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INDIAN ECONOMY
GS PRELIMS & MAINS

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SAIMA KHAN
AIR 165
UPSC CSE 2023

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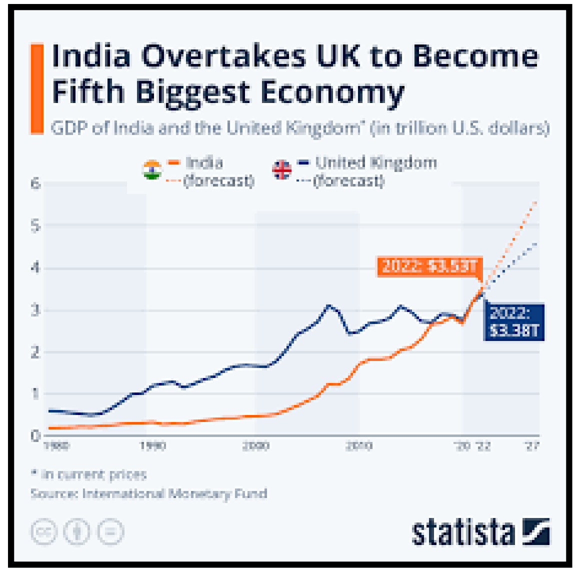


1. Current Picture of Indian Economy through Various Indicators

1. Economic Growth Overview

- **GDP Growth Projection**: Predicted at ~7% for 2024-25, potentially reaching 7%+ by 2030.
- **Size**: Expected to rise from $3.7 trillion in 2023 to $5 trillion by 2026, possibly $7 trillion by 2030.

2. Historical Decadal Growth Trends

- **1950s-1970s**: Industrialization-focused, growth between 2.9%-4.1%.
- **1980s**: Modest liberalization, GDP growth up to 5.7%.
- **1990s-2000s**: Deregulation, liberalization; growth averaged 5.8%-6.3%.
- **2009-2014**: High fiscal deficit, inflation, twin deficits.
- **2014-2024**: Major reforms, GDP contraction in FY21 due to pandemic.

3. Sectoral Developments

- **Automobile**: 6.4% of GDP, push for clean mobility and EVs.
- **Pharma**: Supplies 60% global vaccines; target $130B market by 2030.
- **Renewable Energy**: 500 GW non-fossil goal by 2030, net-zero by 2070.
- **Fintech**: $50B in 2021, estimated to triple by 2025; GIFT City key project.
- **Other Emerging Sectors**: AI, geospatial, drones, space, semiconductors.

4. Structural Transformation

- **Output Shift**: Agriculture's output share fell from 42% (1972-73) to 15% (2019-20); services now dominate at 55.3% of GDP.
- **Employment Shift**: Agriculture's employment share dropped from 73.9% to 42% (2018-19); industry and services employment increased.

5. Key Economic Reforms

- **Strategic Disinvestment**: Privatization of PSEs, >60 since 1991.
- **Labour Codes**: Streamlined laws for flexibility and social security.
- **Production-Linked Incentive (PLI)**: Boost domestic manufacturing.
- **PM Gati Shakti**: Infrastructure for multimodal connectivity.
- **Make in India 2.0**: Aims to establish India as a global manufacturing hub.
- **Financial Reforms (Post-2020)**: PSB mergers, IBC for balance sheets.

- **Regulatory Frameworks**: GST, RERA, corporate tax reductions for transparency.

6. Social Indicators

- **Life Expectancy**: Increased from ~32 years post-independence to ~69.7 years.
- **Infant Mortality Rate (IMR)**: Reduced from 37 (2015) to 30 (2019).
- **Literacy Rate**: From <20% at independence to 77%.
- **HDI**: India ranked 134th in 2023-24 with a value of 0.644.
- **Gender Equality**: Female LFPR at 37%; rank improved on GII from 122 (2021) to 108 (2022).

7. Future Outlook

- Balancing growth, social development, and sustainability is vital.
- Workforce skilling, human development, tech adoption, and manufacturing expansion will be crucial.
- Strategic policy and multilateral cooperation remain essential as India navigates global challenges and aims for a defining role in the global economy.

This summary covers the essentials relevant for UPSC preparation, emphasizing trends, reforms, and strategic shifts to watch for India's economy.

2. Resource Mobilization in Indian Economy and Its Issues

Mobilizing is the process of assembling and organizing things for ready use or achieving a collective goal. Mobilization of resources should also be seen in the same context. **Mobilization of resources means freeing up of locked resources. Every country has the economic resources within its territory not be available for collective use.**

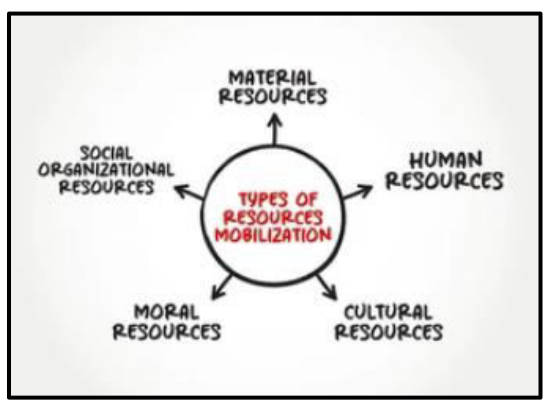
Resource mobilization involves organizing and utilizing economic resources for growth. Identifying and freeing up locked resources is essential for effective central and state planning.

Types of Resources:

1. **Natural Resources**: Coal, petroleum, natural gas, water, and spectrum.
2. **Human Resources**: Labor force and intellectual capabilities.

Key Issues:

1. **Natural Resource Mobilization**:
    - **Insufficient Utilization**: India imports coal and iron due to policy bottlenecks, increasing the Current Account Deficit (CAD).
    - **Example**: Despite being a major coal producer, India is also a top coal importer.
2. **Human Resource Mobilization**:
    - **Quality Concerns**: 33% of the population is illiterate (2008), and 23.49% of youth are not in education,

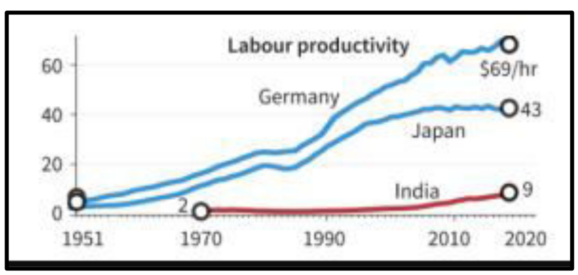


employment, or training (2023).
   - **Empowerment Needed**: Marginalized groups (women, SCs, STs, OBCs) remain underrepresented in the economy.
3. **Financial Resource Mobilization**:
   - **Suboptimal Investment**: Savings often go into non-productive assets like gold.
   - **Narrow Tax Base**: Low tax-to-GDP ratio (11.6%), necessitating a broader tax base and reduced evasion.
4. **Coordination Challenges**:
   - **Production Factors Misalignment**: Issues like bureaucratic delays in land acquisition hinder industrial growth.
5. **Domestic Resource Mobilization (DRM) Issues**:
   - **Reliance on Foreign Capital**: Excessive dependence on FDI limits economic autonomy.
   - **Underdeveloped Savings Infrastructure**: Inefficiencies hinder capital allocation, especially in rural areas.

Recommendations:
- **Enhance State Revenues**: Improve tax administration and broaden the tax base.
- **Private Sector Involvement**: Strengthen public-private partnerships for infrastructure projects.
- **Climate Finance**: Promote green bonds and climate budgeting.
- **Urban Body Revenues**: Improve fiscal management in urban local bodies.
- **Financial Inclusion**: Expand access to banking services and simplify regulations to attract investments.

3. Labour Productivity and recent issues related to unemployment

Productivity measures how efficiently inputs like labor and capital are used to produce outputs, such as goods and services. On a country level, it affects living standards and economic growth. The only conceptual difference between the **Worker Productivity and Labor Productivity is that the 'work' in worker productivity describes mental activities while the 'work' in labour productivity is mostly associated with manual activities.**



Labor Productivity: Measures the output produced per hour of work. For example, for a GDP of $1 trillion with its people working 20 billion hours, the labor productivity is $50 per hour. It is directly linked to increased wages, better living standards, and consumers' purchasing power.

Capital Productivity: Assesses output generated by using physical assets like machinery, buildings, and equipment. It indicates how efficiently investments in physical assets are used, impacting profitability and competitiveness.

Total Factor Productivity (TFP): Accounts for growth in output not explained by labor or capital alone, often termed as "innovation-led growth". It reflects efficiency improvements, technological progress, and innovation in an economy.

Working Duration: Indians average almost 48 hours a week, one of the highest globally.

Hourly Output: India's productivity rate is \$8.47 per hour, despite the long work hours.

In comparison, Countries like France work fewer hours (about 30 weekly) but achieve higher productivity (\$58.5 per hour).

Current Situation:

- India has a large workforce, but labor productivity lags behind countries like China, primarily due to inadequate skills, infrastructure issues, and outdated labor laws.
- A 2023 Oxford University report indicates India's human capital ranks lower than that of China and other regional peers.

Economic Growth vs. Income Inequality:

- Between 1980 and 2015, India's GDP grew significantly from \$200 billion to over \$2 trillion. However, income distribution became increasingly unequal:
  - The middle-income group's share of national income fell from 48% to 29%.
  - The low-income group's share dropped from 23% to 14%.
  - The top 10% saw their share increase from 30% to 58%, highlighting rising income disparity.

Recommendations for Improvement:

1. **Promote Non-Farm Employment**: Focus on sectors like food processing.
2. **Support Labor-Intensive Industries**: Special programs for textiles and leather can create more jobs.
3. **Implement "Assemble in India for the World"**: Integrate this initiative into Make in India to create millions of jobs.
4. **Incentivize MSMEs**: Support emerging firms with initial incentives.
5. **Revise Special Economic Zones (SEZs)**: Shift focus to create Employment and Economic Enclaves.
6. **Coordinate Urban Development**: Infrastructure investments can generate jobs and stimulate growth.
7. **Effective Labor Reforms**: Streamlining labor codes can enhance employment opportunities.
8. **Invest in Health and Skills**: Collaboration between industry and public institutions to upskill workers can improve productivity without sacrificing job creation.

4. GIG Economy and Employment

The gig economy **can serve up to 90 million jobs in the non-farm sectors in India** with a **potential to add 1.25% to the GDP over the "long term"**.

As India moves towards its stated goal of becoming a **USD 5 trillion economy by 2025**, the gig economy will be a major building block in bridging the income and unemployment gap.

According to the NITI Aayog report, **India's gig workforce is expected to expand to 2.35 crore by 2029-30**.

A Gig economy is a **free market system in which temporary positions are common and organizations contract with independent workers** for short-term engagements.

- **Gig Worker:** A person who performs work or **participates in a work arrangement and earns from such activities outside of traditional employer-employee relationship.**

What are the Key Drivers of the Gig Sector?

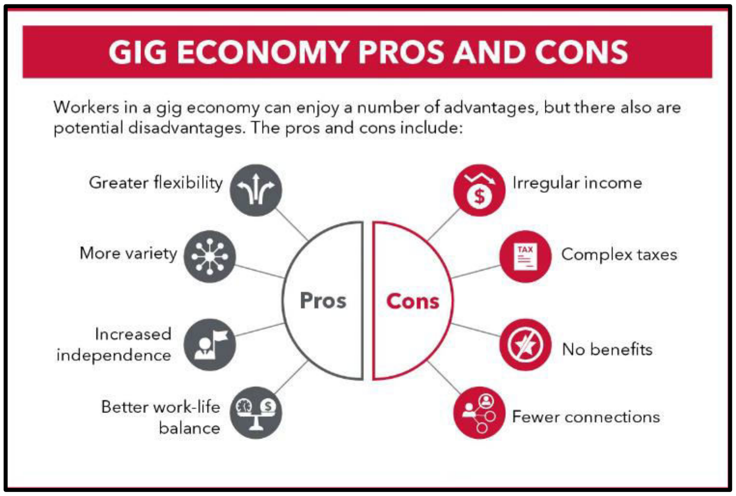
- **Flexibility to Work from Anywhere:**
  - In the digital age, the **worker need not sit at a fixed location**—the job can be done from anywhere, so employers can select the best talent available for a project without being bound by geography.
- **Changing Work Approach:**
  - The millennial generation **seems to have quite a different attitude to careers**. They seek to do work that they want to do rather than have careers that may not satisfy their inner urges.
- **Business Models:**
  - Gig employees work on **various compensation models such as fixed-fee (decided during contract initiation), time & effort, actual unit of work delivered and quality of outcome**. The fixed-fee model is the most prevalent, however, the time & effort model comes a close second.
- **Emergence of a Start-up Culture:**
  - The **start-up ecosystem in India has been developing rapidly**. For start-ups, hiring full-time employees leads to high fixed costs and therefore, contractual freelancers are hired for non-core activities..
- **Rising demand of Contractual Employees:**
  - MNCs are adopting flexi-hiring options, especially for niche projects, to reduce operational expenses after the pandemic.

What are the Major Issues Raised by the Report?

- **Accessibility:**
  - Even though the gig economy, with the wide variety of employment options it offers, is accessible to all those who are willing to **engage in such employment, access to internet services and digital technology** can be a restrictive factor.
    - This has made the gig economy largely an **urban phenomenon**.
- **Job and Income Insecurity:**
  - Gig Workers do not **get benefit from labor regulations pertaining to wages, hours, working conditions,** and the right to collective bargaining.
- **Occupational Safety and Health Risks:**
  - Workers engaged in employment with the digital platforms, particularly, **women workers in the app-based taxi and delivery sectors, face various occupational safety and health risks**.
- **Skills Mismatch:**
  - Varying degrees of vertical and horizontal skills mismatch can be observed on online web-based platforms.

Challenges faced due to Terms of Contract:

- Working conditions on digital platforms are largely regulated by the terms of service agreements. They tend to characterize the **contractual relationship between the platform owner and worker** as other than one of employment.



<u>What are the Recommendations?</u>

- **'Platform India Initiative':**
  - On the lines of the **'Startup India initiative'**, accelerating platformization, skill development and social financial inclusion, can provide a framework to balance the flexibility offered by **platforms and social security of workers**.
    - **Self-employed Individuals** engaged in the business of selling regional and rural cuisine, street food, etc., **can be linked to platforms** so that **they can sell their produce to wider markets in towns and cities**.
- **Funding support:**
  - **Access to institutional credit may be enhanced** through financial products specifically designed for platform workers and those interested in setting up their own platforms.
  - Venture capital funding, grants and loans from banks and other funding agencies should be provided to platform businesses of all sizes.
- **Gender Sensitization:**
  - **Encouragement of behavior modification through raising awareness** of gender equality concerns.
- **Extending social security measures** :
  - **Make** it available for such workers and their families in partnership mode as envisaged in the **Code on Social Security**.

- **Code on Social Security, 2020:**
  - The Code on Social Security, 2020 aims to **amend and consolidate laws related to social security** to extend it to all employees and workers in organized or unorganized sectors.
  - The Code can be applied to **establishments subject to size-threshold through notification by the central government.**
  - Separate **Social Security Funds will be set up by the Central and State Governments** for unorganized workers, gig workers, and platform workers.
  - Registration provisions are specified for **unorganized workers, gig workers, and platform workers.**
  - A **National Social Security Board** will be established to recommend and monitor schemes for these categories of workers.
  - Funding for schemes of gig workers and platform workers may **come from contributions by central and state governments, as well as aggregators.**

- Penalties for certain offenses have been reduced, including obstructing inspectors and unlawfully deducting contributions from wages.
- During an **epidemic**, the central government may defer or reduce employer and employee contributions (under **Employee State Insurance (ESI) and <u>Provident Fund (PF)</u> for up to three months.**

The Rajasthan Platform-Based Gig Workers (Registration and Welfare) Bill acknowledges the **significant contributions of gig workers to the economy** and aims to provide them with essential protection and support. The primary objective of this bill is to **extend social security and welfare benefits to gig workers operating in the state.**

5. Growth Pattern in India – Labor Intensive or Capital Intensive. India's growth should be led by labor-intensive manufacturing: ILO

*There is "no alternative" for India to have growth led by **<u>labour-intensive manufacturing at least for the next 10 years to absorb seven-eight million youths who will join the labour force annually</u>**, a report jointly prepared by the International Labour Organization (ILO) and Institute for Human Development (IHD) has said.*

Key Findings:

- **Labor Market Uncertainty**: Rapid technological advancements, especially in AI, pose risks to job stability. Traditional outsourcing may be threatened as AI automates back-office functions.
- **Youth Unemployment**: In 2022, unemployment rates for youths were alarmingly high—18.4% for those with secondary education and 29.1% for graduates, compared to just 3.4% for illiterate individuals. This disparity indicates a mismatch between educational qualifications and available labor-intensive jobs.
- **Sector Composition**: Manufacturing employment remains stagnant at around 12%, with agriculture employing 45.5% of the workforce. The services sector has overtaken manufacturing, leading to increased income inequality.

Challenges:

- **Skill Mismatch**: According to the 2022-23 Periodic Labour Force Survey (PLFS), a vast majority of workers are classified as low-skilled (22.15%) or semi-skilled (66.89%). Only 2-8% are highly skilled, signaling a critical shortage of qualified labor for emerging sectors.
- **Informal Employment**: Nearly 90% of jobs in India are informal, and capital-intensive industries are outpacing labor-intensive sectors in growth. This results in a decline in the share of wages in net value added by industries.

Recommendations:

- **Invest in Labor-Intensive Sectors**: Focus on industries like food processing, textiles, and tourism, offering appropriate subsidies and incentives.

- **Strengthen MSMEs**: Provide support for micro, small, and medium enterprises through easier credit access and reduced regulatory burdens.
- **Regulate Emerging Economies**: Encourage the growth of care and digital economies, creating more stable job opportunities.
- **NITI Aayog's Action Agenda**: Implement labor law reforms at the state level and establish coastal employment zones to promote exports and job creation.

Conclusion:
To effectively integrate 8-10 million new workers annually while addressing a 6.5% unemployment rate, India must recalibrate its strategies. Emphasizing entrepreneurship, skill development, and labor-intensive manufacturing will be essential for fostering inclusive growth and reducing inequality.

6. The Essence Of India's Inflation Problem

The Reserve Bank of India is the authority to control inflation under RBI Act 1934. Presently, the RBI targets headline CPI inflation as part of its 'inflation targeting' mandate. Economic survey has recommended shifting from 'headline' to 'core inflation' by removing the food component. The economic survey contends that the food price fluctuations are 'transitory' in nature. That means that it's increase is inevitably followed by a downward movement.

Headline Inflation- Headline inflation is a measure of the total inflation within an economy, including commodities such as food and energy prices, which tend to be much more volatile and prone to inflationary spikes. The headline inflation is reported through the Consumer Price Index (CPI) in India.

Core Inflation- Core inflation is the persistent component of inflation in India. It attempts to remove the volatile, transitory movements from the CPI. In India, it is measured by removing Food and Fuel categories from CPI.

Key Concerns
1. **Ignoring Economic Reality**: Excluding food prices neglects the cost of living for a significant portion of the population.
2. **Persistent Food Price Fluctuations**: Food inflation is not merely transitory; it reflects deeper structural issues within the economy.
3. **Interdependence of Inflation Types**: Food prices affect wages and core inflation, complicating independent management.
4. **Policy Risks**: Overlooking food prices can lead to increased living costs, harming households.
5. **Limitations of Monetary Tools**: Raising interest rates has not effectively curbed inflation and may have increased production costs instead.

Additional Challenges
- **Demand-Side Focus**: RBI's policies primarily address demand, overlooking supply shocks from food and energy sectors.

- **Inflation Targeting Model Flaws**: Current models are not statistically validated for India's context, complicating effective policy-making.
- **Failure to Address Supply Shocks**: Export bans can cause panic in domestic markets, exacerbating price volatility.
- **Growth Versus Inflation**: Overemphasis on controlling inflation has adversely affected GDP growth due to high interest rates.
- **Global Influences**: Domestic inflation is influenced by international price fluctuations, necessitating a comprehensive approach.

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 Food Corporation of India in the open market at reasonable prices. This will cool down the food inflation.
3. **Enhancement of Processing Capacity**- About 10-15 percent 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. **Updating 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.

Supply-Side Factors in Food Inflation

Addressing food inflation also requires a focus on supply-side factors. Several schemes and measures aim to enhance supply chain efficiency, reduce wastage, and stabilize food prices:

1. **Operation Green (2018)**
   - **Objective**: Stabilize prices of highly perishable crops (Tomatoes, Onions, Potatoes - TOP).
   - **Measures**: Support for production clusters, transportation, storage, and processing. Expanded to 22 crops in 2021.
2. **Price Stabilisation Fund (PSF) (2014)**
   - **Objective**: Mitigate extreme price volatility in essential commodities.
   - **Measures**: Procures surplus stocks from farmers for release during shortages.
3. **Buffer Stock of Pulses (2015)**
   - **Objective**: Control prices and ensure availability of pulses.
   - **Measures**: Maintains a buffer stock for market release when prices rise.
4. **Pradhan Mantri Kisan SAMPADA Yojana (2017)**
   - **Objective**: Modernize food processing and reduce wastage.
   - **Measures**: Supports infrastructure development, enhancing the supply chain.
5. **National Food Security Mission (NFSM) (2007)**

- **Objective**: Increase production of key food grains.
- **Measures**: Input subsidies and better agricultural practices to enhance productivity.

6. **Integrated Scheme for Agricultural Marketing (ISAM)**
   - **Objective**: Create a unified national market for agricultural commodities.
   - **Measures**: Promotes efficient marketing and establishes proper storage facilities.
7. **Atmanirbhar Bharat Abhiyan - Agriculture Reforms (2020)**
   - **Objective**: Create a self-reliant agriculture sector.
   - **Measures**: Free market access, aggregation of small farmers, and infrastructure investment.
8. **Mission for Integrated Development of Horticulture (MIDH)**
   - **Objective**: Enhance horticultural crop production and supply chains.
   - **Measures**: Develops cold chains and processing infrastructure.
9. **Agri-Infrastructure Fund (2020)**
   - **Objective**: Improve post-harvest infrastructure.
   - **Measures**: Provides financing for cold storage and processing units.
10. **Essential Commodities (Amendment) Act (2020)**
    - **Objective**: Reduce regulatory hurdles in stock limits.
    - **Measures**: Prevents hoarding, improving supply efficiency.
11. **Distribution through Public Distribution System (PDS)**
    - **Objective**: Provide subsidized food grains to vulnerable populations.
    - **Measures**: Stabilizes market prices, controlling inflation for staples.
12. **Farm Mechanization and Technology Development Scheme**
    - **Objective**: Enhance productivity and reduce post-harvest losses.
    - **Measures**: Promotes modern farm machinery adoption.

Conclusion

India's approach to managing fluctuating food inflation should balance monetary policy with robust supply-side measures. While food inflation remains volatile due to factors like weather changes, its effects on the populace are profound. Excluding it from the inflation targeting framework, as the Economic Survey suggests, risks neglecting real inflationary pressures.

The RBI, through its Monetary Policy Committee (MPC), should maintain a focus on headline inflation that includes food prices to ensure overall price stability. However, tackling food inflation effectively requires government intervention to address supply-side challenges through programs like Operation Green and price stabilization funds. A coordinated effort between the RBI's monetary policy and government schemes will be essential for comprehensive inflation management in India.

7. Fall in Household Savings

Household sector's savings in financial assets has **shown a sharp decline to 5.1% of GDP in 2022-23**. Household savings refer to money left after the household pays taxes and spends on the consumption of goods and services.

• Components- Household savings has three components. Financial assets- Currency, bank deposits, pension, insurance, equity and related products. Physical assets- Investment in fixed assets of construction, Gold and silver ornaments.

Implications of Decline in Savings

1. **Choked Capital Investment**: Reduced household savings limit crucial funding for government infrastructure projects, critical for economic growth.
2. **Dependence on Foreign Capital**: The dip in domestic savings leads to a higher reliance on foreign investments to bridge funding gaps.
3. **Disruption in the Investment Cycle**: Increased borrowing ties future income to debt repayment, reducing disposable income available for investments and consumption.
4. **Rising Inequality**: The disparity between declining assets and increasing liabilities can exacerbate economic inequalities among households.

Economic Impact of Household Savings

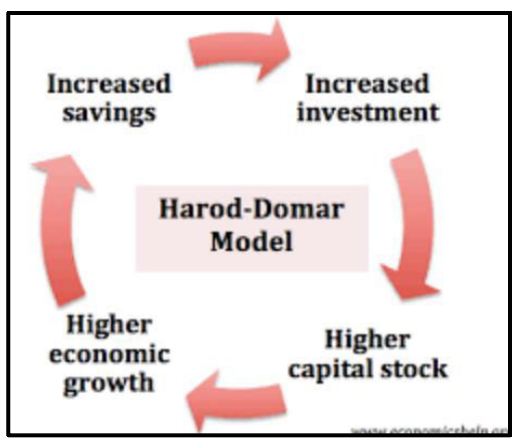
- **Interest Rates**: Changes in household savings behavior can influence monetary policy, potentially prompting adjustments in interest rates to encourage savings.
- **Enhanced Lending Capacity**: As households rebuild their financial strength post-pandemic, they are likely to emerge as primary net lenders, facilitating corporate borrowing.
- **Economic Stability**: Higher physical savings contribute to overall economic stability, diversifying investment portfolios and potentially increasing long-term wealth.

Harrod-Domar Model and Capital Output Ratio

The Harrod-Domar model emphasizes the relationship between savings, investment, and economic growth, suggesting that higher savings can lead to increased capital accumulation and, consequently, higher economic output. However, India's current capital output ratio is relatively high, indicating that more savings are required to generate growth compared to other economies.

Link to Household Savings

The declining household savings rate poses a challenge to achieving sustainable economic growth as indicated by the Harrod-Domar model. If savings do not improve, the country may struggle to achieve the necessary investment levels to drive economic expansion.



Government Initiatives to Boost Savings

To encourage household savings, the Indian government has introduced various schemes:

1. **Sukanya Samriddhi Account**: Aimed at promoting savings for a girl child's future education and marriage.
2. **Senior Citizens' Savings Scheme (SCSS)**: Offers secure investment options for retirees, ensuring a steady income post-retirement.

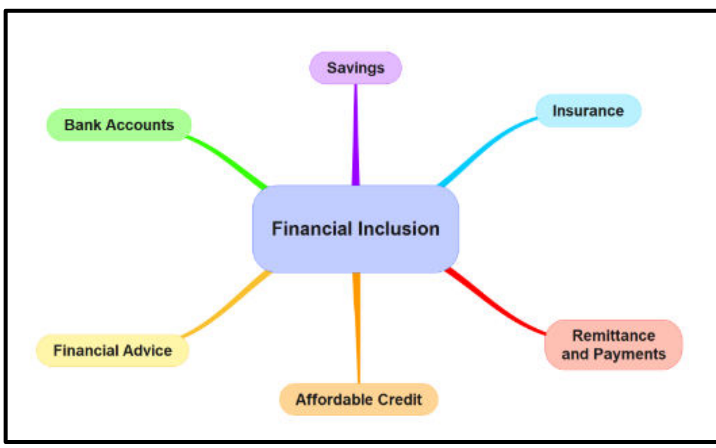
3. **Kisan Vikas Patra (KVP)**: Guarantees returns and encourages long-term savings, particularly appealing to rural investors.
4. **Mahila Samman Savings Certificate**: Empowers women by providing government-backed savings options, promoting financial inclusion.
5. **Employees Provident Fund (EPF)**: A mandatory savings scheme for salaried individuals that builds substantial retirement funds.
6. **National Pension System (NPS)**: Encourages long-term retirement savings with flexibility and tax benefits.
7. **Public Provident Fund (PPF)**: A long-term savings scheme with guaranteed returns, making it a popular choice among risk-averse savers.
8. **Post Office Monthly Income Scheme (POMIS)**: Provides fixed monthly returns, offering reliable income for conservative investors.

These initiatives are designed to mobilize household savings into the formal financial system, facilitating capital for infrastructure development and broader economic growth. By encouraging savings, India can enhance capital formation, addressing the high capital output ratio and supporting sustainable economic expansion.

Inclusive Growth and issues arising from it and Government Budgeting.

8. Financial Inclusion: Current Status, Issues, Solutions

- **Financial Inclusion:** It is the process of ensuring access to appropriate **financial products and services** needed by **vulnerable groups** such as weaker sections and low-income groups at an affordable cost in a fair and transparent manner by mainstream institutional players.
- **Scope of Financial Inclusion:** The scope of financial inclusion encompasses a wide range of financial services, including basic **banking services** (savings and checking accounts), **credit facilities, insurance** products, **investment** options, **pension schemes**, **payment** and **remittance services** and financial advisory services.
- **Key Components of Financial Inclusion:** The main components of **financial inclusion** are:
  - **Access to Financial Services**: Ensuring that financial services such as **banking, insurance**, and **credit** are available to everyone. This involves the establishment of physical banking outlets in underserved areas and the provision of **digital financial services.**
  - **Affordability**: Financial products and services should be priced to be **accessible for all segments of society.** High costs can be a significant barrier, particularly for low-income groups.



- **Financial Literacy:** Educating individuals about financial products, services, and management is essential. **Financial literacy** empowers people to make informed decisions about their finances, including saving, investing, and managing credit.
- **Usage:** Beyond access, it's crucial that individuals **actively use financial services** to achieve financial stability and growth. This includes engaging with banking services, utilizing credit responsibly, and taking advantage of insurance products.

What is the Current State of Financial Inclusion in India?

- **Overall Progress:** Since the introduction of the **Pradhan Mantri Jan Dhan Yojana (PMJDY),** India has made significant strides in **financial inclusion.**
  - The percentage of adults with **formal financial accounts** has surged from approximately 50% in 2011 to over 80% in 2024.
- **Account Statistics**: As of August 2024, the total number of PMJDY accounts stands at **53.13 crore**. This is a remarkable increase from the 14.7 crore accounts recorded in March 2015.
- **Banking Sector Involvement: Public sector banks** have played a crucial role in the PMJDY initiative, managing about 78% of the accounts opened under the scheme.
- **Gender Distribution:** Out of the total PMJDY accounts, **29.56 crore (55.6%)** are held by women.
- **Rural and Semi-Urban Areas:** About **66.6% of PMJDY accounts** are in **rural and semi-urban regions,** reflecting the scheme's focus on underserved areas.
- **Digital Transaction**: **National Payments Corporation of India (NPCI)** data shows that compared with June, the volume of UPI transactions grew by 3.95% in July, while the value of transactions increased by 2.84%.

What are the Challenges Associated with Financial Inclusion?

- **Digital Divide**: India's **vast and diverse geography** poses significant challenges for delivering financial services to remote areas, where a substantial portion of the rural population lacks access to **smartphones and internet connectivity.**
  - **Inadequate road connectivity,** unreliable electricity supply, and **limited internet penetration** in rural regions hinder the expansion of financial services.
  - For instance, India's internet penetration rate is around **52%,** which is below the global average of **66%.**This digital divide limits the reach and effectiveness of digital financial services.
- **Financial Literacy:** Low levels of financial literacy, especially among rural and low-income populations, impede the effective use of financial services.
  - Many individuals struggle to understand financial products and make informed financial decisions.
- **Gender Gap:** Women face additional barriers to financial inclusion due to social, economic, and cultural factors.
  - For instance, the **National Family Health Survey (NFHS-5)** in India reveals that **33%** of women use the internet, while the figure is 57% for men.
  - Limited asset ownership and **lower financial literacy** rates among women contribute to this gap.

- **Difficult KYC Norms:** Despite improvements, many individuals still struggle with providing necessary documentation for accessing financial services.
  - This is particularly **challenging for migrant workers** and those in the informal sector.
- **Last-Mile Connectivity:** Ensuring consistent availability of **banking services** in remote areas remains a challenge.
  - Issues such as irregular visits by banking correspondents and **non-functional ATMs** affect service quality.
- **Credit Access for MSMEs: Micro, Small, and Medium Enterprises(MSMEs)** often face difficulties in accessing **formal credit** due to lack of collateral, credit history, and complex loan application processes.
- **Cybersecurity Concerns**: The growth of digital financial services has led to **increased cybersecurity risks.**
  - For instance, as per **National Crime Records Bureau (NCRB) 2022**, cybercrime reporting surged by 24.4%, totalling 65,893 cases, a significant surge from 52,974 cases in 2021.
  - Rising incidents of digital fraud and limited awareness of cybersecurity best practices among users pose significant challenges.

What Should be the Way Forward?

- **Strengthen Digital Infrastructure**: Expanding **internet connectivity** through the **BharatNet project** and public **Wi-Fi in rural areas** while encouraging private investment in **telecom infrastructure** would **strengthen digital infrastructure.**
- **Enhance Financial Literacy Programs**: Enhance financial literacy programs to improve understanding of **digital financial services and cybersecurity.** This is crucial for empowering users to **navigate online transactions securely, bridging gaps in access**, and reducing vulnerabilities in remote and underserved areas.
  - **Leverage Technology for Last-Mile Connectivity**: Use **blockchain** for secure transactions, **artificial intelligence (AI)** for credit scoring, and voice-based interfaces to overcome literacy barriers.
- **Focus on Women and Rural Populations: Tailor financial products and services** to meet the needs of women, the poor, and those living in rural areas. This can include creating **gender-sensitive financial products, providing microcredit, and offering savings schemes** that cater specifically to these groups.
  - **Implement targeted policies** to address the persistent **gender gap** in financial inclusion. This could include promoting **women-focused financial services,** encouraging women's entrepreneurship through microfinance, and ensuring that financial literacy programs are accessible to women.
- **Simplify KYC Norms:** Implement **video KYC** for remote account opening, create a unified KYC system, and develop alternative methods for those without traditional documents.
- **Strengthen the Banking Correspondent Model:** Improve **Banking Correspondent** training and incentives, expand service offerings, and enhance monitoring. This will enhance last-mile banking access, particularly in remote areas.
- **Credit Histories and Data Sharing:** Enhance online **credit history systems** such as CIBIL.

- Providing people with the ability to build and access their credit histories can **encourage financial institutions to extend credit** and other financial services to first-time users and those in underserved areas.

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What are Financial Inclusion Initiatives in India?

- **Pradhan Mantri Jan Dhan Yojana (PMJDY):** Launched in 2014, **Pradhan Mantri Jan Dhan Yojana (PMJDY)** is **National Mission for Financial Inclusion** to ensure access to financial services, namely, **banking/savings & deposit accounts, remittance, credit, insurance**, pension in an affordable manner.
  - **Key features** of the scheme include **zero balance accounts** that eliminate the need for a minimum deposit, **accident insurance coverage** of up to Rs 1 lakh for financial protection in case of accidental death or disability, and **overdraft facilities** up to Rs 10,000 to assist eligible account holders during emergencies.

- **Micro-Insurance and Micro-Pension Schemes**: The government has introduced **low-cost insurance and pension schemes** to reach underserved populations:
  - **Pradhan Mantri Suraksha Bima Yojana (PMSBY)**: It offers **accidental death and disability insurance** with an annual premium of Rs 20 for Rs 2 lakh coverage.
  - **Atal Pension Yojana (APY)**: A pension scheme for the unorganized sector, offering a guaranteed monthly pension of Rs 1,000 to Rs 5,000 after age 60.
- **Other Financial Inclusion Initiatives:**
  - **Pradhan Mantri Vaya Vandana Yojana (PMVVY)**: This **pension scheme** is designed for **senior citizens** aged 60 and above and guarantees return on investment for a fixed period.
  - **Pradhan Mantri Mudra Yojana (PMMY):** PMMY facilitates **easy access to credit** for small and micro enterprises by providing loans up to Rs 20 lakh to non-corporate, non-farm small/micro enterprises, promoting entrepreneurship and job creation.
  - **Stand Up India Scheme**: This initiative **supports SC/ST and women entrepreneurs** by providing loans between Rs 10 lakh and Rs 1 crore for setting up greenfield enterprises. It aims to foster inclusive growth and financial independence.
  - **Venture Capital Fund for Scheduled Castes (SCs):** The fund provides financial assistance to SC entrepreneurs to help them start and grow businesses.
  - **Varishtha Pension Bima Yojana (VPBY):** It is a scheme for the benefit of senior citizens aged **60 years and above.**
  - **Sukanya Samriddhi Yojana**: The Sukanya Samriddhi Scheme is a government savings program for parents of girl children, aimed at encouraging savings for their education and marriage expenses.
- **JAM Trinity:** The **JAM Trinity**, comprising **Jan Dhan** (bank accounts), **Aadhaar** (biometric ID), and **Mobile** (digital access), is a framework designed to enhance financial inclusion in India.
  - This combination aims to improve **financial inclusion,** enable **direct benefit transfers,** and enhance service delivery efficiency. JAM facilitates **seamless authentication and digital transactions,** reducing leakages in welfare programs.
- **Elaborating Banking System: Payment banks, small finance banks, and priority sector lending,** together they expand financial services reach, fostering broader economic participation and inclusion.
  - **Payment Banks:** Specialized banks for small savings accounts and payments.
  - **Small Finance Banks:** Banks focused on underserved segments.
  - **Priority Sector Lending**: Mandated lending to specific sectors including agriculture and MSMEs.
- **Banking Correspondents**: The **Reserve Bank of India's (RBI)** introduced the **Banking Correspondent (BC)** model in 2006 to extend banking services to areas where full bank branches are impractical.
  - BCs provide basic services such as **account opening, cash deposits, withdrawals, fund transfers**, and **balance inquiries** using technology like **micro-ATMs** and **point-of-sale devices.**
- **Digital Payments and Financial Technology (FinTech): Digital technology** has revolutionized financial services in India, with both government-backed and private sector innovations driving financial inclusion.
  - **Unified Payments Interface (UPI):**Introduced in 2016, **UPI** enables **instant money transfers** between bank accounts through a mobile app, supports multiple accounts in one app, and facilitates seamless transactions.

  - According to the **RBI annual report,** in FY24, nearly **80% of digital payments** in India were made through the **UPI.**
 - **Bharat Interface for Money (BHIM)**: A UPI-based app designed for basic **smartphones** and low connectivity areas.
 - **RuPay Cards:** India's domestic card network, reducing reliance on international schemes with **lower transaction costs.**
 - **Aadhaar Enabled Payment System (AEPS)**: Uses the **Aadhaar biometric** database to enable transactions through Aadhaar number and biometric **authentication**. This system is particularly beneficial for those lacking traditional **banking infrastructure.**
- **Microfinance Institutions (MFIs) and Self-Help Groups (SHGs)**: **Microfinance institutions** and **Self-Help Groups (SHGs)** play a vital role in reaching underserved communities, especially in rural and semi-urban areas.
 - **Microfinance Institutions (MFIs):** Provide **small loans** to individuals who are unable to access traditional banking services, focusing on empowering **economically weaker sections** by offering credit without collateral.
 - **Self-Help Groups (SHGs)**: SHGs are community-based organizations where members pool savings and provide loans to one another, effectively fostering savings and offering credit based on mutual trust, especially in rural areas.
  - India boasts of some **12 million SHGs,** of which **88%** are **all-women-member ones**. These groups have been crucial in **promoting financial discipline** and providing **credit to underserved communities.**
- **Financial Literacy Programs**: **Financial literacy** is essential for ensuring effective use of financial services. Several initiatives aim to improve financial literacy across various demographics.
 - **Financial Education Programme for Adults (FEPA)**: It is a financial literacy program aimed at spreading **financial awareness** among adults, including farmers, women's groups, and various workers, aligning with the **National Strategy for Financial Education.**
 - **National Centre for Financial Education (NCFE)**: It **enhances financial literacy** through educational resources, workshops, and training programs, focusing on budgeting, saving, investing, and understanding financial products.
 - **Digital Financial Literacy Campaigns**: Educate people about **digital banking, online transactions, and cybersecurity,** especially important as digital financial tools become more prevalent.

Conclusion

The journey towards comprehensive **financial inclusion** in India is ongoing, marked by significant progress and persistent challenges. The convergence of **government initiatives, technological innovation, and collaborative efforts across sectors** has laid a strong foundation for a more **inclusive financial ecosystem.** However, bridging the remaining gaps requires sustained focus on addressing infrastructure limitations, enhancing financial literacy, and developing tailored solutions for underserved segments.

As India moves forward, the emphasis must be on ensuring that **financial inclusion** translates into meaningful **financial empowerment and improved economic outcomes** for all citizens. This involves not just expanding access but also fostering usage, building trust in the formal financial system, and continuously innovating to meet evolving needs. Ultimately, achieving true financial inclusion will be pivotal in realizing India's aspirations for **equitable and sustainable economic growth.**

9. Persisting Issues Related To Fiscal Stability Of States In India

Recently, the Reserve Bank of India published an annual report titled "State Finances: A Study of Budget of 2023-24". The theme of the Report is 'Revenue Dynamics and Fiscal Capacity of Indian States. The key findings are as follows:

Category	Details
GFD-GDP Ratio	Declined from 4.1% in 2020-21 to 2.8% in 2021-22 Led by moderation in revenue expenditure and increase in revenue collection
Capital Outlay	Involves expenditure towards asset creation and has a multiplier effect on economic output Budgeted to increase by 42.6% in 2023-24 to 2.9% of GDP
States' Total Outstanding Liabilities	Debt-GDP ratio declined from 31% (end-March 2021) to 27.5% (end-March 2023) Supported by fiscal consolidation, Support from Centre via 50-year interest-free capex loans helped reduce interest burden
Net Market Borrowings	Declined to 76% in the budgeted GFD for 2023-24 Decline due to increased loans from the Centre
Increased Tax Buoyancy	Implementation of GST led to increased tax buoyancy for the States GST implementation led to greater formalization of the economy, expanding the tax base
Committed Expenditure	Includes interest payments, administrative services, and pension Expected to remain at 4.5% of GDP

Concerns with State Finances

• **Low Non-Tax Revenues Collection**: Non-Tax Revenues remained around 1 per cent of GDP in the last 10 years compared to a ratio of 10 % or more in countries like Singapore, Egypt and Iran.

• **Reduced Development Expenditure**: The allocations for education, sports, art and culture, relief on account of natural calamities, urban development, agriculture and allied activities, and rural development were reduced.

• **Return to Old Pension Scheme (OPS)**: Return to the OPS would exert a huge burden on State finances and restrict their capacity to undertake growth-enhancing capital expenditures. o If all the State governments revert to OPS from the National Pension System (NPS), the cumulative fiscal burden could be as high as 4.5 times that of NPS.

• **Precarious Fiscal Situation:** Any further provision of non-merit goods and services, subsidies, transfers and guarantees will render their fiscal situation precarious and disrupt the overall fiscal consolidation achieved in the last two years.

Ways to Improve State Finances:

• **Increase Non–non-tax revenue**: Through revisions of user charges on electricity, water and other public services, royalties and premiums from mining, asset monetization etc.
• **Prevent Revenue Loss due to Illegal Mining**: Utilize modern technologies such as Geographic Information Systems (GIS) and Drone Surveys to identify and curb illegal mining activities.
• **Performance-Based Transfers:** Finance Commissions could consider recommending an increased share of conditional transfers based on reforms, quality of expenditure and fiscal sustainability. This will harness healthy competition across States towards improving their economic performance. Currently, revenue deficit grants are disbursed to those States which are assessed to have high revenue deficits post-tax devolution.
• **Increase Fiscal Capacity:** Need for scaling up fiscal capacity for uninterrupted and efficient delivery of social, economic and general services to the people and for upgrading the quality of physical and human capital.
• **Streamlining Fund Transfers for Efficient Governance**: Efficient banking arrangements and cash management practices are essential for the effective utilization of the government's financial resources and the timely execution of payment obligations. o Fragmented banking arrangements - multiple accounts maintained by numerous revenue-collecting and spending agencies (including autonomous and statutory bodies) - can result in inefficient cash management practices.
• **Climate finance:** The Centre can introduce performance-based incentives for States that achieve significant progress towards climate goals

10. Is India on Path of Sustainable Development?

The SDGs are a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. There is a total of 17 interlinked goals; interlinked because they recognize that action in one area will affect outcomes in others and that development must balance social, economic, and environmental sustainability. They were adopted by a **UN General Assembly Resolution** in September 2015 (Agenda 2030). Through the resolution, the global leaders pledged to set the world on a new trajectory to deliver meaningful progress for people and the planet through domestic actions in the next 15 years.

The **NITI (National Institution for Transforming India) Aayog** has released its latest **Sustainable Development Goal (SDG) India Index for 2023-24,** showing significant progress in **sustainable development** across states and union territory of India.

What is the SDG India Index?

- **About:** The SDG India Index is a tool developed by NITI Aayog to measure and track India's progress towards the **SDGs set by the United Nations**.

The Index **assesses the performance** of states and union territories (UTs) **across 16 SDGs** using a set of indicators aligned with national priorities.

o The SDG India Index **measures national progress using 113 indicators** aligned to the **National Indicator Framework.**

o Goal-wise scores are computed for the 16 SDGs, and overall composite scores are derived for each State/UT. Note, **Goal 14 (Life Below Water) has not been included in the calculation** of the Composite Score for the Index as it solely pertains to the nine coastal States.

But at the same time, the Lancet journal published a report titled "Progress on Sustainable Development Goal Indicators in 707 districts of India: A quantitative mid-line assessment using the National Family Health Surveys, 2016 and 2021″. The report has highlighted India's SDGs performance is not up to the mark and mentioned that India may not be able to achieve at least 19 of the United Nations Sustainable Development Goals by 2030.

What is the status of India's SDG performance according to the Lancet study?

- India is not on-target for 19 of the 33 SDGs indicators (Sustainable Development Goals) of the United Nations
- Among the 19 off-target indicators, the situation has worsened for three of the off-target goals including those relating to **anaemia among women, pregnant and non-pregnant women, between 2016 and 2021.**
- The critical off-target indicators include access to basic services, wasting and overweight children, anaemia, child marriage, partner violence, tobacco use, and modern contraceptives. December 2023, 36% of children under six years old in India were stunted, **17% were underweight, and 6% were wasted, 57% of women in India aged 15–49 years are anemic (NFHS-5)**
- Off-target districts are concentrated in the states of Madhya Pradesh, Chhattisgarh, Jharkhand, Bihar, and Odisha , with poor performance of aspirational districts
- Many districts will never meet the targets on the SDGs even after 2030 due to a worsening trend observed between 2016 and 2021.

The study found some good things about India's SDG performance. These include

- At the all-India level, the **one SDG indicator that has already been achieved** is related to **adolescent pregnancy** in the age group of 10–14 years.
- India is also **On-Target to meet 13 out of the 33 indicators,** including **Internet use, women having a bank account, full vaccination (card), improved sanitation, multidimensional poverty, birth registration, skilled birth attendants, electricity access, tobacco use (women), child marriage of girls less than 15 years of age, under 5 mortality, teenage sexual violence, and neonatal mortality.**
- If efforts continue, India may meet the target of improved water access by 2031, clean fuel for cooking by 2035, lowering teenage pregnancy age by 2039, and partner sexual violence by 2040.

What can be done to improve India's SDG performance?

Appraisal of the policies and programs: India needs to urgently conduct an appraisal of the policies and programs that relate to SDGs, especially those that relate to four SDG targets relating to no poverty, zero hunger, good health and well-being and gender equality.

Identifying and prioritizing districts:
On critical indicators of health and social determinants of health, there is a need for a greater degree of precision in identifying and prioritizing districts for intervention. Meeting these goals will require prioritising and targeti ng specific areas within India

Inter-ministerial initiatives: Since the different SDGs fall under tightly organised ministries, there is a need to establish inter-ministerial initiatives, with clear governance structures under the Prime Minister's Office. Similar structures could be developed at the state level under the respective chief minister's office.

Conduct economic cost-benefit analysis: This will aid in setting priorities and directing more resources to the policy that offers the greatest return for each additional rupee spent Along with other initiatives, India should also **create a strategic road map** that will help make sure that the SDGs are met successfully.

11. Will India become a Developed Nation by 2047?

India's journey to becoming a developed country is a tale of resilience,ups and downs, innovation and huge growth potential and achievements. Emerging from the painful shadows of colonial rule in August 1947, India has since charted a path for making itself a developed country marked by a focussed and rapid industrialization, five year plans for socio-economic justice, technological advancements, and substantial economic reforms. Despite grappling with challenges that it inherited from British colonial powers such as poverty, infrastructural deficits, and social inequalities, India has managed to position itself in the global map as a burgeoning global power.

The term "developed" is used in different contexts to distinguish these advanced developed countries from "developing" or "underdeveloped" nations, which are still trying for economic and social development.

India as of now is classified as a developing nation and it is the world's fifth-largest economy with a Gross Domestic Product (GDP) of $ 3.42 trillion.

What are the Major Growth Drivers Propelling India Towards a Developed Economy?

- **Rise of the Services Sector:** India's **services sector** is experiencing rapid growth, accounting for over 50% of GDP. This sector offers high-value jobs and attracts foreign investment.
  - **Example:** The **IT and Business Process Outsourcing (BPO)** industries in India have become global leaders, providing services to international clients.
    - This growth in the service sector signifies India's increasing integration into the global economy.
- **Demographic Dividend:** India has a young and growing population, with a median age of **28.2 years (2023)**. This vast pool of human capital can fuel economic growth if properly skilled and employed.
- **Government Initiatives for Infrastructure Development:** The Indian government is actively investing in infrastructure development projects through initiatives like **The Pradhan Mantri Gati Shakti National Master Plan**.
  - This will enhance efficiency and boost economic activity across sectors.

- **Digital Transformation and Startup Ecosystem:** India is witnessing a digital revolution through **Digital India Initiative** and democratization of **Unified Payment Interface,** with increasing internet penetration (**8% year-on-year basis growth in 2023**).
  - Digital technologies are transforming industries and creating new growth opportunities.
- **Economic Resilience Despite Global Slowdown:** Despite global economic uncertainties, geopolitical tensions such as the **Russia-Ukraine War**, disruptions in supply chains like the **Red Sea and Panama Canal Crisis**, and tightening financial conditions in major economies like the US, India's domestic demand has shown relative resilience.
  - The **Reserve Bank of India** expects India's real GDP to grow by **7% in 2024-25.**
- **Innovation and Entrepreneurship:** India is fostering a culture of innovation and entrepreneurship.
  - This is evident in the **growing number of startups** (1,12,718 DPIIT-recognized startups across 763 districts) and research institutions focused on developing new technologies and solutions.
  - This technological prowess can lead to advancements in various sectors and attract global collaborations.

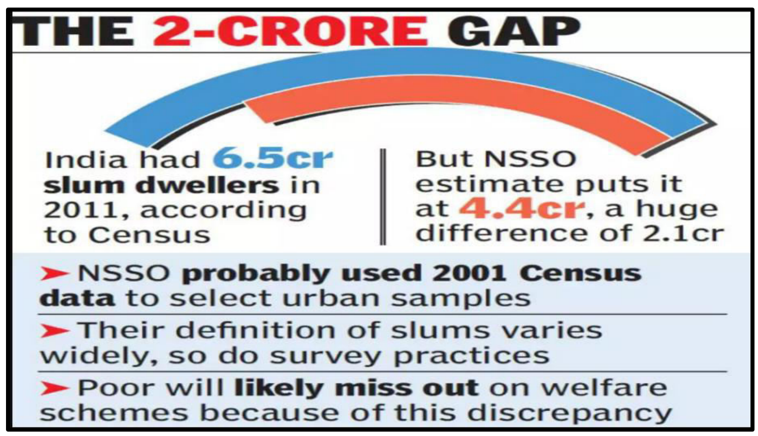
Challenges for India in Becoming a Developed Country

These are the following challenges for India in various sectors which needs course correction for placing itself as a developed country:

- **Agricultural**: Around 46% of India's total labor force is engaged in agriculture which is going through a low-productivity phase and contributes only 18% to GDP.
- **Female Labor Force Participation:** It is abysmally low i.e 37%, as compared to other countries like China, Japan, Vietnam etc
- **Middle-Income Trap:** India's current efforts and push is not sufficient enough to pull it out of this trap.
- **Logistics:** India as a whole face cost disabilities for power sector, logistics and supply chain and financing, coupled with low labor productivity when compared to countries such as Bangladesh, Vietnam etc and a compliance burden that deters new players from entering and the existing ones from expanding
- **Human Development:** India lags behind in Human Development HDI rankings mainly because of its low life expectancy rate and low per capita income,which can be improved with more funding and support from the government in the education and health sectors.
- **Jobless Growth:** While India boasts impressive economic growth of **7.8% in the 2023–24** fiscal year (FY) it has not translated into sufficient job creation.
- **Poverty-Education-Skill Trap:** Poor quality primary and secondary education limits **cognitive development** and reduces the potential benefits of higher education (The **India Skills Report 2021** argues that nearly **half of India's graduates are unemployable**).
- **Rural-Urban Divide and Unbalanced Development:** While India's urban centers have experienced economic growth, rural areas remain mired in **poverty, lack of infrastructure, and limited access to basic services.**
- **Climate Change Vulnerabilities:** India's rapid industrialization and urbanization have come at the cost of **environmental degradation**, including air and water pollution, deforestation, and biodiversity loss.

Measures for India to Become a Developed Economy & Avoid the Middle-Income Trap:

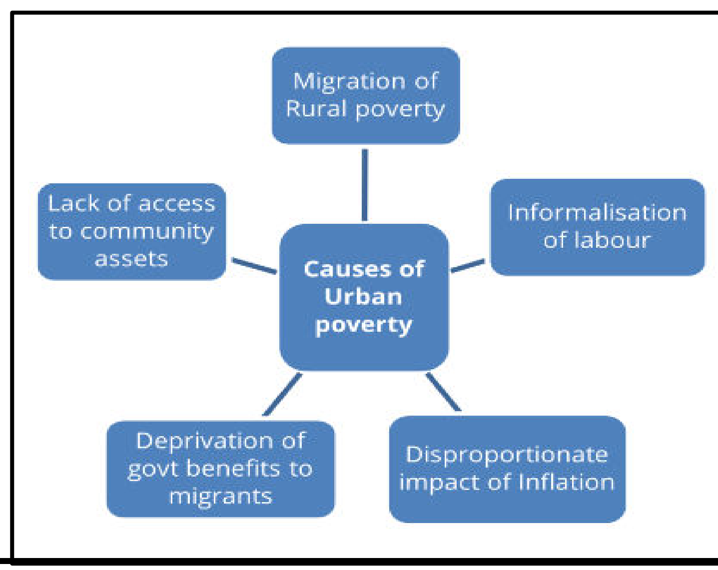
1. **Consistent Growth Rate**: Maintain a stable 7-8% growth rate over decades. Example: Economic reforms like GST and PLI (Production Linked Incentive) schemes.
2. **Skill Development**: Massive investment in vocational training for future industries like AI, renewable energy. Example: Pradhan Mantri Kaushal Vikas Yojana (PMKVY).
3. **Rural Transformation**: Focus on rural infrastructure (roads, healthcare, digital) and non-farm employment. Example: PMGSY for roads, PM-AASHA for farmers.
4. **Healthcare**: Increase public health spending to 2.5% of GDP, promote preventive care via telemedicine. Example: National Health Policy 2017.
5. **Innovation & R&D**: Raise R&D to 2% of GDP and promote tech parks and innovation hubs. Example: STIP 2020.
6. **Blue Economy**: Harness marine resources, boost coastal shipping and marine biotech. Example: Sagarmala and Deep Ocean Mission.
7. **Formalization & MSMEs**: Implement portable social security for informal workers, boost MSMEs with better financing. Example: E-Shram and MSME Udyam portals.
8. **Green Jobs**: Launch green job programs and provide subsidies for green industry employment. Example: National Solar Mission.
9. **Reduce Urban-Rural Divide**- There's one India that is akin to Singapore, another India akin to Sub-Saharan African Nations, it shows the deep divide of East-West, Rural-Urban, North-South, Rich-Poor, Upper Caste-Low Caste etc.



Conclusion: To escape the middle-income trap and truly transform during *Amrit Kaal*, India must aim for inclusive growth, driven by innovation, a skilled workforce, and sustainable practices. This consistent upward trajectory, supported by reforms and future-ready policies, can make the dream of a developed India by 2047 a reality.

12. Measures to Address Urban Poverty: Roadblocks for Inclusive Growth

Urban poverty is the concentration of poverty within urban areas, where individuals and communities struggle to meet their basic needs and access essential services. It is influenced by a range of factors, including inadequate employment opportunities, lack of affordable housing, limited access to education and healthcare, social exclusion, and discrimination.



As per NSSO survey reports, there are over 80 million urban poor. It is different from Rural poverty in its characteristics and causes.

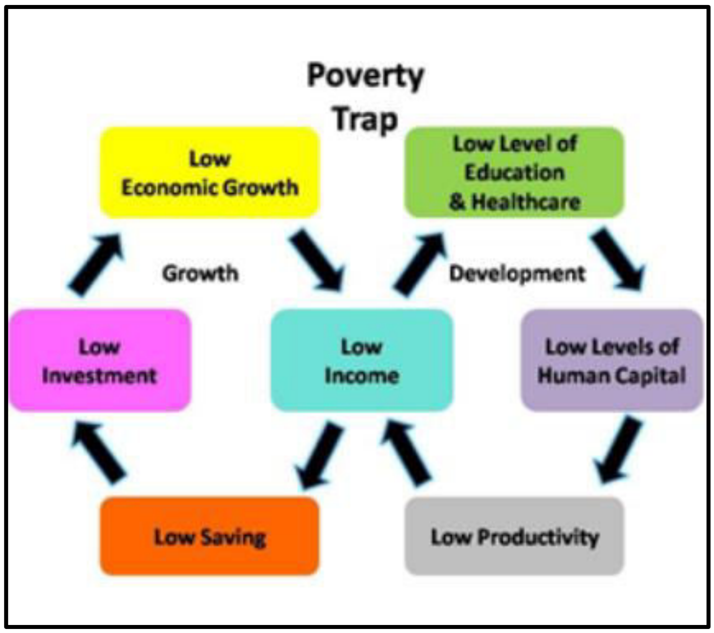
Urban poverty in India is unique.

1. Although the proportion of urban poor has declined over the last decades, there is a steady increase in the number which has a **direct impact on the slum areas of the metros.**
2. In India, "Gareebi Hatao" was a major objective of the Fifth Five Year Plan (1974-79) **when the urban poor got an identity.** According to the report of the Ministry of Housing and Urban Poverty Alleviation (2001)**, about 23.5% of urban households live in slums.**
3. Total number of slum households had increased **to 13 million in 2011**. The majority of urban poverty occurs in megacities.

The 2011 Census found that around 12 per cent of the urban population in "Class I" cities lived in slums, with higher rates in the larger cities.

Unique Challenges of Urban Poor in India:

1. **Lack of Affordable Housing**: High rent and poor living conditions force many into slums.
2. **Unstable Employment**: Informal, low-wage jobs with no job security or social benefits.
3. **Limited Access to Basic Services**: Poor healthcare, sanitation, education, and transport facilities in urban poor areas.
4. **Vulnerability to Displacement**: Urban redevelopment projects often displace the urban poor without adequate resettlement.
5. **Exclusion from Digital Economy**: Limited access to digital platforms that could offer job opportunities, particularly in the gig economy.



Measures Taken by the Government of India:

1. **Affordable Housing**: *Pradhan Mantri Awas Yojana (Urban)* aims to provide affordable housing to all by 2022. As of 2023, around 1.12 crore houses have been sanctioned under the scheme.
2. **Urban Employment**: *Deen Dayal Antyodaya Yojana - National Urban Livelihoods Mission (DAY-NULM)* focuses on skill development and self-employment. Over 12 lakh urban poor trained under the scheme.
3. **Healthcare & Sanitation**: *Swachh Bharat Mission*

(Urban) and *Ayushman Bharat* have targeted sanitation improvements and provided healthcare coverage to the poor.

4. **Smart Cities Mission**: Aims to improve urban infrastructure, including slum rehabilitation, improving quality of life for the urban poor.

Success Case Study: **Brazil's "Minha Casa, Minha Vida" (My House, My Life)**: Brazil's affordable housing program, launched in 2009, has built over 10 million homes for low-income families. The program integrates social housing with urban infrastructure like schools, healthcare, and transportation. It has significantly reduced Brazil's urban housing deficit.

- **Impact**: 12 million people lifted out of slums by 2018.
- **Funding**: Government-private partnerships made the program financially sustainable.

Suggestions to Eradicate Urban Poverty in India:

1. **Urban Planning & Slum Rehabilitation**: Ensure slum redevelopment includes adequate resettlement and social infrastructure like schools, healthcare, and public spaces.
2. **Cities Expansion**: Promote inclusive urban expansion with affordable housing on city outskirts, connected to urban centers through public transport.
3. **Support for Gig Economy**: Create social security measures (health insurance, pensions) for gig workers in urban areas to ensure economic stability.
4. **Affordable Public Transport**: Improve affordable, accessible public transport to allow the urban poor easier access to employment and services.
5. **Digital Inclusion**: Provide digital skills training and affordable internet access to integrate the urban poor into the digital and gig economies.

Conclusion:

Eradicating urban poverty in India requires a comprehensive approach that not only addresses housing and employment but also integrates social security, urban planning, and digital inclusion. In this transformative *Amrit Kaal*, India must focus on creating sustainable, inclusive cities that provide opportunities for all its citizens, ensuring that urban prosperity touches the lives of the urban poor.

13. Current Issues in GST Framework and possible solution for Indirect Tax

- GST is a value-added tax system that is levied on the supply of goods and services in India.
  - It is a comprehensive indirect tax that was introduced in India on **1st July 2017,** through the **101st Constitution Amendment Act, 2016**, with the slogan of **'One Nation One Tax'.**
- **Tax Slabs:** The primary GST slabs for regular taxpayers are currently 0% (nil-rated), **5%, 12%, 18%, and 28%.**

What are the Current Major Challenges Related to GST in India?

- **Complexity and Compliance Burden:** GST in India has a complex structure with **multiple tax slabs**, leading to increased compliance requirements.
  - This complexity poses a **challenge for businesses,** especially smaller enterprises, in understanding and adhering to the diverse regulations.
- **Technology and Infrastructure Readiness:** The successful implementation of GST relies heavily on robust technological infrastructure. Issues such as **lack of technological readiness among businesses, and disparities in technology adoption** can hinder the seamless functioning of the GST network.
- **Input Tax Credit (ITC) Verification**: The government authorities have recently identified and busted more than 29,000 bogus firms involved in evading GST dues.
- **Multiple Registrations Across States:** Businesses operating in multiple states must **register separately in each state for GST compliance.**
  - This multiplicity of registrations adds administrative burden and increases compliance costs for businesses with a **pan-India presence,** contributing to logistical challenges.

- **Benefits of GST:**
  - **Simplified Tax Regime:** GST replaced a multitude of indirect taxes, making compliance easier and reducing paperwork for businesses.
  - **Increased Transparency:** The **online GST portal** simplifies tax administration and promotes transparency in the system.
  - **Reduced Tax Burden:** Lower prices due to the elimination of cascading taxes benefit consumers.
  - **Boosted Economic Growth:** By removing tax barriers and improving efficiency, **GST is expected to contribute to higher economic growth** and job creation.
- **GST Council:** The GST Council is a **constitutional body responsible for making recommendations** on issues related to the implementation of the GST in India.
  - As per **Article 279A (1)** of the amended Constitution, the **GST Council was constituted by the President.**

What are the Current Major Challenges Related to GST in India?

- **Complexity and Compliance Burden:** GST in India has a complex structure with **multiple tax slabs**, leading to increased compliance requirements.
  - This complexity poses a **challenge for businesses,** especially smaller enterprises, in understanding and adhering to the diverse regulations.
- **Technology and Infrastructure Readiness:** The successful implementation of GST relies heavily on robust technological infrastructure. Issues such as **lack of technological readiness among businesses, and disparities in technology adoption** can hinder the seamless functioning of the GST network.
- **Input Tax Credit (ITC) Verification**: The government authorities have recently identified and busted more than 29,000 bogus firms involved in evading GST dues.
- **Multiple Registrations Across States:** Businesses operating in multiple states must **register separately in each state for GST compliance.**
  - This multiplicity of registrations adds administrative burden and increases compliance costs for businesses with a **pan-India presence,** contributing to logistical challenges.

Way Forward

- **Simplify and Rationalize Tax Structure:** Simplifying the GST tax structure by **reducing the number of tax slabs.**
  - A more straightforward and uniform tax system would ease compliance for businesses and promote a clearer understanding of tax obligations.

Streamline Compliance Procedures: Work towards simplifying and streamlining compliance procedures to reduce the administrative burden on businesses. This could involve **harmonizing return filing processes, ensuring timely refunds, and implementing user-friendly interfaces for tax filings.- D**igital tools for invoice management, like the new Invoice Management System (IMS), could enhance transparency and reduce under-reporting

- **Focus on Anti-Evasion Measures:** Strengthen measures to **curb tax evasion, especially through fake invoices** and fraudulent activities.
  - Utilizing **advanced data analytics and technology** to identify suspicious transactions, and implement stringent penalties for non-compliance to deter fraudulent practices.
  - **Sector-Specific Issues**: Industries such as healthcare and aviation have called for lower GST rates on essential goods and services. For instance, GST on life-saving drugs was recently reduced, but other critical sectors like medical insurance and education still need further tax rationalization

14. India's six-decade-old tax laws are in for a revamp: Govt wants real-world solutions.

India's tax authority seeks public feedback to revamp the 60-year-old Income Tax Act, aiming for simplification and reduced disputes. The Central Board of Direct Taxes wants to align reforms with industry expectations, focusing on clearer language and easing compliance.

Internal committee set up to review the Income Tax Act has sought public feedback on four categories:
1. simplification of language,
2. litigation reduction,
3. compliance reduction, and
4. redundant/obsolete provisions.

The Income Tax Act has 298 sections arranged in 23 chapters. It also has 14 schedules.

Challenges:

1. **Outdated Provisions**: Many sections in the 1961 Income Tax Act are no longer relevant to the present economic environment. For example, outdated clauses increase the complexity and burden of compliance, especially for small businesses and individual taxpayers. It has a direct impact on Ease of Doing Business
2. **Litigation and Legal Disputes**: The current tax framework often leads to unnecessary legal disputes due to ambiguities in the law. Complex provisions, such as those relating to the interpretation of various deductions and exemptions, are a common cause of litigation

3. **Tax Filing Complexity**: The existing process of filing taxes is seen as cumbersome, involving extensive paperwork and technical requirements that confuse many taxpayers, further exacerbated by the dual tax regimes (old vs new)
4. **Compliance Burden**: High compliance costs and the length of the current tax law are burdensome, especially for small businesses. Many sections are obsolete and irrelevant in today's context, making compliance more challenging

Proposed Solutions:

1. **Simplification of the Law**: The government is keen on reducing the number of sections and clauses, with a focus on cutting down redundant and outdated provisions. A target of abolishing about 125 sections from the current act has been suggested. The idea is to make the tax code more straightforward, reducing the compliance burden and making the language more accessible.
2. **Feedback Mechanism**: The Ministry of Finance has introduced a feedback mechanism to gather real-world suggestions from the private sector, businesses, and tax professionals. This is expected to ensure that the revised tax framework is practical and addresses key pain points
3. **Modernization**: Key updates include introducing clearer definitions of income, assets, and liabilities, and offering simplified guidelines for tax deductions and exemptions. This will help avoid confusion and reduce the number of errors in filings.
4. **Digital Tools and Simplification**: The government has been developing digital tools and tax portals that streamline the tax-filing process. One of the suggestions is to integrate AI and machine learning into these platforms to reduce manual errors and improve the user experience.
5. **Holistic Review**: A committee under the Central Board of Direct Taxes (CBDT) has been tasked with thoroughly reviewing the existing law and suggesting necessary updates, which are expected to be introduced in the Union Budget 2025.

Timeline:

- The first draft of the new tax framework, incorporating feedback from industry and experts, is expected by early 2025, with the formal introduction during the 2025 Budget session.

Examples and Suggestions:

- **Streamlining Procedures**: Provisions like reducing the audit threshold for small businesses and simplifying the deduction claim process have been proposed. For instance, making the *deductions on investments* clearer for retail investors will reduce compliance errors and litigation.
- **Easing Filing for Individuals**: The new regime could introduce a simplified tax bracket system and streamlined forms for salaried employees, similar to the simplified tax regimes of countries like Singapore.

In summary, the upcoming tax reforms aim to modernize India's tax system, simplifying both compliance and administration while ensuring a robust revenue collection mechanism for the government.

15. Why is the manufacturing share not growing in India's GDP?

The manufacturing sector's share in the GDP has stagnated as per the National Accounts Statistics. In 2014-15, the share was 16.1 per cent at current prices. It fell by three percentage points by 2022-23. At constant prices (net of inflation), the share declined marginally to 15.6 per cent. Make in India, initiated in October 2014, was one of the first policy measures of the then-incoming government. It aimed to raise the manufacturing sector's share in the GDP to 25 per cent and create 100 million jobs by 2022 (in addition to the existing 60 million at the time).

Challenges:

1. **Infrastructure Gaps**: Insufficient infrastructure, especially in logistics, energy supply, and port capacity, has slowed down the sector's efficiency. India's logistics costs are high, around 13-14% of GDP, compared to China's 8-9%, making manufacturing less competitive globally.
2. **Skilled Labor Shortage**: The availability of adequately trained workers is another significant bottleneck. Despite a large workforce, only about 10% of Indian workers receive formal vocational training, hindering the transition to advanced manufacturing like Industry 4.0.
3. **Credit and Financing Constraints**: Small and Medium Enterprises (SMEs), which form a significant part of the manufacturing sector, struggle with access to affordable credit. The banking system's risk aversion towards lending to MSMEs, exacerbated by the non-performing asset (NPA) issue, limits capital investment.
4. **Global Competition and Domestic Policy**: India faces stiff competition from China and Southeast Asia, which offer cheaper labor and more established manufacturing ecosystems. Also, complex regulatory requirements ("regulatory cholesterol") and a cumbersome business environment continue to pose challenges.
5. **Underutilization of the Production-Linked Incentive (PLI) Scheme**: While the PLI scheme aimed to boost domestic manufacturing, its potential is yet to be fully realized. Some sectors, like electronics, have benefited, but challenges in scaling up across industries remain.
6. **Technology and Automation**: The shift towards automation and digital transformation, though essential, has been slow, leading to inefficiencies in production. The manufacturing sector's current level of technology adoption lags behind international standards.
7. **Low Private Investment -** Since 2014-15, there has practically been no expansion of the net fixed investment rate, thus leading to a stagnation in manufacturing capacity. India's industrial imports have boomed to meet the demand-supply gap, mainly from China, import of $100 Bn)

Solutions:

1. **Invest in Infrastructure**: Increased investment in logistics and industrial infrastructure is critical. Programs like **PM Gati Shakti** aim to improve multimodal connectivity, which can reduce logistics costs and make Indian manufacturing more competitive globally.
2. **Strengthening Vocational Training**: Expanding and modernizing skill development programs can help address the labor issue. **Pradhan Mantri Kaushal Vikas Yojana** (PMKVY) and partnerships between industry and academia need to be enhanced to create a future-ready workforce.

3. **MSME Financing**: Strengthening access to finance for SMEs by leveraging platforms like **SIDBI** (Small Industries Development Bank of India) and enhancing digital lending platforms will support capital investment. Efforts to address the NPA issue will also be crucial.
4. **Simplifying Regulatory Processes**: India must continue with **ease of doing business reforms** to streamline approvals, reduce compliance costs, and make it easier to set up and scale manufacturing businesses. This includes simplifying labor laws and land acquisition processes.
5. **Utilizing PLI Schemes**: The government can better tailor the **Production-Linked Incentive (PLI)** schemes to focus on sectors where India has comparative advantages, such as electronics, automotive components, and renewable energy, and ensure that these sectors receive adequate support for technology upgrades.
6. **Promoting Technological Innovation**: Accelerating the adoption of **Industry 4.0** through incentives for automation, AI, and IoT in manufacturing plants can improve productivity. Fostering partnerships between global tech firms and Indian manufacturers can help transfer best practices and technology.

Expert Views and Recommendations:

- **NITI Aayog's** recommendations include the need for focusing on emerging sectors like electric vehicles, batteries, and solar panels, where India can build a global manufacturing leadership.
- The **Economic Survey 2022-23** emphasized improving logistics and enhancing the ecosystem for MSMEs to expand manufacturing capacity.
- The **National Manufacturing Policy** aims to increase the manufacturing sector's share in GDP to 25% by 2025, with suggestions to simplify the tax structure and align policies with global best practices.

Addressing these challenges holistically can help India transform into a manufacturing powerhouse, contributing significantly to its goal of becoming a $5 trillion economy.

16. India's Semiconductor Industry: Prospects, Problems, Way Ahead

Recently, the Union Cabinet, led by Prime Minister Shri Narendra Modi, has approved the establishment of a new semiconductor unit in India. The new semiconductor unit will be set up by Kaynes Semicon Pvt Ltd in Sanand, Gujarat, with an investment of Rs 3,300 crore, and it will have a production capacity of 60 lakh chips per day. The announcement is a continuation of the series of establishment of semiconductor plants in India. The semiconductor plants have been announced in Sanand, Gujarat (two units by Kaynes Semicon Pvt Ltd and CG Power), Dholera, Gujarat (one unit by Tata Electronics), and Morigaon, Assam (one unit by Tata Electronics).

Semiconductors are materials which have a conductivity between conductors and insulators. They can either be pure elements, like silicon or germanium or compounds, like gallium, arsenide, or cadmium selenide.

Properties- Semiconductors have less resistivity than insulators and more than conductors. The resistance of the semiconductor decreases with an increase in temperature and vice versa.

Importance of Semiconductor chips

1. Heart and brain of modern technology products- Semiconductor chips are the heart and brain of all modern electronics and communications technology products, contemporary automobiles, household gadgets such as refrigerators, and essential medical devices such as ECG machines.
2. Propeller of emerging technologies- The development of emerging technologies like AI, 5G, or driverless cars is dependent upon a fast and cheap semiconductor industry.
3. Most traded products after petroleum- Semiconductors are globally the most-traded products after petroleum and cars, with an annual turnover of $500 billion.
4. Aiding the further development of electronic devices- Semiconductors make the devices more compact, less expensive, and more powerful. **For ex-** Semiconductor chips have enhanced the features of smartphones with powerful processing.
5. Transformative potential- Semiconductors continue to enable the world's greatest breakthroughs and transformation in industries, ranging from aerospace and consumer electronics to energy and medicine.

What are the defining features of Semiconductor manufacturing?
Semiconductor manufacturing has the following defining features-
1. Front-end manufacturing and back-end assembly- Semiconductor manufacturing comprises the front-end fab manufacturing and the back-end assembly, including packaging and testing. However, the front-end fab manufacturing is a complex process, with only a handful of companies involved in large scale fab-manufacturing.
2. Complexity in manufacturing- The semiconductor manufacturing is a complex process requiring at least 300 different high-technology inputs.
3. Highly concentrated global supply chain- Globally, the entire semiconductor value chain has seeped in the interdependence between a handful of countries like the USA, Taiwan, Japan, China, and some European nations. Within this chain, there's an extraordinary degree of specialisation that makes it vulnerable to shocks. For ex-100% of the world's most advanced (below 10 nanometres) semiconductor manufacturing facilities are located in just two countries, Taiwan and South Korea.
4. Large investment- The semiconductor product development requires the largest investment on both R&D and manufacturing. It is estimated that over the next decade about $3 trillion in investment will be needed.
5. Revenue sharing b/w few companies- The top three companies in each stage of the semiconductor supply chain take in about 80-90% of the revenue.

Semiconductor manufacturing status in India
1. Semiconductor R&D footprint in India- India has an existing base for design and verification for the semiconductor industry. Most of the global semiconductor companies having an R&D footprint in India.
2. Fabrication facilities limited to strategic semiconductor development- India has two fabs — SITAR, a unit of the Defence Research and Development Organisation (DRDO) in Bengaluru, and a semiconductor laboratory in Chandigarh. These build silicon chips for strategic purposes like defence and space, and not for commercial use.
However, 100% of our semiconductor chips, memory, and display cards are imported into the country. In 2020, India spent $15bn on electronic imports, with 37% coming from China.

Prospects:- India's semiconductor market is projected to reach $63 billion by 2026, indicating robust growth potential. This growth is fueled by rising demand across various sectors, including automotive, telecommunications, and defense

What is the significance of development of indigenous semiconductor industry in India?

1. Tackling supply shocks- The pandemic and the subsequent lockdowns impacted the supply of chips to India. **For ex-** Automobile manufacturers like Mahindra & Mahindra and Tata group were compelled to reduce their production due to the shortage.

2. Meeting the rising demand- Experts estimate that around 50 crore people will join the internet in the next decade, which will increase the demand of more phones and laptops. Similarly, the post-pandemic world is showing a greater inclination towards work from home culture. This warrants an enhanced demand for servers, internet connectivity, and cloud usage. Hence, indigenous semiconductor industry is needed to meet the rising demands. There is a huge domestic market for semiconductors which could exceed $60 billion by 2026.

3. Employment Creation- Indigenous manufacturing of chips will build its smartphone assembly industry and strengthen its electronics supply chain. This will create numerous employment opportunities for the Indian youth.

4. Revenue boost- Indigenous capacity would attract local taxes and boost the export potential. Further, India would be required to import fewer semiconductor chips, which would decrease the import bill. **For ex-** India imports almost all semiconductors to meet its demand, which is estimated to reach around $100 billion by 2025.

5. Enhanced Security- Chips made locally will be designated as "trusted sources" and can be used in products ranging from CCTV cameras to 5G equipment. This would improve the national cybersecurity profile.

6. Geopolitical Benefits- Countries having a sufficient supply of chips would be in a better position to mould the future course of geopolitics, driven by data and the digital revolution. Further self-sufficiency will decrease reliance on Chinese chip imports, especially during hard times like the recent Galwan Valley border clash.

7. Increased competitiveness- Indian manufacturers globally competitive to attract investment in the areas of core competency and cutting-edge technology.

What have been the government efforts towards development of semiconductor industry in India?

National Policy on Electronics, 2019	It envisions positioning India as a global hub for Electronics System Design and Manufacturing (ESDM) sector. It aims to encourage the development of core components (including chipsets) and create an enabling environment for the industry to compete globally.
Semicon India programme	The government has approved the Semicon India programme with a total outlay of INR 76,000 crore for the development of semiconductor and display manufacturing ecosystem in the country.
'Modified Scheme for setting up of Semiconductor Fabs in	It aims to attract large investments for setting up semiconductor wafer fabrication facilities in the country. The Scheme extends a fiscal support of 50%

India'	of the project cost on an equal footing basis for setting up of Silicon complementary metal-oxide semiconductor (CMOS) based Semiconductor fabrication in India.
Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme	Under this, the government will provide support for the setting up of Electronics Manufacturing Clusters (EMCs) and Common Facility Centres (CFCs).
Foreign Direct Investment	The Government of India has allowed 100 percent (FDI) under the automatic route in the Electronics Systems Design & Manufacturing sector.
Production Linked Incentive Scheme(PLI)	Under this, the government will provide an incentive of 4% to 6% on goods manufactured in India and covered under target segments to eligible companies for a period of five years.

What are the challenges in the semiconductor industry in India?

1. High Cost of establishment- As per a government estimate, it would cost roughly $5-$7 billion to set up a chip fabrication unit in India.

2. Bureaucratic inefficiencies- The process of establishing an indigenous semiconductor facility requires clearances and approvals from multiple government departments. Further, there exists a considerable degree of bureaucratic delays at each stage that discourages the establishment of manufacturing units.

3. Unstable power supply- The smooth production of semiconductors requires the availability of an uninterrupted 24*7 power supply. However, this requirement is not fulfilled by many regions in the country. This restricts production to very few locations.

4. Technological Constraint- The indigenous manufacturing of semiconductors requires the use of high-end technologies. These technologies are licensed from patent holders at a very high price.

5. Structural Flaws- FDI in electronics is less than 1% of the total FDI inflow because of the dearth of skilled labor, delays in land acquisition, and the uncertain tax regime.

What Should be the Way Forward?

1. Provision of adequate funding- Adequate funding must be provided to augment the research and development potential of technical institutes. **For ex-** IIT Madras developed a microprocessor named 'Moushik' with funding support from the Ministry of Electronics and Information Technology.

2. Expeditious execution of Sovereign Patent Fund (SPF)- The Sovereign Patent Fund (SPF) under National Policy on electronics should be established expeditiously. It is a wholly or partly Government-backed entity that aims to bolster domestic businesses through the acquisition and licensing of patented technology.

3. Domestic procurement assurances- The manufacturers need to be given an assurance of minimum domestic procurement by the government and the private sector. The focus should be on manufacturing economical and technically viable options like 28nm chips.

4. Support of businesses- The government should also support businesses in the acquisition of semiconductor manufacturing units in other countries. This is easier than setting up a domestic facility and can be done swiftly for ensuring a continuous supply of chips. Hand-holding startups of entrepreneurial engineers can also produce large payoffs.
5. Intial Focus on back-end of manufacturing- Semiconductor foundries are the world's most expensive factories, accounting for 65% of industry capital expenditure but only 25% of the value addition. Therefore, to lower the risks of investment, India should especially look at back-end of manufacturing such as assembly, packaging and testing. Once it stabilises and an ecosystem develops, front-end of manufacturing will follow.
6. Proactive cooperation of states- Areas like stable power, large quantities of pure water and land, are state subjects, and the state governments should also create the right climate for easy implementation of semiconductor projects.

Conclusion
The 21st century will be an era of Digital revolution signifying an increased use of mobile phones and computer devices. This enhanced usage can be met only with a robust availability of semiconductor chips that sustains their functioning. Therefore India needs to focus on the indigenous development of semiconductors in order to realize its digital potential and emerge as a strong power in the present era.

17. India and issues at WTO and solutions

Recently, the 13th Ministerial Conference (MC13) of the World Trade Organization (WTO) ended in a status quo. No consensus was reached on most of the key issues. WTO reforms still remains an Achilles heel.
The World Trade Organization is the only international organization that deals with the rules of trade between countries. The WTO officially commenced in 1995 under the Marrakesh Agreement signed by 124 nations, replacing the General Agreement on Tariffs and Trade (GATT).
According to its rules, all decisions are taken through consensus and any member can exercise a veto.
India's relationship with the World Trade Organization (WTO) has been marked by several issues, particularly concerning agricultural subsidies, intellectual property rights, and trade in information technology.

1. **Agricultural Subsidies and the Peace Clause**: India has invoked the WTO's "Peace Clause," which protects developing countries from disputes over subsidy ceilings for food security programs. This clause is critical for India, as it allows for higher subsidies without facing retaliation from other countries. However, India has faced criticism for its subsidy policies, particularly in rice and wheat production, which some member countries argue distort global trade
2. **Intellectual Property Rights (TRIPS)**: India has raised concerns regarding the TRIPS Agreement, particularly its impact on public health and access to medicines. The country has been advocating for a review of this agreement to align it with the Convention on Biological Diversity (CBD) to prevent bio-piracy and protect traditional knowledge
3. **Information Technology Tariff Dispute**: A significant WTO panel ruling went against India concerning its tariffs on certain information technology products. This case highlighted the tensions between India's desire to protect domestic industries and the WTO's push for tariff reductions

4. **Ban on Chinese Apps**: India's ban on Chinese mobile applications has led to accusations from China that India is violating WTO rules. However, India defends its actions as necessary for national security

Other Areas of Dispute Highlighted in recently conducted in 13th MC

Fisheries Subsidies

India's Demand- India acknowledged the negative impact of subsidies on the fisheries sector. India emphasised on the need to curb harmful subsidies for countries engaged in distant water fishing.

Outcome- Member nations failed to produce an outcome document regarding subsidization of fisheries. The ministerial declaration did not mention fisheries subsidies.

Impact on India- India retains full policy space for the benefit of its artisanal fisheries. The livelihoods of fishermen, particularly those fishing up to 200 nautical miles beyond territorial waters, is safeguarded.

E-Commerce

India's Demand- India opposed the continued exemption of Customs duties on e-commerce or electronic transmission. India has argued that the moratorium adversely affected revenue collections. India also wanted an assessment of the moratorium's scope and its impact on other countries.

Outcome- WTO nations agreed to maintain the current practice of not imposing Customs duties on electronic transmissions until the next ministerial conference or March 31, 2026, whichever is earlier.

Impact on India- The extension of tax breaks for Big Tech will impact the tax revenue collection of India. It curtails the policy space for undertaking digital industrialisation in India and escaping digital colonisation.

Dispute Settlement Mechanism

India's Demand- India has demanded the establishment of a fully functional dispute settlement system for amicable resolution of disputes.

Outcome- Countries have resolved to establish a fully functioning dispute settlement system accessible to all members by the end of 2024.

Impact on India- The establishment of fully functional dispute settlement system will help in faster resolution of India related trade pacts.

Proposed Solutions

To address these issues, several strategies have been suggested:

1. **Revising Agricultural Subsidy Policies**: India could work towards aligning its subsidy policies with WTO rules while ensuring food security. This may involve restructuring the subsidy framework to comply with international norms without compromising domestic needs.
2. **Negotiating TRIPS Flexibilities**: India can push for more robust provisions within the TRIPS framework that prioritize public health over intellectual property rights. This would involve advocating for clearer definitions of what constitutes bio-piracy and seeking international cooperation in protecting traditional knowledge
3. **Strengthening Domestic Industries**: To resolve the IT tariff dispute, India should consider gradually reducing tariffs on specific products while simultaneously enhancing local industry capabilities. This could involve fostering innovation and improving technology infrastructure to compete globally.

4. **Engaging in Bilateral and Multilateral Dialogues**: India can enhance its diplomatic engagement with other WTO members to build coalitions around common interests, especially in agriculture and technology. This would involve participating actively in WTO negotiations to advocate for fair treatment of developing nations

What have been the achievements of WTO?

1. Facilitation of International Trade- Binding rules for global trade in goods and services have facilitated dramatic growth in cross-border business activity. The real volume of world trade has expanded by 2.7 times since the inception of WTO.

2. Reduction in Tariffs- After the creation of WTO, average tariffs have almost halved, from 10.5% to 6.4%. This has facilitated the growth of International trade.

3. Boost to national incomes- Accession to WTO has given a lasting boost to national income of several developing economies.

4. Rise of global value chains- The predictable market conditions fostered by the WTO have combined with improved communications to enable the rise of global value chains. Trade within these global value chains today accounts for almost 70% of total merchandise trade.

5. Reduction in poverty- The free and fair trade principles has also contributed to reduction in world poverty levels. Taking into account, the World Bank's $1.90 threshold for extreme poverty, the poverty level has fallen from ~33.33% in 1995 to ~10% today.

What are the suggested WTO reforms?

1. 30 for 30- India has issued a comprehensive proposal called "30 For 30". It is to bring at least 30 operational improvements to the WTO before the Organization completes 30 years, that is by 1 January 2025. A year long cooling-off period before hiring a diplomat in any role in the organization, resolving old issues before picking up new ones, and a time-bound work programme to make dispute settlement more accessible for developing countries are some of the suggested operational improvements.

2. New rules on emerging trade domains- There must be consensus based new agreements on emerging trade domains like electronic commerce, investment facilitation, domestic regulation in services. It will make trade more efficient and predictable in cutting-edge sectors of the economy.

3. Increasing participation in global trade- Efforts must be made to make it easier, safer and viable for women and smaller businesses to participate in global trade. This would help make trade more inclusive.

4. Depoliticisation of Appointment process- The appointment process to dispute settlement body should be made independent of political control.

5. Reforming the voting process- Clear guidelines must be spelt as to when a country may use its veto power. Veto usage needs to be weighed against the interests of all, and in light of the WTO's mandate.

6. Dispute settlement reform- This includes expanding the Appellate Body panel from seven to nine judges, redefining membership of the Appellate Body from part-time to full-time, and allocating more resources to the Appellate Body Secretariat.

7. Independent panel as arbiter- An independent panel could play the role of arbiter, evaluating the competing claims and helping to overcome the political deadlock.

8. Increasing transparency- WTO members should proactively disclose their subsidies to develop trust and transparency among WTO members

18. India and issues with Multilateral Banks

Recently, a **G20** expert panel has recommended that Multilateral Development Banks (MDBs), should shift their approach from funding individual projects to focusing on sector-specific programs and long-term transformation plans as outlined by national governments.

What are Multilateral Development Banks?

- **MDBs** are international institutions comprising developed and developing countries.
- They offer financing and technical assistance for various projects in areas like transportation, energy, urban infrastructure, and waste management.
- Developed countries contribute to MDB lending, while developing nations typically borrow from them for development projects.
- MDBs have been instrumental in supporting the development of both low-income and middle-income countries (LICs and MICs) by addressing issues such as poverty reduction, infrastructure development, human capital formation, etc.
- MDBs include the **World Bank Group**, the **Asian Development Bank**, the African Development Bank, the Inter-American Development Bank, etc.

Why are Experts Advocating for Reforms within MDBs?

- **Climate Crisis**: The G20 expert panel argues that the climate crisis necessitates reforms in MDBs to address global challenges, especially in emerging markets and developing economies (EMDEs)
- **Long Term Transformation**: MDBs should align their operations with the **Sustainable Development Goals (SDGs)** identified by national governments, focusing on long-term transformation plans.
- **Private Sector Engagement:** Greater private sector engagement should be central to MDB operations, breaking from their historical separation of private and sovereign financing arms.
- **Coordination:** The success of MDBs depends on enhanced coordination among various stakeholders.The reforms should aim to mitigate coordination failures between domestic and international stakeholders, public and private.
- **National Involvement:** National governments should have a more prominent role in shaping a unified vision of goals, policies, investments, and financing.

How have MDBs Traditionally Lent in India?

- **World Bank's Commitment to India:**
  - The **World Bank**, established in 1944, has committed USD 97.6 billion in lending to India, encompassing both active and closed projects.

- Out of the total commitments,19% has been dedicated to projects in the public administration sector, 15% to agriculture, fishing, and forestry, and 11% to the transport sector.

- **Asian Development Bank's (ADB) Involvement:**
  - The **ADB, based in Manila** and established in 1969, has committed USD 59.7 billion in assistance to India, covering both project and technical assistance.
- **Asian Infrastructure Investment Bank's (AIIB) Contribution:**
  - The **AIIB, headquartered in Beijing** and founded in 2016, has approved USD 9.9 billion in financing for India.
  - Of this amount, 42% has been designated for the transport sector

19. India's Push for Infrastructure Development

India's journey towards becoming a developed nation by 2047 hinges significantly on improving its infrastructure, a cornerstone for fostering liveable, climate-resilient, and inclusive cities that drive economic growth. The government's commitment is evident through its allocation of 3.3% of GDP to the infrastructure sector in the fiscal year 2024, with particular focus on the transport and logistics segments.

Recently, the **Cabinet Committee on Economic Affairs,** led by the Prime Minister has approved **eight National High Speed Corridor projects** under the Public-Private Partnership (PPP) Model.

- These projects are expected to create approximately **4.42 crore mandays of direct and indirect employment.**

Agra-Gwalior high-speed corridor, Tharad-Deesa-Mehsana-Ahmedabad corridor, Guwahati Ring Road:
Build-Operate-Transfer (BOT)
Nashik Phata-Khed corridor, **Hybrid Annuity Model (HAM)**
Kharagpur-Moregram corridor , Ayodhya Ring Road Raipur-Ranchi corridor,
Engineering, Procurement, and Construction (EPC) Model

What is the Government's Road Map for Infrastructure Development?

- **Focus on Public-Private Partnerships (PPP):** Government has emphasised on project development through PPP investment models.
  - This model allows private players to assume investment risks and manage the construction and maintenance of highways.
- **Amendments to Concession Agreements:** Government has amended the **Model Concession Agreement** to make it **more attractive for private investors,** introducing liberal compensation, extended concession periods, and termination payments.
  - The earlier **concession agreement** system featured **fixed compensation, short concession periods, low termination payments, and strict regulatory oversight,** making it less appealing to private investors.

- **Introduction of Construction Support:** A new 'construction support' mechanism will enable the **National Highways Authority of India (NHAI)** to pay up to 40% of the total project cost in ten instalments based on physical progress, enhancing financial viability for private developers.
  - Earlier, NHAI only provided equity support, which led to **cash flow challenges** as developers had to rely heavily on their own funds before project completion.
- **Economic Impact of High Speed Corridor Projects:** The projects aim to boost regional economies, particularly in states like West Bengal and the North East, by improving connectivity and reducing transportation costs.
- **Progress in Highway Construction in India:**
  - The **length of National Highways** has increased from 0.91 lakh km in 2013-14 to **1.46 lakh km** in 2024.
  - The average annual construction of National Highways has increased by about 2.4 times from about 4,000 km in 2004-14 to about 9,600 km in 2014-24.
  - The total **capital investment in National Highways** including private **investment has increased by 6 times** from Rs. 50,000 Crore in 2013-14 to about Rs. 3.1 Lakh Crore in 2023-24.
  - The government has adopted a **corridor-based highway infrastructure development approach** with a focus on consistent standards, user convenience, and logistics efficiency.

Related Infrastructure Development Schemes

- **PM Gati Shakti Scheme:** It aims to ensure integrated planning and implementation of infrastructure projects with focus on expediting works on the ground, saving costs and creating jobs.
- **Bharatmala scheme:** It is a flagship highway development programme launched under the Ministry of Road Transport and Highways.
  - The first phase of Bharatmala, **announced in 2017** and initially set to be completed by 2022, has now had its **deadline extended to 2027-28.**
  - It focuses on enhanced effectiveness of already built infrastructure, multi-modal integration, bridging infrastructure gaps for seamless movement and integrating **National and Economic Corridors.**
- **National Infrastructure Pipeline (NIP):** It is a group of social and economic infrastructure projects to provide world-class infrastructure across the country and improve the quality of life for all citizens.
- **Sagarmala Project:** It was approved in 2015, aims to develop port infrastructure along India's 7,516-km coastline through modernisation, mechanisation and computerisation.
- **Ude Desh Ka Aam Nagrik (UDAN):** This scheme was with the aim to improve air connectivity to remote and regional areas of India, enable common people to access affordable air travel and create employment in the aviation sector.

What are the Challenges to Infrastructure Development in India?

- **Physical Infrastructure:** The construction of physical infrastructure in India faces significant challenges including **land acquisition,** which often involves complicated resettlement and compensation issues.
  - Additionally, **funding** such **large-scale projects is difficult** due to **limited government resources** and **private investment hindered** by economic and regulatory obstacles.

- Furthermore, there is a **lack of technology and expertise** required for executing complex infrastructure developments.

- **Political and Regulatory Risk:** It encompasses various approvals required across the project cycle, community opposition, changes to regulations, and breach of contract terms.
  - In India, **denial of government payments** against contractual agreements is perceived as likely to influence future investment decisions.
- **Geographical Challenges:** India's diverse topography, including mountains, rivers, and coastal regions, presents unique engineering challenges. Additionally, extreme weather conditions, such as **cyclones** and **floods,** can disrupt projects and increase costs.
- Corruption and Inefficiency: **Bureaucratic red tape, corruption**, and lack of transparency often lead to project delays, cost escalation, and suboptimal quality of projects.
- **Policy Inconsistencies:** Conflicting policies and regulations often create an uncertain environment for investors and developers, discouraging private participation.
- **Digital Divide:** India faces challenges in developing its digital infrastructure due to a significant digital divide, particularly in rural areas with limited access to technology and the internet.
  - The rise in technology usage also raises concerns regarding **cybersecurity and privacy**, necessitating robust regulations and infrastructure.
  - Additionally, the **absence of standardisation and coordination** among various stakeholders in the digital infrastructure sector can impede user experience and stifle growth and innovation.
    - **Roads**: Bharatmala Phase I aims to develop 34,800 km of highways, with completion by 2027-28, covering 31 States/UTs and 550+ districts. 22 greenfield expressways are planned.
    - **Airports**: UDAN has launched 425 routes and revived 58 airports, with 50 more to come. The 2023-24 budget allocates INR 1,244 Cr to expand air connectivity.
    - **Railways**: Indian Railways electrified 61,508 km and launched 35 Vande Bharat trains, aiming for net-zero emissions by 2030 with solar and wind power plants.
    - **Ports**: Port turnaround time is 0.9 days; cargo through waterways increased by 7.49% in 2023. Sagarmala will boost port capacity from 2,600 MTPA to 10,000+ MTPA by 2047.

Conclusion The infrastructure sector plays a pivotal role in driving India's economic growth and overall development. As the country continues on its path towards becoming a global economic powerhouse, the need for robust infrastructure becomes increasingly apparent. Private sector partnerships have emerged as crucial enablers in this endeavour, bringing in much-needed investment, innovation, and efficiency. By leveraging public-private partnerships (PPPs), India can accelerate infrastructure development while ensuring sustainability and inclusivity.

20. Government considering several measures to help revive Special Economic Zones

The government is considering several measures such as a flexible framework for sale of products manufactured in special economic zones (SEZs) in the domestic market, easy de-notification norms, and streamlining approval processes for units, an official said.

The aim is to help revive SEZs and facilitate business transactions between SEZ and domestic tariff area (DTA) or the domestic market.

SEZs are enclosures which are treated as foreign territories for trade and customs duties, with restrictions on duty-free sales outside these zones in the domestic market.

In India the SEZs are governed as per the provisions of the **SEZ act of 2005**, which aimed to achieve the following objectives

- To **boost exports** of goods and services.
- To create **additional economic capacity**.
- To **generate employment**.
- To attract domestic and foreign **investments.**
- To create a conducive **administrative and business environment**.
- To develop **infrastructure facilities.**

To achieve the above aims, various **incentives/facilities** are provided to the units in SEZ

- **Simplified procedures** for development, operation, and maintenance of the SEZ.
- **Duty free imports** or domestic procurement of goods and services.
- **Tax incentive** for units in the SEZ, both central and state taxes.
- **Single window clearance** for state and central approvals.

However, the SEZ act is now more than 16 years old and several issues have emerged in the functioning SEZs in India. In India the **SEZs have not been as successful** as the SEZs in countries like Singapore and China.

- New generation firms in SEZs, **used incentives to avoid taxes** rather than creating exporting capacity.
- Manufacturing SEZs have underperformed because of **poor linkages with the rest of the economy**.
- Many states did not sync state level laws with central SEZ act, which created **barriers in the single window clearance regime**.
- There are **multiple models for economic zones** apart from SEZ like NIMZ, Coastal economic zone etc, which creates problems in integration of various models.
- **Number of SEZs in India is over 375**, while China has about 20. This large number makes administration complicated.
- Other **Asian countries, like Thailand, have tweaked their SEZ laws** to attract investment at the cost of Indian SEZs.

To address the underlying issues in the functioning of SEZs, the **Union government** has announced that it will bring a **new legislation to govern the SEZs** to create ease of doing business and enhance competitiveness. The new legislation will ensure

- **States become partners** in development of SEZs.
- **Custom administration is hassle free** and fully IT driven.
  The new proposed law needs to be in line with the recommendation of **Baba Kalyani Committee**, to effectively address the present challenges of SEZs, which include
- Shift in approach from export growth to broad-based Employment and Economic Growth. (**Employment and Economic Enclaves- 3Es**)
- Separate rules and procedures for **manufacturing and service SEZs**.
- Shift from **supply driven to demand driven** approach for 3Es development.
- Creation of **enabling ecosystem development** by funding high speed multi modal connectivity, business services and utility infrastructure.

If governed effectively SEZs can function as growth engines for development of Indian economy and address the challenges faced by the Indian economy specially in the COVID years. The new SEZ legislation will be a good step in the right direction.

21. PM Gati Shakti National Master Plan Completes 3 Years Of Transforming Country's Infrastructure Landscape

The PM GatiShakti National Master Plan (NMP) for muti-modal connectivity, launched by Hon'ble Prime Minister on 13th October 2021, completes three years having achieved significant milestones in transforming the country's infrastructure landscape.
During the last three years, more than 44 Central Ministries and 36 States/UTs have been on boarded; their data layers have been integrated and are provided with their own geospatial planning portal

Key Achievements of the PM Gati Shakti Project

1. **Integrated Platform**: Successfully onboarded 44 Central Ministries and 36 States/UTs with over 1,600 data layers, enhancing planning and execution of infrastructure projects.
2. **Social Sector Impact**: Extended to Social Sector Ministries, enabling better planning for essential services like healthcare, education, and tribal development by identifying infrastructure gaps in remote areas.
3. **State Master Plans (SMPs)**: All States/UTs developed SMP portals aligned with the National Master Plan, streamlining capital investment and mapping over 533 projects.
4. **Logistics Improvement**: Contributed to India's rise in the World Bank's Logistics Performance Index (from 44th in 2018 to 38th in 2023) by addressing infrastructure gaps and reducing logistics costs.
5. **Stakeholder Engagement**: Conducted five regional workshops, fostering knowledge sharing and cooperative federalism, enhancing local adoption of the Gati Shakti framework.
6. **Data-Driven Development**: Utilized GIS-based tools for real-time monitoring, aligning projects with national priorities and minimizing delays, supporting India's Net Zero commitments.
7. **Training Initiatives**: Trained over 20,000 officials through various courses and workshops, integrating PM Gati Shakti into the curriculum of Central Training Institutes.
8. **District-Level Expansion**: Developing PM Gati Shakti District Master Plan portals for collaborative planning at the district level, incorporating emerging technologies like AI and IoT.

9. **International Outreach**: Engaged diplomatically with neighboring countries to promote integrated infrastructure planning and share geospatial technology.
10. **Commitment to Atmanirbhar Bharat**: Celebrating three years, the initiative continues to strengthen India's infrastructure network, essential for self-reliance and sustainable growth.

22. Indian Startup Ecosystem

India now boasts the **world's third-largest startup ecosystem,** with over **140,000 registered startups and a unicorn emerging every 20 days.** This growth has been supported by top-tier higher education institutions, government capital expenditure, and widespread internet penetration. However, to sustain this momentum and achieve the vision of a developed India by 2047, there's a need to integrate **education, entrepreneurship, and employment** more effectively.

What is the Current Status of India's Startup Sector?

- **Ecosystem Size and Growth:** India boasts a robust startup ecosystem, **ranking third globally with over 1.4 lakh registered startups** under the **Department for Promotion of Industry and Internal Trade (DPIIT).**
  - This dynamic ecosystem is characterized by its rapid growth, consistently adding more startups per day than any other country.
  - Furthermore, the **emergence of one unicorn every 20 days over the past seven to eight years** highlights the immense potential and entrepreneurial spirit within the Indian startup landscape.
- **Job Creation**: The Indian startup ecosystem has been a significant driver of job creation, with DPIIT-recognized startups generating more than 15.5 lakh direct job opportunities.
  - In 2023 alone, **these startups created an impressive 3.9 lakh jobs,** representing a remarkable 46.6% year-on-year increase and a substantial **217.3% growth over the past five years.**
  - This trend underscores the startups' pivotal role in providing employment opportunities and contributing to the country's economic development.
- **Economic Contribution**: The impact of startups extends beyond job creation, as they have made a substantial contribution to the Indian economy.
  - In FY23, startups and their corporate counterparts **injected a significant USD 140 billion,** representing nearly 4% of India's GDP. This substantial contribution highlights the startups' role as key drivers of economic growth and innovation.

How India's Startup Sector is Booming?

- **Digital Infrastructure Revolution**: The widespread adoption of digital technologies, spearheaded by initiatives like **Digital India,** has created a fertile ground for startups.
  - The **Unified Payments Interface (UPI)** has been a game-changer, with transaction values surpassing **Rs 20 lakh crore in August 2024.**
  - This digital backbone, coupled with the world's lowest data costs (averaging **₹6.7 per GB in 2023)**, has enabled startups to reach a vast customer base efficiently.

- **Supportive Government Policies** The Indian government's proactive stance through initiatives like **Startup India and Stand Up India** has been instrumental.
  - As on **30th June 2024,** Department for Promotion of Industry and Internal Trade has recognized **1,40,803 entities as startups** with tax benefits and easier compliance norms.
  - As on 31st December 2022, under the **Fund of Funds Scheme (FFS)** for startups, **Rs. 7,980 crore** has been committed to **99 Alternative Investment Funds (AIFs) .**
- **Burgeoning Talent Pool:** India's demographic dividend, with **65% of its population under 35,** provides a vast talent pool for startups.
  - The country produces over **1.5 million engineering graduates annually,** with a growing focus on emerging technologies.
  - The **National Education Policy 2020's** emphasis on vocational education and entrepreneurship is further enhancing this talent pipeline.
- **Maturing Funding Ecosystem:** Despite global economic uncertainties, India's startup funding ecosystem has shown resilience.
  - While **2023 saw a funding winter, 2024 has witnessed a resurgence.** Indian tech startups raised USD 4.1 billion in H1 2024, 4% higher than H2 2023, **remaining fourth-highest funded country globally.**
  - The rise of domestic venture capital firms and the entry of global investors have diversified funding sources.
- **Sector-Specific Opportunities**: Emerging sectors like **cleantech, spacetech, and deeptech** are driving the next wave of innovation.
  - The Indian spacetech sector, bolstered by the government's decision to open up the space sector to private players, saw investments of **USD 124.7 million in 2023 (for Space Start-Ups).**
  - **Skyroot Aerospace's** successful launch of India's first privately developed rocket, **Vikram-S,** in November 2022, marked a milestone in this sector.
- **Growing Domestic Market**: With a steady GDP growth rate, India will have 140 million **new middle-class households by 2030 a**ccording to the World Economic Forum, presenting a massive opportunity for startups.
  - The increasing disposable income and changing consumer behaviors are driving demand across sectors.
  - According to Grant Thornton, e-commerce in India is expected to be worth **USD 188 billion by 2025.**
- **Corporate-Startup Synergies**: Increased collaboration between established corporates and startups has created win-win situations.
  - Many large Indian conglomerates have **set up startup accelerators** or venture funds.
  - For instance, **Reliance Industries' JioGenNext has supported over 170 startups.**
  - The acquisition of **online pharmacy 1mg by Tata Digital in 2021,** illustrates the potential of such collaborations.

What are the Roadblocks to the Growth of Indian Startups?

- **Regulatory Hurdles:** The complex and sometimes ambiguous regulatory environment poses significant challenges for startups.

- For instance, the recent **debate over the categorization of app-based cab services like Ola and Uber under the Motor Vehicles Act** has created operational uncertainties.
- The recent **Digital Personal Data Protection Act, 2024** while necessary, adds compliance burdens on startups.

- **Talent Retention Hurdle:** While India produces a large number of graduates, retaining top talent remains a challenge.
  - The startup sector **faces competition from established MNCs** and the lure of overseas opportunities.
  - A 2023 study by Randstad revealed that **60% of Indian tech professionals** are willing to relocate abroad for better career prospects.
  - High-profile exits, like that of **Paytm's Amit Nayyar in 2021**, highlight the talent retention issue.
- **Market Saturation and Hyper-Competition:** Certain sectors in the Indian startup ecosystem are becoming increasingly crowded, leading to intense competition and **reduced profit margins.**
  - The **edtech sector,** once booming, faced a downturn post-pandemic, forcing players like BYJU's and Unacademy laying off employees.
    - This hyper-competition often leads to **unsustainable cash burn and market consolidation.**
- **Infrastructure Gaps and Uneven Funding**: While India has made significant strides in digital infrastructure, substantial gaps remain.
  - Even in urban areas, internet penetration stands at 71%, leaving a significant portion of the population unreached.
  - The **urban-rural digital divide is stark,** with rural internet density at 37% compared to 69% in urban areas.
  - This **disparity limits the addressable market** for many digital startups. For instance, agritech startup **DeHaat**, despite its success, faces challenges in scaling due to limited internet access among rural farmers.
  - Also, despite growth in funding it remains largely uneven for instance, India's more than **6000 women-led startups remain unfunded.**
- **Scaling Challenges:** Many Indian startups struggle to scale beyond their initial success. Issues range from **operational inefficiencies** to difficulties in expanding to new markets.
  - Despite this robust growth, data shows that about **90% of Indian start-ups** fail within the **first five years,** primarily due to scaling issues
- **Lack of Deep Tech Innovatio**n: While India excels in creating innovative business models, it lags in deep tech innovations.
  - R&D spending in India remains low at **0.7% of GDP in 2023**, compared to **3.5% in the US.**
  - This gap is evident in areas like **semiconductor design,** where India has few startups despite the government's **USD 10 billion** incentive scheme announced in 2021.
  - The lack of industry-academia collaboration further exacerbates this issue. Out of the approximately **40,000 higher education institutions in India**, less than 1% actively participate in **high-quality research.**
- **Exit Challenges**: The Indian startup ecosystem still struggles with providing viable exit options for investors.

- There have been **46 IPOs in 2023,** raising a cumulative Rs 41095.36 crore. This marks a **30% decline from Rs 59301.7 crore** raised through **40 IPOs in 2022**
- The lackluster performance of some listed startups has made both investors and founders cautious.

What Measures can be Adopted to Enhance the Startup Sector in India?

- **Streamlined Regulatory Sandbox:** Implement a comprehensive regulatory sandbox across sectors, **expanding on the success of RBI's fintech sandbox.**
  - This would allow startups to test innovative products in a controlled environment without full regulatory burden.
  - Extend this model to sectors like **healthtech, edtech, and cleantech.**
- **Targeted Skill Development Programs:** Launch sector-specific skill development initiatives in collaboration with industry leaders and academia.
  - Focus on emerging technologies like **AI, blockchain**, **and IoT.** The government's Skill India program can be leveraged and expanded for this purpose.
- **Decentralized Startup Hubs:** Develop **tier-2 and tier-3 cities as startup hubs** through targeted infrastructure and incentives.
  - This can be modeled on the success of Mohali's startup ecosystem, which saw a significant increase in startup registrations between 2021 and 2023.
  - Implement a **hub-and-spoke model** where each major city (hub) supports surrounding smaller cities (spokes).
- **Enhanced Tax Incentive**s: Extend and expand tax benefits for startups beyond the **current three-year limit to five years f**or all recognized startups.
  - Introduce additional tax breaks for **deep-tech startups and those addressing critical national priorities.**
  - For example, **Israel's tax benefits for tech companies,** which include a reduced corporate tax rate of **12%**, have significantly boosted their startup ecosystem.
    - There is a need to Implement a similar model in India.
- **Robust IP Protection Framework**: Streamline the patent filing and approval process, reducing the average time.
  - Introduce **fast-track examination for startups in critical sectors**. Implement an IP awareness program targeting a large number of startups annually.
  - **Japan's accelerated examination system,** which reduced patent examination time to an average of 14 months, can serve as a model.
- **Government Procurement Boost**: Mandate a certain percentage of government procurement from startups, similar to the existing **25% procurement requirement from MSMEs.**
  - The US Federal Government's goal to award 23% of prime government contracts to small businesses can be a benchmark.
  - This could potentially open up a market worth billions for Indian startups.
- **Sector-Specific Incubation Centers:** Establish sector-specific incubation centers in collaboration with industry leaders.

  - Focus on areas like **spacetech, biotech, and cleantech**. For instance, the success of **T-Hub in Hyderabad** can be replicated with a sector-specific focus.
- **Startup-Academia Collaboration Platform:** Create a national platform to facilitate collaboration between startups and academic institutions.
  - This can be modeled on successful programs like the **UK's Knowledge Transfer Partnerships.**
  - Set a target to facilitate 1,000 such collaborations annually by 2025.
- **Enhanced Funding Access**: Expand the Fund of Funds for Startups (FFS) and create sector-specific funds.
  - Introduce a credit guarantee scheme for startup loans, similar to the **UK's Enterprise Finance Guarantee.**
- **Digital Infrastructure Push:** Accelerate the implementation of initiatives like BharatNet to ensure high-speed internet connectivity across all villages by 2025. This is crucial for startups to reach untapped markets.
  - The success of **Estonia's e-Residency program** in fostering a digital business environment can be a model.

Conclusion

India's startup ecosystem has shown immense potential, contributing significantly to economic growth and job creation. However, to sustain and accelerate this momentum, it is essential to **address regulatory hurdles, foster deeper collaboration between academia and industry,** and ensure equitable access to funding and infrastructure. By integrating education, entrepreneurship, and employment, **India can unlock its entrepreneurial potential and move closer to becoming a developed nation by 2047**.

23. Internationalization of the Rupee

Internationalization of Indian Rupee is a process that involves **increasing the use of the rupee in cross-border transactions.** These are **all transactions between residents in India and non-residents.**

- **Key Process Involved: :** It involves **promoting the rupee for import and export trade** and then other current account transactions, followed by its use in **capital account transactions.**

- **Significance and Requirement:**
  - **Need for Economic Progress:** The Internationalisation of the rupee is essential for India's economic growth.
  - **Necessary Steps:**
    - Requires **opening up of the currency settlement**
    - **A strong swap and forex market.**
    - Require **full convertibility of the currency** on the capital account and

- **Cross-border transfer of funds without any restrictions.**

- **Historical Context:**
  - **1950s:** In 1959, the Centre allowed the RBI to issue special notes only for the Gulf region.
    - The Indian rupee was the **legal tender in the Gulf countries,** including Kuwait, Bahrain, Qatar and UAE, till the early 1970s. The currency had the same value as the Indian rupee and was known as the **Gulf rupee or external rupee.**
    - Moreover, Indians could also take the **Indian rupee notes when they went on the Haj pilgrimage and exchange them freely for Saudi riyals.**
    - Later, the Centre introduced special notes for the pilgrimage with the word "HAJ" inscribed on it. These were called **"Haj notes".**
    - The Indian currency, however, was **devalued in 1966.** This led to several countries in the Gulf withdrawing the use of the Gulf rupee. Gradually, by the early 1970s, all the countries stopped using the Gulf rupee as their currency.
  - **1994:** India accepted the **Articles of Agreement of the IMF,** making the Indian Rupee fully convertible on the current account.
    - India **also enabled external commercial borrowings in Rupees** (like masala bonds, which are rupee-denominated bonds issued by Indian entities outside India).

Advantages of Internationalization of the Indian Rupee

- **Mitigates Currency Risk:** The use of the rupee in cross-border transactions mitigates currency risk for Indian businesses.
  - Protection from currency volatility not only reduces the cost of doing business, it also enables better growth of business, **improving the chances for Indian businesses to grow globally.**
- **Reduce dependency on Foreign Currency:** Internationalization of the rupee reduces the need for holding foreign exchange reserves. Reducing dependence on foreign currency will **make India less vulnerable to external shocks.**
  - **As per RBI data,** presently, India's foreign exchange reserves are at **a record high of $642.63 billion.**
- **Enhancement of India's Global Stature:** As the use of the rupee becomes significant, the bargaining power of Indian businesses would improve, **adding weight to the Indian economy** and enhancing India's global stature and respect.
- **Enhanced Competitiveness:** It can enhance India's competitiveness in global markets by allowing the Rupee to reflect India's economic fundamentals and reducing the need for the RBI to intervene in currency markets.
- **Diversification of Reserves:** Internationalization of the rupee can diversify India's foreign exchange reserves away from a concentration in US dollars, reducing the risks associated with holding a single currency.

Challenges of Internationalization of Indian Rupee

- **Trade Deficit:** To internationalize any currency as a safe asset, the size of the economy is of primary importance. Whilst the Indian economy fulfills this criteria, India's imports are larger than its exports and suffers from the disadvantage of a trade deficit.

  - **China's efforts** to make its currency, **Renminbi** internationally acceptable, has met with **only limited success** though, post the Ukraine war, as some settlements with Russia in Renminbi are taking place.
- **Impact on Import Costs:** If the internationalization of the Rupee leads to increased demand for the currency in global markets, it might strengthen the Rupee against other currencies.
  - A stronger Rupee could **potentially reduce the cost of imports from countries like China and Russia,** potentially impacting trade balances.
- **Tight Control by the Central Government:** The RBI exercises a very tight control over India's Capital account. To internationalize the rupee, the free flow of capital is desired.
  - Even though the value of the Rupee is determined in the open market, RBI's open market operations help maintain its stability.
- **Convertibility Concern:** Although Rupee-based trade is being encouraged by the government and the RBI, there is no move to permit full convertibility as it may lead to the flight of capital with attendant exchange risks.
  - **Full capital Account Convertibility** is not permitted in India. It is driven by past fears of capital flight (outflow of capital from India due to monetary policies/lack of growth) and exchange rate volatility, given significant current and capital account deficits.
- **The rupee is fully convertible in the current account, but partially in the capital account.**
- **Triffin Dilemma or Monetary Policy Dilemma:** It is a conflict that arises when a country needs to supply enough of its currency to meet global demand while also maintaining its domestic monetary policies.
  - Balancing these conflicting objectives can be challenging in the process of internationalizing the Rupee because actions taken to meet global demand may have unintended consequences for India's economy such as inflation or unstable financial conditions.

India's Initiatives Towards Internationalization of Indian Rupee

- **Special Rupee Vostro Accounts (SRVAs):** With the objective of promoting bilateral trade in local currencies, the RBI in **July 2022,** had permitted banks to open and maintain Special Rupee Vostro Accounts (SRVAs) for partner banks from other countries.
  - The RBI has taken steps to make the rupee more acceptable in global trade by allowing **20 banks,** operating in India, to open **92 SRVAs** with partner banks from 22 countries to promote bilateral trade in a local currency.
- **Recommendations of the Inter-Departmental Group (IDG):** The efforts to internationalize rupee have gained momentum after an RBI-appointed working group, in **July 2023,** recommended various measures to accelerate the pace of internationalization of local currency.
  - The inter-departmental group (IDG) said that **non-residents should be allowed to open rupee accounts** as the ability to open accounts outside the country of the currency is a foundational element of the internationalization of a currency.
- **Agreements on Unified Payments Interface (UPI):** The government has also signed agreements with **seven countries** to make UPI, allowing **Indian citizens to transact in local currency.**
  - Following its launch in **Sri Lanka and Mauritius**, UPI payments are accepted in **France, UAE, Singapore, Bhutan, and Nepal.**

- **RBI** in collaboration with the **Government of India and National Payments Corporation of India (NPCI)** is reaching out to jurisdictions to increase the global outreach of the UPI system to **facilitate cross-border transactions, including remittances.**

- **Developments in the GIFT City:** Gujarat International Finance Tec-City (GIFT City), Gandhinagar was set up as **India's first International Financial Service Centre (IFSC)** with a vision to bring to the Indian shores, those financial services/markets and transactions, relating to India, that are currently done outside India.
  - GIFT IFSC has the **potential to develop as a competitor** to international financial centers for Rupee products and also **provides an opportunity for Indian entities to raise foreign capital** through masala bonds and list the same on the exchanges in the IFSC.
- **Asian Clearing Union (ACU):** It is a regional payment arrangement that facilitates the settlement of trade transactions among its member countries on a multilateral basis.
  - It was **established in 1974** by 10 central banks of Asia. The ACU currently has 13 member countries, including India.
  - In March 2023, the RBI put in place the mechanism for rupee trade settlement with as many as **18 countries.**
  - Banks from these countries have been allowed to open SVRAs for settling payments in the Rupees.
- **Promotion of Rupee-denominated Bonds:** The government has allowed Indian companies to issue rupee-denominated bonds in international markets that helped to increase the demand for the rupee.
- **RBI enabled external commercial borrowings in Rupees (especially Masala Bonds).**
- **Currency Swap Agreements:** The RBI has signed currency swap agreements with several countries, which allow for the exchange of rupee and foreign currency between the central banks of the two countries.
  - The RBI launched the **South Asian Association for Regional Cooperation (SAARC) Swap Framework** to strengthen regional financial and economic cooperation and to provide to SAARC countries a backstop line of funding to meet any balance of payments and liquidity crises.
- The swap drawals can be made in **US dollar, euro or Indian rupee.** The framework provides certain **concessions for swap drawals in Indian rupee.**
  - **India currently has a Bilateral Swap Agreement with Japan** for an amount up to **USD 75 billion.**
- **Bilateral Trade Agreements:** The Indian government has signed several bilateral trade agreements with other countries to facilitate greater cross-border trade and investment and increased the use of the rupee in international transactions.
  - Recently India made its first-ever payment, in rupees, to the **UAE** to buy crude oil. This was seen as a significant boost for India, which has had to rely on buying 80% of its crude oil imports internationally in dollars.
  - Under the **Indo-Iran Agreement,** the Indian Rupee vostro accounts of Iranian banks are credited 100% in Rupees by Indian importers
  - In 2022, **Sri Lanka** also made Rupee a designated foreign currency.

Way Forward

- **Adopt a Collaborative Approach:** There is a need for careful planning and coordination between policymakers, market participants and regulators to ensure a smooth and successful transition towards the internationalization of the Rupee.
- **More Freely Convertible Rupees:** With a goal of full convertibility by **2060,** there is a need for more financial investments that move freely between India and abroad.
  - It would allow foreign investors to easily buy and sell the rupee, **enhancing its liquidity and making it more attractive.**
  - While the acceptance of the Rupee as a global currency is gaining, its internationalization will still **require cautious steps.**
- **Work upon Recommendations of Tarapore Committee:** Recommendations of Tarapore Committee should be followed to achieve the aim of Internationalisation of the Indian Rupee.
- **More Currency Swap Agreements:** Currency Swaps and Local Currency Settlement provides currency diversification that stabilizes the local currency and provides a natural hedge for the business community to protect against currency risk exposure.
  - **A natural hedge** is the reduction in risk that can arise from an institution's normal operating procedures.
- **Ensure Currency Management Stability:** It is required to avoid sudden or drastic changes such as devaluation or demonetisation that can impact investors' confidence.
- **Easing Regulatory Hurdles:** There is a need to ease the **Foreign Exchange Management Act, 1999;** revisiting regulatory guidelines to remove hurdles in the current **Financial Action Task Force (FATF) and Prevention of Money Laundering Act (PMLA) provisions.**
  - Also, procedural and documentation roadblocks faced by **foreign portfolio investors** need to be reviewed. These roadblocks not only add to transaction and compliance costs but also affect the overall ease of doing business in India.
- **Continuous Linked Settlement (CLS):** Considering the growth in the Indian economy and the increase in trade, it is desirable and required to include Rupees as a direct settlement currency in CLS.
  - CLS is a global system for the settlement of foreign currency transactions.
- **Cross-border Payment Infrastructure: To achieve the objective of internationalization of Rupee, there is a need** for a robust Rupee-denominated payment mechanism for cross-border transactions and providing timely inter-bank transfers and settlement.
  - This ensures a seamless flow of cross-border transactions in local currencies and may also reduce dependence on international payment systems based on the SWIFT messaging system.
- **Creation of an Indian Clearing System:** An Indian Clearing System will bring greater efficiency in the settlement in domestic currencies.
- **Part of Special Drawing Rights (SDR) Basket:** Inclusion of Rupee in the International Monetary Fund's (IMF) SDR basket will help in attaining the objective of internationalization of Rupees.
- **Rate Volatility:** Internationalization of the Rupee can create risks for businesses and investors that operate in multiple currencies, leading to uncertainty and higher transaction costs, especially in the initial stages.
  - Fluctuations can impact trade and investments, **affecting economic stability.**

- **Lack of International Demand:** The daily average share for the rupee in the global foreign exchange market is about 1.6%, while India's share of global goods trade is about 2%.
  - As per Parliamentary Standing Committee, there were **few takers for the Indian Rupee.**
  - During **FY 2022-23, no crude oil imports** by oil Public Sector Undertakings (PSUs) were **settled in Indian Rupee.**
  - While efforts have been made to trade with **around 18 countries in Rupees, transactions have remained limited.**
- **Impact of Demonetization:** The demonetization of 2016, along with the withdrawal of the Rupees 2,000 note has affected confidence in the rupee, particularly in neighboring countries like Bhutan and Nepal.

24. Reforms needed in Insolvency and Bankruptcy Code (IBC) 2016

The Insolvency and Bankruptcy Code (IBC) came into effect in 2016 to achieve several objectives, including maximizing the value of debtor's assets, promoting entrepreneurship, ensuring timely resolution of cases, and balancing the interests of stakeholders. However, recent developments have raised concerns about the effectiveness of the code and the resolution process.

- **Insolvency and Bankruptcy Code** is a **legislation enacted in 2016** based on the 'T.K Vishwanathan Committee Report'.
- It consolidates various laws pertaining to the resolution of insolvency of businesses and firms.
- It establishes streamlined and expedited insolvency procedures to assist creditors, such as banks, in recovering dues and mitigating bad loans, which are a significant burden on the economy.
- It is also known as the exit law of India.

What is Insolvency?

- **Insolvency** refers to a situation where individuals or companies cannot repay back their outstanding debt obligations.

What is Bankruptcy?

- **Bankruptcy** refers to a legal status declared by a court of competent jurisdiction for a person or entity that is insolvent i.e. unable to pay off debts.
- The court issues appropriate orders to resolve the insolvency and protect the rights of creditors.

The Insolvency and Bankruptcy Code (IBC) **needs second-generation reforms as there are concerns regarding the present functioning of the Code, as per Amitabh Kant, G20 Sherpa and former CEO of Niti Aayog.**

Need for the reform

- **Extended Resolution Timeframes:** The average resolution time at the **National Company Law Tribunal (NCLT) increased from 654 days in FY23 to 716 days in FY24.** The admission of cases also took longer, rising from 468 days in FY21 to 650 days in FY22.

- **Declining Creditor Recovery Rates:** The recovery rate for creditors **fell from 36% in FY23 to 27% in FY24, leading to a cumulative recovery of only 32% since the IBC's introduction in 2016.**

What are the challenges for the IBC?

- **Liquidation-** Among the 3,400 cases admitted under the IBC in the last 6 years, more than 50% of the cases ended in liquidation, and only 14% could find a proper resolution.
- **Time taken**- The average number of days taken to resolve cases increased rapidly over the past five years.
- In FY22, it took 772 days to resolve cases involving companies that owed more than Rs. 1,000 crore.
- **Realisation of value**- The gap between the realizable values during resolution and liquidation has been narrowing over the years.
- **Haircut**- A haircut is the debt foregone by the lender as a share of the outstanding claim.
- The Parliamentary Standing Committee on Finance in 2021 pointed out that, creditors on an average had to bear an 80% haircut in more than 70% of the cases.
- **Conduct of the CoCs**- The Standing Committee stated that the committee of creditors has significant discretion in accepting resolution plans and appointing IPs.
- **Issue with IPs-** The IBBI took disciplinary action on 61% of the 203 professionals inspected since 2016, adding that there should be a single regulator for them to ensure best practices and transparency.

Proposed Features of Second-Generation Reforms

Improved Court Management:

It must have a provision for allowing non-sovereign or private entities to leverage technology for better management of court processes.

Successful privatization of Passport Seva Kendras as a model for enhancing the efficiency of court proceedings should be adopted.

Substantive Changes to the IBC

Substantive changes to the IBC are necessary, **particularly regarding cross-border insolvency, which involves cases that span multiple jurisdictions.** Additionally, **strengthening creditor rights** is essential to ensure that their interests are adequately protected within the resolution process.

Sectoral focus rather than collective focus

The reforms should also recognize and incorporate the unique challenges faced by various sectors in insolvency cases.

Pre-packaged insolvency

Pre-pack arrangements should be introduced to expedite resolution processes, which will be particularly beneficial for Micro, Small, and Medium Enterprises (MSMEs).

Operational Efficiency

This can be **achieved by implementing innovative resolution mechanisms that streamline the process.** Capacity building for resolution professionals is also essential, ensuring they possess the interdisciplinary skills needed to handle cases effectively.

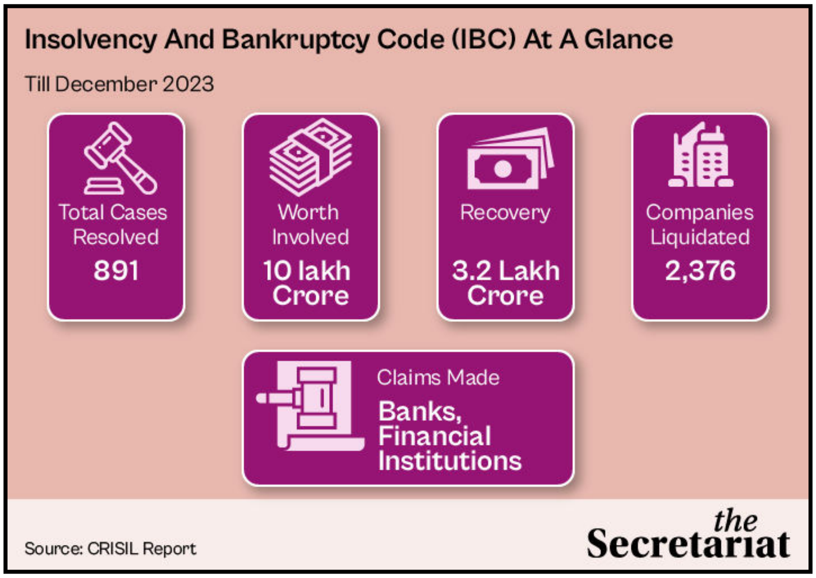
Additionally, minimizing judicial delays is vital to accelerate the resolution process.

Expected Outcomes of Reforms

The expected outcomes of these reforms include a significant reduction in the delays currently experienced in insolvency resolutions.

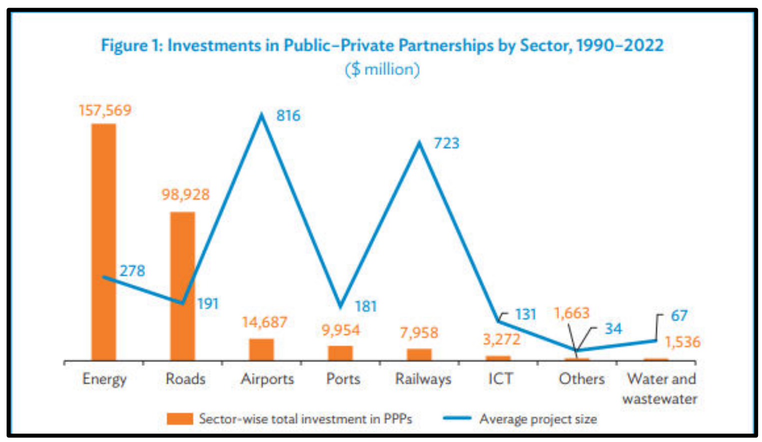
It is anticipated that the proposed amendments will lead to increased recovery rates for creditors and contribute to a more robust financial ecosystem.

Moreover, these reforms aim to revitalise unproductive assets, transforming them into productive ones through timely resolutions.



25. Snapshot of India's PPP Projects: Prospects and Future

India, a rapidly growing economy, has set its vision of becoming a $10 trillion economy by 2035. However, achieving this goal requires substantial investments in infrastructure and the involvement of multiple stakeholders. India's infrastructure sector primarily utilizes the PPP approach.



- The road and energy sectors have been the most active, accounting for more than 84% of the total number of projects that achieved financial closure.
- Energy takes up the highest share of total investments in such projects, followed by roads, airports, ports, railways, information and communication technology, and water and wastewater
- India's approach to PPPs is decentralized, reflecting diverse frameworks across states.
- State governments and departmental ministries have established their own regulatory structures to steer their choices and accelerate the development of infrastructure

What is Public-Private Partnership (PPP or P3 or 3P)?

- Public-Private Partnership (PPP) refers to an agreement between a government or government-owned entity and a private sector entity. Typically, this arrangement involves the private sector investing in or managing public assets or services for a set period. Risks are clearly assigned between the private and public entities. The private entity is selected through **open competitive bidding** and receives **performance-based payments** aligned with predetermined standards set by the public entity or its representative.
- **Private Sector Responsibility:** In PPPs, the private sector takes charge of running or managing the project and shoulders a significant portion of its risks.
- **Public Sector Oversight:** Throughout the project's operation, the public sector oversees the performance of the private partner and ensures that the contract's terms are upheld.
- **Cost Recovery Mechanisms:** The expenses incurred by the private sector may be recuperated through user fees or payments from the public sector, either in full or in part.
- **Performance-Based Payments:** Payments made by the public sector are contingent upon the private partner meeting predefined performance criteria outlined in the contract.
- **Capital Investment by the Private Sector:** While not always the case, it's common for the private sector to contribute the majority of the project's capital costs.

Types of PPP:

1. **Build Operate Transfer (BOT):** In this classic PPP model, the private partner handles everything from designing and constructing to operating the facility for a specified period before transferring it back to the public sector.
2. **Build Own Operate (BOO):** Under this model, the private entity not only builds but also retains ownership of the constructed facility.
3. **Build Own Operate Transfer (BOOT):** Similar to BOT, except in this variation, the project ownership is eventually transferred to either the government or another private operator after a predetermined timeframe.
4. **Build Operate Lease Transfer (BOLT):** Here, the private entity constructs and owns the facility, leases it to the public sector, and eventually transfers ownership back to the government at the lease's end.
5. **Design Build Finance Operate Transfer (DBFOT):** In this model, the private party takes full responsibility for designing, building, financing, and operating the project for a specified period.
6. **Lease Develop Operate (LDO):** In LDO, the government or a public entity retains ownership of the infrastructure while leasing it to a private promoter, who operates it and makes lease payments.
7. **Operation and Maintenance Contract (O & M):** Under this arrangement, a private company operates and maintains a publicly-owned asset for a contracted period, with ownership remaining with the public partner.
8. **Hybrid Annuity Model (HAM):** HAM is a blend of two infrastructure development approaches: Engineering, Procurement, and Construction (EPC) and Build, Operate, Transfer (BOT). In this model, EPC constitutes 40% while BOT-Annuity constitutes 60%. The National Highway Authority of India (NHAI) provides up to 40% of the project cost in installments, while the road developer raises the remaining 60%.

Advantages:

1. **Meeting Infrastructure Needs:** PPPs address infrastructure requirements and funding shortfalls by involving the private sector in project arrangement and financing.

2. **Relieving Public Sector Financial Burden:** PPPs lessen the burden on the public sector to fund projects solely through taxes or borrowing, which is especially beneficial in countries like India where public capital is limited.
3. **Boosting Infrastructure Investment:** By shifting financial responsibilities away from the public sector, PPPs facilitate more significant infrastructure investments which not only broaden access to infrastructure services to the common people but also increase economic activity across the sectors.
4. **Incentivizing Efficiency and Risk Management:** PPP contracts incentivize private partners to operate efficiently and manage risks effectively throughout the project lifecycle, thus promoting cost-effective delivery.
5. **Mitigating Cost Escalation Risks:** Risk allocation to private partners helps the public sector limit exposure to cost escalation, enhancing financial predictability and project sustainability.
6. **Long-term Focus:** PPP structures encourage a holistic approach where private partners design projects considering construction and operational phases, leading to long-term cost reductions.
7. **Enhancing Transparency:** Public release of project information promotes transparency, allowing media, NGOs, and stakeholders to scrutinize projects and minimize corrupt practices.

Government Support for PPPs:

1. **Viability Gap Funding (VGF) Subsidy**
   - VGF provides a capital grant of up to 40% of the project cost to support economically justified infrastructure projects.
   - Accessible through competitive bidding, particularly for projects falling slightly short of financial viability.
2. **India Infrastructure Project Development Fund (IIPDF)**
   - The scheme aids Central and State Governments as well as local bodies by offering financial support for various project development activities.
   - This includes funding for feasibility reports, project structuring, and other essential tasks related to PPP projects.
3. **India Infrastructure Finance Company Limited (IIFCL)**
   - IIFCL offers long-term debt financing for infrastructure projects with extended gestation periods.
   - Recognizing the need for sufficient debt finance in such projects, IIFCL plays a crucial role in filling this gap in the market.
4. **Foreign Direct Investment (FDI)**
   - FDI up to 100% in equity of Special Purpose Vehicles (SPVs) within the PPP sector is permitted through the automatic route across most sectors.
   - This encourages foreign investment and participation in PPP projects, boosting their scale and effectiveness.

Viability Gap Funding (VGF) is a scheme designed to bolster infrastructure projects that are economically sound but lack financial viability. Here's what you need to know about it:

1. **Support for Marginal Viability**: VGF targets projects that are almost financially viable but require additional assistance to become fully feasible.
2. **Selective Criteria**: This support is exclusively available for infrastructure projects where private sector sponsors are chosen through a competitive bidding process.
3. **Financial Limits**: The total VGF provided does not surpass twenty percent of the Total Project Cost. However, the government or relevant statutory entity may consider allocating additional grants, up to another twenty percent of the Total Project Cost, if deemed necessary.
4. **Form of Assistance**: VGF is typically granted as a capital grant during the project's construction phase, aiming to alleviate financial burdens and encourage project progress.

The Kelkar committee was established by the Indian government to evaluate the existing public-private partnership (PPP) model in India.

1. **Leadership**: Led by Vijay Kelkar, the committee was tasked with studying and assessing the effectiveness of PPPs in the country.
2. **Origins**: The committee's formation followed the 2015 Union Budget of India and was initiated by Arun Jaitley, the then-finance minister.
3. **Composition**: Consisting of ten members, the committee comprised experts from various relevant fields to provide comprehensive insights into PPPs in India.
4. **PPP Projects in India:** As of November 2020, India has initiated approximately 1100 PPP projects, amounting to a total investment commitment of $274.96 billion.
5. **Health Sector Reform:** NITI Aayog has introduced a PPP model aimed at addressing gaps in medical education and the shortage of qualified doctors by linking private medical colleges with functional district hospitals.
6. **Power Sector Revitalization:** The Government plans to launch the **Atal Distribution Transformation Yojana (ADITYA)** Scheme, incentivizing states to involve private sectors in improving the efficiency of distribution companies. This initiative is crucial for India's ambition to become a $5 trillion economy.
7. **Privatization in Railways: Tejas Express,** India's first private train, operates under the PPP model, with private players managing services such as housekeeping, catering, and ticketing, while Indian Railways provides physical infrastructure.
   i. Developing railway infrastructure in India is expensive, and the sector often struggles with limited funds and a backlog of maintenance and upgrade projects.
   ii. Public-Private Partnerships (PPPs) offer a solution by tapping into private-sector capital and technology. PPPs in railways involve sharing rail tracks, leading to increased efficiency and revenue for states and reduced costs for private investors.
   iii. Introducing the private sector fosters competition in a previously monopolized sector, enhancing services and enabling the modernization of railway infrastructure.
8. **Urban Housing Transformation:** Government-funded urban housing is being transformed into **Affordable Rental Housing Complexes (ARHC)** through PPPs, aimed at providing migrants with affordable housing options in urban areas.

Challenges:

1. **Complexity of Project Definition**: PPP projects require thorough definition, including risk allocation and service output requirements, demanding meticulous planning and contingencies.
2. **Costly Tendering Process**: Tendering and negotiation involve significant expenses, with the need for transaction advisors and legal experts.
3. **Uncertainty in Long-Term Contracts**: PPP contracts often span decades, introducing uncertainty due to potential changes in requirements or conditions, leading to contract modifications and associated costs.
4. **Monitoring and Enforcement Challenges**: Success depends on the government's ability to monitor performance and enforce contract terms during construction and operation phases.
5. **Difficulty in Demonstrating Value for Money**: Proving value for money beforehand is challenging due to project uncertainties and limited information on comparable projects.
6. **Mismatch in Objectives**: Misalignment of objectives between government and private sectors can hinder PPP success, necessitating clarity and alignment from the outset.
7. **Differences in Organizational Cultures**: Varied organizational cultures between public and private sectors may lead to conflicts, requiring coordination mechanisms to foster mutual trust and clarity in roles and responsibilities.
8. **Precise Agreements and Transparent Selection**: Clear agreements and transparent selection processes are crucial to delineate roles and responsibilities accurately and build confidence between partners.

Solution

1. **Periodic Reviews:** The Committee suggests conducting frequent reviews, ideally every three years, to ensure the effectiveness of PPP projects.
2. **Attitude Change:** It emphasizes the importance of building trust between public and private sector partners involved in PPPs.
3. **Amendment to Prevention of Corruption Act:** The Committee recommends amending the Prevention of Corruption Act to differentiate between genuine errors and corrupt practices.
4. **Capacity Building Programs:** Structured capacity building programs are suggested for various stakeholders, including implementing agencies, banks, and financial institutions, to enhance their capabilities.
5. **Optimal Risk Allocation:** The Committee stresses the need for a tailored approach to risk allocation across different PPP projects, rather than a one-size-fits-all strategy.
6. **Dispute Resolution Mechanism:** It calls for the establishment of a quick, fair, and efficient dispute resolution mechanism for PPP projects.
7. **Discouragement of Small PPP Projects:** Small PPP projects may not justify the associated costs and complexities, so the Committee advises against their adoption.
8. **Discouragement of Unsolicited Proposals:**The Committee suggests actively discouraging unsolicited proposals to maintain transparency and fairness in the procurement process.
9. **Exclusion of State-Owned Entities:** State-owned entities should not be permitted to bid for PPP projects, according to the Committee.
10. **Suitability Assessment for PPP:** PPP should only be considered after a thorough assessment of its suitability for a specific project.

11. **Monetization of Viable Projects:** The Committee proposes considering monetization of successful projects with stable revenue flows after the Engineering, Procurement, and Construction (EPC) phase.
12. **Divestment of Equity:** Equity in completed infrastructure projects may be divested to long-term investors, including domestic and foreign institutional investors.
13. **Encouragement of Deep Discount Bonds:** Encouraging banks and financial institutions to issue Deep Discount Bonds or Zero Coupon Bonds is recommended to lower debt servicing costs and user charges initially.

Public-Private Partnerships (PPPs) have emerged as a crucial mechanism for fostering development across various sectors in India and the world. The recent initiatives in healthcare, power, railways, and urban housing highlight the potential of PPPs to address critical challenges and drive progress. Looking ahead, one key aspect is to streamline the PPP process, ensuring clarity in project definition, risk allocation, and contract terms. Additionally, enhancing transparency and accountability in PPP projects will build trust and confidence among stakeholders, paving the way for more successful partnerships. It has been found that many projects under PPP in India have gone wrong because of a lack of project knowledge and its implementation. Furthermore, investing in capacity-building and knowledge-sharing initiatives will empower both sectors to effectively implement PPP projects and maximize their impact.

26. The High Cost of India's Transition from Coal to Green Energy

A recent study by iForest (International Forum for Environment, Sustainability and Technology) reveals that India will need over $1 trillion (Rs 84 lakh crore) over the next 30 years for a just transition away from coal. The study, the first of its kind, estimates the costs of phasing down coal mines and plants while ensuring socio-economic stability in coal-dependent regions.

- According to the National Coal Inventory of 2023, the total estimated coal reserve (resource) of India is **378.21billion tonnes as of 01.04.2023.**
- Total coal import during 2023-24 was 261 million tonnes.

India's transition from a coal-based economy to a green economy faces several complex challenges and requires substantial investment. Key issues and solutions include:

1. **Job Loss and Economic Impact**: Coal-dependent regions and workers face job insecurity as coal mines and thermal plants close. Nearly 3.6 lakh workers in public coal companies alone will need reskilling and support. Supporting these workers through social safety nets and skill development for **green jobs is crucial to avoid economic hardship in these communities.**
2. **Investment Needs**: India needs over $1 trillion to facilitate a just energy transition. A large portion will go towards green energy investments to replace coal-based infrastructure, while additional funds are required for mine closures, site repurposing, and worker reskilling.
3. **Energy Storage and Grid Integration**: Renewable energy like solar and wind is intermittent, making storage solutions critical to ensure a stable power supply. Integrating renewable sources into the existing power grid also presents significant technical challenges.

4. **Funding Sources**: Public and private investments will play a role. Public funds, such as District Mineral Foundation and CSR contributions, can support socio-economic initiatives in coal-dependent regions. Private investments, especially in clean energy projects, will cover most of the energy-related costs.
5. **International Cooperation**: Learning from other countries like South Africa and Germany, which have received international financial support for their just transition programs, India can also seek concessional loans and grants to ease the financial burden of transitioning to a green economy.

To successfully transition, India must carefully balance economic stability, climate goals, and socio-economic support for impacted communities

27. Production Linked Incentive Scheme – Success and Setbacks

The Production-Linked Incentive (PLI) scheme, a government initiative aimed at promoting domestic manufacturing and attracting investments, brings forth diverse perspectives. This includes criticism from renowned economist Raghuram Rajan.

Rajan has raised concerns regarding the potential risks associated with overreliance on fiscal subsidies and has emphasized the need for a comprehensive approach to address underlying structural issues in the manufacturing sector.

The PLI scheme is a financial initiative launched by the Indian government to boost domestic manufacturing and make it globally competitive. It began in March 2020, covering mobile manufacturing and IT hardware initially, and has since expanded to include 14 sectors such as pharmaceuticals, telecom, food products, automobiles, textiles, and drones. The scheme offers subsidies based on additional investments, incremental sales, and value additions.

Achievements of the PLI Scheme so far:

1. **Export Growth**: Significant increase in exports across sectors like electronics, automobiles, and pharmaceuticals. For instance, electronic exports surged by 57.36% in March 2023 compared to March 2022.
2. **Attracting Investments**: The scheme has drawn large-scale investments from both domestic and foreign companies. For example, the automobile sector attracted investments worth ₹45,000 crore.
3. **Job Creation**: The scheme has generated jobs, particularly in sectors like textiles (7.5 lakh jobs) and drone manufacturing (10,000 direct jobs).
4. **Boost in Production**: Incremental production worth ₹1.68 lakh crore has been recorded, driven by targeted investments.
5. **Global Recognition**: India ranked second in the 2021 Global Manufacturing Risk Index, highlighting the scheme's positive impact.
6. **Economic Growth**: PLI is expected to contribute 1.7% to India's GDP by 2027.

Challenges of the PLI Scheme:

1. **Regulatory Issues**: Red tape and inconsistent regulations across states pose obstacles for businesses.

2. **Infrastructure Gaps**: Power, logistics, and connectivity challenges increase operational costs and reduce competitiveness.
3. **Limited Access to Capital**: SMEs face difficulty accessing affordable financing, limiting their ability to expand.
4. **Skills Gap**: A shortage of skilled workers in advanced sectors like technology hampers growth.
5. **Technology Adoption**: Low adoption of advanced technologies impairs competitiveness in targeted sectors.
6. **Geopolitical Risks**: Global trade tensions may disrupt exports and supply chains.

Concerns about the PLI Scheme:

1. **Selective Sector Focus, Not Enough Job Creation**: Critics argue that focusing on select sectors might distort resource allocation.
2. **Dependence on Subsidies**: Over-reliance on government subsidies raises concerns about long-term sustainability.
3. **Implementation Issues**: Effective execution across sectors remains a challenge, requiring efficient administration.
4. **Fiscal Burden**: The scheme's large financial outlays may strain government finances.
5. **Missed Global Trade Opportunities**: Critics say India may miss opportunities by not engaging enough in regional trade agreements (RTAs).

To enhance the effectiveness of the **Production Linked Incentive (PLI) Scheme**, experts suggest the following solutions:

1. **Employment-Based Incentives**: Linking the PLI scheme to **job creation** rather than just production can ensure that the scheme not only boosts manufacturing but also generates **sustainable employment**. This would prevent automation-driven production increases without corresponding employment benefits, especially in labor-intensive sectors.
2. **Focus on MSMEs**: The PLI scheme currently favors larger industries. To make it more inclusive, extending **special provisions for MSMEs**—such as simplified eligibility criteria, easier access to funds, and technical assistance—would help smaller players participate, boosting **local manufacturing ecosystems**.
3. **Strengthen R&D Linkages**: Incentivizing companies to **invest in R&D and innovation** alongside production could increase **technology transfers** and foster **long-term competitiveness**. Experts advocate for a focus on building **indigenous technology capabilities** to reduce dependence on imports.
4. **Green Manufacturing Initiatives**: Integrating **sustainability incentives** within the PLI scheme to promote **green technologies** and eco-friendly practices would align with global climate goals and ensure India's manufacturing growth does not come at the cost of environmental degradation.
5. **Regional Diversification**: The current implementation often focuses on a few industrial hubs. Expanding the scheme to **backward and underserved regions** could boost regional development, reduce migration pressures, and tap into **untapped labor potential**.
6. **Simplified Compliance Mechanism**: Streamlining the **bureaucratic processes** involved in accessing PLI benefits would reduce delays and make it easier for companies to participate. This includes **reducing red tape** and ensuring uniform policy implementation across states.

7. **Long-Term Commitment**: Experts recommend **longer tenure guarantees** for the PLI scheme to provide businesses with the confidence to make larger investments. This would prevent a short-term focus and encourage companies to invest in building **sustainable capacities**.

Conclusion: Making the PLI scheme more employment-centric, MSME-inclusive, research-driven, and green-oriented can greatly improve its impact. Combining these with regional and regulatory reforms will help India achieve balanced growth and long-term manufacturing competitiveness.

28. Why Digitization is not enough to reform land laws

What are the key challenges in India's land governance?

1. **Unclear land titles**: Insecurity of tenure hinders investments and ownership transfers.
2. **Fragmented landholdings**: 90% of farm households own less than 2 hectares, limiting agricultural productivity.
3. **Complex laws**: Conflicting regulations, like Gujarat's 40 types of land ceiling laws, create administrative difficulties and encourage rent-seeking.
4. **Outdated land records**: Poor record management delays infrastructure projects and limits credit access.
5. **Gender inequality**: Women face challenges in owning land and property.
6. **Inability to use land efficiently**: Leasing agricultural land is prohibited in many states, and complicated tenancy laws make land use risky.
7. **Weak targeting of subsidies**: Fertiliser subsidies aren't integrated with land data, leading to inefficiencies.
8. **Benami properties**: The legal framework lacks clarity for regularising these properties, contributing to uncertainty in ownership.

Why are technological solutions alone not enough?

While the 2024 Budget proposed digitisation (like land records digitisation and Agri Stack integration), this is not enough:

1. The root problem is the complex legal framework, not just outdated records.
2. Simply digitising land records without legal reform won't improve land markets or property rights.
3. Laws like the Ninth Schedule prevent judicial review, limiting property owners' rights.
4. State-level legal complexities, like Gujarat's land ceiling laws, create multiple regulations based on land quality and ownership.

What should be Done?

1. **Legal Reforms:** Comprehensive legal reforms should address the complex and conflicting land laws. These reforms must strengthen property rights and streamline regulations for more efficient land markets. For example, updating tenancy laws and land use regulations can help ensure better property rights and access to formal credit.
2. **Digitization and Integration:** Accelerate the digitization of land records and integrate these with platforms like Agri Stack. However, ensure these technological solutions are complemented by legal reforms. For

instance, digitizing land records should go hand in hand with updating the laws that govern land ownership and use.

3. **Enhance Land Banks:** Improve the functioning of land banks to support infrastructure, renewable energy, and industrial projects by addressing legal hurdles that currently limit their effectiveness.
4. **Targeted Subsidy Reforms:** Link subsidies more closely to land ownership data to ensure efficient targeting and reduce misuse. This includes integrating Point of Sale devices for fertilizer subsidies with updated land records.
5. **Promote Land Consolidation:** Implement policies that facilitate land consolidation, particularly in rural areas where land fragmentation affects agricultural productivity. Nearly 90% of farm households own less than 2 hectares, leading to suboptimal economies of scale.

29. Allied Sectors Of Indian Agriculture Have Emerged As Promising Sources For Improving Farm Incomes: Economic Survey

Economic Survey 2023-24 shows that **the allied sectors of Indian agriculture are steadily emerging as robust growth centres and promising sources for improving farm incomes.**

- From 2014 to 2023, **the livestock sector grew at an impressive Compound Annual Growth Rate (CAGR) of 7.38 %**
- Livestock sector contributed **4.66 per cent of the total GVA**, significantly boosting the per capita availability of milk, eggs, and meat.
- The fisheries sector makes up about **6.72 per cent of the agricultural GVA**
- This **"sunrise sector" supports approximately 30 million people, particularly marginalised and vulnerable communities**
- India is the **largest producer of milk and the second largest producer of fruits, vegetables and sugar.**

Allied sectors in agriculture encompass activities like **horticulture, animal husbandry, dairy farming, poultry farming, and fisheries, among others. Horticulture involves the cultivation of fruits, vegetables, flowers, and ornamental plants. It contributes to agriculture by providing nutritious food, enhancing farm income, and beautifying landscapes.**

Animal husbandry involves the **care, breeding, and management of livestock. It contributes to agriculture by providing meat, milk, eggs, wool, and other products,** while also serving as a source of organic manure and contributing to sustainable farming practices.

Dairy farming is a significant contributor to the agricultural economy, providing **milk, cheese, butter, and other dairy products.** It generates employment, enhances rural income, and supports food security and nutrition.

Initiatives in Agriculture and Allied Sector

Pradhan Mantri Krishi Sinchayee Yojana, 2015

- The Government of India is committed to prioritising water conservation and its management.

- To this effect, **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)** has been formulated with the vision of extending the coverage of irrigation **'Har Khet ko Pani'** and improving water use efficiency **'More crop per drop'** in a focused manner with an end-to-end solution on source creation, distribution, management, field application, and extension activities.

Rashtriya Krishi Vikas Yojana – Raftaar (RKVY-Raftaar), 2007

- In 2017, the Government approved the continuation of Rashtriya Krishi Vikas Yojana (RKVY) as **Rashtriya Krishi Vikas Yojana- Remunerative Approaches for Agriculture and Allied Sector Rejuvenation (RKVY-RAFTAAR)** for three years.
- Under RKVY-RAFTAAR, the major focus is on **pre & post-harvest infrastructure**, besides promoting agri-entrepreneurship and innovations.

National Horticulture Mission, 2005

- The National Horticulture Mission was launched in 2005-06 as a Centrally Sponsored Scheme to foster the comprehensive development of the horticulture sector using area-based and regionally tailored strategies.
- The scheme was subsumed in the Mission for Integration Development of Horticulture (MIDH) during 2014-15.

1. Animal Husbandry and Dairy

- **Prospects**: India's dairy sector has immense potential, with India as the largest milk producer globally. Focus areas include value addition in milk products and improving breeds for higher milk yield.
- **Challenges**: Low productivity due to limited veterinary services, fodder shortages, and inadequate infrastructure for processing and marketing milk products.
- **Solutions**: Enhancing AI (Artificial Insemination) services, funding infrastructure, and promoting Farmer Producer Organizations (FPOs).
- **Case Study**: Amul exemplifies a successful cooperative model, transforming Gujarat's rural economy and setting an example for dairy cooperatives.

2. Fisheries and Aquaculture

- **Prospects**: Significant export potential, especially in shrimp farming. Initiatives such as Pradhan Mantri Matsya Sampada Yojana (PMMSY) target a sustainable fishery ecosystem with value addition.
- **Challenges**: Overfishing, climate impacts on coastal fishing communities, and water quality issues.
- **Solutions**: Nucleus breeding centers for shrimp and improving post-harvest infrastructure. Government budgets allocate funding to enhance shrimp farming and exports through NABARD

3. Horticulture

- **Prospects**: Growing demand for fruits, vegetables, and organic products presents strong growth potential in both domestic and export markets.
- **Challenges**: Inefficiencies in cold storage, high post-harvest losses, and fluctuating prices.
- **Solutions**: Developing large-scale production clusters near consumption centers, enhancing cold chain logistics, and digital public infrastructure for market linkage.

4. Sericulture

- **Prospects**: India is a major silk producer, with a high demand for silk textiles domestically and globally.
- **Challenges**: Disease management in silkworms and competition from synthetic fibers.
- **Solutions**: Improved silkworm breeding, disease-resistant varieties, and financial assistance for sericulture farmers.

5. Bamboo Cultivation

- **Prospects**: Bamboo has versatile uses in construction, furniture, and handicrafts, and is part of sustainable rural livelihood programs.
- **Challenges**: Regulatory restrictions on bamboo harvesting and lack of processing units in rural areas.
- **Solutions**: Policy reforms, establishment of bamboo research centers, and promotion of bamboo-based industries.

Expert Views and Future Roadmap

- Experts from NITI Aayog emphasize a shift towards natural farming, agroecology, and digital transformation in allied sectors. For instance, a digital crop survey is planned to integrate data from six crore farmers to streamline agricultural services.
- To achieve "atmanirbharta" (self-reliance), there is a budgetary focus on R&D, supply chain improvements, and infrastructure development to improve productivity and sustainability in allied sectors.

This multi-pronged approach—boosting infrastructure, technological integration, and targeted financial support—aims to make allied sectors key contributors to India's agricultural and economic growth.

30. Is legal assurance of MSP for farmers viable, what are its implications?

In February 2024, farmers from Punjab, Haryana, and Uttar Pradesh were marching towards Delhi in the 'Delhi Chalo' protest, demanding legal guarantees for the MSP. In 2020, farmers protested against three farm laws passed by the government, at Delhi borders, leading to their repeal in 2021.

The MSP regime was established in 1965 by setting up the Agricultural Prices Commission (APC) as a form of market intervention to enhance national food security and protect farmers from significant decline in market prices.

DAILY EDITORIAL BASED QUIZ

How can Legalising MSP help Indian Agriculture?

- **Income Security for Farmers**: By providing a legally guaranteed MSP, farmers would have a safety net against price fluctuations, ensuring they receive a minimum price for their crops.
  - This could help stabilize their income, reduce the risk of financial distress, and potentially lower the debt burden on farmers.

- The average monthly income of agricultural households is around ₹10,695, which is often insufficient for a dignified life.
- Additionally, on average, 30 farmers die by suicide each day.

- **Boost to Rural Economy:** Improved price realization from both government procurement and private sector transactions could enhance the purchasing power of rural communities, stimulating economic activity in these areas.
- **Extending FRP Model and Direct Compensatio**n: Currently, private mills are mandated to procure sugarcane at or above the **Fair and Remunerative Price (FRP)** set by the Cabinet Committee on Economic Affairs (CCEA).
  - This model could be extended to other MSP-covered crops. Furthermore, farmers should receive direct compensation if they are forced to sell below MSP, reimbursing them for the price difference.
- **Legal Mandate for Private Crop Purchases**: Private players should be legally mandated to purchase crops at or above MSP, with rigorous monitoring systems in place and penalties for any violations. This would ensure that farmers are not solely reliant on government procurement agencies for crop purchases.
- **Encouragement for Investment**: With assured returns, farmers might be more inclined to invest in better farming techniques, equipment, and inputs, potentially leading to increased productivity and agricultural growth.
- **Corporate-Centric Approach:** When there is a conflict between consumer prices and farmer compensation, governments tend to favor the interests of profit-making corporations involved in agri-produce processing.
  - These corporations already benefit from legalised Maximum Retail Prices (MRP) on their products.
  - This corporate-centric approach, along with intermediaries claiming a significant portion of the margin between farm and end-consumer prices, has negatively impacted farmers.

What are the Challenges Related to Farming and Legalising the MSP in India?

- **Budgetary Concerns**: There is a growing argument against legalising MSP, claiming that creating legal provisions is practically impossible. The combined value of all crops covered under MSP may exceed ₹11-lakh crore, **while India's total budgeted expenditure in 2023-24 was around ₹45-lakh crore.**
  - Thus, it appears **unrealistic for the government to allocate such a large portion of the budget solely for purchasing crops** from farmers. Moreover, farmers retain around 25% of their produce for personal and livestock use, further complicating the feasibility of legalising MSP.
- **Complexity in Implementation**: Creating legal provisions for MSP is deemed challenging due to the vast array of crops and the diverse agricultural landscape in India. Ensuring compliance and fair implementation across the country poses logistical and administrative challenges.
- **Market Demand Mismatch in Agriculture:**
  - Lack of effective mechanisms for farmers to anticipate market demand and adjust their planting accordingly. Farmers **often face price volatility and uncertainty because their planting decisions are not aligned with actual market demand**. This disconnect leads to situations where high production levels result in oversupply and subsequent price drops, impacting farmer incomes negatively.

- In the **2016 kharif season, for example,** the government pushed farmers to reduce cotton and plant more pulses. Those who continued growing cotton made good money but the majority who went in for pulses **faced excess supply and are dealing with a steep fall in prices.**

o **Impact on Market Dynamics**: Critics argue that MSP, if not implemented carefully, could distort market dynamics and inhibit the efficiency of agricultural markets. This includes concerns about disincentivising private investment and innovation in agriculture.
  - For example, **MSP has led to a decline in the cultivation of crops other than wheat and rice** because the government predominantly procures these two crops in large quantities for **Public Distribution System (PDS) distribution.**

- **Limitations of APMC Law:** The **Agricultural Produce Market Committee (APMC) Act** prohibits farmers from selling their produce in any mandi other than their designated one. This makes farmers vulnerable to middlemen and vested interests. They are exposed to global prices but are **not provided with access to cost-efficient technologies and information systems.** This places them at a disadvantage with farmers from other countries.
  - o Just **15% of the APMC markets have cold storage facilities**. Weighing facilities are available in only 49% of the markets.
  - o As of March 2017, **there were 6,630 APMCs** in India, which means each APMC serves an average geographical area of 496 square kilometers. This exceeds the recommended area of 80 square kilometers per APMC (**as per the National Farmers' Commission 2006).**

Way Forward

- **Recommendations of Swaminathan Commission**: The commission report recommends that the government should ensure a MSP that is at least 50% higher than the weighted average cost of production. This recommendation, also referred to as the 'C2+50% formula,' includes the imputed cost of capital and the rent on the land (termed 'C2') to guarantee farmers a 50% return.
  - o It is **suggested that the government implement a legal guarantee for this MSP based on the C2+50% formula.**
- **Recommendations of Ashok Dalwai Committee Recommendations:** The report suggests adhering to the Model Agricultural Land Leasing Act, 2016, proposed by the Haque Committee (Haque Committee, 2016).
  - o In developing countries like India, tenancy reforms aimed to abolish informal and exploitative contracts to protect poor tenants from eviction and regulate rent. The Dalwai report, based on "market-led agrarian reform," assumes equal bargaining power between lessors and lessees.
- **Comprehensive Policy Framework:** A holistic national agriculture policy, embodied with an effective and efficient procurement policy of every grain as well as vegetables and fruits on FRP, is needed.
  - o The FIVE 'Cs' — Conservation of water and soil, **Climate change** resistance, Cultivation, Consumption, and Commercial viability are crucial for the livelihoods of farmers across the country.
- **Need to Amend APMC Act:** States should amend their APMC Acts to align with the Model Act and promptly notify the necessary rules. To **maximise the benefits of these reforms for small and marginal**

farmers, states should also promote the formation of Self Help Groups, Farmers/Commodity Interest Groups, and similar organizations.

- **Balancing Market Forces and Government Support:** Recognise that while some agricultural segments, such as horticultural crops, can thrive through market forces, others require government support through mechanisms like MSP.
    - Consider the growth of horticultural crops, **which have doubled the growth rate of rice and wheat in the last decade,** as evidence that demand-driven factors can significantly enhance farmers' income and growth.
- **Assured Price to Farmers (APF)**: Implement an APF system that includes both an MSP component and a profit margin. Set the MSP equal to the cost C2 to ensure a net return for farmers, **with an additional margin determined annually by an expert body** like the CACP. This margin should remain variable, unlike the consistently rising MSP.
- **Categorisation and Implementation of MSP Crops**: For effective MSP implementation, crops should be categorised into those of all-India importance and regional importance.
    - The central government **should handle the Assured Price to Farmers (APF) for all-India crops,** while states, with shared funding from the central government, should manage the APF for regionally important crops.
- **Establishment of Commodity-based Farmers' Organisations:** To provide global demand-supply projections, guide planting decisions, and moderate acreages to avoid price crashes. Additionally, **there's a need for non-partisan platforms** where farmers can engage with policymakers, economists, and scientists objectively, prioritizing scientific approaches over political or special interest agendas.
    - In other countries, such organisations **advise farmers on global projections of demand and supply for specific crops** and help in moderating acreages in line with projected demand.
- **Comprehensive Cost Inclusion in MSP:** The MSP should be revised to include all production costs such as labour costs, expenses, fertilizers, irrigation, and interest on working capital and land rent. This should also encompass the imputed value of family labour.
    - By including these comprehensive costs in the MSP calculation, the **aim is to provide farmers with a price that not only covers their basic production expenses but also ensures a reasonable profit margin**.
- **Use of Evolving Technologies**: Karnataka has united all mandis in the state on an electronic platform and this has reportedly **improved farmers' selling prices** by 38%. This system enhances price transparency and market access, benefiting farmers economically. Adopting **this model across the country could similarly boost farmers' incomes nationwide.**

Conclusion

The agricultural sector has faced numerous challenges over the years, and there is a pressing need for a legal guarantee for MSP to address this crisis. Despite the agreement reached with protesting farmers, the Central Government has not taken concrete action in the past two years. The government should have promptly addressed the demand for a legal guarantee for MSP and other issues to transform the country's focus from food security to nutrition security.

31. Current scope and significance of the food processing industry in India, government initiatives.

The food processing industry in India is crucial to the economy, impacting agriculture, employment, and exports. As one of the largest food producers globally, India has immense potential to expand in food processing, improving both domestic supply chains and international exports. The sector's Gross Value Added (GVA) reached INR 2.08 lakh crore in 2021-22, growing annually at approximately 7.3%.

Prospects

1. **Market Growth**: India's food processing market is expected to reach USD 535 billion by 2025 due to demand for packaged and value-added foods.
2. **Employment Potential**: The industry can generate 9 million jobs by 2024, especially in rural areas, due to processing demands across fruits, dairy, fisheries, and meat sectors.
3. **Agriculture Linkages**: Approximately 70% of India's raw materials from agriculture are processed, reducing post-harvest losses and benefiting farmers through backward linkages
4. **Export Growth**: India's seafood exports reached an all-time high of 1.73 million MT in 2022-23, demonstrating strong global demand for Indian processed foods.
5. **Investment Attraction**: The Production Linked Incentive (PLI) scheme has attracted significant investments, especially from global food brands looking to establish production units in India.

Key Issues

1. **Infrastructure Gaps**: Limited cold storage facilities and transportation bottlenecks lead to high post-harvest losses, particularly in perishable foods.
2. **Lack of Technological Integration**: Many small and medium processing units face challenges in modernizing operations, which restricts efficiency and quality standards.
3. **Policy and Regulatory Hurdles**: Navigating various licenses and quality standards can be cumbersome, especially for smaller players.
4. **Skilled Labor Shortage**: The industry struggles with a lack of skilled labor in processing, packaging,.
5. **Resource Constraints**: High energy and water requirements can be a limitation, given resource scarcity in certain regions.

Government Initiatives

1. **Pradhan Mantri Kisan Sampada Yojana (PMKSY)**: This scheme supports infrastructure like mega food parks, cold chains, and agro-processing clusters to create efficient supply chains from farm to market.
2. **PM Formalization of Micro Food Processing Enterprises (PMFME)**: Provides subsidies and training to promote and modernize around 2 lakh micro-enterprises.
3. **Production Linked Incentive (PLI) Scheme**: Launched to promote exports and establish Indian brands globally by offering incentives to companies that expand production.
4. **Mega Food Parks Scheme**: Supports the development of integrated food processing clusters to reduce food waste and improve rural employment

5. **100% FDI via Automatic Route**: Permits foreign companies to invest directly in India's food processing sector, encouraging global players
.

Solutions and Case Studies

1. **Integrated Infrastructure Development**: Building more cold chains and transport networks could enhance value chain efficiency, as exemplified by Maharashtra's success in using agro-processing clusters to reduce waste.
2. **Public-Private Partnerships (PPP)**: These can bridge resource gaps; for instance, Amul's dairy model in Gujarat has achieved tremendous success through cooperative processing.
3. **Skill Development Programs**: Offering targeted training in food technology and processing for rural youth could alleviate the skilled labor gap, similar to the initiatives in Tamil Nadu's food parks.
4. **Encouraging Start-ups**: Government-backed incubators could nurture innovation and foster smaller players in developing organic, specialty, and export-oriented products.

The food processing industry stands as a transformative sector in India, with support from targeted policies and infrastructure development. Addressing bottlenecks can unlock its full potential, contributing to rural employment, reducing waste, and boosting the economy through higher agricultural and processed food exports.

32. Primary Agricultural Credit Societies and FPOS

Primary Agricultural Credit Societies (PACS) and Farmers Producer Organizations (FPOs) are both organizations that play a role in the agricultural sector:

- **PACS**

PACS are the foundation of the short-term cooperative credit structure and are the primary point of contact for rural borrowers. PACS provide loans, collect repayments, and distribute and market products. They also connect borrowers with higher financing agencies like the RBI/NABARD and Scheduled Commercial Banks.

- **FPOs**

FPOs are organizations where farmers are the members. The Small Farmers' Agribusiness Consortium (SFAC) supports the promotion of FPOs.

Here are some recent developments related to PACS and FPOs:

- **Model bylaws**

In January 2023, 31 states and Union Territories adopted model bylaws for PACS. These bylaws aim to improve the transparency, accountability, and professionalism of PACS.

- **Computerization**

The Government of India has approved a project to computerize PACS. The project will link all functional PACS to a national software and connect them to NABARD through DCCBs and StCBs.

- **New PACS**

The Government has approved a plan to establish new PACS in all villages and Panchayats over the next five years.

- **Number of FPOs**

As of 2024, 8,875 FPOs have been registered across India.

- **Primary Agriculture Cooperative Societies:**
  - PACS are **cooperative societies that provide short-term credit** and other services to their members, who are mostly farmers.
  - They are the **grassroots level institutions** of the cooperative credit structure in India.
  - There are **about 90,000 PACS in the country, with a membership of 13 crore farmers.**
  - PACS are being transformed by **computerisation, undertaking multiservice, distribution of electricity, water, medicines** and offering services as **Common Service Centres (CSC).**
- **Farmer Producer Organizations:**
  - FPOs are **legal entities formed by a group of farmers who share common interests and goals.**
  - They are **registered under various legal forms,** such as cooperatives, companies, trusts, or societies.
  - FPOs aim to **provide better access to finance and markets** to small and marginal farmers by aggregating their produce and bargaining power.
  - They also **provide technical assistance, input supply, value addition, and quality assurance** to their members.

How can be the PACS-FPO Integration Significant?

- **Strengthened Farmer Support:**
  - Integration can provide farmers with a **comprehensive support system that combines credit services, marketing opportunities, and technical assistance.**
  - This holistic approach can contribute to enhancing farmer incomes and improving their overall well-being.
- **Market Access and Value Addition:**
  - FPOs can benefit from the established market linkages and networks of PACS, expanding **their reach and enhancing their bargaining power**.
  - Integration **can enable FPOs to access better markets, negotiate favorable prices, and add value** to their agricultural produce.
- **Knowledge Sharing and Expertise:**
  - PACS, with their experience and expertise in rural finance, can share their knowledge and best practices with FPOs.
  - This collaboration can help FPOs in areas such as **financial management, risk assessment, and governance, strengthening their operational efficiency.**
- **Resource Pooling:**
  - Integration can lead to resource pooling, including **financial resources, infrastructure, and technical expertise.**
  - Sharing resources between PACS and FPOs can optimize costs, increase efficiency, and create synergies that benefit both entities.
- **Policy Support and Recognition:**
  - Integration of PACS and FPOs can draw attention to the importance of **collective action and farmer-centric initiatives.**

- It can generate policy support and recognition, leading to **favorable policies, incentives, and schemes** to further promote and strengthen the integrated model.
- For e.g., the FPO's primarily those dealing with **one district one product** (ODOP) and taking advantages of **World Bank sponsored SMART & Central Government schemes** have been performing comparatively well; even crossing the turnover of more than one crore.

- **Innovation and Technology Adoption:**
  - Integrating PACS and FPOs can facilitate the adoption of innovative practices and technologies.
  - This can lead to improved agricultural productivity, efficient supply chains, and enhanced market access, contributing to the overall growth and development of the agricultural sector.

How can PACS and FPO Work Together?

- **Cooperation in Credit:**
  - PACS **can provide credit and other services to FPOs** and their members at concessional rates and flexible terms. This will **help FPOs to overcome their financial constraints** and scale up their operations.
- **Better Networking:**
  - FPOs **can leverage the existing network and infrastructure of PACS** to reach out to more farmers and markets. This will help FPOs to **reduce their transaction costs and increase their efficiency.**
- **Collective Marketing:**
  - PACS can benefit from the collective marketing and value addition activities of FPOs by getting **better prices and quality for their produce.** This will help PACS to improve their **profitability and sustainability.**
- **Leveraging Social Capital:**
  - FPOs can benefit from the **social capital and trust that PACS have among the farmers** by involving them in their governance and decision making. This will help FPOs to enhance their legitimacy and accountability.
- **Other Economic Cooperation:**
  - PACS and FPO can jointly undertake high income generating activities like **beekeeping, mushroom cultivation, non agri sector like handloom, handicrafts, travel, media, education and health.**

What are the Challenges to the PACS-FPO Integration?

- **Organizational and Cultural Differences:**
  - PACS and FPOs have **different organizational structures, governance systems, and operational processes.**
  - Integrating the two entities would require **addressing these differences and establishing a cohesive framework** that accommodates both.
- **Trust and Cooperation:**
  - Building trust and fostering cooperation between PACS and FPOs is crucial for successful integration.

- PACS often have long-standing relationships with farmers, and **FPOs need to establish themselves as reliable partners.** Overcoming any **initial scepticism or resistance** would be vital for collaboration to flourish.

- **Reforming Regulatory and Legal Frameworks:**
  - Aligning the **regulatory and legal frameworks governing PACS and FPOs** can be challenging.
  - Addressing any discrepancies, **ensuring compliance with applicable laws,** and creating a supportive regulatory environment for integrated operations may require legislative amendments or policy changes.
- **Financial Integration:**
  - Integrating financial services and ensuring **seamless access to credit, savings, and other financial products** for FPOs within the existing PACS infrastructure would require careful coordination and planning.

What are the New Business Models that can Emerge from PACS-FPO Integration?

- **Platform Cooperatives:**
  - These cooperatives **use digital platforms to connect producers with consumers** can offer services such as **e-commerce**, **e-learning**, **e-healthcare**, etc., using the data generated by their members.
- **Sustainable Cooperatives:**
  - These are cooperatives that adopt sustainable practices such as **organic farming**, **agroforestry**, **renewable energy**, **waste management**, etc., to reduce their environmental impact and enhance their social impact.
- **Circular Economy:**
  - PACS and FPOs can adopt **circular economy** principles by using biodegradable packaging, composting organic waste, recovering nutrients, etc.
- **Regenerative Agriculture:**
  - PACS and FPOs can practice **regenerative agriculture** by using techniques such as **no-till, cover crops, crop rotation, mulching, etc.**
- **Custom Hiring Centres:**
  - These centres **provide rental farm machinery and equipment** (drones, sensors, irrigation systems etc.) **to farmers** who cannot afford to buy or maintain them.

What Steps can be taken to Integrate PACS and FPOs?

- **Role that Govt and Other Agencies can Play:**
  - **Enabling Policy Environment:** Provide conducive policies and regulations to support the integration of PACS and FPOs.
  - **Capacity Building and Mentoring Support:** Provide training, guidance, and handholding to the PACS and FPOs on various aspects of integration.

- **Participatory Learning Platforms and Incubation Centres:** Create platforms and centres where PACS and FPOs can learn from each other's experiences, share best practices, and access innovation support.

- **Role of PACS and FPOs:**
  - **Collaborations with Various Stakeholders:** Forge partnerships and collaborations with other actors such as NGOs, private sector, research institutions, media, etc. to enhance their capacities and outreach.
  - **Innovations and Entrepreneurship among Farmers:** Encourage and support the farmers to develop new ideas, products, services, and enterprises that can add value to their produce and income.

33. India's Grain Storage System

World's Largest Grain Storage Plan Carried Out in 11 States

- To address the shortage of foodgrain storage capacity in the country, the government has approved this plan in May 2023.
- **The project is being carried out in 11 states** by primary agricultural credit societies (Uttar Pradesh, Madhya Pradesh, Tamil Nadu, Tripura, Uttarakhand, Rajasthan, Maharashtra, Assam, Gujarat, Karnataka and Telangana).
- **Vision:** Thousands of **Primary Agricultural Credit Societies (PACS)** from across the country will join it in the next couple of years to **reach 100% storage capacity before 2027.**

About the Program

- **Goal**: Establish a robust storage infrastructure with a capacity of 700 lakh metric tons.
- **Focus on PACS**: The program aims to build grain storage facilities through Primary Agricultural Credit Societies (PACS) at the village level, enhancing storage and food security across rural India.
- **Infrastructure Development**: Includes decentralised godowns, custom hiring centers, and Fair Price Shops (FPS) to support agricultural needs at the grassroots.
- **Budget**: No separate allocation; it converges funds from eight existing schemes.
- **Key Agencies Involved**: Implemented by the National Cooperative Development Corporation (NCDC) with the support of NABARD, Food Corporation of India (FCI), Central Warehousing Corporation (CWC), and other state and central agencies.
- **Financial Support by NABARD**: Offers highly subsidized refinancing rates (around 1%) under the AIF scheme for projects up to ₹2 Crore.

Key Challenges

1. **Non-functional PACS**: Many PACS are currently inactive, with only 63,000 of 1 lakh operational.
2. **Complex Bureaucracy**: Coordinating across multiple schemes and institutions can present bureaucratic challenges.

3. **Infrastructure & Technology Gaps**: Setting up advanced storage in rural areas poses technological and infrastructural difficulties.
4. **Skill Shortage**: Operating modern storage requires skilled labor, which may be scarce in rural regions.
5. **Governance Issues**: Conflicts could arise between agricultural cooperatives and Farmer Producer Organizations (FPOs), which also handle post-harvest management.
6. **Maintenance Concerns**: India's history of poor infrastructure upkeep raises concerns about the long-term viability of these facilities.

Government Schemes Supporting the Initiative

1. **Pradhan Mantri Kisan Sampada Yojana (PMKSY)**: Supports infrastructure development like cold chains and food processing units.
2. **Agriculture Infrastructure Fund (AIF)**: Provides financial support for creating post-harvest management and community assets.
3. **Pradhan Mantri Annadata Aay SanraksHan Abhiyan (PM-AASHA)**: Ensures MSP support for oilseeds, pulses, and other crops.
4. **Price Support Scheme (PSS)**: Direct procurement of oilseeds, pulses, and copra to stabilize prices.
5. **Price Deficiency Payment Scheme (PDPS)**: Covers the difference between MSP and market price for registered farmers.
6. **Market Intervention Scheme (MIS)**: Purchases perishable crops not covered under MSP, ensuring farmers get fair prices.
7. **Bhartiya Beej Sahakari Samiti Limited (BBSSL)**: Encourages cooperative efforts in seed production to enhance crop productivity.

Suggested Solutions

1. **Modernizing PACS Infrastructure**: Modern storage solutions, especially for perishable items, can enhance longevity and reduce nutritional loss.
2. **Incentivizing Private Sector Participation**: Partnerships with the private sector could improve management and operational efficiency.
3. **Strengthening Governance via PPP**: Using a Public-Private-People model could enhance management and avoid governance issues.
4. **Integrating FPO and PACS Efforts**: Streamlining roles of FPOs and PACS can help reduce conflicts.
5. **Focus on Hermetic Storage**: Airtight storage technology can prevent pest infestation, ensuring food safety.

Important Data and Examples

- **Existing PACS Coverage**: 1 lakh PACS with over 13 crore members, 81% of whom are small or marginal farmers.
- **PACS Lending**: Around 60% of lending from district cooperative banks occurs through PACS.
- **Food Security Goals**: The program's localized storage facilities aim to ensure food security down to the Panchayat/village level.
- **Case Study – Amul and Lijjat Papad**: Successful cooperative models highlighting PACS' potential to support agriculture and allied activities at scale.

Conclusion

The Grain Storage Plan stands as a transformative effort to address India's food security and rural infrastructure. By leveraging PACS, India can reduce post-harvest losses, stabilize food supply chains, and boost farmers' economic well-being. While challenges such as bureaucratic coordination, infrastructure maintenance, and skill development remain, addressing these proactively can unlock the program's full potential, benefiting India's agricultural economy and rural communities alike.

34. Doubling Farmer's Income

- Recently, Prime Minister shared his dream of doubling farmers' incomes in the year when India completes 75 years of Independence and enters Amrit Kaal. Now that we have entered Amrit Kaal, it is a good time to revisit that dream and see if it has been fulfilled, and if not, how best it can be done. It was a noble dream because unless the incomes of farmers go up, we cannot have sustained high growth of overall GDP.
- Doubling farmers' income is a target set by the government of India in February 2016 to be achieved by 2022-23.
- To promote farmers' welfare, reduce agrarian distress and bring parity between income of farmers and those working in non-agricultural professions.
- Doubling Farmers Income can directly have a positive effect on the future of agriculture.

Significance of doubling farmers' income:

- **Fluctuations in farmers' income**: The low and highly fluctuating farm income is causing a detrimental effect on the interest in farming and farm investments.
  - It is also forcing more and more cultivators, particularly younger age groups, to leave farming.
- **Agrarian distress**: There has been a large disparity between the income of a farmer and non-agricultural worker since long and this coupled with low level of absolute income has led to emergence of agrarian distress in the country, particularly in late 1990s.
  - In recent times it has gotten severe and been impacting almost half of the population of the country that is dependent on farming for livelihood.
- **Poverty and farmer suicides:** Poverty coupled with natural disasters and other such reasons caused country a sharp increase in the number of farmer suicides in late 1990s to 2000s.
- **Promotes farmers welfare**: Farmers' increased income may address agrarian distress and promote farmers welfare.
  - Thus the goal of doubling farmers' income by 2022-23 is central to bring parity between the income of farmers and those working in non-agricultural professions.
- **Faulty policy decisions**: Past strategy for the development of the agriculture sector in India has focused primarily on raising agricultural output and improving food security.
  - This has been a reason for farmers' low income and which is evident from the incidence of poverty among farm households.

Ashok Dalwai panel farm income estimations:

- **Methodology:** The Dalwai panel adopted a broader **definition of 'farmer' used by the Situation Assessment Survey (SAS) of the National Statistical Office (NSO).**
  - It used all the income of such households for defining the target of doubling farmers' incomes.
  - This included **non-farm incomes from businesses and the labour wages of farmer households.**
- **Issues with the methodology**: Lack of latest data as the most recent NSO survey of farmers is for 2018-19 and prior to that was in 2012-13.
  - There is **no way to estimate farmers' incomes in 2022**, as there have **been no surveys after 2018-19** and it is unlikely in near future as these are generally decennial.
  - Even the older data also shows that the income of farmer households from crop cultivation declined 1.5% per annum between 2012-13 and 2018-19.
  - Possibility of data manipulation as the income of farmers does rise barely by 0.6% per annum, when livestock income is included.
  - On adding non-farm income, it shows a growth of 2.8% per annum and based on the non-farm intake of farmer households.
- **Differential definitions and criterion** if another source of data on income of agricultural households are used such as the **survey of rural households as part of the NABARD All India Financial Inclusion Survey (NAFIS).**
- Also its definition of agricultural households and income differs from the SAS's and only provides data on income for 2015-16.

However, it found that the income of agricultural households from all sources increased 1.7% per annum between 2015-16 and 2018-19, less than half the 3.8% growth rate of the prior period between 2012-13 and 2015-16.

Government of India initiatives to improve farmer's income:

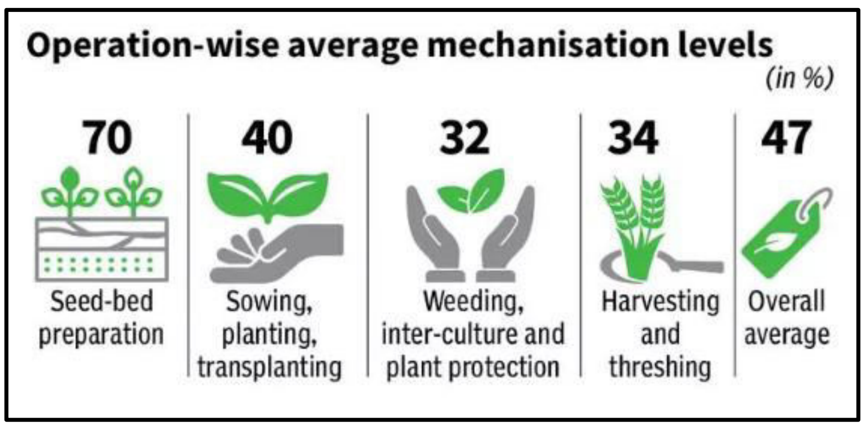
- **Wide range of Agri- schemes** such as crop insurance under **Pradhan Mantri Fasal Bima Yojna (PMFBY), supplementary income support under PM-KISAN**, new procurement policy **under PM-AASHA** in addition **to FCI operations, better access to irrigation under Pradhan Mantri Krishi Sinchayi Yojana (PMKSY) etc.**
- **Smart Agriculture** through **adoption of drone technologies** in agriculture which has a potential to revolutionize Indian agriculture.
- **Increase in Minimum Support Price** (**MSPs**) for all Kharif and Rabi crops ensuring a minimum of 50 percent of profit margin on the cost of production
- **Formation and promotion of 10,000 Farmer Producer Organisations (FPOs)** along with necessary financial support under **Aatmanirbhar Package (Agriculture).**
- **National Mission for Sustainable Agriculture (NMSA),** which aims to evolve and implement strategies to make Indian agriculture more resilient to the changing climate.
- **Range of schemes and programmes for Agri allied services** such Bee-Keeping Mission, Rashtriya Gokul Mission, Blue Revolution, Interest Subvention Scheme, agroforestry, restructured bamboo mission etc.

Way Forward:

From the above information, given our lack of data there is little possibility of concrete and robust estimates of farmers' income in the last 5 years. Although based on the available sources we can infer that, there has been a deceleration in farmer incomes after 2015-16, irrespective of the source or method.
The problem with respect to Agriculture in India is deep-rooted. It requires systemic solutions with a well-thought-out strategy and policy reforms. Therefore, for any meaningful plan aimed at an economic revival in the future, prioritizing the revival of India's rural economy is not just desirable, but a necessity.

35. Mechanization in Agriculture

- Recent replies in Parliament showed that the overall average mechanisation level for crops stands at 47%, and it will take another 25 years to reach 75-80% mechanisation in India.
- Farm mechanisation refers to the **adoption of machinery and technology** in various agricultural operations. It plays a pivotal role in **enhancing productivity, reducing manual labour, and ensuring timely and efficient farm practices**.
- In India, where agriculture remains a **backbone of the economy**, mechanisation becomes even more critical.
- **Overall Mechanisation Level:** The available data for major crops—such as rice, wheat, maize, sorghum, millets, pulses, oilseeds, cotton, and sugarcane—paints a picture of **47% overall mechanisation.**
- While states like Uttar Pradesh, Haryana, and Punjab have relatively high mechanisation levels, the northeastern states lag behind significantly.



Challenges and Issues

- **Fragmented Land Holdings:** Over 86% of farmers own less than 2 hectares, limiting the feasibility of owning heavy machinery individually.
- **High Equipment Costs:** Small farmers find it challenging to afford machinery without subsidies or shared usage models.
- **Dependency on Monsoons:** Rain-fed agriculture limits the effectiveness of machinery, especially during off-seasons.
- **Workforce Shift:** Migration of rural labor to urban areas has increased labor costs, intensifying the need for mechanization to meet production demands

Government Initiatives

- **SMAM:** Launched in 2014, it provides financial assistance, promotes mechanization hubs, and encourages custom hiring centers.
- **Yantra Laxmi Scheme (Telangana):** Offers 50-100% subsidies on mini-tractors and other equipment for SC/ST smallholders.
- **CRM (Crop Residue Management):** Promotes sustainable mechanization to handle crop residue, reducing pollution and improving soil health

Recommendations from NITI Aayog and Experts

- **Increasing Farm Power**: NITI Aayog advocates for enhancing farm power availability to match international standards (7 kW/ha in countries like the US and Korea).
- **Encouraging Custom Hiring Models**: Experts recommend scaling up shared equipment access, especially for small farms, through more custom hiring centers and subsidized schemes

Benefits of Mechanisation

- **Cost Savings:** Farmers save 15-20% on seeds and fertilisers.
- **Improved Germination:** Mechanization boosts seed germination by 7-25%.
- **Time Efficiency**: It saves 20-30% of farmers' time.
- **Small and Marginal Farmers:** With 86% of farmers owning less than 2 hectares, tailored machinery for small holdings is crucial.

Related Government Initiatives

- **Sub-Mission on Agricultural Mechanisation (SMAM):** Launched in 2014-15, this centrally sponsored scheme aims to promote farm mechanisation. It provides financial assistance for purchasing agricultural machines, establishing **Custom Hiring Centres (CHCs)**, and setting up **Farm Machinery Banks (FMBs).**
  - **Components of SMAM** include *Hubs for Hi-tech & High-value Farm Equipment, Awareness and Skill Development, and Quality Assurance along with the CHCs, and FMBs.*
  - From 2014-15 to 2020-21, over ₹4,556.93 crores have been released under SMAM, resulting in the establishment of more than 27,500 Custom Hiring Institutions and distribution of over 13 lakh agricultural machines.
- **Make in India:** The government encourages domestic manufacturers to produce agricultural machinery through research and development support, skill development, and simplified rules for testing.
  - Preference is given to domestically manufactured products in public procurement, fostering a level playing field for Indian manufacturers.

State-Specific Initiatives

- States like Rajasthan and Karnataka have also taken steps to promote farm mechanisation. For instance:
- **Rajasthan:** The state budget includes an agri-tech mission that provides subsidies for various types of equipment, benefiting small and marginal farmers and women farmers.
- **Karnataka**: The state aims to establish 100 Harvester Hubs and invest in farm mechanisation projects under the Krishi Bhagya scheme.

- Karnataka emphasises the importance of scientific farming and integrated farming systems to improve farmers' income.

What more to be done for achieving 75-80% Farm Mechanisation in India?

- **Financial Support and Incentives:** Offering subsidies or financial incentives for purchasing agricultural machinery encourages adoption. Governments can provide targeted support for small and marginal farmers.
- **Indigenous Solutions:** Encouraging research and development for locally relevant machinery is essential.
  - 'Make in India' initiatives should focus on creating equipment suited to Indian soil conditions, crop types, and farm sizes.
- **Precision Farming Technologies:** Investing in precision agriculture technologies (such as GPS-guided tractors, drones, and sensor-based systems) can optimise resource use and improve yields.

Infrastructure Development

- **Rural Roads and Connectivity:** Improved rural infrastructure ensures smooth transportation of machinery to farms.
- **Electricity Access:** Reliable electricity supply is critical for running electric-powered machinery. Promoting solar-powered solutions can address energy challenges.

Collaboration with Private Sector

- **Industry Partnerships:** Collaborating with private companies, especially farm equipment manufacturers, can accelerate innovation and technology adoption.
  - **Mahindra & Mahindra** emphasises the importance of automation technologies, including self-driven tractors, can reduce manual interventions, enhance productivity, and minimise costs for farmers.
  - Mahindra's recent OJA tractor range incorporates cutting-edge technologies to empower smaller farmers.
- **Start-ups and Agri-Tech Companies:** Supporting start-ups that focus on mechanisation and precision farming can drive technological advancements.

Customisation for Small Landholdings

- **Small and Marginal Farmers:** Given that a majority of Indian farmers have small landholdings, customised solutions (e.g., mini tractors, small-scale implements) are essential. Cooperative models for machinery sharing can be explored.
- **Affordable Technology:** Developing cost-effective machinery suitable for small plots is crucial.

Policy Reforms

- **Trade Policies:** Ensuring import restrictions on low-quality machinery while promoting domestic manufacturing.
- **Incentivising Research:** Tax breaks and grants for companies investing in R&D for farm equipment.

Promotion of Agri-Entrepreneurship

- **Young Entrepreneurs:** Encouraging youth to venture into agri-mechanisation services can create a network of service providers.

- **Skill Development Institutes:** Establishing institutes that train technicians in farm machinery repair and maintenance.

Monitoring and Evaluation
- **Performance Assessment:** Regularly evaluating the impact of mechanisation programs helps identify gaps and refine strategies.
- **Data-Driven Approaches:** Using data analytics to understand adoption rates, challenges, and success stories.

Conclusion
- Farm mechanisation is not just about replacing human labour; it's about bridging efficiency gaps, ensuring food security, and sustaining livelihoods. As India continues its agricultural journey, smart mechanisation will play a pivotal role in shaping a prosperous and resilient farming sector.

36. Has the country achieved true Aatmnirbharta in Agriculture Sector

India's agriculture sector has made significant progress in terms of self-reliance, yet it remains dependent on certain imports, particularly for pulses, oilseeds, and specific fertilizers. Current data suggests that although India is largely self-sufficient in grains like rice and wheat, importing 10-15% of its pulses and over 50% of its edible oil requirements keeps it partially dependent on foreign markets

India's agricultural imports can be worrisome because they indicate that the country is not fully self-sufficient in food production:

- **Foodgrain imports**

India has imported large quantities of foodgrains, including wheat, edible oil, and pulses, in recent years. In 2015-16, 79% of India's imported agricultural produce was foodgrains.

- **Vegetable oil imports**

Vegetable oil is India's top imported agricultural product. In FY 2023, India's vegetable oil imports were $18.4 billion, which is nearly double the amount five years earlier.

However, India is also a significant exporter of agricultural products, including rice, spices, cotton, oil meal cake, castor oil, coffee, cashew, tea, fresh vegetables, and sugar.

The Indian government has launched several schemes and programs in the 2024-25 Union Budget to strengthen self-reliance in agriculture, focusing on innovation, infrastructure, crop diversification, and sustainable practices. Here's an overview:

1. Promotion of Oilseed Production
- **National Mission on Edible Oils (NMEO)**: Aims to increase domestic oilseed production and reduce import dependency. It includes financial support for farmers and adoption of high-yield seeds to improve productivity.
- **Cluster-Based Development**: Fosters oilseed clusters across various states to enhance production, streamline supply chains, and improve processing facilities.

2. Agriculture Infrastructure Fund (AIF)

- **Fund Allocation**: The government has allocated Rs. 1 lakh crore under AIF to build infrastructure for post-harvest management, including cold storage, warehouses, and processing facilities.
- **Technology and Innovation**: Supports technology-driven solutions like smart warehousing and real-time quality monitoring for better resource utilization and reduced post-harvest losses.

3. Digital Agriculture Mission (DAM)

- **Promotion of Precision Farming**: Encourages the use of IoT, drones, AI, and other digital tools to enhance crop yield and quality, improving productivity.
- **Data-Driven Decision Making**: DAM integrates data platforms for weather, soil health, and crop cycles, helping farmers make more informed decisions. It's aligned with increasing the adoption of digital tools, especially in rural and semi-rural areas.

4. Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)

- **Improved Irrigation and Water Management**: Focuses on increasing water-use efficiency through "More Crop per Drop" initiatives, micro-irrigation, and watershed management.
- **Addressing Water Scarcity**: The scheme aids farmers in water-scarce regions, enhancing productivity and crop resilience against climate variability.

5. Promotion of Sustainable and Organic Farming

- **Paramparagat Krishi Vikas Yojana (PKVY)**: Encourages organic farming practices, with emphasis on bio-fertilizers and vermicomposting, making agriculture environmentally sustainable.
- **Climate-Resilient Agriculture**: Aims to reduce dependency on chemical inputs, promoting crop resilience and long-term soil health

6. Support for Cooperative and FPO-Based Agriculture

- **Formation of Farmer Producer Organizations (FPOs)**: Enables farmers to pool resources, access credit, and gain bargaining power in the market, enhancing collective income.
- **Primary Agriculture Credit Societies (PACS)**: PACS expansion aims to strengthen rural financing for farmers, offering loans at subsidized rates for input purchase, storage, and infrastructure development.

7. Incentives for Crop Diversification

- **Promotion of Millets and Pulses**: Special incentives for growing millet and pulses aim to reduce over-reliance on rice and wheat, diversifying crop production and ensuring nutritional security.
- **Atmanirbhar Bharat Millets Mission**: Supports farmers in shifting to drought-resistant millet crops, aligned with achieving self-sufficiency in pulses and enhancing export potential

8. Market Reforms for Direct Farmer-Buyer Linkages

- **E-NAM (National Agriculture Market)**: Expands the digital marketplace for transparent, direct trade between farmers and buyers, aiming to improve farm incomes and reduce intermediaries.
- **Warehouse Receipt Financing**: Introduces the Warehouse Development and Regulatory Authority (WDRA) to provide financing options to farmers against their produce stored in warehouses, reducing distress sales.

Conclusion

The combination of financial support, modern infrastructure, technological integration, and sustainable practices showcases India's commitment to making agriculture self-reliant. These initiatives collectively aim to reduce import dependency, increase farmer incomes, and promote a resilient agricultural ecosystem.