of living. Ignoring food prices in inflation targeting would lead to neglect of a major economic concern for a large portion of the population.
2. **Transitory Fluctuations of food prices is a misconception in India-** Contrary to claims that food price fluctuations are temporary, food inflation in India has been persistent for over a decade. This indicates a structural problem, and removal of food inflation from inflation targeting will not solve the problem.
3. **Interdependence of Food and Core Inflation-** Food prices influence wages, which in turn impact core inflation. Hence, it would be difficult to control core inflation independently of food prices.
4. **Misguided Policy-** Exclusion of food prices from the inflation target could leave India vulnerable to rising food costs. This would undermine the standard of living for a large segment of the population.
5. **Ineffectiveness of Interest Rate Adjustments-** Raising interest rates have not led to curbing of core inflation but has instead exacerbated it by increasing the costs for firms. This has led to higher prices of the products and higher inflation in the economy.
6. **Monetary Policy singular focus on demand side:** RBI's monetary policy targets only demand side constraints. It faces the problem of tackling supply shocks originating from food and oil.
7. **Flawed Model of Inflation targeting:** Monetary Policy model used for Inflation management in India is not statistically validated for Indian data. The current model of Inflation targeting is based on the assumption that inflation means overheating the economy- that is increased output greater than natural level output. However, In India it is impossible to observe the actual level of output in an economy. Hence, setting policy rates based on the assumption that the economy has overheated is unscientific.
8. **Failure in addressing supply shocks-** Adoption of a myopic vision in inflation management by focussing on export ban of agricultural products (like wheat, rice, onions), leads to increased inflation. Export bans induce fear and panic in the domestic market, leading to rise in stock holdings, which ultimately result in price rise.
9. **Exclusive Focus on Inflation slows down growth-** RBI's current mandate of inflation management is too singularly focused on controlling inflation. Inflation management has negatively impacted GDP growth. High policy rates (repo) maintained to control inflation affected the cost of domestic capital. It led to a decline in investment rate, thereby resulting in less GDP. For ex- Since 2016 (after inflation rate targeting was institutionalised), there has been a steady increase in repo rates, and a steady decline in GDP growth.

10. **Ignoring the Global Nature of inflation-** Inflation is global in nature, as the price level of a good is determined by millions of producers across the world. Hence, solely targeting inflation management is not good for the health of the economy, as certain prices of goods are beyond our control.

What should be the way forward?

1. **Increasing agricultural production-** We must focus on improving agricultural productivity and controlling food prices through supply-side measures to address inflation in India.
2. **Release Excess Buffer Stocks-** The government holds more than 40 million tonnes of rice, much above the buffer stock norms of 13.5 MT. This excess stock should be unloaded by the Food Corporation of India in the open market at reasonable prices. This will cool down food inflation.
3. **Enhancement of Processing Capacity:** About 10-15% of perishable items like tomatoes and onions should be processed. The availability of alternatives like tomato paste and onion powder will help to stabilize prices.
4. **Adjustment of Import Duties-** Import duties on items like wheat should be reduced, as cheaper imports can help control domestic prices.
5. **Updation of the CPI Basket Weights-** The weight of food and beverages in the CPI basket should be adjusted to reflect current realities as the weights are based on the 2011 consumption survey.
6. **Greater Tolerance of Higher levels of Inflation:** Since inflation is a global issue, there must be greater tolerance for higher levels of inflation either by adjusting the acceptable range of inflation upwards, or by extending the period over which the MPC has to meet its inflation target.

Conclusion:

Inflation management is a very important policy tool which should not only be limited to price control but shall be central to social well-being, macroeconomic stability, and achieving India's long-term development targets.

Read More: **The New Indian Express**
UPSC GS-2: Economics

Demographic Dividend & Employability Concerns in India – Explained Pointwise

India has become the most populous nation with ~1.44 billion population, which is slightly more than China. The exponentially increasing population levels in the 1970s, predicted a doom for India and the World. However, the Indian population growth story has belied the prediction of doom. With drop fertility rates (which is now below the replacement levels today), significant reductions in maternal and child mortality rates, India's demography has entered into a phase of 'demographic dividend'.

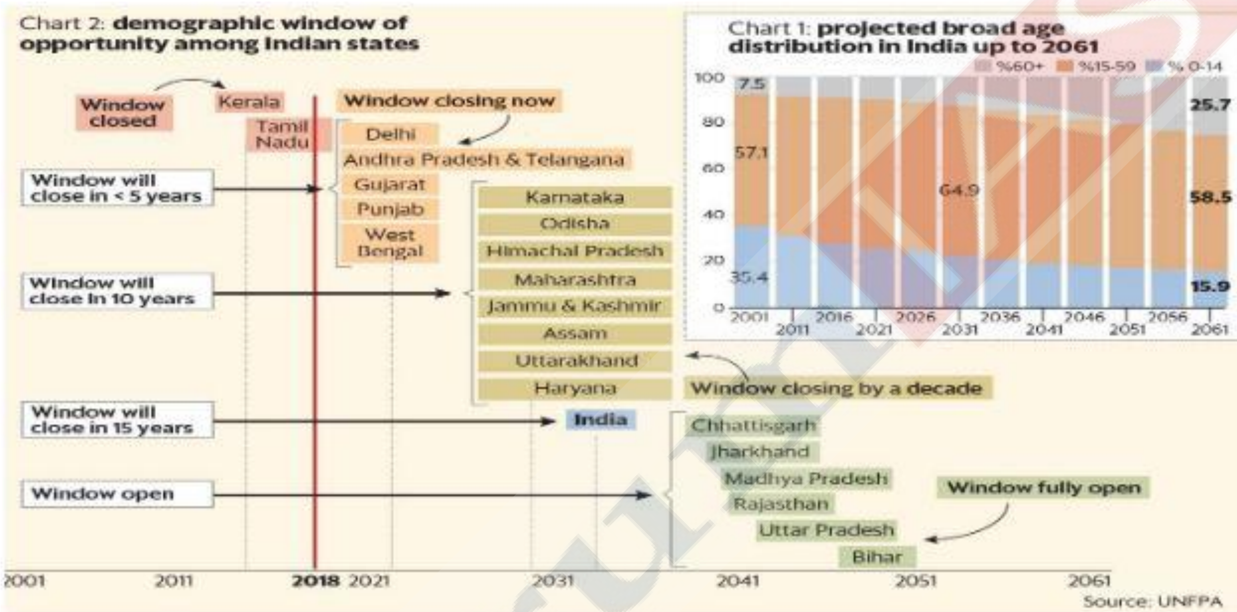
What is the demographic dividend?

According to the United Nations Population Fund (UNFPA), demographic dividend means the economic growth potential that can result from shifts in a population's age structure. The demographic dividend leads to an increased labour supply that increases the production of goods and boosts savings and investment. India has one of the youngest populations (62.5% of its population in the age group 15-59) in an aging world.

What is India's Demographic Status?

- According to the State of World Population Report 2023, published by the UNFPA, India has surpassed China as the most populous country, with a population of 142.86 crores compared to China's 142.57 crores.

- India's population growth has slowed down significantly in the past 10 years, with the total fertility rate (TFR) declining to 2 in 2020-2021 from about 3.4 in the early 1990s. A TFR of 2.1 is necessary for a country to attain population stability.
- India's population is forecast to grow to 1.67 billion in 2050 and peak at 1.7 billion in 2064 before settling at 1.53 billion in 2100.
- Two-thirds of India's total population are between the ages of 15 and 64. It presents a potential demographic dividend if education, skill development, and opportunities are provided, particularly for youth from disadvantaged sections and women.



Source: UNFPA

What is the significance of India's huge demographic dividend?

1. **Increased Supply of Labour:** The rapidly rising young population results in the increased labour supply, as more people reach working age.
2. **Economic growth:** Demographic Dividend results in better economic growth brought about by increased economic activities due to higher working age population and lower dependent population. Demographic dividend has historically contributed up to 15 % of the overall growth in advanced economies.
3. **Capital formation:** The propensity of saving increases with the decrease in the number of dependents. This increases national savings rates, increases the stock of capital in developing countries and provides an opportunity for enhanced capital formation through investment.
4. **Creation of Infrastructure:** Increased fiscal space created by the demographic dividend enables the government to divert resources from spending on children to investing in physical and human infrastructure.
5. **Increase in Female Human capital**: Decrease in fertility rates result in healthier women and fewer economic pressures at home. This provides an opportunity to engage more women in the workforce and enhance human capital.

6. **Innovation and entrepreneurship:** A young population can lead to increased innovation and entrepreneurship, with more startups and unicorns emerging in various sectors like healthcare, education, agriculture, and financial services.
7. **Climate action and sustainability:** A young and educated population can drive sustainable development by prioritizing climate action and adopting environmentally friendly practices.
8. **Increase in Global influence:** India's rising population, combined with its position as the world's largest democracy and a major economy, can help it become a global manufacturing hub, startup capital, and exporter of skilled manpower.

What are the challenges/limitations that can turn India's 'Demographic Dividend' into 'Demographic Disaster'?

1. **Lack of employability:** Poor human capital formation is reflected in low employability among India's graduates and postgraduates. According to ASSOCHAM, only 20-30 % of engineers find a job suited to their skills. Thus, a low human capital base and lack of skills is a big challenge.
2. **Low human development:** India ranks 134 out of 189 countries in UNDP's Human Development Index. The life expectancy at birth, and the mean years of schooling is much lower than other developing countries.
3. **Hunger and Malnutrition:** In the Global Hunger Index (2023), India was ranked at 111 out of 125 countries. The nutrition, stunting, wasting and underweight among children below five years and anemia among women pose serious challenges. According to India's epidemiological trajectory, India faces the double burden of communicable and non-communicable diseases (NCD).
4. **Informal economy:** Informal nature of economy in India is another challenge in reaping the benefits of demographic transition in India. The workers in the Informal economy are underpaid and devoid of social security benefits.
5. **Jobless growth:** As per the NSSO Periodic Labour Force Survey 2017-18, India's labour force participation rate for the age-group 15-59 years is around 53%. This means that around half of the working age population is jobless. There are future concerns of further jobless growth due to deindustrialization, de-globalization, the fourth industrial revolution and technological progress.
6. **Low Women workforce Participation rate:** According to the latest Periodic Labour Force Survey (2022-23) female LFPR is around 37.0%. This poses a serious challenge in effectively reaping the demographic dividend.

What are the reasons for low employability of India's workforce?

1. **Lack of employable skills**: One of the main reasons behind the high youth unemployment rate in India is that schools even today are training students from a young age in skills that have no use in the market in the future. The World Economic Forum Report also highlighted the need for skills of the future, especially those that involve technology, such as programming, data science, big data, machine learning, AI, web development, etc.
2. **Obsession with "honourable" jobs**: Indian society puts a high value on graduates and white-collar jobs and often ends up neglecting those with adequate vocational skills or those who have completed on-the-job training.
3. **Poor communication skill**: In today's era, good communication skill is necessary, as our economy is expanding to other countries also. Employers want to recruit people who possess good communication skills so he/she can deal with foreign clients also.
4. **Dynamic nature of job market**: The job market is changing faster, candidates who do not equip themselves with new technology or adapt themselves to changing nature of jobs find it challenging to get employment.

5. **Rising trend of voluntary unemployment:** While the lack of sufficient job creation could lead to resentment due to people's high aspirations, NITI Aayog member Bibek Debroy, flagged a dramatic rise in voluntary unemployment across the country, where people choose not to work below a certain income level after 'investing' in education.
6. **Low labour force participation of women**: After recording some improvement in recent years, India's notoriously low female labour force participation rate (LFPR) seems to have stagnated, data from the Periodic Labour Force Survey (PLFS July 2021-June 2022) shows. 29.4% of women (aged 15-59) were part of India's labour force in 2021-22, as compared to 29.8% in the preceding year. In contrast, men's LFPR improved from 80.1% in 2020-21 to 80.7% in 2021-22.
7. **Less growth of the employment-intensive industry**: Less growth of employment-intensive industries like manufacturing, textile etc are a major problem. The skill-intensive service industry is unable to absorb the workforce,as these jobs require high-level skills.

What are various initiatives to improve the employability of the workforce in India?

1. **Skill India Mission (SIM):** Provides skill, reskill, and upskill training to youth across all states through various schemes and partner institutes to prepare them for future jobs in diverse industries.
2. **National Policy for Skill Development and Entrepreneurship (2015):** Umbrella policy to unify skilling activities, promote common standards, and link efforts to demand centers.
3. **Pradhan Mantri Kaushal Vikas Yojana (PMKVY):** Flagship program that delivers free, industry-relevant short-term training, offers recognition of prior learning, and ensures placement assistance.
4. **National Apprenticeship Promotion Scheme (NAPS):** Incentivizes employers to engage apprentices, combining practical work experience with formal study to boost job preparedness.
5. **Startup India Scheme:** Fosters entrepreneurship through funding, mentoring, and tax benefits, encouraging youth to launch innovative ventures.
6. **Sector Skill Councils (SSCs):** Develop sector-specific standards and training, closely collaborating with industry to ensure skills match workforce demand.
7. **E-Shram Portal:** National database of informal workers to enable targeted skilling, employment benefits, and social security integration.

What should be the way forward to improve the employability of the workforce in India?

1. **Strengthen Industry-Academia Linkage:**
    - Align curricula of schools, universities, and training institutes with real-world industry needs, ensuring the imparting of job-relevant skills through partnerships, internships, and apprenticeships.
    - Embed soft skills, digital literacy, and adaptability within both technical and general education to boost workforce flexibility and professional conduct.
2. **Scale & Modernise Skill Development:**
    - Expand vocational training and apprenticeship opportunities, emphasizing emerging sectors such as AI, robotics, renewable energy, healthcare, and tourism.
    - Encourage modular skill courses, blended learning models, and experimentation with digital platforms to increase access, especially in rural and excluded communities.
3. **Promote Formalisation of Economy:** Formalize informal employment by leveraging digital platforms like e-Shram for benefits, skilling, health and retirement coverage, and dignified employment contracts.
4. **Foster Innovation, Startups & Entrepreneurship:** Streamline regulatory processes, offer startup incubation, and build access to credit to unleash self-employment and micro-enterprises, especially for youth and women.

5. **Public-Private Partnerships (PPPs):** The government can work with the private sector to fund and manage skill development initiatives on a large scale.

Conclusion:
"Solving the employability crisis is less about the skills that our youth need to build and more about the opportunities that need to be built to skill our youth,".

UPSC GS-3: Indian Economy
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Inclusive Growth-Explained Pointwise

What is Inclusive Growth?

- **As per OECD** (Organisation for Economic Cooperation and Development), **inclusive growth** is economic growth that is distributed fairly across society and creates opportunities for all.
- **UNDP** described it as "the process and the outcome where all groups of people have participated in growth and have benefited equitably from it".
- Put simply, it refers to economic development that benefits all segments of society, ensuring equitable opportunities and outcomes for individuals regardless of their socio-economic background or circumstances.

What are the Major Components of Inclusive Growth?

1) **Reduced Poverty-** Inclusive growth strives to reduce poverty by improving the poor's access to opportunities and resources.

2) **Women's Empowerment-** Since women are frequently left out of economic possibilities, inclusive growth aims to provide them more power through employment, education, and training.

3) **Good Governance-** Transparency, accountability, and efficient institutions that meet the demands of all citizens are essential for inclusive progress.

4) **Education & Skill Development-** Building skills is a crucial component of inclusive growth because it paves the way for people to engage fully in the economy.

5) **Equal Opportunity-** Inclusive growth works to level the playing field for everyone, regardless of socio-economic position, gender, race, or religion.

6) **Access to Basic Services-** Inclusive growth seeks to guarantee that all citizens have access to basic services including healthcare, education, and sanitation. This access should include not only the quantity, but also quality, of these basic services.

7) **Employment Creation-** To combat poverty and advance economic development, inclusive growth aims to increase employment, especially for disadvantaged and marginalised people.

8) **Addressing the Marginalised-** Ensuring participation from all sections of society in the social, economic and political sphere.

9) **Reduction in Income Disparities-** Among the following:

1. Sections of society (Religion, Caste, etc.)
2. Rural-Urban Areas
3. Genders

What is the situation of inclusive growth in India?

- India is now one of the fastest-growing economies globally. However, this growth has not resulted in a corresponding increase in its **Human Development Index (HDI)**. According to the Human Development Report of 2023-24, India ranks 134 out of 193 countries.
- In the **Inclusive Development Index (IDI)**, 2018 compiled by the World Economic Forum (WEF), India ranked 62nd out of 74 emerging countries and was among the least inclusive countries in G20 countries.
- The **"Public good or Private Wealth?" Report 2019**, published by OxFam showed that India's top 10% holds 77.4% of the total national wealth, while the top 1% holds 51.53% of the wealth. The bottom 60% of the population holds only 4.8% of the national wealth.

What are the reasons behind lack of Inclusive Growth in India?

1) **Historical reasons-** Discrimination against certain sections of the society since historic times has affected their access to opportunities and to education, employment and health. Affirmative policies have been restricted to a few beneficiaries.

2) **Gender Inequality-** Females are treated as subordinate to males. Girl education is considered a burden on the family and women have limited choices in employment.

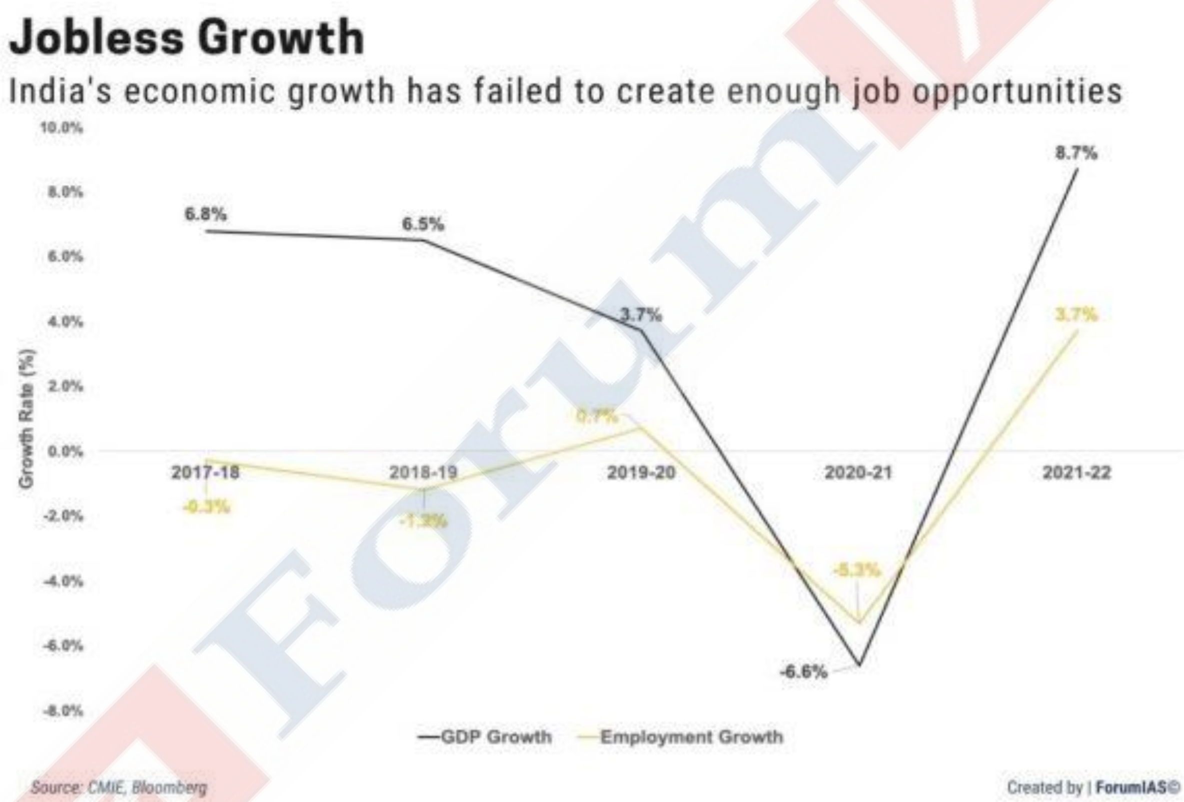
3) **Large-scale informal employment-** 80% of the Indian labour force is employed in the informal sector. Informal sector jobs are more insecure without regular pay and social security benefits. This increases the wage gap between formal and informal sectors.

4) **Overdependence on Agriculture-** A huge proportion of the population is still dependent on agriculture (~45% of the workforce) but the share of agriculture to the total GDP is falling.

5) **Regional Disparities in Growth-** Growth has been different across sectors and regions. For example, Green Revolution has disproportionately benefitted North-Western India when compared to Eastern India.

6) **Globalisation-** Studies show that globalization and opening up the economy has benefited the rich more than the poor, thus raising inequality.

7) **Jobless Growth-** India experienced job growth of 3% p.a in the 1970s at a time when the economy grew at 3-3.5% p.a but over the last 3 decades the economy grew at over 5-8% p.a but job growth has been close to 1% p.a.



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8) **Government Inefficiencies-** This includes corruption, maladministration, red tapism etc. This prevents the optimum utilization of resources and creation of jobs.

Read More- Inclusive Growth

What are the challenges in ensuring inclusive growth?

1) **Poverty-** The Multidimensional Poverty Index 2024 places India first, with an estimated 23 crore people living in multidimensional poverty.

2) **Uneven Distribution of Resources-** Unfair resource allocation can thwart efforts to create inclusive growth. Examples of unfair resource distribution include wealth, land, and education.

3) **Social and cultural obstacles-** Marginalized groups may encounter social and cultural obstacles that restrict them from accessing opportunities and services, such as discrimination, exclusion, and gender inequity. For instance, Women often face barriers in accessing education, employment, and other opportunities.

4) **Weak institutional capacity-** Policies and programmes aimed at promoting equitable growth may be less effective if there is a lack of proper implementation, infrastructure, functionaries, etc.

5) **Rural-Urban Divide-** Disparities between urban and rural areas persist in terms of infrastructure, access to education, healthcare, and employment opportunities. This gap has still not been bridged.

6) **Unemployment and Underemployment-** Creating enough jobs for the growing workforce, especially in sectors that absorb a large number of people like agriculture and manufacturing, remains a challenge. Many are employed in the informal sector without job security or proper benefits.

7) **Education and Skills Gap-** Access to quality education and skill development is uneven across regions and socio-economic groups. This leads to a lack of skilled workers and limits opportunities for many individuals.

What are the advantages of inclusive growth?

Ensuring inclusive growth leads to many advantages that positively impact both society and the economy. Some key advantages include:

1) **Economic Stability and Sustainability-** Inclusive growth contributes to economic stability by creating a more balanced distribution of wealth. When more people have access to resources and opportunities, it can lead to a more sustainable economic development trajectory.

2) **Social Cohesion and Stability-** Addressing disparities fosters a more cohesive society. It reduces social tensions arising from inequality, which can lead to a more stable and harmonious community.

3) **Increased Human Capital Development-** When marginalized groups have access to education and skill development, it enhances the overall human capital of the nation. Educated and skilled individuals contribute more effectively to economic growth and innovation.

4) **Expanded Consumer Base-** Inclusive growth expands the consumer base by bringing more people into the formal economy. This leads to increased demand for goods and services, spurring economic growth.

5) **Enhanced Political Stability-** When people feel included in the economic and social fabric of society, it often translates to more stable political environments, reducing the risk of social unrest or conflicts.

6) **Greater Innovation and Creativity-** Inclusive growth brings together diverse perspectives, fostering innovation and creativity. A diverse workforce and society can generate new ideas and solutions to complex problems.

What are various government initiatives to ensure inclusive growth?

Financial Inclusion	• **Pradhan Mantri Jan Dhan Yojana (PMJDY):** Launched in 2014, this flagship scheme aims to provide universal access to banking services, including savings accounts, credit, insurance, and pensions, to every household. It has significantly expanded the formal banking network, especially in rural areas, and enabled Direct Benefit Transfers (DBT). • **Direct Benefit Transfer (DBT):** This initiative aims to transfer government subsidies and benefits directly to the bank accounts of beneficiaries, reducing leakages and corruption, and ensuring that funds reach the intended recipients. It covers a wide range of schemes, including food subsidies, pensions, and scholarships. For e.g. **PM KISAN** – 110mn farmers are now receiving direct income support. • **Pradhan Mantri MUDRA Yojana (PMMY):** Launched in 2015, MUDRA provides collateral-free loans up to ₹10 lakh to micro and small enterprises, particularly those run by women, SC/ST, and OBC entrepreneurs. This promotes self-employment and entrepreneurship among marginalized sections. • **Atal Pension Yojana (APY):** A government-backed pension scheme that provides a guaranteed pension to subscribers based on their contributions, primarily targeting workers in the unorganized sector to ensure social security in old age. • **Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) & Pradhan Mantri Suraksha Bima Yojana (PMSBY):** These are affordable life insurance and accident insurance schemes, respectively, designed to provide social security cover to the masses at very low premiums, making financial protection accessible to all. • **Kisan Credit Card (KCC):** Provides timely and adequate credit to farmers for their agricultural needs, preventing their reliance on informal money lenders.

Skill Development and Employment Generation	• **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA):** This landmark Act guarantees 100 days of wage employment in a financial year to adult members of any rural household willing to do unskilled manual work. It acts as a safety net, especially for the rural poor, and creates rural infrastructure. • **Make in India:** Launched in 2014, with the aim to transform the country into a global manufacturing and design hub as well as support an industrial growth that creates jobs. It led to the strengthening of MSMEs & encouraged Indian entrepreneurs & startups to innovate & establish new business – thus, transforming them from 'job seekers' to 'job creators'. • **Skill India Mission:** An umbrella initiative comprising several schemes aimed at skilling, re-skilling, and up-skilling the youth to enhance their employability. ○ **Pradhan Mantri Kaushal Vikas Yojana (PMKVY):** Provides skill training to the youth, focusing on industry-relevant skills. ○ **Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY):** Focuses on transforming rural poor youth into an economically independent and globally relevant workforce through skill training and placement. ○ **Jan Shikshan Sansthans (JSS):** Provide vocational training to non-literates, neo-literates, and school dropouts, especially in rural areas. • **PM Vishwakarma Yojana:** Launched in 2023, this scheme provides support to traditional artisans and craftspeople (Vishwakarmas) through skill training, toolkits, marketing support, and collateral-free credit. • **Pradhan Mantri Employment Generation Programme (PMEGP):** Promotes self-employment through the establishment of micro-enterprises in the non-farm sector by providing financial assistance. • **PM SVANidhi Scheme:** Provides affordable working capital loans to street vendors to resume their livelihoods and promotes digital transactions. • **National Rural Livelihoods Mission (NRLM) / Deendayal Antyodaya Yojana – National Rural Livelihood Mission (DAY-NRLM):** Focuses on organizing rural poor households into Self Help Groups (SHGs) and federations, providing them access to financial services and sustainable livelihood opportunities.

Education and Human Development	• **National Education Policy (NEP) 2020:** Aims to provide universal access to quality education from pre-school to higher education, with a strong emphasis on holistic development, foundational literacy and numeracy, skill development, and inclusive learning environments. • **Samagra Shiksha Abhiyan:** An overarching program for the school education sector, extending from pre-school to senior secondary levels, aiming to ensure inclusive and equitable quality education. It specifically targets bridging gender and social category gaps. • **Mid-Day Meal Scheme (now PM POSHAN):** Provides hot cooked meals to schoolchildren, improving nutritional status, increasing enrollment and attendance, and reducing dropout rates, particularly among disadvantaged groups. • **Rashtriya Uchchatar Shiksha Abhiyan (RUSA):** Aims to improve access, equity, and quality in higher education by providing strategic funding to eligible state higher educational institutions. • **Pradhan Mantri Innovative Learning Program (DHRUV):** Identifies and nurtures talented children to help them achieve their full potential.
Health and Nutrition	• **Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PMJAY):** The world's largest health insurance scheme, providing a health cover of ₹5 lakh per family per year for secondary and tertiary care hospitalization to over 10 crore poor and vulnerable families. • **National Health Mission (NHM):** Seeks to improve the health outcomes of the population, particularly in rural areas, by strengthening public health infrastructure, promoting maternal and child health, and controlling communicable and non-communicable diseases. • **POSHAN Abhiyaan (National Nutrition Mission):** Aims to reduce malnutrition among children, adolescent girls, pregnant women, and lactating mothers through a multi-ministerial convergence approach and technology. • **Jan Aushadhi Kendras:** Provide quality generic medicines at affordable prices, making healthcare more accessible and affordable for all. • **Healthcare Infrastructure:** Number of medical colleges increased to 780 & AIIMS institution increased to 23.
Social Protection and Housing	• **Pradhan Mantri Awas Yojana (PMAY) – Urban and Rural:** Aims to provide "Housing for All" by 2022 (extended to 2024 for some components), by providing financial assistance for constructing or purchasing houses for eligible beneficiaries, especially those from economically weaker sections. • **National Social Assistance Programme (NSAP):** Provides social assistance benefits to the elderly, widows, and persons with disabilities in the form of pensions.

	● **Reservation Policies:** Constitutional provisions and government policies for reservation of seats in education, employment, and legislative bodies for Scheduled Castes (SCs), Scheduled Tribes (STs), Other Backward Classes (OBCs), and Economically Weaker Sections (EWS) to promote affirmative action and social equity. ● **PM JANMAN (PM-Janjati Adivasi Nyaya Maha Abhiyan):** A targeted initiative for the comprehensive development of Particularly Vulnerable Tribal Groups (PVTGs), focusing on basic amenities, health, education, and livelihoods.
Infrastructure and Connectivity	● **Jal Jeevan Mission (Har Ghar Jal):** Aims to provide safe and adequate drinking water through tap connections to all rural households by 2024, improving health and reducing the drudgery of water collection. ● **Pradhan Mantri Gram Sadak Yojana (PMGSY):** Connects unconnected habitations with all-weather roads, improving access to markets, schools, healthcare, and other services in rural areas. ● **BharatNet Project:** Focuses on providing broadband connectivity to all Gram Panchayats, aiming to bridge the digital divide and enable access to digital services in rural India. ● **Swachh Bharat Mission (SBM):** Focuses on improving sanitation and hygiene, particularly in rural areas, through the construction of toilets, which has significant health and dignity benefits for all, especially women. ● Construction of key infrastructure projects connecting the remote areas for e.g. **Chenab & Anji bridges**. ● **Digital Connectivity:** ○ **Digital India:** An umbrella program focused on transforming India into a digitally empowered society and knowledge economy, which underpins many inclusive growth initiatives by enabling digital delivery of services. ○ Introduction of **Digital Public Infrastructure** like Aadhar & UPI with over 141cr Aadhar registration & 60cr UPI transactions every day. ○ **IndiaAI Mission**: Over 34,000 high-speed computer chips, called GPU, are now available at one-third of global cost.

What should be the Way Forward?

Achieving inclusive growth in India requires a comprehensive and multi-dimensional approach. Here are the steps that can be taken to ensure inclusive growth:

1) **Education and Skill Development-** Improving access to quality education for all, especially in rural and marginalized areas, is crucial. Emphasizing skill development programs that align with market needs can enhance employability.

2) **Employment Generation-** Encouraging sectors that create more jobs, such as manufacturing, services, and entrepreneurship, can help reduce unemployment and underemployment.

3) **Social Protection Programs-** Strengthening and expanding social safety nets like the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), subsidized food programs, and healthcare initiatives can provide a safety net for vulnerable populations.

4) **Financial Inclusion-** Expanding access to banking and financial services, especially in rural areas, can empower individuals and small businesses. Initiatives like Jan Dhan Yojana and Microfinance Institutions can play a significant role here.

5) **Gender Equality-** Promoting gender equality through policies that support education, employment, and entrepreneurship for women can unlock significant economic potential.

6) **Rural Development-** Focusing on agriculture by modernizing techniques, providing better access to markets, and improving infrastructure can spur growth in rural areas.

7) **Policy Reforms-** Implementing policies that promote inclusive growth, such as progressive taxation, land reforms, labour reforms, and policies targeting marginalized communities, can play a pivotal role.

Conclusion:
A holistic approach that addresses these multiple dimensions while considering regional disparities and the diverse needs of the population will be key in moving India toward a path of inclusive growth. Collaboration between government, private sector, civil society, and international organisations is crucial in executing these strategies effectively.

Read More- The Hindu
UPSC Syllabus- GS-3- Inclusive Growth

JAM Trinity – Significance & Challenges – Explained Pointwise

The JAM Trinity – Jan Dhan, Aadhaar, and Mobile – has marked a decade of driving India's digital push. Launched with the Pradhan Mantri Jan Dhan Yojana (PMJDY) in 2014, this framework has linked banking, identity, and connectivity to bring millions into the formal economy. Today, PMJDY boasts over 56 crore accounts, with deposits exceeding Rs 2.68 lakh crore. Aadhaar covers 141 crore people, while mobile subscriptions stand at 119 crore, with tele-density climbing to 86%. This setup has enabled Direct Benefit Transfers (DBT) of over Rs 43 lakh crore, saving Rs 3.48 lakh crore by cutting leakages. As India builds on this, JAM stands as a key tool for financial inclusion and transparent governance.

What is JAM?

- The JAM is the abbreviation form of **Jan Dhan Yojana , Aadhaar & Mobile number**.
- The JAM (short for Jan Dhan-Aadhaar-Mobile) trinity was first proposed in the Economic Survey 2014-15.
- The government has launched JAM to deliver direct benefits to India' poor.
- JAM brought together financial inclusion, biometric identification (Aadhaar) and mobile telecommunications.
- JAM was launched to foster financial inclusion, improve governance, and ensure efficient delivery of welfare benefits and public services.

What are the components of JAM trinity?

- **Jan Dhan (PMJDY):** Provides every citizen with access to a bank account, integrating those previously outside the formal financial system.
- **Aadhaar:** Offers unique biometric identification, allowing accurate targeting and authentication of beneficiaries under welfare schemes, eliminating fraud and duplication.
- **Mobile:** Ensures ubiquitous digital connectivity to access financial services, receive subsidy payments, and communicate with government programs.

What was the need of JAM?

1. **Addressing Leakages & Corruption:** Before JAM, government subsidies and welfare benefits suffered massive leakages due to middlemen, phantom beneficiaries, and inefficient delivery channels. Nearly half of subsidized goods and cash transfers did not reach the intended recipients, fueling corruption and losses to the public exchequer.
2. **Empowering the unbanked & marginalised:** A significant proportion of India's poor, rural, and marginalized populations lacked access to formal banking, making it impossible for them to receive direct cash benefits or participate in the economy securely.
3. **Poor targeting & Efficiency of Welfare Schemes:** Before JAM, welfare schemes were fragmented and slow, delaying payments and making it difficult for beneficiaries to track, access, or use government support effectively.

What are the objectives of JAM trinity?

1. **Direct Benefit Transfers (DBT):** Facilitate direct cash or subsidy transfers into beneficiaries' accounts, minimizing intermediaries and leakages.
2. **Financial Inclusion:** Empower marginalized communities by opening access to banking, credit, insurance, and pension schemes. JAM has strengthened financial inclusion as it has ensured that each eligible account holder under the Pradhan Mantri Jan Dhan Yojana is provided access to digital financial services in addition to the RuPay Card.
3. **Transparency and Accountability:** Biometric identification and digital transactions reduce corruption, increase administrative efficiency, and make welfare delivery more accountable.
4. **Cost Efficiency:** Reduces overheads by digitizing transactions and removing administrative bottlenecks.

What are the benefits of JAM?

For poor	• JAM has brought millions of previously unbanked citizens into the formal financial system and has played a key role in ending their social as well as economic exclusion. • The trinity has provided them with a secure place to save money and access credit. This has empowered a large segment of the population and contributed to their economic upliftment. • JAM-linked schemes (PM-KISAN, Ujjwala, MGNREGA) have provided timely support to farmers, women, and the poor—boosting food security and rural incomes, and lifting 25 crore Indians out of poverty in the last decade. • JAM trinity ensured that the poor now have access to financial services.

For government	● JAM Trinity has fundamentally transformed the way government subsidies and benefits are delivered. Traditionally, these benefits were disbursed through a cumbersome system involving middlemen, which often led to corruption and leakage. The JAM Trinity has created a more efficient and transparent system. ● By making the transfer of funds transparent and trackable, the JAM Trinity has improved the efficiency and accountability of the government. It has helped plug leakages in the public expenditure system and ensured that every rupee spent reaches the right person. ● The government has been able to identify various beneficiaries of various schemes and directly send them cash.
For Economy	● Over 55 crore Jan Dhan accounts have brought millions of Indians, including women and marginalized groups, into the formal banking system, spurring savings and access to institutional finance. This inclusivity has supported entrepreneurship and rural development, enabling marginalized communities to access credit and insurance. ● JAM has driven digital payments growth, with billions of UPI transactions monthly, and democratized access to e-commerce, online education, and telemedicine—even in rural areas. ● BharatNet and 5G roll-outs have accelerated digital infrastructure penetration, creating new business opportunities and boosting GDP growth.

What are the Challenges?

1. **Limited access to smartphones, internet, and digital literacy:** Large rural, tribal, and marginalized populations remain excluded or unable to fully benefit from JAM due to lack of connectivity and devices.
2. **Poor banking infrastructure:** Many remote areas have inadequate branch coverage, insufficient cash-out points, and a shortage of banking correspondents or agents to assist account holders.
3. **Dormant/Inactive Jan Dhan Accounts:** Millions of Jan Dhan accounts remain inactive or dormant due to limited financial awareness, lack of trust, and low-income activity. Behavioral change from financial participation takes time and targeted effort.
4. **Aadhaar-based authentication issues:** Biometric mismatches, technical failures, and data entry errors frequently lead to exclusion, denying benefits to genuine recipients.
5. **Data Privacy & Cybersecurity Risks:** Linking Aadhaar to bank and mobile accounts raises vulnerabilities. Weak data protection protocols have led to concerns over unauthorized access and misuse.

What should be the way forward?

1. **Enhance Digital & Financial Literacy:**
    - Launch large-scale digital literacy campaigns for rural, tribal, and marginalized populations to increase comfort with mobile, internet, and banking services.
    - Provide tailored financial education, helping beneficiaries understand banking, government schemes, and fraud prevention.

2. **Expand & Upgrade Infrastructure:**
    - Invest in high-speed internet connectivity and mobile networks across remote and rural areas, closing the digital divide.
    - Strengthen banking outreach by increasing the number of branches, ATMs, banking correspondents, and mobile banking vans.
    - Deploy robust, fail-safe transaction systems to minimize downtime or errors due to power/network disruptions.
3. **Strengthen Cybersecurity & Data Protection:**
    - Enforce stricter data privacy standards, implement advanced encryption, and regularly audit systems for vulnerabilities and breaches.
    - Update laws to protect users from cyber fraud and financial exploitation, guided by the Digital Personal Data Protection Act and international best practices.
4. **Integrate Innovation & New Schemes:** Broaden JAM's coverage to new types of welfare transfers, micro-credit, insurance, and pension programs, adapting the ecosystem for evolving needs.

Conclusion:
JAM Trinity, thus, represents a powerful digital infrastructure & has been a cornerstone of India's digital and financial inclusion agenda, advancing efficiency, transparency, and equitable growth in public service delivery.

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Financial Inclusion – Significance & Challenges – Explained Pointwise

What is financial inclusion?

- Financial inclusion is the delivery of financial services at affordable costs to all sections of society (including the disadvantaged and low-income segments).
- The term 'Financial' includes all types of financial services, including savings, payments and credit from all types of formal financial institutions.
- It strives to address and bring solutions to the constraints that exclude people from participating in the financial sector.

United Nations has defined Financial Inclusion as follows:

1. Access at a reasonable cost for all households to a full range of financial services, including savings or deposit services, payment and transfer services, credit and insurance.
2. Sound and safe institutions governed by clear regulation and industry performance standards.
3. Financial and institutional sustainability, to ensure continuity and certainty of investment
4. Competition to ensure choice and affordability for clients.

Need for Financial Inclusion in India:

1. **Banking for the unbanked:** Financial inclusion would ensure universal access to bank accounts, which are a gateway to all financial services.
2. **Poverty reduction & Social Equity:**

a) Extends essential financial tools (savings, loans, insurance) to the poor, helping them build assets, manage risk, and break the cycle of poverty.
b) Empowers migrants, farmers, daily wage workers, and self-employed individuals to participate meaningfully in the economy.
c) Directly supports women's empowerment and gender equality by enabling access to finance, fostering economic independence, and improving household welfare.

3. **Insurance and social security:** Financial inclusion would ensure universal coverage of insurance for life, accidents, etc., and of pensions and other retirement planning services.
4. **Asset diversification:** It would allow diversification of the asset portfolio of households through increased participation in capital markets.
5. **Access to credit:** India has considerable ground to cover in terms of credit access. As per a NITI Aayog report, the number of loan accounts per 1000 adults was 154 in India (in 2016). In comparison, the number of loan accounts per 1,000 adults was 88 in Bangladesh, 26 in Pakistan, 417 in South Africa, and 231 in Kenya. Thus, financial inclusion would ensure better access to credit at a reasonable cost for those presently excluded(such as small and marginal farmers).
6. **Economic Growth:** Brings more citizens into the banking net, increasing savings, investment, and productive economic activity, which fuels GDP growth.
7. **Formalisation of Economy:** Promotes the transition from informal to formal economy, increasing transparency, accountability, and tax compliance.
8. **Efficient Welfare Delivery (DBT, Insurance, Pensions):** Financial inclusion enables targeted Direct Benefit Transfers (DBT) and the JAM Trinity system, reducing leakages, improving efficiency, and ensuring benefits reach the intended recipients. It facilitates affordable insurance and pension schemes for vulnerable and informal sector workers.

Challenges to Financial Inclusion:

1. **Lack of financial literacy:** A large proportion of the population (such as: rural households, low income households and small informal businesses) depend on the informal sources of credit due to a lack of financial literacy among them.
2. **High cost of transaction:** Traditional banking models consisting of brick-and-mortar bank branches in remote areas add to the operational cost of the banks. This has acted as a disincentive for the banks to move to remote regions.
3. **Lack of credit information:** Lack of information to determine the credit-worthiness of low-income households and informal businesses with formal creditors acts as a constraint while lending. This results in a high cost of credit.
4. **Low and irregular income:** Income level is one of the prominent factors that hinder the underprivileged from availing services from banks. The majority of the people's income level in the rural area is low and irregular too. A major portion of people is in seasonal employment. Hence, income level decides people's savings and investment avenues.
5. **Regulatory Cholesterol:** At present, there are a number of authorities (RBI, SIDBI, NABARD etc.) that play a role in financial inclusion. This has led to multiplicity of regulations and coordination issues between them. Such a situation is also referred to as 'regulatory cholesterol'.
6. **Large amount of NPAs:** Weak balance sheets of banks and the rising NPAs have made the banks reluctant and cautious in lending to customers such as farmers, small businesses and thin file clients (Clients with zero or insignificant credit history).

7. **Technological Issues:** Frequent machine breakdowns, lack of internet connectivity and problems with hand-held devices have continued to deter the financial inclusion of unserved and under-served areas.
8. **High Cost:** Nowadays banks are operating for profit in a competitive environment. They levy charges for different transactions like minimum balance requirements, charges for usage of ATM services, processing fees etc.

Government Initiatives for Financial Inclusion:

1. **Pradhan Mantri Jan Dhan Yojana (PMJDY):**
   - Launched in 2014 as a National Mission for Financial Inclusion, PMJDY provides every citizen with a zero-balance bank account, affordable credit, insurance, remittance, and pension facilities.
   - Over 56 crore bank accounts have been opened, with a significant share for women and rural populations.
2. **Pradhan Mantri Mudra Yojana (PMMY):**
   - Enables collateral-free, easy-access microcredit for small and micro enterprises, helping boost entrepreneurship among non-corporate, rural, and informal sector workers.
   - Loans up to Rs 10 lakh under three categories (Shishu, Kishor, Tarun) have fostered job creation and small business growth.
3. **Stand Up India Scheme:** Facilitates bank loans between Rs 10 lakh and Rs 1 crore for SC/ST and women entrepreneurs to launch greenfield enterprises, ensuring inclusion in self-employment and business ownership.
4. **Atal Pension Yojana (APY):** Provides pension coverage for the unorganized sector, aiming for safe, inclusive retirement security (guaranteed monthly pension post age 60).
5. **Pradhan Mantri Suraksha Bima Yojana (PMSBY) & Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY):** Affordable insurance schemes delivering accident, disability, and life insurance to millions of low-income citizens for minimal annual premiums.
6. **Digital Payment:** Unified Payments Interface (UPI), Aadhaar-enabled payments, Bharat Interface for Money (BHIM), and the creation of Digital Banking Units have dramatically boosted digital transactions, mobile banking, and financial empowerment.
7. **Jan Dhan-Aadhar-Mobile (JAM) Trinity:** The combination of Aadhaar, PMJDY, and an increase in mobile communication has transformed how citizens access government services.
8. **Improving Financial Literacy:**
   - The Reserve Bank of India has launched a project called "**Project Financial Literacy.**" The project's goal is to disseminate information about the central bank and general banking concepts to a variety of target groups, including school and college children, women, the rural and urban poor, military personnel, and senior citizens.
   - '**Pocket Money**' is the flagship programme of the Securities and Exchange Board of India (SEBI) and the National Institute of Securities Markets (NISM) aimed at increasing financial literacy among school students. The goal is to teach students about the value of money and the importance of saving, investing, and financial planning.
9. **Financial Inclusion Index:** It is a **composite, annual measure** developed by RBI to objectively assess and monitor the **extent of financial inclusion** across India. It captures the **penetration and usage of financial services**—banking, investments, insurance, postal, and pension sectors—for **all individuals and households** in the country. The index comprises **three** broad parameters — **access, usage, and quality**, having weight **35%, 45% and 20%**, respectively. The index ranges from **0 (complete exclusion) to 100 (full inclusion).**

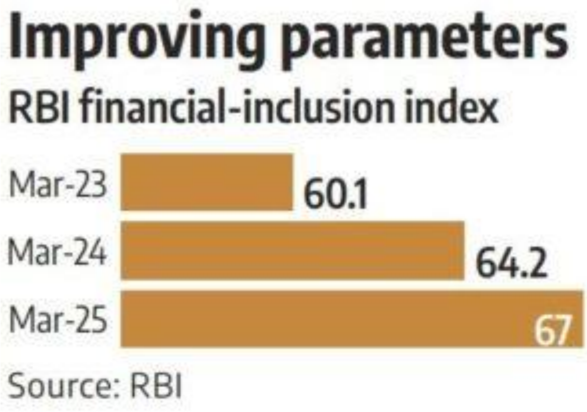

Figure 1.Source: RBI

Way Forward:

1. **Product:** Diversified products and services with adequate flexibility, and continuous availability may be developed to serve the rural masses. It would have the greatest impact on reducing poverty and empowering the rural masses.
2. **Processes**: Business processes need to be realigned to help banks reach the deprived and vulnerable population and provide them with hassle-free doorstep service.
3. **Partnership:** The bank-non-bank relationship [SHGs, MFIs etc] can be enhanced to ease the accessibility and availability of financial services.
4. **Protection:** Adequate safeguards are needed to be put in place to protect the receivers and providers of financial services.
5. **Profitability:** Proper delivery models are needed to ensure that the rural finance service providers function profitably on a sustained basis.
6. **Productivity:** The focus of the financial inclusion initiatives should be on maximizing productivity by adopting a **'CREDIT-PLUS APPROACH'**. [The Credit-plus approach integrates adequate and timely credit into larger developmental processes such as community organizing, leadership training, entrepreneurship etc.]
7. **People:** The rural branch staff should be adequately equipped to meet the needs of driving the process of financial inclusion in terms of knowledge, skills and attitude.

Conclusion:

Financial inclusion is critical for India's journey towards inclusive growth, digital empowerment, social justice, and long-term developmental resilience.

UPSC GS-3: Economics – Inclusive Growth

Monetary Policy – Significance & Challenges – Explained Pointwise

What is monetary policy?

- Monetary policy refers to the actions and strategies used by a central bank (RBI) to manage money supply, interest rates, and credit in the economy, ensuring price stability, supporting economic growth, and ensuring financial stability.
- **The Reserve Bank of India (RBI) is vested with the responsibility of conducting monetary policy**. This responsibility is explicitly mandated under the Reserve Bank of India Act, 1934.

Types of monetary policy:

There are two types of monetary policy:

1. **Contractionary/Dear money policy:** It seeks to reduce the money supply in the economy. Under this policy:
    - These rates are **increased**: CRR, SLR, Bank Rate, Repo Rate, Reverse Repo Rate, MSF.
    - Under OMO, RBI will sell g-secs.
2. **Expansionary/Cheap money policy:** It aims to increase the money supply in the economy. It is usually followed when RBI wants to push economic growth or counter recession. Under this policy:
    - These rates are **decreased**: CRR, SLR, Bank Rate, Repo Rate, Reverse Repo Rate, MSF.
    - Under OMO, RBI shall purchase G-secs.

Objectives of monetary policy:

1. **Price Stability:** Target headline inflation at 4% (±2%) to maintain stable prices for goods and services.
2. **Growth and Employment:** Support conditions for sustainable economic growth and job creation by adjusting interest rates, money supply, and credit flows.
3. **Financial Stability:** Prevent excessive volatility in financial markets and banking system. Manage liquidity, supervise banks, and avoid asset bubbles.

4. **Exchange Rate Stability:** Manage the external value of the rupee through intervention in the foreign exchange market, mitigating excessive volatility, and ensuring competitive export/import sectors.
5. **Interest Rate Stability:** Curb undue fluctuations in interest rates, ensuring certainty for businesses and consumers in planning investments and purchases.
6. **Support Priority Sector:** Ensure affordable credit to agriculture, small industries, housing, and other priority sectors to promote inclusive growth and poverty reduction.

Monetary Policy Tools:

Quantitative tools	1. **Reserve Ratio**:
	  1. Cash Reserve Ratio (CRR)
	  2. Statutory Liquidity Ratio (SLR)
	2. **Open Market Operation (OMO)**
	3. **Rates**:
	  1. **Bank rate**
	  2. **Liquidity Adjustment Facility (LAF)**
	    ○ Repo Rate
	    ○ Reverse Repo Rate
	  3. **Marginal Standing Facility (MSF)**
	4. **Market Stabilisation Scheme (MSS)**

Qualitative Tools	● Credit rationing
	● Margin requirements
	● Other measures
	  ○ Moralsuasion
	  ○ Direct Action

Monetary Policy Committee:

- The Monetary Policy Committee (MPC) is constituted by the Central Government under Section 45ZB of the RBI Act 1934.
- The Reserve Bank's Monetary Policy Department (MPD) assists the MPC in formulating the monetary policy.
- **Situation before MPC**: Before the constitution of the MPC, a **Technical Advisory Committee (TAC) on monetary policy** with experts from monetary economics, central banking, financial markets, and public finance, used to **advise** the Reserve Bank on monetary policy. With the formation of MPC, the TAC on Monetary Policy **ceased to exist.**
- **Structure of MPC**: 6 members
  - Governor (Chairperson of MPC)
  - Deputy Governor (in-charge of monetary policy)
  - One officer of the Reserve Bank of India to be nominated by the Central Board – Member, ex officio
  - 3 members to be nominated by the government (These members will hold office for a period of **four years or until further orders**, whichever is earlier).

- Each member of the MPC has **one vote**, and in the event of an equality of votes, the Governor has a second or **casting vote**.
- Under the flexible inflation targeting (FIT) framework, the "repo rate" is the policy rate. It is determined by the MPC based on the assessment of the macroeconomic condition and with the aim to keep CPI inflation near 4%+/-2%, as discussed above.
- Currently, MPC is only responsible for setting policy (repo) rate and performing the liquidity operations to operationalize the monetary policy lies with the RBI.

Significance of monetary policy:

1. **Price Stability & Inflation Control:** By targeting inflation and managing money supply through rates, the RBI preserves the purchasing power of citizens and prevents economic disruptions.
2. **Supports Sustainable Economic Growth:** The RBI ensures adequate credit availability for productive sectors, enabling investment, entrepreneurship, and employment generation, which drive India's development.
3. **Financial System Stability:** Monetary policy helps prevent financial crises, liquidity shortages, and systemic risks by actively overseeing and regulating banks, NBFCs, and financial institutions.
4. **Exchange Rate Stability:** The RBI manages the value of the rupee to avoid wild fluctuations, supporting international trade, controlling import/export costs, and maintaining investor confidence.
5. **Interest Rate & Credit Flow Management:** By influencing lending rates and credit conditions, the RBI supports business planning, housing markets, consumption, and investment.

Challenges or limitations of monetary policy:

1. **Monetary Policy Transmission:** Reductions or hikes in the RBI's policy rates (e.g., repo rate) do not always reflect quickly or fully in the lending rates offered by banks due to inflexible deposit costs, high small savings interest rates, and administered pricing.
2. **Inflation Targeting Constraints:** Monetary policy is effective mainly for demand-driven inflation, but much of India's inflation is supply-side (especially food and fuel), which the RBI cannot address directly.
3. **Incoherence between Fiscal & Monetary Policy:**
   - High fiscal deficit and government borrowing can crowd out private investment and reduce the effectiveness of monetary policy.
   - Price controls, subsidies, and MSP (Minimum Support Price) interventions can conflict with policy aims, limiting the RBI's independence and flexibility.
4. **Policy Rate Rigidity & Administered Rates:** Administered rates on small-savings greatly influence household deposit decisions, causing banks to hold their deposit and lending rates steady even when RBI signals rate changes.
5. **Structural Rigidities & Market Constraints:**
   - India's financial markets are still evolving. Limited integration, underdeveloped bond markets, and preference for cash transactions reduce the impact of policy tools.
   - The large informal sector, which operates outside formal banking, means monetary policy changes might not reach a significant portion of the economy.
6. **External Factors:** Factors such as capital flows, global recession, US monetary policy, and geopolitical risks can impact India's currency, capital markets, and inflation, often beyond RBI's control.

7. **Conflicting Objectives:** The need to simultaneously control inflation and promote growth can create trade-offs. Expansionary policies boost growth but risk inflation, while contractionary policies fight inflation but slow growth.

Way Forward:

1. **Strengthen Monetary Policy Transmission:**
   - Improve the transmission mechanism so changes in the RBI's policy rates reflect promptly and effectively into bank lending and deposit rates.
   - Encourage banking sector reforms to reduce NPAs, improve competition, and lower fixed costs so banks can adjust rates dynamically.
2. **Enhance Coordination between Fiscal & Monetary Policies:**
   - Improve synchronization between RBI and government budgetary policies to reduce fiscal dominance and its adverse effects on inflation and interest rates.
   - Rationalize subsidies and move towards better-targeted support to limit distortions in price signals.
3. **Target Broader Inflation Measure Responsibly:**
   - Balance headline and core inflation targeting, ensuring policymakers do not overlook essential goods impacting the poor.
   - Build public understanding and set expectations for acceptable inflation bands tailored to India's developmental context.
4. **Strengthen Regulatory Framework & Digital Infrastructure:**
   - Expand digital payments infrastructure to improve monetary policy transmission through formal financial channels.
   - Strengthen regulation and oversight of NBFCs and microfinance institutions to ensure credit flow and financial stability.
5. **Enhance Global Risk Management:** Develop frameworks to better manage capital flow volatility, exchange rate fluctuations, and external shocks through a mix of monetary, fiscal, and macroprudential tools.
6. **Foster Transparency & Communication:**
   - Improve RBI's communication strategies to build market confidence and effectively anchor inflation expectations.
   - Publish detailed monetary policy reports, market surveys, and data releases for greater accountability.

Conclusion:
Monetary policy in India thus aims to maintain stable price levels, promote growth, and support broad-based, inclusive financial sector development, ensuring that its benefits reach every section of society.

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