INSTA MAINS 2020
EXCLUSIVE
ECONOMY
# Table of Contents

## Indian Economy – Growth and Development

1. Key Highlights of Economic Survey of India 2019-20 .................................................. 3
2. Economic Impact of Covid-19 .................................................................................... 5
3. Transparent Taxation ............................................................................................. 6
4. Recession faced by India ......................................................................................... 6
5. Shortfalls of economic growth ............................................................................... 7
6. Tourism sector ...................................................................................................... 8
7. National Competition Policy ................................................................................... 8
8. Boosting India’s Exports ......................................................................................... 9
9. Direct Tax Collections ............................................................................................ 10
10. Benefits of getting more people into the direct tax net ..................................... 11
11. Credit Requirements of MSMEs .......................................................................... 11
12. Inclusive Growth .................................................................................................. 12
13. Public Private Partnership (PPP) ......................................................................... 13
14. Rural Economy ...................................................................................................... 14
15. Skill Development ................................................................................................ 15

## Banking and Financial Sector

1. Privatisation of Public Sector Banks ......................................................................... 17
2. Role of RBI in an Economy .................................................................................... 17
3. Resolving India’s Banking Crisis ........................................................................... 18
4. External Commercial Borrowings ......................................................................... 18
5. Deficit Monetisation ............................................................................................... 19

## External Sector

1. Foreign Contribution (Regulation) Act (FCRA) .................................................... 21
2. Rising protectionism and trade nationalism in global trade .................................. 21
3. Global value chain (GVC) ...................................................................................... 22
4. Government’s ban on FDI through the automatic route from land border sharing
   neighbouring countries ......................................................................................... 22

## Infrastructure: Energy, Ports, Roads, Airports, Railways, Etc

1. Report on National Infrastructure Pipeline (NIP) .................................................... 24
2. Renewable Energy ................................................................................................ 24
3. India’s Renewable Energy Challenge .................................................................. 26
4. Non-Renewable Electricity Generation ................................................................ 26
5. India’s Strategic Oil Reserves ............................................................................... 27
6. Private trains ........................................................................................................ 28

## Industrial Policy and Industrial Growth

1. Automobile Sector .................................................................................................. 30
2. Electric Vehicles in India ........................................................................................ 30
3. Textile Sector .......................................................................................................... 31
4. Labour Reforms ..................................................................................................... 32
5. Small and medium-sized enterprises (SMEs) ......................................................... 32
6. Mines and Minerals ............................................................................................... 32
7. Electronics Manufacturing ...................................................................................... 33

www.insightsonindia.com
Agriculture and Associated Issues

1. Farmer’s suicide
2. Focus on Horticulture Crops
3. Bt cotton in India
4. Nano-Fertilizers
5. Agriculture loan waivers
6. Pulses revolution in India
7. Minimum Support Price (MSP)
8. Pradhan Mantri Annadata Aay SanraksHan Abhiyan (PM-AASHA) Scheme
9. Indian Agrarian Crisis
10. Integrated Farming System (IFS)
11. Agricultural Marketing
12. Agri Exports
13. DBT for Food and Fertilizer Subsidies
14. How Agricultural Reforms evolved in China
15. E-Agriculture
16. Climate Change and Agriculture
17. Monsoon Dependence of Indian Economy
18. Climate Smart Agriculture
19. Zero Budget Natural Farming (ZBNF)
20. Non-Farm Diversification
21. White Revolution
22. Blue Revolution
23. Mahatma Gandhi’s vision for India’s development and his prescriptions
Indian Economy – Growth and Development

1. Key Highlights of Economic Survey of India 2019-20

- More new firms created
  - The Economic Survey highlighted that new firm creation in India has increased dramatically since 2014.
  - There has been 12.2% cumulative annual growth rate of new firms in the formal sector during 2014-18, compared to 3.8% during 2006-2014.
  - About 1.24 lakh new firms created in 2018, an increase of about 80% from about 70,000 in 2014.
- 47.33 Lakh Houses Completed Per Year in 2018-19 Under PMAY- Gramin
  - The Survey noted, the two Schemes, Pradhan Mantri Awaas Yojana- Gramin (PMAY-G) and Pradhan Mantri Awaas Yojana- Urban (PMAY-U), seek to achieve the target of housing for all by 2022.
  - Under PMAY-G, the number of houses completed in a year increased by more than four times, from 11.95 lakh in 2014-15 to 47.33 lakh in 2018-19, states the Survey.
- Infrastructure Investment of Rs.102 Lakh Crore in FY 2020-2025
  - The Survey said that to achieve GDP of USD 5 trillion by 2024 – 2025, India needs to spend about USD 1.4 trillion (Rs.100 lakh crore) over these years on infrastructure so that lack of infrastructure does not become a constraint to the growth of Indian economy.
  - NIP is expected to enable well prepared infrastructure projects that will create jobs, improve ease of living and provide equitable access for infrastructure for all thereby making growth more inclusive.
- 7.9 Per Cent Growth Registered in Livestock Sector During Last Five Years
  - The Survey said that Livestock income has become an important secondary source of income for millions of rural families and has assumed an important role in achieving the goal of doubling farmers’ income, says Economic Survey.
  - Livestock sector has been growing at a Compound Annual Growth Rate (CAGR) of 7.9 per cent during last five years.
- Greening India!
  - The Survey said that despite ongoing developmental efforts, forest and tree cover are increasing considerably. The forest and tree cover have reached 80.73 million hectares which is 24.56 per cent of the geographical area of the country.
  - The Survey further highlighted that the States/UTs showing gain in forest cover are Karnataka (1,025 sq. km), Andhra Pradesh (990 sq. km) and Jammu & Kashmir (371 sq. km) whereas those showing loss in forest cover include Manipur, Meghalaya, Arunachal Pradesh and Mizoram.
  - In the Forest Report 2019, the total carbon stock in forest is estimated as 7,124.6 million tons, showing an increase of 42.6 million tons as compared to the last assessment in 2017.
- Ayushman Bharat and Health
  - Ayushman Bharat, the world’s biggest health care Scheme to improve access to health and delivery of health services at massive scale, has set up 28,005 Health & Wellness Centres as on 14th January 2020. “To promote preventive healthcare, one and half lakh Ayushman Bharat- Health and Wellness Centres are proposed to be set up by 2022,” the Survey said.
  - As per the latest National Health Accounts 2016-17, the out of pocket expenditure (OoPE) on health as a percentage of total health expenditure declined from 64.2 per cent in 2013-14 to 58.7 per cent in 2016-17, observed the Economic Survey.
- 2.6 crore jobs created in Rural and Urban Areas Between 2011-12 and 2017-18
o The Survey said that along with efforts for generating additional employment, special focus has been on improving quality of jobs and formalisation of the economy, notes the Economic Survey.

o The share of regular wage/salaried employees has increased by 5 percentage points from 18 per cent in 2011-12 to 23 per cent in 2017-18. In absolute terms, there was a significant jump of around 2.62 crore new jobs with 1.21 crore in rural areas and 1.39 crore in urban areas in this category.

- India has become Second Largest Emerging Green Bond Market after China
  o Survey observed that India has the Second largest Emerging Green Bond Market after China. The SBI entered the market with an US$650 million Certified Climate Bond.
  o India also joined International Platform on Sustainable Finance (IPSF) in 2019 to scale up the environmentally sustainable investments.

- All Urban Areas of 35 States/UTs Declared Open Defecation Free;
  o Swachh Bharat Mission (Urban) was launched in 2014 with twin objectives of ensuring 100 percent scientific solid waste management and making urban India ODF to achieve total environmental improvement.
  o All Urban areas of 35 States/UTs have become ODF and percentage of waste processing rose from around 18 percent to 60 percent.

- Services Sector Sees 33 Per Cent Jump in Gross FDI
  o Growing in its significance, the Services Sector accounted for about 55 percent of the economy and Gross Value Added (GVA) growth, two-thirds of total FDI inflows into India and about 38 percent of the total exports.
  o The sector’s share now exceeds 50 per cent of the Gross State Value Added in 15 out of the 33 states and UTs, the Survey further noted.

- Improvement in Space Sector
  o India’s space programme has grown exponentially since its modest beginnings five decades ago, moving from simple mapping services to many more uses currently. Even though India’s spending is less compared to others, ISRO has launched around 5-7 satellites per year in recent years with almost no failures.

- Rationalisation of Government Intervention to Boost Economic Freedom & Wealth Creation required
  o The Economic Survey said that while there is a case for Government intervention when markets do not function properly, excessive intervention especially when the market can do the job of enhancing citizens welfare perfectly well, stifles economic freedom and creates ‘deadweight loss’ which is the loss created by the wasted chance of creating a consumer and producer surplus and reduces wealth creation by not allowing efficient allocation of entrepreneurial resources and energy to productive activities thereby promoting economic dynamism.

- Other Highlights of Economic Survey 2019-20
  o GDP growth pegged at 6-6.5 per cent in fiscal year starting April 1, up from 5 per cent in current fiscal
  o Fiscal deficit target for current fiscal may need to be relaxed to revive growth
  o Uptick in growth projected in second half of current fiscal based on 10 factors including higher FDI flows, buildup of demand pressure, positive GST revenue growth
  o Survey asks government to deliver expeditiously on reforms to revive growth
  o Ethical wealth creation key to India becoming USD 5 trillion economy by 2025
  o Share of formal employment increased from 17.9 per cent in 2011-12 to 22.8 per cent in 2017-18 reflecting formalisation in the economy
  o Theme of Survey is wealth creation, promotion of pro-business policies, strengthening of trust in the economy
  o To achieve GDP of USD 5 trillion by 2024-25, India needs to spend about USD 1.4 trillion over these years on infrastructure
2.62 crore new jobs created in rural, urban areas between 2011-12 and 2017-18 among regular wage/salaried employees
8 per cent increase in regular employment of women in 2017-18 over 2011-12
Excessive government intervention in markets, especially when the market can do the job of enhancing citizens welfare perfectly well, stifles economic freedom
Debt waivers disrupt the credit culture, reduces formal credit to same farmers
Suggests government to systematically examine areas where it needlessly intervenes and undermines markets
Calls for improving governance in public sector banks, more disclosures to build trust
Calls for measures to make it easier to start new business, register property, pay taxes, enforce contracts
Easing of crude prices lowers current account deficit; imports contract more sharply than exports in first half of current fiscal
Declining inflation from 3.2 per cent in April 2019 to 2.6 per cent in December 2019, reflecting weakening demand pressure in the economy
GST collections grew by 4.1 per cent for the centre during April-November 2019.

2. Economic Impact of Covid-19
- The economic impact of Covid-19 pandemic has caused unprecedented damage to the global and India is no exception.
- According to State Bank of India’s research report – Ecowrap, the following observations were made:
  - All the four quarters of FY21 will exhibit negative real GDP growth and the fall of full-year contraction in growth will likely be in double digits.
  - India’s GDP crashed 9 per cent in Q1 FY21 due to the nationwide lockdown.
  - The contraction will likely be in double digits, which may be around 9 per cent. Q2 real GDP fall will be up to 15 per cent, while the GDP in Q3 will fall up to 10 per cent.
  - It had earlier estimated real gross domestic product (GDP) at (-) 6.8% for the current fiscal.
  - As anticipated private final consumption expenditure (PFCE) growth collapsed as COVID-19 containment measures reduced consumption to mostly essential items.
  - The FY21 consolidated fiscal deficit of the Centre and state governments might touch 13 per cent of GDP.
- India’s exports and imports (both merchandise and services), estimated at $141.82 billion and $127.76 billion, respectively, during April-July FY21, have contracted by 21.9% and 40.7% when compared to the same period last year. This unequivocally points to the saga of how badly the pandemic has impacted India’s global trade.
- The global economy is expected to experience one of its worst years in history and the Indian economy is expected to contract significantly for the first time in many decades.
- The World Bank predicts that remittance flows will face their sharpest decline in history, falling by an expected 20% in 2020 to $445 billion.
Prolonged economic recession will force the return of a significant number of migrants to their countries of origin, aggravating the economic downturn and social disruption.

The revival of the health of the banking sector must, apart from involving steps such as capital infusion and disinvestment of public sector banks, also involve allowing institutions such as the RBI, public sector banks, bankruptcy boards, securities and insurance regulators to function freely and professionally.

India must make full use of loan programmes of international institutions such as the International Monetary Fund and the World Bank.

**Conclusion**

The foundation for reviving our economy is to inject confidence back in the entire ecosystem. People must feel confident about their lives and livelihoods. Entrepreneurs must feel confident of reopening and making investments. Bankers must feel confident about providing capital. Multilateral organisations must feel confident enough to provide funding to India. Sovereign ratings agencies must feel confident about India’s ability to fulfil its financial obligations and restore economic growth.

**3. Transparent Taxation**

- The Prime Minister of India recently launched the ‘Transparent Taxation – Honouring The Honest’ platform to honour the honest taxpayers of the country. The platform has major reforms like Faceless Assessment, Faceless Appeal and Taxpayers Charter. The platform seeks to “reform and simplify our tax system.”
- The number of taxpayers is significantly low with only 1.5 Crore paying taxes in a country of 130 Crore people. Therefore, it’s time for people to introspect and come forward to pay Income taxes due on them to build an Aatmanirbhar Bharat.
- The new facilities launched are a part of the Government’s resolve to provide maximum governance with minimum government.
- Central Board of Direct Taxes (CBDT) last year slashed the corporate tax from 30% to 22% and for new manufacturing units the rates were reduced to 15%. Dividend distribution Tax was also abolished.
- The government now had adopted a people centric approach towards making laws, rules and policies. These reforms are likely to empower citizens by ensuring time-bound services by the Income Tax Department.

**4. Recession faced by India**

The NBER defines a recession as a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales.

**India’s past recessions**

- 1958 – Balance of Payment (BoP) crisis
- 1966 – Severe Drought
- 1973 – Energy Crisis
- 1980 – Oil Shock leading to BoP crisis

Current slump in economic growth due to pandemic

- Unprecedented contraction: For India this is estimated to be the worst ever contraction of GDP growth.
- Negative GDP: RBI in its MPC meet acknowledged that this year’s GDP will be in negative territory but refrained from giving any numbers.
- Efficacy of Stimulus: India’s 20 lakhs crore stimulus is only the 15th largest in the world
  - It costs Indian government just 1% of the GDP, while the top economies have invested 4-5% of GDP.
It does no resolve immediate issues of credit for the poor and the farmers, which may impact future food security and nutrition in the country.

- **Poverty**: India has an estimated 812 million poor people, which could increase to 915 million, due to the impact of COVID pandemic.
- **Impact on economic demand**: The rise in unemployment and fall in incomes could lead to reduced spending and consumption.
- **Constrained financial resources**: as public finances at both central and state levels have been under considerable strain. It makes it difficult for the government to put more cash in the hands of the distressed.

**Way Forward**

- **Policies to support firms**: includes providing grants and wage subsidies to firms to minimize layoffs and supporting micro and small enterprises through measures such as tax exemptions, delays, or waivers targeted to small firms, soft loans, and grants.
- **Active labor market programs** to facilitate the transition of workers who have lost jobs that are not coming back into training or new jobs.
- **Increase in coverage of existing safety net programs** to new beneficiaries based on geography (e.g. the areas with the highest levels of community transmission and/or economic disruptions), or sector of employment, or focusing on at-risk categories (e.g. families with young children, pre-existing health conditions, and elderly family members).

5. **Shortfalls of economic growth**

- Economic growth has raised living standards around the world. However, modern economies have lost sight of the fact that the *standard metric of economic growth, gross domestic product (GDP)*, merely measures the size of a nation’s economy and doesn’t reflect a nation’s welfare.
- Yet policymakers and economists often treat GDP, or GDP per capita in some cases, as an all-encompassing unit to signify a nation’s development, combining its economic prosperity and societal well-being. As a result, policies that result in economic growth are seen to be beneficial for society.
- **Environmental degradation** is a significant externality that the measure of GDP has failed to reflect.
- Modern economies need a better measure of welfare that takes these externalities into account to obtain a truer reflection of development.
- GDP also fails to capture the distribution of income across. It cannot differentiate between an unequal and an egalitarian society if they have similar economic sizes.

**Shift towards Happiness**

- Economic indicators such as the gross national product, per capita income, healthcare facility, employment and wealth must be related with national happiness.
- The *World Happiness Report, 2020* has ranked 156 countries by happiness of their citizens based on six key variables — income, healthy life expectancy, social support, freedom, trust and generosity.
- Finland, despite not having the highest GDP, tops the list due to its social safety, personal freedom and a work-life balance while materially superior countries are ranked lower. The results mean that growth in happiness is not always accompanied by growth in economic prosperity.
- These findings give some hope that national happiness can be increased even if material prosperity is not among the highest.
- India, Canada, Brazil, the US, UK, UAE, the Philippines and Thailand have undertaken efforts to measure and increase happiness and well-being beyond GDP.
• Gujarat University introduced a certificate course in “Happiness Counselling” through meditation, yoga, neurology, social activities, music, food and dance. Madhya Pradesh has set up a happiness department and organises “Happiness Camps” to teach positive outlook towards life. Andhra Pradesh has come up with a “Happiness Index” department to measure development in the state.

Conclusion
Our deeply divided society has to be patched up with peaceful, reconciliatory and diplomatic means like education, awareness and social safety net. We need a Ministry of Happiness with academicians, economists, psychologists and social thinkers to map the road to happiness forever. The quest of humanity for another habitable planet must begin with making our own planet happy and liveable.

6. Tourism sector
• India’s rising middle class and increasing disposable incomes has continued to support the growth of domestic and outbound tourism.
• During January- November 2019, a total of 25,51,211 tourist arrived on e-Tourist Visa registering a growth of 23.8 per cent.
• The travel & tourism sector in India accounted for 8 per cent of the total employment opportunities generated in the country in 2017, providing employment to around 41.6 million people during the same year.
• Travel and tourism industry contributed a tenth of India’s GDP in 2018 and accounts for 42 million jobs in the country, report says.
• India doing well in medical tourism, business tourism, ecological tourism, pilgrimage tourism, historical tourism, adventure tourism.

Tourism has the potential to be one of the main pillars of India’s economy in post Covid-19 recovery:
• Employment
• Job Retention
• Alternative Business Opportunities
• Poverty Alleviation
• Scope for new business opportunities
• Maintaining the sustainable livelihood
• Reduces migration
• Alternative Way of Earning
• Empowerment of Localities
• Arts and Crafts Sale
• Environmental Improvement
• Heritage Preservation
• Source of Foreign Exchange Earnings

India’s travel and tourism industry has huge growth potential. The tourism industry is also looking forward to the expansion of E-visa scheme which is expected to double the tourist inflow to India. India’s travel and tourism industry has the potential to expand by 2.5 per cent on the back of higher budgetary allocation and low-cost healthcare facility. The next step is where all the action is. Once the outbreak of the virus is contained and the world is set to travel again, any plan of re-opening must be done keeping long-term benefits and safety compliances in mind.

7. National Competition Policy
• The current macroeconomic indicators casts a dark cloud on the Prime minister’s vision of achieving a $5-trillion economy by 2025 due to the Covid-19 crisis.
India’s macro-economic indicator scenario:
- Moody’s downgraded India’s ratings-outlook from ‘stable’ to ‘negative’ in November 2019.
- Fitch Ratings released in May projected a 5% decline in growth.
- Even IMF’s recent report on June 24 has projected India’s economy to contract by 4.5% in FY21.
- IMF has also slashed India’s growth rate to 1.9% in FY21.

**Competition policy** refers to “those government measures that directly affect the behaviour of enterprises and the structure of industry” to maximise total welfare, i.e., the total of consumer’s surplus and producer’s surplus, as well as taxes collected by the government.

**Need for a new National Competition policy (NCP) for India:**
- While National competition policies proved a key structural reform to boost economic growth in many developed countries, India has not utilised CCI’s full potential due to the absence of a national competition policy.
- In the absence of NCP, the benefits of competition are yet to reach all the sectors. Sectors like coal mining have been under monopoly control of the state via PSUs like the Coal India.

A national competition policy that could help fix policy-induced market distortions which hampers fair rivalry in the market. Further, NCP will ensure each policy regulation and law is screened based on impact, if any, on the state of competition. However, this requires a strong political will.

**8. Boosting India’s Exports**
- India is not a big exporter in the world and its share in the world trade is less than two percent.
- Exports played an important role in transforming countries such as South Korea and China in recent decades.

**Export Preparedness Index 2020 (Key Findings):**
- India’s merchandise exports have witnessed growth from USD 275.9 billion in 2016-17 to USD 331.0 billion in 2019-20.
- However, the Covid-19 crisis gave a major blow to the current fiscal. Consequently, India’s exports shrank by 60% in April 2020.

**Government Initiatives:**
- A logistics division has been established in the department of commerce to coordinate development in the logistics space.
- Duty-free procurement of the inputs needed for exports.
- Trade Infrastructure for Export Scheme (TIES) to create appropriate infrastructure for development and growth of exports.
- Remission of Duties or Taxes on Export Products scheme (RoDTEP)
  - RoDTEP is a new scheme to replace the existing Merchandise Exports from India scheme (MEIS) for exports of goods from India, which aims to reimburse the taxes and duties incurred by exporters such as local taxes, coal cess, mandi tax, electricity duties and fuel used for transportation, which are not getting exempted or refunded under any other existing scheme. The rebate would be claimed as a percentage of the Freight On Board (FOB) value of exports.
  - Implementation of the scheme would make India a WTO-compliant exporter in the international market and the process that is promised by GOI seems to be a simpler and more transparent one for exporters, improving efficiencies in collection of refunds as well.

**Concerns / Challenges**
- India’s logistics sector is highly defragmented and very complex.
- In electronic goods, 65 per cent of our demand is met through imports.
Vietnam and Bangladesh are becoming more competitive and are capturing the low-end manufacturing space being vacated by China.

Economic Survey (2016-17) highlighted how India is losing out in labour-intensive sectors.

Threat of rising protectionism and rising automation.

The markets in some developed countries have strict standards for admitting India’s agricultural exports.

**Way Forward:**
- Increase in exports can help India to achieve the target of making India a developed economy by focusing on ‘Atma Nirbhar Bharat’. The exports can also help generate employment in India.
- Doubling India’s share of world exports will require the government, states and industry to act on a mission mode.
- Speeding up the establishment of product-specific industrial clusters and enacting labour reform, at least in export zones.
- Require a sound export infrastructure by energising the Bharatmala Pariyojana to improve the efficiency of movement of goods and to cut logistics costs.
- Improving Logistics sector will facilitate 10% decrease in indirect logistics cost leading to growth of 5 to 8% in exports.
- We also need to revisit safeguard and anti-dumping duties to boost export growth.
- Banking on India's political relationships with countries such as Cuba and many in Africa to push exports to new markets.

**9. Direct Tax Collections**

**How to increase tax collection?**
- Rewards could be more effective in motivating people to pay tax like reduced public transportation fares or special privilege in government-operated hotels, hospitals, and airlines.
- South Korea considers allowance to airport, VIP rooms, and free parking in public parking facilities.
- Providing tax-compliance certificates to firms to help them build an image.
- Making tax certificates mandatory to renew certain licenses
- Good financial behaviour needs to be celebrated publically
- Government could consider an insurance scheme for informal sector business tax payers by providing financial support in times of distress.
- Quick settlement of disputed cases.
- For creating conducive tax administration there is a need to introduce academic courses on ethics and business practices for business graduates, chartered accountants, company secretaries, auditors and legal experts.

**Concerns / Challenges**
- The share of direct taxes in the total is still low.
- It is also far too low when compared to its peak of over 60% in 2009-10.
- Delay in drafting a new direct tax code due to bureaucratic delays.

The share of direct taxes in total tax collections must go up as indirect taxes are relatively regressive.

Tax evasion is more common among the self-employed and in the unorganised sector. So, the need is to bring large section of the informal sector under GST and make them formal.

The government must raise the income threshold for the maximum marginal income tax rate of 30%, rather than lower the tax rate.

India’s corporate tax rate must come down to below 20%, to ASEAN levels if it wants to maintain its stature as an attractive investment destination.

It will create an incentive for individuals to incorporate their businesses and become more transparent.
Reforms must aim at doubling the tax collections by the Centre and the states combined that stands at around 17% of GDP.

**Tax Compliance (International Practice):**
- In the US, tax compliance is high and ascribed to strong deterrent effect of selective, intensive audits.
- In advanced countries, high tax collection and excellent public services reinforce each other.
- Globally the revenue from personal income tax is much higher compared to corporate income tax.
- While in India the personal income tax collection has to go up. China’s taxpayers are more than those of India, even when its income levels were similar to those of India.

**10. Benefits of getting more people into the direct tax net**
- Helps in decreasing income inequalities.
- The overall boost to tax collections means that the Indian state will be in a better position to perform its key duties without running into repeated fiscal crises.
- A further increase in the share of direct taxes will help the government to lower regressive indirect taxes that impose a significant burden on the poor.
- This means a shift from a regressive to a progressive tax system.
- A widening tax pool means the current system in which efficient firms are taxed at a high rate because inefficient firms manage to slip outside the tax system will end.
- Direct taxes constitute an important source of government revenue. Their collection charges are also low.
- A direct tax increases the civic sense of the people. When the people are fully aware of the payment of taxes, they are also conscious of the way the government spends the money.

**11. Credit Requirements of MSMEs**
- Micro, Small and Medium Enterprises (MSME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades.
- MSMEs are complementary to large industries as ancillary units and this sector contributes enormously to the socio-economic development of the country.
  - Importance of MSME Sector
    - MSMEs are a source of massive job creation mainly for less-skilled job seekers.
    - Economically, any improvement in the sector’s operating environment will help the Indian economy.
    - The share of MSMEs in the country’s gross value added is estimated to be about 32%.
    - It also contributes about 40% to total exports and 45% to manufacturing output.
    - They help in industrialization of rural & backward areas, thereby, reducing regional imbalances, assuring more equitable distribution of national income and wealth.
  - Informal Nature of MSME Sector
    - More than 90% of MSMEs operate in the informal sector.
    - These firms largely depend on informal sources of credit at higher interest rates.
    - It is difficult for these firms to get loans from banks because they do not maintain proper documents and records.
    - Most firms in the informal sector are unlikely to attract skilled labour.
    - This has not only affected growth and output, but also employment generation.
  - Concerns / Challenges
    - MSMEs are largely depend on informal sources of credit at higher interest rates.
    - Availability of credit from formal sources has been a problem for the sector.
    - The share of credit to MSMEs has declined as a proportion of overall bank credit in recent years.
India’s next wave of Ease Of Doing Business should have three vectors—rationalization (cutting down the number of laws), simplification (cutting down the number of compliances and filings) and digitization (architecting for true paperless, presence-less and cashless).

Simplifying the regulatory architecture will also help in the progress of MSMEs.

Impact of changes of definition:

- The definition has been widened in line with industry suggestions.
- It will help a wider section of companies to avail various sops announced for the sector.
- The enhanced turnover limit brings relief to many companies that were worried that they would not be eligible for MSME status.
- Moreover, MSMEs, thanks to their small scale of operations and informal organisation, MSMEs don’t always maintain proper books of accounts. This essentially results in their not being classified as MSMEs.
- The change of definition is likely to improve the ease of doing business for MSMEs, and in the process, make it easier for them to pay taxes, attract investments and create more jobs.

12. Inclusive Growth

- The concept of inclusive growth focuses on equitable growth for all sections of society. This involves ensuring that fruits of growth and development reach the poor and marginalized sections as well. Inclusiveness is a multi-dimensional concept.
- Inequalities that include, social exclusion, discrimination, restrictions on migration, constraints on human development, lack of access to finance and insurance, corruption – are sources of inequality and limit the prospect for economic advancement among certain segments of the population, thereby perpetuating poverty.

Economic growth is a precondition for inclusive growth, though the nature and composition of growth has to be conducive to inclusion.

- Inclusive growth is to include the poor and lagging socio-economic groups such as ethnic / tribal groups, weaker sections as well as lagging regions as partners and beneficiaries of economic growth.
- The Inclusive growth addresses the constraints of the excluded and the marginalised. It has to open up opportunities for them to be partners in growth.
- Inclusive growth should be non-discriminatory and favourable for the excluded. This implies that inclusive growth has to be broad-based in terms of coverage of regions, and labour-intensive in terms of creating large-scale productive employment opportunities in the economy.
- Inclusive growth is expected to reduce poverty faster in the sense that it has to have a higher elasticity of poverty reduction.
- Inclusive growth has to ensure access of people to basic infrastructure and basic services/capabilities such as basic health and education. This access should include not only the quantity, but also quality of these basic services.
- Inclusive growth should reduce vertical as well as horizontal inequalities in incomes and assets.

However, only economic growth does not automatically translate into widely shared gains. Awareness about inclusiveness and empowerment is required to be created. Reducing poverty is to be taken as key element in our inclusive growth strategy.
13. Public Private Partnership (PPP)

Public Private Partnership means an arrangement between a government/statutory entity/government owned entity on one side and a private sector entity on the other.

Challenges faced by PPP in India

- Construction/implementation risk, arising from delay in project clearance; contractor default; environmental damage.
- Market risk, arising from insufficient demand; insufficient demand.
- Finance risk, arising from inflation; changes in interest rates; increase in taxes, Change in exchange rates.
- Operation and maintenance risk, arising from the termination of the contract; technology risk; labor risk.
- Legal risk, arising from changes in law; changes in title/lease rights; insolvency of developer/service provider; change in security structure.

Way Forward

- The success of Public-Private Partnership PPP to a large extent depends on optimal risk allocation among stakeholders, the environment of trust among stakeholders, robust institutional capacity to undertake grooming and implementation of PPP projects.
- To develop the PPP projects in India, the Kelkar Committee proposed some changes. Some of them are:
  - The PPP model requires the involvement of a private partner to leverage financing and improve operational efficiencies. Therefore, state-owned enterprises or public sector undertakings should not be allowed to bid for PPP projects.
  - PPPs should not be used by the government to evade its responsibility for service delivery to citizens. This model should be adopted only after checking its viability for a project, in terms of costs and risks.
  - Further, PPP structures should not be adopted for very small projects, since the benefits are not commensurate with the costs.
  - Risk allocation and management: Public-Private Partnership PPP contracts should ensure optimal risk allocation across all stakeholders by ensuring that it is allocated to the entity that is best suited to manage the risk. A generic risk monitoring and evaluation framework should be developed covering all aspects of a project’s lifecycle.
  - Strengthening policy and governance: The Prevention of Corruption Act, 1988 should be amended to distinguish between genuine errors in decision making and acts of corruption by public servants.
  - Strengthening institutional capacity: A national-level institution should be set up to support institutional capacity building activities and encouraging private investments with regard to PPPs. Independent regulators must be set up in sectors that are going for PPPs.
  - Strengthening contracts: The private sector must be protected against such loss of bargaining power. This could be ensured by amending the terms of the Public-Private Partnership PPP contracts to allow for renegotiations.
  - PPP must not be a short cut only to save money or bridge fiscal gaps or transfer risks; it should be used to improve service quality or bring efficiency improvements.
14. Rural Economy

- About half of the national income and more than two third of the total employment is generated in rural areas.

- Government Spending Support
  - The budget for the Mahatma Gandhi National Rural Employment Guarantee Scheme has been raised to Rs 1 lakh crore due to the disruptions caused by the Covid-19 crisis.
  - The government expenditure for major rural-focused ministries rose by 109% year-on-year for the first two months of the ongoing financial year.
  - Amending the Essential Commodities Act, formation of a central law for agricultural produce marketing to remove inter-state restrictions could also prove to be game-changers for the sector.

- Impediments to rural growth
  - Uncertainty remains about rural wage growth, which has been depressed for some time.
  - Increased MGNREGA outlays don’t seem enough, construction-led employment may remain weak, and rising rural indebtedness could hurt.
  - The lack of required skills and technical knowledge are the main barrier for rural workers to enter manufacturing sector.

- Rural Employment
  - Services sector witnessed deceleration in output as well as employment after 2004-05.
  - Setting up of industries and improvement in infrastructure.
  - Human resources development programmes to impart necessary skills and training to rural youth to match the job requirement in manufacturing sector.
  - Rural areas have comparative advantage in services like post-harvest value addition, on farm storage, primary processing, grading etc.
  - Shifting workers out of conventional agricultural activities to manufacturing and services.
  - India should explore possibilities of creating blue collar jobs in and around agriculture.

- With unemployment figures at a 45-year high, and with the added economic destruction caused by the novel coronavirus pandemic, MGNREGA will have more importance in providing livelihood to migrant workers in coming times.

The importance of rebuilding the village economy:

- Gram Swaraj – Gandhiji’s talisman, the fruit of his life-long search for answers of India’s many ills.
- His pioneering idea of Swaraj or self-rule emanated from the very foundation of the Indian society, its villages, and implied self-reliance.
- Gandhi envisioned his ideal village as a self-sufficient republic – independent of its neighbours for its own wants, and, yet, interdependent for those dependent on it.
- For migrants, in the current scenario, villages are still a better option, with a social security net.
- Rebuilding the village economy can enable people to stay in their communities.
- Livestock, fisheries, dairy, vegetables, fruit and food processing are more labour-intensive and high value-yielding.
- Small scale industries, local mills, cottage and home-grown products can make this happen if supported with an efficient distribution system and conducive laws.

On the Panchayati Raj Diwas on April 24, the prime minister launched the ‘Swamitva Yojna’, or the ownership scheme, to map residential land ownership in the rural sector with the help of modern technology like drones. The scheme will go a long way in achieving social justice and...
securing the lives of rural people by providing them definite legal assurance of their land ownership.

Rural economy would need support of a suitable policy framework and reforms in pricing policy, tax, market access, credit and rural infrastructure, like warehouses and cold storage. The next two years or so of how we learn to live with coronavirus can redesign the economy towards safer and more sustainable production and consumption, with agriculture and the rural economy as its strength, rather than its weakness.

15. Skill Development

- Skill Development can be defined as proficiency that is acquired or developed through training or experience. **Skilled human resource is essential for inclusive growth.** Hence, skill development can be connected to a broader growth, employment and development mandating government interventions.
- Organisation for Economic Co-operation and Development (OECD) data depicts skills shortage in India.
- The government launched the Skill India mission which aims to train over 400 million people in India in different skills by 2022. Various schemes have been launched to further the aim of skill development.
- The skilled workforce is crucial for the success of Make in India, Digital India, and Smart Cities.
- **Demographic Dividend:** With most of the major economies of world having sizeable ageing population, India has huge opportunity of serving the booming market. The ‘demographic window’ is only a span of few decades. The skilled youth is required to save demographic dividend from becoming demographic disaster.
- **Skill Capital of World:** To convert this vision into reality, India needs to create a skilled and productive workforce matching international standards of quality and productivity through integration of skills and training along with education.
- **World Bank Assistance**
  - **Skill Acquisition and Knowledge Awareness for Livelihood Promotion (“SANKALP”)** is a programme of the Ministry of Skill Development with loan assistance from the World Bank. It aims to improve short term skill training qualitatively and quantitatively through strengthening institutions, bring in better market connectivity and inclusion of marginalised sections of the society.
  - Another scheme assisted by World Bank - STRIVE (Skill Strengthening for Industrial Value Enhancement).
- **Sharda Prasad Committee recommendations**
  - We need better oversight, with a national board for all skill development programmes.
  - The core work (accreditation, assessment, certification and course standards) cannot be outsourced.
  - We should also have a mandatory rating system for the ITIs that are published periodically.
  - A ranking of the ITIs on several parameters such as the one done by the National Assessment and Accreditation Council in tertiary education can be replicated.
  - There should be one system, with one law and one national vocational education and training system.
  - We need a national vocational act that replaces all scattered regulations — recommended in the 12th Five Year Plan.
- **Micro-institutional reforms: Need of the hour:**
  - Critical need to reskill ITI teachers and maintain the student-teacher ratio.
  - Financial support envisaged through the NSDC should be extended to the ITIs.
  - Institutional reforms such as moving the office of the Directorate General of Employment (the arm that has all data on employment) from the Ministry of Labour to the MSDE would help.
The best possible available solution is through a reimbursable industry contribution (RIC) — a 1-2% payroll tax that will be reimbursed when employers train using public/private infrastructure and provide data.

RIC, which is implemented in 62 other countries, was recommended in the 12th Plan and is an idea whose time has come.

Conclusion

India needs a new strategy to counter the phenomena of jobless growth. This requires manufacturing sector to play a dominant role. The focus of economic policy must be the creation of jobs and creating an enabling policy for youth to take up entrepreneurship and create more jobs in the market. India does not need five companies worth 5000 crores turnover but needs 5000 companies of 5 crore turnover.
Banking and Financial Sector

1. Privatisation of Public Sector Banks
   - **Due to the pandemic, India cannot afford to fund its banks.** The dimension of credit growth and management of loans — the assets side of the banks’ balance sheet is considerably worrying. Therefore, the prescriptions is the often repeated agenda of Big Capital, which is the privatisation of Indian banks and handing over the banking system to investors.
   - Many countries have privatised their nationalised banks, including some from the erstwhile Eastern bloc countries. Argentina, Australia, Brazil, Bulgaria, Chile, Denmark, Egypt etc.
   - Before bank nationalisation, a few corporate houses controlled all funds, credit flowed into speculation and the agriculture sector had virtually no access to credit. Nationalisation ensured that a large chunk of India’s population could access banking facilities, farmers got loans and the state could direct the flow of credit to priority sectors.
   - Public sector banks are created out of public money. These entities are therefore duty-bound to extend all types of services to customers across categories. Privatisation will impact this very root purpose.
   - **Private sector banks don’t share the government’s social responsibilities.** Even in matters of recruitment, they don’t follow the government’s reservation policy or don’t show any enthusiasm in giving education loans to needy students. Thus, we can see that privatisation is not the solution for problems facing PSBs. The solution lies in making the public sector more robust, not pawning it in the hands of a few powerful individuals.

**Conclusion:**
   - Privatisation of PSBs is not going to be easy, as it would involve building consensus amongst various stake holders, including unions and parliamentarians.
   - The decision to privatisate inefficient PSBs, consistently delivering negative returns, would require wide debate.
   - As the Planning Commission was a vestige of the socialist era, so is social banking. It is time to reconsider whether PSBs, are really required to serve the purpose of social banking in our country and at what cost.
   - Therefore, it would be useful to have a high-powered, government-appointed committee, to devise exact criteria, modus operandi, the type of privatisation model to be adopted, and engage with the social ramifications before privatisation is actually undertaken.

2. Role of RBI in an Economy
   - Reserve Bank of India (RBI) is India’s Central bank. It plays multi-facet role by executing multiple functions such as overseeing monetary policy, issuing currency, managing foreign exchange, working as a bank of government.
   - Before inflation targeting was formally introduced in 2016, RBI was doing multiple roles. They were responsible for growth by managing liquidity as well as interest rates.
   - They also took care of the financial system’s stability by supervising banks and NBFCs.
   - **Nobel laureate Joseph Stiglitz made a statement that if RBI Governor was the governor of the US Fed then the sub-prime crisis would not have occurred.**
   - The RBI plays a vital role in economic growth of the country and maintaining price stability.
   - A six-member Monetary Policy Committee, headed by RBI Governor, decides the benchmark repo rate.
   - RBI acts as a banker for both the central as well as state governments.
   - **Way Forward**
     - Some experts feel that what we require at this point of time is the old RBI that is an all-rounder rather than a specialist.
     - They have to manage multiple roles.
     - They have to manage issues like inflation, growth, rupee and financial system stability.
o Operational independence of central banks important for carrying out their responsibilities, says IMF
  o In a democracy, the final responsibility of all policy decisions must lie with Government.
  o Therefore, there should be mutual cooperation and coordination between RBI and Government in large at public interests for an efficient and sustainable economy.

3. Resolving India’s Banking Crisis

- To sustain the high growth rate India has achieved, the country should carry out banking sector reforms.
- IMF also said India must address the ongoing crisis in its banking sector to support investment and inclusive growth agenda.
- Inclusive growth has been India’s policy focus throughout and the 12th Five Year Plan was even titled as – “Faster, sustainable and more inclusive growth”.
- India’s banking system is characterised by a high share of Public Sector Banks (PSBs), accounting for over 70% of total assets.
- Rising NPAs have also put a strain on the health of the PSBs, reflected in their declining Return on Assets (ROA) and Return on Equity (ROE) ratios.
- The stresses on the banking sector have translated into a slowdown in industrial credit.
- India’s banks lag behind global counterparts in terms of financial depth or the size of banks.
- India also has low levels of private credit to GDP and credit to deposit ratio, relative to other emerging economies.

• Medium-term to Long-term Solutions:
  o Prompt Corrective Actions helps the bank to improve their business for the foreseeable future instead of hurting their operations.
  o Over the medium term, the RBI needs to develop better mechanisms for monitoring macro-prudential indicators. It especially needs to look out for credit bubbles.
  o Actions needs to be taken to strengthen the functioning of banks in general and, more particularly, PSBs.
  o Governance at PSBs, meaning the functioning of PSB boards, can certainly improve.
  o One important lesson from the past decades experience with NPAs is that management of concentration risk that is, excessive exposure to any business group, sector, geography, etc. is too important to be left entirely to bank boards.
- Overall risk management at PSBs needs to be taken to a higher level. This certainly requires strengthening of PSB boards. We need to induct more high-quality professionals on PSB boards and compensate them better.
- India needs a safe and efficient banking system to service the needs of a growing economy. The RBI as well in addition to government part would do well to use the current opportunity to strengthen the banking system.

4. External Commercial Borrowings

- External commercial borrowing (ECB) is basically a loan availed by an Indian entity from a non-resident lender.
- They are used widely in India to facilitate access to foreign money by Indian corporations and PSUs (public sector undertakings).
- In the post reform period, ECBs have emerged a major form of foreign capital like FDI and FII.
• Unlike China, most of the Indian foreign debt is mainly owned by the private corporate sector.
• ECBs have emerged as one of the chief conduits for strengthening the Indian corporate debt market.
• According to data on ECBs from RBI, it is found that its quantum has grown during the last decade (financial years 2007–17).
• The government follows a well-designed ECB policy - government puts ceiling for the total amount of ECBs that can be obtained by all Indian firms through the ECB route during a year.
• RBI recently liberalised the norms for ECB by including more sectors in the window.
• The Sahoo Committee report on ECB
  o The Sahoo Committee was set up in 2013, to develop a framework for access to domestic and overseas capital markets.
  o The Committee noted that the possibility of market failure can be ameliorated, by requiring firms that borrow in foreign currency to hedge their exchange risk exposure.
  o The present complex array of controls on foreign currency borrowing should be done away with.
  o The Indian domestic rupee debt market is a viable alternative to foreign borrowing for financing Indian firms and does not entail any market failure.
  o The policy should aim at removal of all impediments to the development of the domestic rupee debt market.

5. Deficit Monetisation
• Monetisation of deficit means printing more money.
• Monetisation of deficit happens when RBI buys government securities directly from the primary market to fund government’s expenses.
• RBI participates in indirect monetisation of deficit through its open market operations (OMOs).

Historical Background
• Monetisation of deficit was in practice in India till 1997, whereby the central bank automatically monetised government deficit through the issuance of ad-hoc treasury bills.
• Two agreements were signed between the government and RBI in 1994 and 1997 to completely phase out funding through ad-hoc treasury bills.
• With the enactment of FRBM Act, 2003, RBI was completely barred from subscribing to the primary issuances of the government from April 1, 2006.
• An escape clause in the 2017 amendment of the FRBM (Fiscal Responsibility and Budget Management Act) act permits such direct monetisation under special circumstances.

Consequences of Deficit monetisation
• Deficit monetisation also comes at a cost.
• It triggers a spike in inflation rate.
  o In the Indian scenario, it won’t immediately translate into a higher inflation rate due to the demand slowdown the economy is experiencing.
  o When the economy enters the recovery path, increased money supply could lead to a higher inflation rate.
  o It might become a challenge for RBI to follow an inflation targeting regime
• Fall in rupee value
  o When there is excess supply of the currency, it could lead to a fall in rupee value, leading to an outflow of foreign investment.
In the current scenario, a rupee depreciation would not be beneficial for the exports sector.
Thus, a fall in rupee value would be costlier for the economy.
- It could weaken the macro fundamentals of the country, risking a downgrade by the credit rating agencies

**Way Forward**
- The government will need to work on multiple dimensions.
- Bringing transparency in fiscal spends by depicting off-budget borrowings in the fiscal deficit
- Adopting a ‘credible medium term’ fiscal framework that relies on improving revenue mobilization.
- Fiscal policy will need to tackle grave issues of inequality by enhancing universal access to healthcare and education and progressive tax systems.
- A body like CAG can assume a greater role in checking the credibility of fiscal expenditures so as to carefully navigate the government in its path to fiscal consolidation.

**Conclusion**
India’s growth story needs to be driven by inclusivity and high productivity to start with and then probably, printing money could do less harm than good.
External Sector

1. Foreign Contribution (Regulation) Act (FCRA)
   - The Foreign Contribution (Regulation) Act (FCRA), 2010 has been enacted by the Parliament to consolidate the law to regulate the acceptance and utilization of foreign contribution or foreign hospitality by certain individuals or associations or companies and to prohibit acceptance and utilization of foreign contribution or foreign hospitality for any activities detrimental to national interest and for matters connected therewith or incidental thereto.
   - The Act specifies that NGOs require the government’s permission to receive funding from abroad.
   - The government can refuse permission if it believes that the donation to the NGO will adversely affect “public interest” or the “economic interest of the state”.
   - This condition is manifestly overbroad. There is no clear guidance on what constitutes “public interest”.
   - A regulatory mechanism to keep a watch on the financial activities of NGOs and voluntary organizations is the need of the hour. Citizens today are keen to play an active role in processes that shape their lives and it is important that their participation in democracy go beyond the ritual of voting and should include promotion of social justice, gender equity, inclusion etc.

2. Rising protectionism and trade nationalism in global trade
   - Trade protectionism and nationalism is defined as a nation, or sometimes a group of nations working in conjunction as a trade bloc, creating trade barriers with the specific goal of protecting its economy from the possible perils of international trading.
   - This is the opposite of free trade in which a government allows its citizenry to purchase goods and services from other countries or to sell their goods and services to other markets without any governmental restrictions, interference, or hindrances.

There are various methods of trade protectionism whose goal is to protect a nation’s economic well-being. These include:
   - Tariffs
   - Quotas
   - Subsidies
   - Local content requirements
   - Administrative trade policies
   - Antidumping policies
   - Exchange rate controls

Effects of Trade Protectionism on global trade:
   - Consumers’ limited choice and pay more for goods and services.
   - Infant industries may never grow up due to government trade protection policies.
   - Exchange rate controls that causes long-term inflation.
   - A trade war among nations.
   - Protecting jobs and industries.

Way Forward
   - Multilateral co-operation is needed to maintain an open global economy.
   - One real benefit of the multilateral systems like WTO is that the same rules, more or less, apply to everyone.
   - Major trading powers, such as Japan and the EU, should continue to insist on the importance of maintaining a rules-based trading system, with the WTO at its core.
• **WTO dispute settlement resolution mechanism** should be approached instead of unilateral decisions.
• The benefit of the WTO process is that it prevents the damaging consequences of trade protectionism.

**Conclusion**
Trade liberalisation within the framework of multilateral cooperation has been a key factor driving **global economic prosperity**. Trade integration helped to drive economic growth in advanced and developing economies in the second part of the 20th century, while also helping to pull hundreds of millions of people out of poverty.

3. **Global value chain (GVC)**
Global value chains (GVCs) integrate the know-how of lead firms and suppliers of key components along stages of production and in multiple offshore locations. Global Value Chains are undergoing profound changes, with important implications for the manufacturing and production ecosystem. When uncertainty rises, global value chains suffer.

**Importance of GVCs:**
• **Promote productivity and growth:** According to WTO report, a 1% increase in GVC participation is estimated to boost per capita income levels by more than 1%—about twice as much as standard trade.
• In Ethiopia, firms participating in GVC are more than twice as productive as similar firms that participate in standard trade.
• **Reduce poverty:** Since gains in growth from GVC are larger than from trade in final products, their impact on poverty reduction is also larger.
• Regions in Mexico and Vietnam that participated more intensively in GVCs experienced greater reductions in poverty.
• **Deliver better jobs:** Firms in GVC draw people into more productive manufacturing and services activities and tend to employ more women, supporting structural transformation in developing countries.
• **Important for growth:** GVCs are a powerful driver of productivity growth, job creation, and increased living standards. Countries that embrace them grow faster, import skills and technology, and boost employment.
• With GVC-driven development, countries generate growth by moving to higher-value-added tasks and by embedding more technology and know-how in all their agriculture, manufacturing, and services production.
• GVCs provide countries the opportunity to leap-frog their development process.

Mitigating the impact of COVID-19 on manufacturers and supply chains requires both **new approaches and new forms of collaboration to increase overall resilience**. Therefore, there is a need of proposing a **new framework to help governments and companies** think through the implications of the ongoing transformations of Global Value Chains for their industrial development and investment strategies. Thinking of **new opportunities for multi-stakeholder collaboration for national economies** in order to advance their levels of readiness, built resilience and have a role to play in next-generation Global Value Chains.

4. **Government’s ban on FDI through the automatic route from land border sharing neighbouring countries**
• A Foreign Direct Investment (FDI) is an investment in by foreign investors in the foreign based company. FDI under the automatic route does not require prior approval either by the government of India or by the Reserve Bank of India. Investors only require to notify and file documents in the concerned RBI office.
In a decision fraught with geopolitical and economic ramifications, the Indian government amended its foreign direct investment (FDI) policy to put a blanket ban on investments through the automatic route by entities from countries that share a border with India.

The move is seen as an attempt to ward off the threat of “opportunistic” Chinese takeover of Indian companies, whose valuations have been badly hit by the coronavirus pandemic.

The curbs, which were already in force for investments from Pakistan and Bangladesh, will extend to entities where Chinese citizens have “beneficial ownership” to ensure that the restrictions are not circumvented by routing investments via Hong Kong, Singapore or other countries.

**Concerns raised against the move:**

- The additional barriers set by Indian side for investors from specific countries violate WTO’s principle of non-discrimination, and go against the general trend of liberalisation and facilitation of trade and investment.
- As of December 2019, China’s cumulative investment in India has exceeded 8 billion US dollars, far more than the total investments of India’s other border-sharing countries. The impact of the policy on Chinese investors is clear.
- Chinese investment has driven the development of India’s industries, such as mobile phone, household electrical appliances, infrastructure and automobile, creating a large number of jobs in India, and promoting mutual beneficial and win-win cooperation.

**Way forward:**

- There is a need for India to develop new legal and institutional tools. As the ones employed by US and EU member states such as data protection laws or revised mergers and acquisitions rules, and institutional bodies.
- The Chinese have already restarted manufacturing when the rest of the world still grappling with coronavirus.
- China has several months’ advantage over all other major economies and can therefore secure significant benefits.
- After each crisis in recent years, China has consolidated itself. Indian government is trying to pre-empt acquisitions.
- Countries need to strengthen their domestic capabilities to meet the Chinese challenge.
Infrastructure: Energy, Ports, Roads, Airports, Railways, Etc

1. **Report on National Infrastructure Pipeline (NIP)**
   - The report of the task force headed by Atanu Chakraborty on National Infrastructure Pipeline (NIP). **Important recommendations** and observations made:
     - **Investment needed**: ₹111 lakh crore over the next five years (2020-2025) to build infrastructure projects and drive economic growth.
     - Energy, roads, railways and urban projects are estimated to account for the bulk of projects (around 70%).
     - Aggressive push towards asset sales.
     - Monetisation of infrastructure assets.
     - Setting up of development finance institutions.
     - Strengthening the municipal bond market.
   - **What is National Infrastructure Pipeline?**
     - It is a first-of-its-kind government exercise to pave the way for world-class infrastructure across the nation and improve the quality of life of the people.
     - The initiative aims to improve infrastructure project preparation and attract new investments both foreign and domestic.
     - The project will play a significant role in fulfilling India’s goal of becoming a $5 trillion economy by FY 2025.
     - NIP includes economic and social infrastructure projects.
   - **Green Infrastructure**
     - The real estate sector is held accountable for 22 percent of India’s annual CO2 emissions.
     - India will benefit if investments are steered towards green infrastructure projects.
     - Green bonds can provide a long-term source of debt capital for renewable infrastructure projects.
     - Germany is one country that has been a nest for the innovation and application of green technologies. This can provide a useful lesson for India.
   - **Way Forward**
     - Strengthening of PPP route, as it has been able to deliver world class infrastructure in sectors such as airports.
     - In 2015, the Kelkar Committee suggested overhauling of the PPP framework in India through measures such as funding through hybrid models and adoption of international best practices.
     - Ensure a robust regulatory environment for domestic and international funding of infrastructure by introducing an independent PPP regulator in India.
     - As India move towards completing 100 years of independence in 2047, the country must strive to emerge as a developed country complete with all modern and updated infrastructure and an example for the world to see.

2. **Renewable Energy**
   - As on April 30, 2020, the installed renewable energy capacity stood at 87.26 GW, of which, solar and wind comprised 34.81 GW and 37.74 GW, respectively.
   - Biomass and small hydro power constituted 9.86 GW and 4.68 GW, respectively.
   - In 2019, India installed 7.3 GW of solar power across the country, establishing its position as the third-largest solar market in the world.
   - With a potential capacity of 363 GW and with policies focused on the renewable energy sector, Northern India is expected to become the hub for renewable energy in India.

Why renewable energy source is given importance in contemporary times?
There is a strong growth of renewables in India, which now accounts for almost 23% of the country’s total installed capacity.

- The country’s demand for energy is set to double by 2040, and its electricity demand may
- India’s oil demand is expected to reach 6 million barrels per day (bpd) by 2024 from 4.4 million bpd in 2017, but its domestic production is expected to rise only marginally, making the country more reliant on crude imports and more vulnerable to supply disruption in the Middle East.
- India’s oil refining capacity is expected to rise to 5.7 million bpd by 2024, making it a very attractive market for refinery investment.

Efforts of the government

- National Solar Mission aims to increase the share of solar energy in the total energy mix.
- Inter State Transmission System (ISTS) charges and losses for inter-state sale of solar and wind power shall also be waived for renewable projects commissioned by December 2022.
- Government is facilitating developers by allowing Foreign Direct Investment (FDI) of up to 100% through the automatic route.
- Sustainable rooftop implementation of Solar transfiguration of India (SRISTI) scheme to promote rooftop solar power projects in India.
- International Solar Alliance.
- The Indian Renewable Energy Development Agency (IREDA) is a Non-Banking Financial Institution under the administrative control of this Ministry for providing term loans for renewable energy and energy efficiency projects.
- With Fame-I and Fame-II policy, impetus us given to electric vehicles market in India. By 2030, at least 30% vehicles will be electric vehicles.

One Sun One World One Grid’ (OSOWOG) initiative

- India has come up with a ‘One Sun One World One Grid’ (OSOWOG) initiative to set up a framework for facilitating global cooperation in this regard aiming at building a global ecosystem of interconnected renewable energy resources that can be seamlessly shared.
- The Union Ministry of New and Renewable energy (MNRE), through this initiative, plans to build global consensus about sharing solar resources among more than 140 countries of West Asia and South East Asia.
- OSOWOG will help to mitigate the ill effects on climate by providing clean and renewable energy sources, enabling member countries to fulfill their Nationally Determined Contributions (NDCs) towards reducing global warming.
- OSOWOG will provide a strategic rebalance in favour of India and will control the increasing Chinese dominance in Asian subcontinent, providing a better alternative to developing countries.

Way Forward

- Strong financial measures are required to finance the solar projects, innovative steps like green bonds, institutional loans and clean energy fund can play a crucial role.
- Promotion of research and development in renewable energy sector, especially in storage technology.
- Proper mechanism should be provided to tackle China’s dumping of solar equipments.
- Framework to avoid unnecessary delays in policy decision making and implementation.
- India needs to delink grid development with energy generation.
- There is a merit in developing solar and wind in a complementary manner. From grid security perspective, as compared to solar, wind is better in monsoon and night. Also, such a system will require a lower investment.
• In India, offshore wind power still remains untapped and given the power deficit in the country, this huge potential needs to be tapped.

3. India’s Renewable Energy Challenge
• Solar energy will play the most prominent role in the push for green energy.
• Not only does it have a larger share of India’s targets, it represents much of the growth of renewable energy.
• However, there are many hidden costs associated with green energy.

Social Cost:
- Economic survey had raised the issue that investment in renewable energy would have social cost Rs 11 per unit of electricity generated.
- Shift to renewable energy would leave the conventional plants under-utilised, lower than maximum technically feasible limit. Investments made in these plants would be deemed as sunken cost due to revenue loss.
- Banking sector which has extended loans to Coal plants would come under stress.
- Opportunity cost of land used for solar power plant. It requires 5-6 acres per 1 MW as per Ministry of New and Renewable energy.

Hidden Costs / Challenges
- Sunlight is available only during the day. Photovoltaics (PV) delivers electricity only when the sun shines. The peak demand in India is during the evening when solar energy (unless stored) is not available.
- Solar panels require much more space to generate the same amount of power as fossil fuel or nuclear power generators. Additional worries include concerns on panel quality/lifespan.
- We lack flexible markets and dynamic pricing — most power is sold via static power purchase agreements (PPAs).
- Land costs, availability, and bankability are also growing concerns.
- Wind is also seasonal, especially in coastal regions. Turbines might cause noise and aesthetic pollution. Birds have been killed by flying into spinning turbine blades.
- Hydro power generation is a good complement and India has enormous potential. However, this potential has not been tapped on account of environmental considerations.

Way Forward
- Storage and the cost shall be key determinants for sustainability of solar energy
- Time of Day (ToD) pricing — in which consumers are charged based on when power is consumed — will encourage not just dynamic load management but also boost energy storage technologies.
- Support distributed and off-grid generation systems, as well as the adoption of storage technologies.

4. Non-Renewable Electricity Generation
• Non-renewable energy is the conventional fossil fuels such as coal, oil and gas, which are likely to deplete with time.
• Coal accounts for around 70% of the country’s power generation. India’s thermal coal imports, rose 12.6% to nearly 200 million tons in 2019, as per government data reviewed by Reuters showed, reflecting the second straight year of growth in shipments of the fuel.

Coal Usage: Status
- Coal still provides half of India’s commercial primary energy and is the dominant fuel for power generation.
- India is the world’s second largest importer of thermal coal, and has the potential to be an ongoing source of demand growth.
- Coal India has ambitions to raise domestic coal production to 1 billion tons by 2025–26.
**Oil Supply:**
- Oil accounts for about 36% of India’s total energy consumption. India today is one of the top ten oil-guzzling nations in the world.

**Natural Gas Supply:**
- Natural gas accounts for about 8.9 per cent of energy consumption in the country.

**Challenges associated with Non-renewable energy sources:**
- Coal, oil and natural gas are the most important sources of primary energy in India. Inadequate domestic supplies of these hydrocarbons are forcing the country to increase its import bill.
- Failure to attract international investment in domestic hydrocarbon exploration e.g. NELP failed to attract interest of large international energy corporations.
- Lack of skilled manpower and poorly developed infrastructure for developing conventional and unconventional energy is the need of hour.
- India’s fragile energy security is under severe pressure from its rising dependence on imported oil, regulatory uncertainty, international monopolies and opaque natural gas pricing policies.
- India seeks to achieve its energy security through multiple partners e.g. Indo-USA nuclear deal, Oil import from Middle East etc. However, in recent times due to conflict among India’s energy partners e.g. USA and Iran; India had to reduce oil import from Iran.

However, non-renewable sources of energy is not the sustainable solution which India should focus on. India has committed to achieve 40% of India’s power capacity to be based on non-fossil fuel sources, by 2030 under the nationally determined contributions.

**Conclusion:**
India’s energy policy currently focuses on bringing affordable electricity to all homes. India’s per-capita electricity consumption is only one-third of the world average. The environment is equally important while climate change mitigation is the primary concern. Despite growing coal consumption, India is on track to meet its Nationally Determined Contribution under the Paris Agreement. India must speedup her efforts to shift towards renewable energy to meet her socio-economic goals in a sustainable manner.

5. **India’s Strategic Oil Reserves**
- Strategic petroleum reserves are essentially huge stockpiles of crude oil to keep the wheels of the country running in crunch situations.
- Many major global oil consumers such as the US, China and Japan have built massive strategic reserves of oil over the years, and India too embarked on the path in the last decade.
- Taking advantage of low crude prices due to the COVID-19 situation, India

---

**Objective** - To ensure energy security of the country by serving as a cushion during any external supply disruptions

- **GoI has set up 5.33 MMT of strategic crude oil storages in SPR Phase-I at following 3 locations:**
  - Vishakhapatnam - 1.33 MMT
  - Mangalore - 1.5 MMT
  - Padur - 2.5 MMT

- **Another 6.5 MMT of strategic crude reserves is being planned in SPR Phase-II at:**
  - Chandikhol, Odisha (4 MMT)
  - Padur, Karnataka (2.5 MMT)
filled its strategic reserves to full capacity.

- **Importance of strategic Petroleum reserve for India:**
  - India still needs to import 83% crude oil of its requirement which increase import bill of India which further widens the Current Account Deficit (CAD) of the country.
  - The fluctuations in the price of the crude oil in the international market create an atmosphere of uncertainty in the country.
  - The trouble is India produce very little oil of its own and are dependent on imports for more than 80 per cent of its needs.
  - There’s always the risk of supply disruption from natural disasters, war or other calamities.
  - Thus strategic petroleum reserves add much-needed heft to the country’s energy security.

As a summary, it can be said that construction of strategic petroleum reserves by India is a great way to secure country’s energy security.

6. **Private trains**

- The Centre’s move to open up 109 route pairs in 12 clusters to 150 ‘modern, world-class’ private trains could set off a major transformation in passenger rail travel.
- **Indian Railways (IR) has the fourth-largest rail network in the world,** behind only the US, China and Russia.
- Indian Railways has decided to take essential steps to transform itself into a ‘net zero’ carbon emission transportation network by 2030.

**Need for privatisation of railways**

- **Low Quality of Service, Catering and Punctuality:** CAG report noted that, at present the focus is mainly on improving the façade and passenger facilities, rather than removing bottlenecks to ensure timely movement of trains.
- **Low Internal Revenue:** The problem of cross-subsidization has severely affected the internal revenue generation of the Indian Railways.
  - Cross subsidization: Money earned through freight traffic is diverted to meet the shortfalls in passenger revenue, and thus the development of freight traffic infrastructure suffers.
- **Lack of fiscal space:** The working of Indian Railways is caught up between making it a self-sufficient organisation and serving it as a transport system for the poor.
  - The passenger fares usually remain static for years, burdening the Union Budget.
  - In order to keep finances in check, freight charges have been raised in the past.
  - But the discrepancy between freight charges and passenger fares seem to distort the Railways’ performance.
  - The recent decision of surge pricing of tickets in premium trains is a move in a correct direction.
- **Operating Efficiency:** Indian railways has a huge employee base of 1.3 million, which includes powerful workers’ unions.
- **Increasing Number of Accidents:** Repeated railway accidents have further raised questions on government ownership of railways.

**How can privatisation help?**

- Improved Infrastructure
- Normalization of prices due to the competition
- Improved Security
- Better Technological Innovation
- Better customer service

**Problems of privatisation**

www.insightsonindia.com
• **Limited Coverage:** Privatisation of railways would mean the railways will become a profit-making enterprise, this would lead to the elimination of railways routes that are less popular.
• **Not Inclusive:** Hike in fares can render the railways out of reach for lower-income groups.
• **Economic impact:** Indian Railways is the backbone of India, it provides low fare transportation to agricultural and industrial trade.

*Bibek Debroy Committee* made following recommendations for Privatisation of some components of the railways in India.

• **Need for Modernisation:** It is important to modernize the railways, so measures must be taken to reimburse the social costs speedily so that resources of the railways is better allocated and facilities are upgraded from time to time.
• **Delegation of functions:** The peripheral function of railways *(cleanliness, ticket disposal, traveller’s amenities), must be privatized.*
• **The non-core function of railways must be privatized:** These activities include running hospitals and schools, catering, real estate development, including housing, construction and maintenance of infrastructure, manufacturing locomotives, coaches, wagons and their parts.
• **Expansion of Indian Railways Manufacturing Company:** According to Debroy, wagons are already produced by the private sector. Coaches and locomotives could follow. Unless they are freed from 59 their constraints, the existing production units will be unable to face this competition.
• **Encouraging private entry:** Private entry into running both freight and passenger trains in competition with Indian railways should be allowed and private participation.

India should learn from its mistakes in opening up telecom and aviation, and ensure that the social goals of the rail network do not suffer. The opening up of rail services can usher in modernisation and efficiency, provided it is managed well.
Industrial Policy and Industrial Growth

1. **Automobile Sector**
   - In 2019, Automobile sales in India witnessed its sharpest decline in nearly 19 years, dropping 18.71 per cent, rendering almost 15,000 workers jobless over the past quarter as per data released by the Society of Indian Automobile Manufacturers.
   - The Covid-19 pandemic has further compounded the crisis.

   **Policy and Schemes**
   - **Automotive Mission Plan 2016-26 (AMP 2026):**
   - **FAME-II scheme**
   - **National Mission for Electric Mobility (NMEM)**
   - **NATRIP project:** To adopt global best practices to ensure road safety, environmental protection etc. in design, manufacture, testing and operation of motor vehicles in India

   **Significance of promoting domestic automobile sector**
   - The automotive industry is a pillar of the economy and a key driver of macroeconomic growth and technological advancement. In India, the automotive industry contributes 7.1% to the total GDP and provides employment to about 32 million people, directly and indirectly.
   - The automobile sector can play a very important role in the realization of Atmanirbhar Bharat as it faces heavy competition from vehicles, parts and accessories directly from China. It could help reduce imports, which will help reduce the trade deficit while simultaneously boosting indigenous consumption.
   - The auto sector is also one of the biggest recipient of foreign direct investment and between April 2000 and March 2020, the sector has received FDI amounting to $ 24.2 billion.
   - The EV industry will create five crore direct and indirect jobs by 2030.
   - It will help us meet our commitments towards Paris agreement, as Government of India has unequivocally demonstrated its intention to curb vehicular pollution through pivotal initiatives such as Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME) scheme, and regulatory measures such as early introduction of Bharat Stage- VI.

2. **Electric Vehicles in India**
   - The vision for the future of mobility in India is based on 7 Cs: common, connected, convenient, congestion-free, charged, clean, and cutting-edge.
   - Electric vehicles are the future of India's transportation system and could save billions of dollars in fuel cost while also reducing pollution, a report released by NITI Aayog said.
   - Adoption of electric and shared vehicles could help country save $60 billion in diesel and petrol along with cutting down as much as 1 gigatonne (GT) of carbon emissions by 2030.
   - It will help in achieving the target of “Paris climate agreement”.
   - Electric vehicles operating cost per kilometre driven is lower and it contributes to cutting city pollution.
   - According to a research, 90 per cent of India’s car owners would willingly switch to electric cars, with proper infrastructural support.
   - **FAME India** is a part of the National Electric Mobility Mission Plan. Main thrust of FAME is to encourage electric vehicles by providing subsidies.
   - **FAME focuses on 4 areas i.e. Technology development, Demand Creation, Pilot Projects and Charging Infrastructure.**
   - **Faster Adoption and Manufacturing of Hybrid and Electric Vehicles, or FAME 2 scheme** aims to boost electric mobility and increase the number of electric vehicles in commercial fleets.
   - **International Practice**
     - In Norway one in three vehicles (33.1%) registered is plug-in electric.
China and US account for more than half of electric cars in the world.
- China's auto industry is rapidly turning all-electric.

**Concerns / Challenges**
- The Indian electric vehicle (EV) market currently has one of the lowest penetration rates in the world.
- India’s *limited ability to manufacture cost effective batteries*.
- India does not have any known reserves of lithium and cobalt, which makes it dependent on imports of lithium-ion batteries from Japan and China.

**Way ahead:**
- India needs *auto industry’s active participation to ease electric mobility transition*.
  - The auto and battery industries could collaborate to enhance customer awareness, promote domestic manufacturing, promote new business models, conduct R&D for EVs and components, consider new business models to promote EVs.
- Government should focus on a *phased manufacturing plan to promote EVs*, provide *fiscal and non-fiscal incentives* for phased manufacturing of EVs and batteries.
- Increasing focus on *incentivizing electric two-wheelers* because two-wheelers account for 76% of the vehicles in the country and consume most of the fuel.
- *Private investment* in battery manufacturing plants and developing low cost production technology is needed.
- *Acquiring lithium fields* in Bolivia, Australia, and Chile could become as important as buying oil fields as India needs raw material to make batteries for electric vehicles.
- *Providing waiver of road tax and registration fees*, GST refunds and free parking spaces for EVs.
- Different government departments can consider a bouquet of potential policies, such as congestion pricing, ZEV credits, low emission/exclusion zones, parking policies, etc. to drive adoption of EVs.

### 3. Textile Sector

- The *textiles and apparel industry in India have strengths across the entire value chain* from fiber, yarn, fabric to apparel. It is highly diversified with a wide range of segments ranging from products of traditional handloom, handicrafts, wool and silk products to the organized textile industry. The organized textile industry is characterized by the use of capital-intensive technology for mass production of textile products and includes spinning, weaving, processing, and apparel manufacturing.
- The domestic textiles and apparel industry contribute 2% to India’s GDP, 7% of industry output in value terms and 12% of the country’s export earnings.
- The textiles and apparel industry in India are the *second-largest employer in the country* providing direct employment to 45 million people and 60 million people in allied industries.
- India’s textile industry grapples with *domestic issues* including outdated technology, inflexible labour laws, infrastructure bottlenecks, and a fragmented nature of the industry.
- The textiles sector in India, primarily dominated by the unorganized and small players, had taken a major hit with demonetization and the implementation of the goods and services tax (GST).
- *Free-trade pacts*: like the South Asia Free Trade Agreement (SAFTA) have led to intense competition from countries like Bangladesh which have zero-duty access to the Indian market. The government should take a re-look at such pacts and try to work out a solution.
- *Government needs to move away from export-specific subsidy, which violates WTO norms, to focus on regional and cluster subsidies*, technology upgradation and skill development subsidies, which benefit all the producers.
- While over the past few years, Vietnam and Bangladesh have been the key beneficiaries for a shift away from China, India also stands to gain from any such market opportunity which may arise, given its strong presence in the apparels if adequate measures are taken up to
ensure capacity building and ease of doing business in apparel which will automatically ensure India is atmanirbhar in apparels and textiles.

4. Labour Reforms
Balance between workers’ rights and its need to attract investment and creating jobs:
- **Labour on the Concurrent List** and with a confusing array of 300+ laws dealing with it, reforms were overdue. Labour laws, like laws in several other areas, are essentially a colonial legacy.
- India is a State with weak governance mechanisms and poor accountability frameworks for the executive. It is alleged that corruption in the labour department disheartens industrialists and disincentivises investment, so as a solution the laws themselves need to be done away with.
- The narrative of the last few years and especially of the past few months portrays labour as ‘the problem statement’. Labour should be seen as stakeholders and part of the ‘solution framework’ and not treated as expendable entities or equated to consumable resources. Existing labour laws are primarily about protecting jobs and not about protecting people. And this neither benefits the industry nor the labour force.
- The 2014 World Bank Enterprise Survey of India showed that less than 5% of firms identified labour regulation as a primary obstacle to their operations.
- Niti Aayog’s own report mentions that among many Indian states, labour regulation does not feature as the biggest primary obstacle for firms. In fact, it is corruption which is the number one barrier for the private sector to thrive.
- Labour costs are steadily falling, and the Annual Survey of Industries data shows this. Labour is already very cheap in India and other factors that reduce India’s competitiveness have to be first addressed if investments are to be attracted.
- The Covid-19 crisis presents us with the opportunity to pause and try to appreciate what the future of work could look like a few years from now. So an ideal balance must be kept between protecting the rights of workers and the need to attract investment. They should not be seen a conflicting but as reforms which complement each other.

5. Small and medium-sized enterprises (SMEs)
- The importance of SMEs in any economy cannot be overlooked as they form a major chunk in the economic activity of nations. India has nearly three million SMEs, which account for almost 50 per cent of industrial output.
- However, SMEs which form the backbone of industrial development in India are not export competitive and contribute only about 34 percent of exports. It is this feature of the SMEs that make it an ideal target to realize its potential export competitive.
- SMEs in India are contributing significantly to employment generation, exports, innovation and inclusive economic growth. SMEs account for 45% of industrial production, 40% of total exports and also significantly contribute to GDP.
- Therefore, it is of utmost importance that market access and better trade facilitation for SMEs are provided in the partner countries. Further, higher costs of trade be reduced by ensuring access to information on potential suppliers and overseas business partners, sectoral export promotion through export promotion schemes of the foreign trade policy.

6. Mines and Minerals
- India holds a fair advantage in cost of production and conversion costs in steel and alumina. Its strategic location enables convenient exports to develop as well as the fast-developing Asian markets The Centre has taken a number of steps for the development of mining sector in the country, including formulating a new mineral policy in 2019.
• **Mines and Mineral (Development and Regulation) (MMDR) Act, 1957** was amended with effect from January 12, 2015 and auction has been introduced as a method of allocation of mining leases to bring greater transparency in the mining sector.

• **National Mineral Policy 2019**: The New National Mineral Policy will ensure more effective regulation.

• **The Mining Surveillance System (MSS)** is launched to check illegal mining through automatic remote sensing detection technology.

• **District Mineral Foundation Fund (DMF)** was established for the welfare of mining-affected people and areas under Pradhan Mantri Khanij Kshetra Kalyan Yojana [PMKKKY].

• **The National Mineral Exploration Policy** has been released to attract private exploration agencies.

• **100% FDI permitted via automatic route** for mining and exploration of metal and non-metal ores. And approval route for mining of titanium bearing minerals and its ores.

### Way Forward

• **Ease of Doing mining**: There is a need for an expedition of the clearance process for the judicious utilisation of mineral resources.

• **Clamp down on illegal mining**: Stringent implementation of mining-related rules is needed especially regarding the ban on Rat-Hole and unscientific mining to prevent mine-related accidents.

• **Accountability**: Ensure transparency in block allocations and rule-based order should be established.

• **Leverage Technology**: Use of technology for a better way of mineral exploration and surveillance systems.

• **Ensuring Sustainable mining**: Proper rehabilitation of the displaced population, the tribal rights need to be respected in accordance with the law.
  - Proper environmental impact assessment (EIA) and social impact assessment (SIA) must be conducted before allocating the projects.
  - Utilisation of DMF to construct physical & social infrastructure and efforts should be made for the integration of the local population in the process.

• **Protect forests**: A proper regulatory framework for the implementation of the NGT guidelines for the protection of forest and the least damage to the environment.

• **Adopting global practices in operations and ensuring safe working conditions for workers in the mining sector.** Undertake measures to avoid occupational hazards.

### Conclusion

- There is significant scope for new mining capacities in iron ore, bauxite and coal and considerable opportunities for future discoveries of sub-surface deposits. Infrastructure projects continue to provide lucrative business opportunities for steel, zinc and aluminium producers. Considering these factors, the schemes will prove highly progressive to aid the mines and minerals sector in India.

### 7. **Electronics Manufacturing**

• **The Production Linked incentive scheme** for electronics manufacturing proposes a financial incentive to boost domestic manufacturing and attract large investments in the electronics value chain including mobile phones, electronic components and Assembly, Testing, Marking and Packaging (ATMP) units.

• The Central government has unveiled a production-linked incentive (PLI) scheme to encourage domestic manufacturing investments in **10 more sectors**, with an estimated outlay of about ₹1.46 lakh crore over the next five years.

What the scheme seeks to achieve?

www.insightsonindia.com
• Make domestic manufacturing competitive and efficient.
• Create economies of scale.
• Make India part of global supply chain.
• Attract investment in core manufacturing and cutting-edge tech.
• Competitive manufacturing would in turn lift exports.
Agriculture and Associated Issues

1. Farmer’s suicide

- In India, most of the people of the country are directly or indirectly involved in the agriculture sector. It would not be wrong to say that ‘Indian farmers’ are the backbone of the economy. It employs 41% of our work force (World Bank).

Problems plaguing the farmers:
- Small and fragmented land-holdings leading to poor productivity, inability to use mechanisation.
- Increased input costs of seeds, fertilizers, manures etc. The lack of working capital, formal credit facilities push farmers to high interest loans at moneylenders.
- Monsoon-dependence and lack of irrigation facilities doubled with soil erosion and loss of fertility of land due to monocropping.
- The low yield and unattractive prices are pushing peasants out of farming to unskilled labour in urban areas.
- Storage facilities in the rural areas are either totally absent or grossly inadequate leading to immediate sale of produce.

Dire situation of farmer suicide:
- According to Accidental Deaths and Suicides in India report 2019 by the National Crime Records Bureau, at least 10,281 persons involved in the farm sector ended their lives in 2019, accounting for 7.4 per cent of the total number of suicides in India which was 139,516.
- The top six states — Maharashtra (3,927 suicides), Karnataka (1,992), Andhra Pradesh (1,029), Madhya Pradesh (541), Chhattisgarh (499) and Telangana (499) — account for 83 per cent of the deaths committed by persons involved in farm sector.
- The numbers highlight another worrying trend. In 17 states, more farm labourers have committed suicides than farmers, while the reverse is true for seven states. Yet, only 58 per cent of the total suicides committed by people employed in the sector are farmers.

Causes of farmer suicides in India:
- 80 per cent of farmers killed themselves in 2015 because of bankruptcy or debts after taking loans from banks and registered microfinance institutions.
- Moneylenders were more flexible compared to banks and microfinance institutions. “The organised sector is less flexible because rules don’t permit them flexibility.
- Crop-failure and other farm-related issues like drought, price crashes etc.
- The dependence of farmers in Marathwada on water-guzzling cash crops such as sugarcane has been cited as one of the reasons for the distress.
- High input costs and worsened quality of soil due to excessive use of fertilisers.
- Small Farmers grow cash crops such as cotton on small land which is highly susceptible to global price fluctuations.

At a time reported a contraction of 23.9 per cent in national GDP, but agriculture was the only sector to have reported positive growth. It shows how important agriculture and farmers are to our economy. Once in your life, we may need a doctor, a lawyer, a policeman and a preacher. But every day, three times a day, we need a farmer. The pandemic gives us an opportunity to walk the talk.

2. Focus on Horticulture Crops

- Within the agriculture sector, the horticulture sector is widely recognised as the most rapidly growing sector. It has been rightly called as the silent revolution because of its varied
achievements. The Indian agricultural land covers area of 140 million hectares out of which, 17% of area is dedicated to horticultural crops that contributes to 30% of total agricultural GDP.

Horticulture crops and increase in farm income:
- The NHM, a centrally-sponsored scheme, was launched in 2005-06 with one of its major objectives being to increase horticulture production and doubling farmers’ income.
- Horticulture crops are characterised by high-value crops, higher productivity per unit of area and lower requirement of irrigation and input cost.
- Share of value of export earnings from horticultural crops has been higher than the export value of total foodgrain.
- Horticultural production is relatively easy for unskilled people and it can play an important role in poverty alleviation programs and food security initiatives by providing work and income.
- In a nutshell, horticulture production contributes more to crop production despite much lower land use and lower input cost.

Horticulture crops and increase in nutritional security:
- Horticultural interventions to enhance food safety at farm level combined with extensive nutrition and food safety education can offer a long-term food-based strategy to control and eliminate micronutrient malnutrition.

The growth of horticultural crops is economically rewarding. This sector is expected to grow and contribute to food and nutritional security, provided, the sector is nurtured with focused infrastructure development and has a conducive policy environment.

3. Bt cotton in India
- Genetically Modified (GM) pest resistant Bt cotton hybrids have captured the Indian market since their introduction in 2002. These now cover over 95% of the area under cotton, with the seeds produced entirely by the private sector.
- India’s cotton production in 2019 is projected as the highest ever: 354 lakh bales. Bt cotton’s role in increasing India’s cotton production, which GM proponents have highlighted as being instrumental, has also been used to argue for extending GM technology to increase food crop yield.
- However, critics say that Bt cotton hybrids have negatively impacted livelihoods and contributed to agrarian distress, particularly among resource-poor farmers.

Usage and performance of Bt-cotton in India
- According to the Ministry of Agriculture, from 2005, adoption of Bt cotton rose to 81% in 2007, and up to 93% in 2011. Many short-duration studies examining Bt cotton, in the early years, pronounced that Bt was a panacea for dwindling yields and pesticide expenses. The two-decade mark now provides an opportunity to review GM cotton in India more comprehensively.
- The rise in cotton yields can be explained by improvements in irrigation, for instance in Gujarat, and a dramatic growth across the country in the use of fertilizers. Gross fertilizer use for cotton more than doubled from 2007-2013; the average rose from 98 kg/ha in 2003 to 224 kg/ha in 2013.
- There is a strong correlation between the rise in use of fertilizers in individual States and yields, and this bias increase when it is combined with improvements in irrigation.

Conclusion
- It is important to recognise that adoption of any new technology such as Bt is a choice and not an imperative. For example, some of the major cotton-producing countries such as Brazil...
(until 2012) and Turkey (up to the present) have achieved high productivity without the use of GM cotton by using alternative pest-management approaches.

- The purpose of risk assessment in GMO regulation is to enable exercising of this choice by careful and comprehensive evaluation of costs and benefits.
- In the case of Bt cotton hybrids, the benefits were limited and costs may well have been too high, particularly for resource-poor farmers.

4. **Nano-Fertilizers**

- Nanotechnology is a promising field of research which has the potential to offer sustainable remedies to pressing challenges confronted to modern intensive agriculture.
- Nanofertilizers have the potential to **enhance nutrient use efficacy (NUE)** owing to higher nutrients uptake caused by smaller surface area of nanomaterials which increases nutrient-surface interaction. Along with **boosting crops yield** on sustainable basis, nano fertilizers hold potential to **put a halt to environmental pollution caused by fertilizers**.
- Slow release fertilizers coated with nanoparticles significantly **reduced nitrate leaching and de-nitrification**.
- Nanofertilizers feed the crop plants gradually in a controlled manner in contradiction to rapid and spontaneous release of nutrients from chemical fertilizers.
- Despite offering numerous benefits pertaining to sustainable crop production, nanofertilizers have some **limitations regarding research gaps, absence of rigorous monitoring and lack of legislation** which are currently hampering the rapid development and adoption of nanoparticles as a source of plant nutrients.
- The **higher cost** of nano fertilizers constitutes another hurdle.
- Nanofertilizers applied alone and in conjunction with organic materials have the potential to reduce environmental pollution owing to significant less losses and higher absorption rate.
- Researchers and regulators need to shoulder the responsibility by providing further insights in order to take full advantage of the nanofertilizers for sustainable crop production under changing climate with the risk of causing environmental pollution.

5. **Agriculture loan waivers**

- Farm loan waiver is the practice of writing off the loans given to farmers owing to their inability to pay them back due to reasons like calamity, disaster, political policies etc.
- Farm loan waivers, is seen as a necessary promise for electoral victory.
- **NSSO Situational Assessment Survey of Agricultural Households** shows that 52% of farming households are indebted, the rates are as high as 89-92% in some States.

**Arguments against Loan Waiver**

- Study shows that farm loan waivers are not the answer.
- There are evidences on the **ineffectiveness of the Agricultural Debt Waiver and Debt Relief Scheme (ADWDRS) of 2008**.
- Loan waiver scheme did not have any positive impact on household savings, credit uptake from banks, or investments.
- Economic theory suggests that waiving debts via such a scheme will lead to **debt overhang** (essentially stagnated investments due to any new income being used largely for paying back old debts).
- A farm loan waiver benefits only farmers who have access to formal credit—commonly estimated at 30% of farmers.
- **RBI Governor Shaktikanta Das said**, Farm loan waiver adversely impacts the credit culture and the behaviour of borrowers.

- Farm loan waivers do not help the marginal and small farmers who form almost 85% of our farmers. Further, the **tenant farmers, women are also left out due to lack of land records in their name**.
Effects / Consequences of agriculture loan waivers:

- Enormous fiscal burden.
- It will worsen states’ debt-to-GDP ratio.
- Various Research provides evidence that a blanket waiver scheme is detrimental to the development of credit markets.
- The RBI, in a report on state finances had cautioned against the propensity of waiving loans as they were increasing the fiscal deficits of the states.
- Repeated debt-waiver programmes distort households incentive structures, away from productive investments and towards unproductive consumption and wilful defaults.
- The monetary policy committee (MPC) of the Reserve Bank of India (RBI) pointed out that the implementation of farm loan waivers across states could hurt the finances of states and make them throw good money after bad, and stoke inflation.
- Such measures can erode credit discipline and may make banks wary of lending to farmers in the future. It also makes a sharp dent in the finances of the government that finances the write-off.
- With loan waivers, capital investment takes a back seat, aggravating both demand and supply side constraints in the agriculture sector due to a likely fall in asset creation (irrigation, markets, power, etc) that is crucial for sustainability of the agriculture sector.

Way Forward

- Greater focus is required on enhancing farmer loan repayment capacity via smooth supply and value chains, and better price realisations.
- A mix of policy interventions that are aimed at reducing farmer vulnerability and helping them save more for tomorrow so that they can invest in improving their agricultural productivity.
- An Income Support Scheme for small and marginal farmers might turn out be a viable solution.
- The cost of such a scheme will be around only Rs 50,000 crore a year -- or 0.3% of GDP. This is lower than the incremental debt waiver.
- Partial waivers or small loans waivers alone won’t help.
- The Swaminathan Committee in 2004 had recommended farmers be allowed to fix the price for their produce on their own (cost of production plus 50% as profit), keeping local factors in mind.
- The government must focus on three things: crop insurance, better irrigation and subsidised seed and fertilisers.
- Alternative ways to help farmers in distress, such as raising the interest subvention limit for borrowers who repay on time.

Conclusion:
Analysis suggests that such waivers are unlikely to help the cause of either distressed farmers or troubled banks over the long run. And they may well impair the quality of public spending by states, as the central bank fears. Another option is to explore alternative policy interventions like agricultural insurance. The desired intervention could then be the one, which nudges households into investing more now and increase long-term productivity.

6. Pulses revolution in India

- Pulses occupy an important place in Indian agriculture. India moved from a situation of acute scarcity of pulses in 2015-16, to providing free pulses to most of the citizens in the country.
- The 2015-16 pulses crisis was not a wasted opportunity; it set forth an ambitious and desirable outcome to make the country self-sufficient in pulses production.
- The twin factors critical to an immediate increase in pulses production was the minimum support price (MSP) and procurement from farmers directly at MSP.
• Additional coverage was provided for pulses under the **National Food Security Mission (NFSM)** launched in 2016-17.

• As in the wheat and rice revolutions, the **rewards of the increased pulse production are also being reaped by a few farmers**, concentrated mostly in irrigated areas. Attracted by the high prices that such pulses as pigeon pea and chick pea fetch in the market, these farmers are now growing them on a regular basis.

• Despite the increasing yields of some pulses, the **demand for pulses has consistently exceeded production**. Though India is the world’s largest producer of pulses, it is also the largest importer.

• According to **ICRISAT** there has been **no concerted research effort on a particular pulse**. The All India Coordinated Pulses Improvement Project has had to concentrate on 10 different crops simultaneously, so the relative research attention on each crop has been less than on rice or wheat.

• India need to produce 40-50 lakh tonnes of additional pulses for meeting the domestic requirement and this can be possible only if we develop high yielding short duration, drought and insect-pest resistance varieties of pulses.

• The important role that pulses can play in **sustainable crop production systems**, in particular through their contribution to **improved soil fertility and to agro-biodiversity** along with providing a balanced and healthy diet as evidenced by their use by the **World Food Programme** and other food aid initiatives makes it a naturally optimal choice.

### 7. Minimum Support Price (MSP)

- In theory, an MSP is the minimum price set by the Government at which farmers can expect to sell their produce for the season. **When market prices fall below the announced MSPs, procurement agencies step in to procure the crop and ‘support’ the prices.**

- **Commission for Agricultural Costs and Prices (CACP)** takes into account demand and supply, the cost of production and price trends in the market among other things when fixing MSPs.

#### Importance of MSP:

- **Protects farmers against market fluctuations.**

- Provides an economic assurance and security for the farmers.

- **Food security** – Large scale procurement at MSP helps the government in catering the requirements of food security which is targeted by government through schemes like MDM, Aanganwadi, NFSA, etc.

- **Boosts production** – It motivates farmers to grow targeted crops and thus helps in achieving the targets of agriculture production.

- MSPs ensure that farmers get a minimum price for their produce in adverse markets.

- MSPs have also been used as a tool by the Government to incentivise farmers to grow crops that are in short supply.

#### Challenges of MSP:

- **Distorted Production** – Recent trends by NSSO indicates shift in pattern of food consumption from cereals to protein rich foods, but no such remarkable shift is seen in sowing or production patterns. For e.g. India is largest producer and consumer of pulses in the world, but still 25 % of the pulses consumed are imported.

- **Huge Stocks**–Government has huge stocks which are almost double the requirements for Buffer stock, PDS and Other government schemes such as Midday Meal Scheme.

- **Out of control Inflation**–Facts by surveys and analysts suggests an obvious directly proportional link between hike in MSPs and food Inflation.

- **Middlemen**: The other major problem with the MSP-based procurement system is the working dependence on middlemen, commission agents and red-tapism of the APMC (Agriculture Produce Marketing Committee) officials.
- Environmental harm – It degrades the soil because of irrespective of the soil condition, some crops are preferred which have MSP over them which results in exploitation of group water resources, alkality, decrease in the production of the crops in long run and much harm to environment.
- Only a selected few states such as Punjab, Haryana, MP and west UP have well-developed procurement infrastructure.
- More than three-fourths of farming households don’t produce any marketable surplus and hence can’t really benefit from price support.
- **Recommendations by NITI Ayog**
  - The awareness to farmers and timely dissemination of information till the lowest level so that it would increase the bargaining power of the farmers.
  - Timely payment should be ensured.
  - MSP should be announced well in advance of the sowing season so as to enable the farmers to plan their cropping.
  - Improved facilities at procurement centres, such as drying yards, weighing bridges, toilets, etc.
  - More godowns should be set up and maintained properly for better storage and reduction of wastage.
  - The criteria for fixing MSP should be current year’s data and based on more meaningful criteria rather than the historical costs.
  - The Procurement Centres should be in the village itself to avoid transportation costs.
  - The MSP scheme requires a complete overhaul in those States where the impact of the scheme is ‘nil’.
- The ambitious projects like e-NAM, doubling farmer’s income by 2022, price stabilisation fund, implementation of Swaminathan and Shanta Kumar committee is required.
- Coordination is needed amongst union ministries dealing with agriculture, food, food processing, fertilisers, water, rural development, and trade to evolve a holistic approach to agriculture and farmers’ incomes.

**Farm Bills, 2020 and MSP:**
The following were recently passed by Parliament during its monsoon session.
- The Farmers’ Produce Trade and Commerce (Promotion and Facilitation) Bill, 2020, allows farmers to sell their harvest outside the notified Agricultural Produce Market Committee (APMC) mandis without paying any State taxes or fees.
- The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Bill, 2020, facilitates contract farming and direct marketing.
- The Essential Commodities (Amendment) Bill, 2020, deregulates the production, storage, movement and sale of several major foodstuffs, including cereals, pulses, edible oils and onion, except in the case of extraordinary circumstances. The government hopes the new laws will provide farmers with more choice, with competition leading to better prices, as well as ushering in a surge of private investment in agricultural marketing, processing and infrastructure.
- The Centre only purchases paddy, wheat and select pulses in large quantities, and only 6% of farmers actually sell their crops at MSP rates, according to the 2015 Shanta Kumar Committee’s report using National Sample Survey data. None of the laws directly impinges upon the MSP regime.
- The bills give greater freedom to farmers to sell their produce. They will abolish intermediaries, or at least some levels of intermediaries between farmers and buyers. This will ensure that the farmer gets a bigger share of the price paid by the consumer and will, therefore, improve agricultural incomes.
- The clamour for incorporating Minimum Support Prices (MSPs) into the law is a pursuit of vested interests as only a handful of farmers enjoy the benefits of MSP-based procurement in the country today. The agricultural practices in Green Revolution regions of Punjab, Haryana
and Western Uttar Pradesh, where MSP was the cornerstone, have prevented reforms and these changes will lead to a creative destruction in agriculture.

- With the new changes while MSP is being continued, it has given farmers the choice and the freedom to sell outside the mandis.

### Conclusion:
- The future of Indian agriculture cannot be salvaged by simply allowing greater freedom to farmers. Agriculture can have a better future only when the excess workforce employed in farming moves to the non-farm sector and there is a greater demand for agricultural products as incomes increase.

### 8. Pradhan Mantri Annadata Aay SanraksHan Abhiyan (PM-AASHA) Scheme
- PM-AASHA is an umbrella scheme comprising of Price Support Scheme (PSS), Price Deficiency Payment Scheme (PDPS) and Private Procurement & Stockist Scheme (PPSS).
- These schemes are implemented at the request of the State Governments / Union Territories.
- PSS is implemented for procurement of pulses, oilseeds and copra at MSP, whereas PDPS is implemented for oilseeds.
- As per the Department of Administrative Reforms and Public Grievances’ (DARPG) latest report related to agriculture ministry, **46% grievances pertained to low crop prices** received by farmers. Over the last two decades India’s agricultural produce has been surplus—the root cause of low prices.
- PM-AASHA could play a vital role in addressing the above grievances.

### 9. Indian Agrarian Crisis
- Agriculture accounts for around 16% of gross domestic product (GDP), and is the main source of livelihood for nearly half our population.
- The rising frequency of farmers’ agitations and the high incidence of farmer’s suicides are symptoms of a deep malaise in the sector.
- The country’s food production has increased tremendously from just 51 million tonnes in 1950-51 to about 252 million tonnes in 2014-15. However, farm income did not grow much. This was also highlighted by the National Commission on Farmers (NCF) headed by MS Swaminathan.
- **Roots of this crisis**
  - **Weather** - A weak monsoon or even a delayed monsoon means a significant loss of output.
  - **Fragmentation of land** - Demographic pressure has pushed to 0.2 hectares of cultivable land per head of rural population.
  - **Price variations** - The highly distorted and exploitative product market is responsible for the misery of the small farmer.
  - **Shortage of money** - Landless or marginal farmers lacks the resources to buy or lease land or invest in farm infrastructure.
  - **APMCs** - According to a study, the farmers may typically get as little as 25% of the price that consumers finally pay.
  - **MSP** - Small farmers usually do not benefit from the government assured MSPs. Small farmers typically do not have enough marketable surpluses.
  - **Increasing debt burden** - According to NSS survey, loans taken by cultivators from non-institutional sources is rising faster than from institutional sources.
  - **Crop insurance programmes** - They have not been able to recover farmers’ investments in most cases.
  - **High-input cost of farm labour**.
- **Some Major problems we are facing in Water Usage:**
  - Managing the Water–Energy Nexus in Agriculture:
Energy and water are key inputs in agricultural production. It is essential to manage their use efficiently, and policymakers, researchers, academia, farmers, and social activists continually discuss how to formulate policies that will help. Highly subsidised electricity pricing has led to several negative externalities, such as over-pumping, higher energy use by crops, and the cultivation of more water-intensive crops, which have reduced water supplies in agriculture. Groundwater acts and rules, and spacing norms, are ineffective. Power pricing policies—such as metering of agricultural pump set connections and pricing of electricity (flat tariff, pro rata system)—are socially and politically sensitive.

- **Cooperative farming**
  - This is already popular in France, Germany, Kyrgyzstan, Kenya, and Bangladesh among others.
  - It involves land pooling; labour pooling; joint investment, joint water management and joint production.
  - It gives more efficient farming practices and greater bargaining power.

- **Vertical Farming**
  - Vertical farming is cultivating and producing crops/plants in vertically stacked layers and vertically inclined surfaces.
  - ICAR experts are working on the concept of ‘vertical farming’ in soil-less conditions, in which food crops can be grown even on multi-storeyed buildings in metros like New Delhi, Mumbai, Kolkata and Chennai without using soil or pesticides.
  - Vertical farming is a solution to critical problems in Indian farming like lack of supply or oversupply of farm produce, overuse of pesticides, overuse of fertilizers, deteriorating soils and even the employability.

**10 Integrated Farming System (IFS)**

- **Integrated farming system (IFS)** refers to agricultural system that integrates livestock and crop production to deliver more sustainable agriculture. IFS utilizes the crop-livestock interaction as shown in the cyclic diagram, according to Economic Survey 2018-19.
- Some IFS features like Organic farming, and developing a judicious mix of income-generating activities such as dairy, poultry, fishery, goat-rearing, vermicomposting and others, and community-led local systems for water conservation etc help in reducing farmers’ distress.

Case studies:
- **Integrated Fish Cum Pig farming in North east** - Pig sites are constructed on pond embankment. Pig manure (feces and urine) are directly drained into the pond which acts as pond fertilizer and increases the biological productivity of pond water, thus increasing the fish production. Also, fish feed directly on pig excreta, which cuts down the cost of feed as well. This system has helped to improve the status of weaker rural communities, especially tribals in North eastern states.
- **Integrated fish farming cum Horticulture** – Embankments of fish ponds provide area for planting fruits and vegetable. When Banana and Coconut is cultivated in rows in wetlands, the
ditches made between such rows act as supply canal. These canals serve as fish culture system due to regular supply of water rand rich insect populations. In turn it naturally boosts the productivity of soil and yield of fruits and vegetables.

11. Agricultural Marketing

- Agricultural marketing is a method that includes gathering, storage, preparation, shipping, and delivery of different farming materials across the country.
- Recent incidents of farmers reportedly dumping their bumper produce of tomatoes and onions and emptying cans of milk into drains. Had the markets been integrated, the surplus produce would have been transferred to deficit regions.
- The seasonal spike in prices of perishable commodities that pushes up the food inflation cannot be addressed without market reforms.
- Existing literature shows that our markets are not efficient, and thus they cannot respond to sudden shocks.

Food Processing Sector – Impediments

- Current issues faced in the agri-markets by farmers:
  - Monopoly of APMC: It deprives farmers from better customers, and consumers from original suppliers.
  - Cartelization: It is quite often seen that agents in an APMC get together to form a cartel and deliberately restrain from higher bidding. Produce is procured at manipulatively discovered price and sold at higher price.
  - Entry Barriers: License fee in these markets are highly prohibitive. In many markets farmers were not allowed to operate. Further, over and above license fee, rent/value for shops is quite high which keeps away competition. At most places only a group of village/urban elite operates in APMC.
  - Conflict of Interest: APMC play dual role of regulator and Market. Consequently, its role as regulator is undermined by vested interest in lucrative trade.
  - High commission, taxes and levies: Farmers have to pay commission, marketing fee, APMC cess which pushes up costs. Apart from this many states impose Value Added Tax.
  - Other Manipulations: Agents have tendency to block a part of payment for unexplained or fictitious reasons. Farmer is sometimes refused payment slip (which acknowledges sale and payment) which is essential for him to get loan.

- Way Forward
12. Agri Exports

- Government presented the vision of doubling farmer incomes by 2022-23. To achieve government’s goal by 2022-23, the Ashok Dalwai Committee points out that farmers’ real incomes need to grow at 10.4% per annum that is 2.8 times the growth rate achieved historically.

- India’s Agri Export Status:
  - India’s share in global exports of agriculture products was merely 2% in 2016.
  - India has remained at the lower end of the global agriculture export value chain given that the majority of its exports are low value, semi-processed and marketed in bulk.
  - The share of India’s high value and value-added agriculture produce in its agri-export basket is less than 15% compared to 25% in the US and 49% in China.
  - India is unable to export its vast horticultural produce due to lack of uniformity in quality, standardization and its inability to curtail losses across the value chain.

- Agricultural export is extremely important as besides earning precious foreign exchange for the country, the exports help farmers/producers/exporters to take advantage of wider international market and increase their income.

- There is a need to include standardisation and promotion of indigenous technology knowledge (ITK) in agriculture, where techniques are dependent on local resources in dealing with nutrition, disease and pests.

- The Agriculture Export Policy (AEP) is a welcome development.

- Promoting Value Added Exports of indigenous and tribal products through the National Programme on Organic Production (NPOP), organic food parks and by the uniform quality and packaging standards India can tap the potential for increasing organic exports.

- Development of “Brand India” in campaign mode to help penetration into new foreign markets and of new products which automatically translates into higher value realisation

13. DBT for Food and Fertilizer Subsidies

- India has successfully conducted direct benefit transfer in case of LPG and now it wants to expand to fertilizer as well.

Benefits of Direct Benefit Transfer Scheme:

- Food:
  - Reduces the need for large physical movement of food grains,
  - Given the wide inter-State and intra-State variations in food consumption habits, the DBT provides “greater autonomy to beneficiaries to choose their consumption basket and enhance dietary diversity, and
  - It reduces the leakage in the PDS system.
• **Fertilizers:**
  
  o DBT in fertilizer envisages transfer of subsidy to manufacturers upon authentication of purchase by farmers. This restricts diversion and brings about greater transparency, accountability and efficiency.
  o Quick subsidy payments on a daily basis is expected to end delays in companies receiving their dues from the government, besides leaving an electronic trail of every transaction with all relevant details.
  o It will plug leakages and save huge amount of money to the exchequer.
  o Based on NITI Aayog findings:
    ▪ 85% of farmers received transaction receipts and the grievance redress mechanism has improved and 79% retailers are satisfied. A majority of farmers (and retailers) prefer the DBT system.

**Demerits:**

• **Food subsidy:**
  
  o The inadequacy of transfers to maintain pre-DBT consumption levels,
  o Insufficiency of last-mile delivery mechanisms, and
  o Weak grievance redressal system.

• **Fertilizer subsidy:**
  
  o Introduction in the fertilizer sector seems a gigantic task as the beneficiaries and their entitlements are not clearly defined at this present.
  o Different inputs – urea, phosphatic and potassic fertilizers – have different rates of subsidies. Besides, it would be premature to accept that all the farmers would be able to buy their requirements of fertilizers at market rate and wait for 15 days or a month to get the subsidies.

**Measures to Strengthen DBT**

• **Food Subsidy:**
  
  o States with lower literacy levels, higher portion of BPL populations and relatively high child malnutrition could first strengthen the existing PDS through Information and Communication Technologies-based in-kind transfers before embarking on ICT-based DBT cash transfers.
  o To sum up, the PDS has been undergoing transformation and the state governments may have to be ready to adjust to the change to improve the efficiency of expenditure on providing food security to their people.

• **Fertilizer Subsidy:**
  
  o Subsidy should be linked to productivity which will remove fertilizer companies from the game.
  o The momentum for these changes has to be created through robust policies.
  o State Governments and Central Government need to work in tandem to encourage farmers for ecological farming. Particularly in western UP and Punjab, the farmers need to move away from wheat and rice because the ground water has depleted.

**Conclusion:**

• Thus, DBT will save domestic resource costs (DRCs) in production of urea in excess of ‘real’ demand as farmers would not over use urea. Pulses, for instance, being self-nitrogen fixing crops, do not require use of urea. At the same time, soil health will improve and productivity levels will augment considerably.

• Secondly, it will **address the issue of ‘inequity’** as marginal farmers need more assistance compared to other farmers.

• Thirdly, the total bill on account of fertilizers subsidy can be contained, at least for next few years. It will be a ‘win-win’ situation if the Government walks the last mile in fully implementing DBT in case of fertilizers subsidy.
14. How Agricultural Reforms evolved in China

- China’s serious agricultural reform began in 1978.
- In the first 20 years of reform, food grain output increased from 300 million to 500 million tonnes.
- At the same time, cereal centricity was replaced by a focus on meat, eggs, aquatic product and fruit. This shift in assortment was very successful with cereal production per capita increasing by 27% but aquatic and fruit production increasing 700% in the first two decades.
- China’s challenges are tougher than India’s, with only 15% of total land being arable in China (against about 40% in India) and vast areas being inhospitable to agriculture in the north, north-west and southwest of the country.
- China has also a shorter agricultural season than India (five months versus 10 months).
- Chinese agriculture faces challenges from water shortage and climate change.
- The focus of Chinese agriculture policy has shifted from quantity to quality and better water and fertilizer use.

15. E-Agriculture

E-Agriculture involves the conceptualisation, design, development, evaluation and application of innovative ways to use information and communication technologies (ICT) in the rural domain, with a primary focus on agriculture.

- **International efforts**
  - Food and Agriculture Organization (FAO), in collaboration with the International Telecommunication Union, has come up with the e-agriculture strategy to help countries use information and communication technology to drive rural development.
  - Bhutan and Sri Lanka became the first two countries in the world to have full-fledged e-agriculture strategies.

- **Initiatives in India**
  - Initiatives such as e-Choupal have demonstrated the power of bringing communities together.
  - The Indian Council of Agricultural Research (ICAR) has established a network of around Krishi Vigyan Kendras (KVKs) in the country mandated with Technology Assessment and Demonstration for its Application and Capacity Development (TADA–CD).
  - mKisan portal is a platform which provides web-based mobile advisory to farmers with the technological backstopping from Research Institutes and Agricultural Universities.
  - National Agriculture Market (e-NAM) scheme for remunerative prices for the farmers for their produce.

- Technological capacity building would prove more valuable for farmers along with the recently passed farm acts and PM-KISAN aid, opening lucrative opportunities for diversification, access to credit, and increased savings on agri-inputs.
16. Climate Change and Agriculture

- Climate change is any significant long-term change in the expected patterns of average weather of a region (or the whole Earth) over a significant period of time.
- India's agricultural sector faces a significant threat from climate change and directly impacts the daily lives of farmers.

Impact of Climate Change on Agriculture

- Climate change affects all the three aspects of food security: availability, access and absorption.
  - Agricultural productivity is sensitive to climate-induced effects like changes in temperature, precipitation and carbon dioxide concentrations in the atmosphere.
  - The major impacts of climate change will be on rain fed or un-irrigated crops, which are cultivated on nearly 60 percent of cropland.
  - The World Bank report warned that by the 2040s, India would see a significant reduction in crop yields because of extreme heat.
  - Rising levels of atmospheric carbon dioxide reduce the concentrations of protein and essential minerals in most plant species, including wheat, soybeans, and rice.
  - It can also impact fisheries. Some marine disease outbreaks have also been linked with changing climate.
  - Heat waves could threaten livestock by increasing their vulnerability to disease, reducing fertility, and declining milk production.
  - Study found that climate change could have contributed to the deaths of more than 50,000 farmers or farm workers over the last 30 years.
  - Water for agricultural production in the river basins of the Indus, the Ganges, and the Brahmaputra will shrink further and may impact food adequacy.

Consequences
Climate change hits poor the most.
As agriculture contributes around 16 per cent to India’s GDP, climate change causes about 1.5 per cent loss in GDP.
By 2030, rice and wheat are likely to see about 6-10 per cent decrease in yields.
Poor agricultural performance can lead to inflation, farmer distress and unrest, and larger political and social disaffection.
According to 2018 Economic Survey, India incurs losses of about $9-10 billion annually due to extreme weather events.
It also noted farmers’ income losses from climate change would be between 15% and 18% on an average.
All of which can hold back the economy.

Way Forward
To cope with the impact of climate change on agriculture and food production, India will need to act at the global, regional, national and local level.
Enhancing the resilience of agriculture to cope with the climate change and the climate variability.
Increasing area under permaculture from current 108 million acres to 1 billion acres by 2050 could result in a total reduction of 23.2 gigatons of CO2, from both sequestration and reduced emissions.
Applying Farm yard Manure, compost or by practising organic farming to improve the soil organic matter which can help in improvement of soil health.
Develop climate-smart agriculture practices.
Adoption of Zero Budget Natural Farming (ZBNF).
Building on the current crop insurance program, weather-based models and technology need to be used to determine losses and compensate farmers within weeks (Kenya does it in a few days).
Promoting Drought / temperature tolerant varieties and water saving paddy cultivation methods (System of Rice Intensification (SRI)).
Investment in R&D is needed to spur innovations in sustainable climate-friendly and climate-proof productivity, and the private sector can help on this.

17. Monsoon Dependence of Indian Economy

- It is said that “agriculture is the backbone of Indian economy.” To an agriculturist, water is more valuable.
- In many ways, the monsoon is the lifeblood of India’s farm-dependent economy.
- Hence, all variations in the monsoon affect agriculture and economy of the country.

Why Monsoon is important for Indian Economy:
- The monsoon is important for India’s farm-dependent $2 trillion economy.
- India gets around 70 percent of its annual rainfall during the monsoon season.
- Bumper farm output keeps food prices under control and keep inflation in check.
- Monsoon rains also replenish reservoirs and groundwater that helps in improving irrigation and also boosts hydropower production.
- The loan portfolio of banks rises and banks net interest margins also rise.
- A good monsoon will mean more farm related employment leading to a higher cash flow into the economy, all with a positive impact on the overall GDP.

Delayed or Poor Monsoon:
- A poor monsoon season can have a rippling effect on India’s economy and overall GDP growth of India.
- A delayed monsoon can lead to supply issues and even accelerate food inflation.
- Higher food inflation translates into higher interest rates, which in turn raises the borrowing cost across the country and impacts profitability.
- A poor monsoon weakens demand for Fast-Moving Consumer Goods (FMCG) products, tractors, two-wheelers and rural housing.
It forces the government to spend on the **import of food** as well as take measures like **farm loan waivers**. These widen fiscal deficit.

This not only results in banks facing losses, it also **disturbs the credit discipline of borrowers**.

States like Kerala, Karnataka, MP and Maharashtra - could face challenges from a deficit monsoon, as they have poor irrigation availability.

**Way Forward:**

- The monsoon-dependent Indian economy needs **climate-sensitive budgeting**.
- The excessive dependence on monsoon may be mitigated by the construction of modern **irrigation canals, afforestation, and diversification of Indian industries**.
- Farmers, especially smallholder farmers, need **advance warning of emergent weather conditions at a local level**.
- Develop **climate-smart agriculture practices**.
- Build adaptive capacities to climate variability and strengthen the sustainability of farming systems.
- Preventive measures for drought that include **growing of pulses and oilseeds** instead of rice.

**18. Climate Smart Agriculture**

- Climate-smart agriculture (CSA) is an approach that helps to guide actions needed to transform and reorient agricultural systems to effectively support development and ensure food security in a changing climate.

- Climate-smart agriculture considers **adaptation and mitigation together** in the context of building agricultural systems for food security.

**International efforts**

- FAO engages with **Green Climate Fund** and the **Global Environment Facility** and supports countries to access funds for the implementation of CSA projects.
- FAO has been hosting the Facilitation Unit of the **Global Alliance for Climate-Smart Agriculture (GACSA)**.
With nearly 60 percent of India’s cultivated area is rain-fed, the damage caused by climate change is huge in agriculture sector. In order to save the farmers from such calamities, climate smart agricultural practices are increasingly promoted by government and other stakeholders. Millets cultivation is one such practice which seems to be the answer to fighting climate change, poverty and malnutrition.

19. Zero Budget Natural Farming (ZBNF)
- ZBNF is the set of agricultural methods which are intended to boost farmers’ income by minimising the operating expenses and other variable cost heads.
- It is a farming practice that believes in natural growth of crops without adding any chemical fertilizers and pesticides. ZBNF is done using natural ingredients that reduce cost of production on inputs.
- **Need for zero budget farming**
  - Privatised seeds, high-quality chemical fertilisers, and other expensive crop-related inputs are typically inaccessible by small-scale farmers and peasants.
  - ‘Zero budget’ farming promises to end a reliance on loans and drastically cut production costs.
  - Chemical farming did not give farmers much income. Organic farming is also expensive. Both chemical and organic farming lead to global warming as they release greenhouse gases on large scale.
  - According to the Food and Agriculture Organisation, the zero budget natural farming can help in eliminating chemical fertilisers and other crop-specific additives.
  - They also contribute to sustainable practices in terms of health of soil and the environment.
- **Green Revolution to gene revolution have come under severe criticism because of**
  - Massive loss of local agrobiodiversity and associated traditional knowledge.
  - Undermining of seed sovereignty.
  - Farmlands are reporting high soil toxicity due to the use of pesticides and fertilisers, thus jeopardising public health.
- The government has to take a collaborative effort in creating awareness about the applications and benefits of ZBNF.
- A resource and awareness centre can be established as a part of promoting zero budget farming in India.
- Agricultural scientists in India have to rework their strategy so that farming is in consonance with nature.
- We need a global transition to a more resilient and sustainable agriculture that is less dependent on agrochemicals and draws more on natural biological and ecosystem processes.

20. Non-Farm Diversification
- The government has an objective of doubling farmers’ income by 2022. However farming distress is worsening and it is becoming difficult to double farmers' income by 2022.
- Therefore, the role of non-farm diversification is vital to double farmers’ income.
- **Need for Non-Farm Diversification:**
  - It is difficult for marginal farmers for living from just agricultural income.
  - Non-farm diversification is an important pathway for empowering landless labourers and marginal farmers, as development economist Daniel Coppard recommended in a 2001 report.
  - It will help to overcome land constraint to income growth, while allowing farmers to cope with exogenous shocks through additional income.
  - It even allows them to reinvest in productivity enhancing agricultural technologies.
  - A growing rural non-farm economy can absorb surplus labour, slowdown rural-urban migration, reduce rural-urban disparities and promote farm-non-farm linkages.
Evidence from many developing countries suggest that diversification of rural economy towards non-farm activities has considerable potential to augment income and reduce poverty.

- **Way Forward:**
  - The livestock sector can offer significant opportunities for bolstering non-farm income.
  - **Focus on Migrant Workers:** We have to enable migrant workers to get deserved access to various government (Central and State) schemes, despite the lack of identity proof.
  - Improvement in employment in the manufacturing and services sectors will be critical in improving rural income.
  - Improving education facilities and skill development programmes in rural areas will play an important role.

### 21. White Revolution

- The huge increase in milk supply through concerted efforts on a cooperative level is known as the **White Revolution.** Forty-eight years after **Operation Flood** – that made India the world’s largest milk producer – India continues to be on the lookout for the next breakthrough in agricultural produce and productivity.
- **White Revolution 2.0** has effectuated dairy firms’ marketing strategy for milk and milk products, resuscitating the outlook of product-market mix.
- India emerged as the largest milk producer and consumer in 2019.
- Currently India has 17% of world output of dairy products, surpassing USA in 1998 as world’s largest producer of dairy. All this was achieved by operation Flood which was launched in 1970’s.
- **Government initiatives for the dairy sector:**
  - National Programme for Bovine Breeding
  - Rashtriya Gokul Mission
  - National Kamdhenu Breeding Centres
  - E-Pashuhaat portal
  - National Programme for Dairy Development (NPDD)

The Government initiatives can ensure sustainable growth of the dairy sector as well as boost incomes of millions of small and marginal dairy farmers. Linking the animal husbandry with food processing industry, agriculture, researches & patents has all the possible potential to make India a nutritional power house of the world. Animal husbandry is the imperative hope, definite desire and urgent panacea for India as well as the world.

### 22. Blue Revolution

- Creating a separate department for fisheries in the Union government is a significant step.
- **Fisheries are the primary source of livelihood** for several communities. A concentrated effort by an independent department could help the government achieve its objective of doubling farmer’s income.
- The fisheries and aquaculture production contribute around 1% to India’s Gross Domestic Product (GDP) and over 5% to the agricultural GDP.
- India is the world’s second-largest fish producer with exports worth more than Rs 47,000 crores.
- Fisheries are the country’s single-largest agriculture export, with a growth rate of 6 to 10 per cent in the past five years.
- India’s long coastline has the potential of becoming the strength of the economy, particularly through exploitation of the Blue Economy, to ensure better standards and quality of life for a large number of people living in the coastal areas.
- The Blue Revolution scheme launched a few years ago seeks to make fishery and aquaculture a viable and rewarding vocation. The Blue Revolution mission aims at doubling the income of farmers.
Fish Consumption must not lead to Exploitation which affects Sustainability:
  o However, like in rest of the world, India’s fisheries sector faces the challenge of sustainability.
  o The Food and Agriculture Organisation’s State of World Fisheries and Aquaculture reports note that nearly 90 per cent of the global marine fish stocks have either been fully-exploited, or over-fished or depleted to an extent that recovery may not be biologically possible.

The new National Policy on Marine Fisheries, therefore, talks of introducing deep-sea fishing vessels and assisting fishing communities to convert their vessels and gears for the waters beyond.

An integrated approach towards agro and food processing, preservation, packaging and maintenance of the cold chain will be our focus of attention.

23. Mahatma Gandhi’s vision for India’s development and his prescriptions

  - Gandhiji’s concept of rural development revolves around creating model villages for transforming ‘swaraj’ into ‘su-raj’.
  - Gandhi, while rejecting modern civilisation as a mode of life and work, invoked agriculture, charkha and the village as metaphors for sane human living.
  - He envisaged villages as self-sufficient republics, independent of its neighbours for its own vital wants, and yet interdependent for many others in which dependence is a necessity.
  - He knew that India lived in its villages. He wanted to bring about rural reconstruction with sound scientific and spiritual values.
  - He stressed on the growth of the rural economy through allied activities such as khadi, handloom, handicraft and sericulture.
  - Advocacy of the charkha was a way to promote gainful employment for an able-bodied individual.
  - Charkha symbolised this view about how each person could earn their own livelihood and become self-reliant.
  - According to him, large-scale production was meant to be profit-oriented and therefore, harmful for society as it could lead to concentration of wealth and power in a few hands.
  - Gandhi advocated decentralisation because it could avoid violence. He suggested delocalisation of production as against concentration in particular areas. His beliefs on decentralisation were aimed at correcting all evils of a centralised economy.