News Analysis (24 Aug, 2018)

New Industrial Policy, 2018

The Government of India will be introducing a New Industrial Policy that will replace the 27-year-old existing policy and pave the way for the promotion of new technology and reduced regulations.

> The policy aims to create jobs over the next two decades, promote foreign technology transfer and attract $100 billion FDI annually.

Why the need for a new industrial policy?

- It is time to shift from a policy of continuity to radical and accelerated reforms for greater strategic engagement with the world, i.e., it is time to Reform, Perform and Transform.
- A comprehensive, actionable, outcome-oriented industrial policy will enable Industry to deliver a larger role in the economy; to fulfil its role as the engine of growth and to shoulder the responsibility of adding more value and jobs.

Constraints to Industrial Growth

- **Inadequate infrastructure:** Rapid growth of the economy has put further stress on infrastructure. Lack of quality industrial infrastructure has resulted in high logistics cost and has in turn affected cost competitiveness of Indian goods in global markets.
- **Restrictive labour laws:** The labour laws have been overly protective of the labour force in the formal sector. Though labour protection and security are required, the flipside is that it discourages employers from hiring workers on a regular basis. It has probably also led to entrepreneurs choosing to stay away from labour-intensive sectors.
- **Complicated business environment:** Complex and time taking business processes and clearances have been a disincentive for businesses.

- **Slow technology adoption:** Indian industry has been a slow adopter of new and advanced technologies. Inefficient technologies led to low productivity and higher costs adding to the disadvantage of Indian products in international markets.
- **Low productivity:** Workers in India are overwhelmingly employed in low productivity and low wage activities. Productivity as measured by value added per worker and average wages in manufacturing in India are only one-third of that in China.
- **Challenges for trade:** Manufacturing sector especially exporters are facing challenges of stagnant/shrinking global demand and rising protectionist tendencies around the world. Indian MSME sector is particularly facing tough competition from cheap imports from China and FTA countries.
- **Inadequate expenditure on R&D and Innovation:** Investments in these areas is essential to ensure growth in the industry. Public investments have been constrained and private investment is not forthcoming as these involve long gestation periods and uncertain returns.

Earlier Industrial Policies of India

- The **Industrial Policy Resolution of 1956** set the stage for state-owned and government-run enterprises, as well as establishing a private sector that was regulated by a “system of licences.' It did so by dividing India’s industries into three categories:
    - Industries in which the government was going to be the primary actor and the exclusive actor, thereby setting a state monopoly in defence production, iron and steel production, electricity production and distribution, and mining.
    - Industries where the state would be the primary actor in creating enterprises, but there was no state monopoly, and private actors could “supplement the effort of the state.”
    - Industries that would be open to private enterprise, but had to obtain a license from the government for standard business practices such as opening a new firm, or expanding production.
- In 1991, when India faced a severe economic crisis, the government passed a new Industrial Policy resolution. The **Industrial policy of 1991** set out directions for industrialisation in an economy that began its journey in liberalisation. It dealt with liberalising licensing and measures to encourage foreign investments. A policy for public sector enterprises and the Monopolies and Restrictive Trade Practices Act were introduced.
- The Government decided to take a series of initiatives in key areas: (a) Industrial Licensing (b) Foreign Investment (c) Foreign Technology Agreements (d) Public Sector Policy (e) MRTP Act

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Aeolus Wind Satellite

Recently the European Space Agency's (ESA) launched its **Aeolus satellite** into the **polar orbit**.

- It is named after Aeolus, who in Greek mythology was appointed **'keeper of the winds'** by the Gods.
- This mission is the **fifth** in the family of ESA's Earth Explorers. It will also improve weather forecasting.
- Aeolus will use laser technology to measure winds around the globe and play a key role to better understand the workings of our atmosphere.
- Aeolus carries one of the most sophisticated instrument, named **Atmospheric Laser Doppler Instrument (Aladin)** which will blast the surface with a 10-megawatt ultraviolet laser 50 times per second, tracking the minute changes evident in the reflected beam caused by air molecules and other matter in the atmosphere – a completely new approach to measuring the wind from space.

Applications

- Although weather forecasts have advanced considerably in recent years, Aeolus will provide global wind profiles to **improve the accuracy** even further.
- The lack of direct global wind measurements was one of the major deficits in the Global Observing System. By filling this gap, Aeolus will give scientists the information they need to understand how **wind, pressure, temperature and humidity are interlinked.**
- In addition, its data will be used in **air-quality models** to improve **forecasts of dust** and other airborne particles that affect **public health.**

Types of Orbits

In general, there are two types of orbits:

- Polar Synchronous
- Geosynchronous

Polar Orbit

- A polar orbit travels **north-south over the poles** and takes approximately **90 minutes** for a full rotation.
- These orbits have an **inclination near 90 degrees**. This allows the satellite to see virtually every part of the Earth as the Earth rotates underneath it.
- These satellites have many uses such as **monitoring crops, global security, measuring ozone concentrations in the stratosphere or measuring temperatures in the atmosphere.**
- Almost all the satellites that are in a polar orbit are at **lower altitudes**.

- An orbit is called sun-synchronous when the **angle** between the **line joining the centre of the Earth** and the **satellite** and **the Sun** is **constant throughout the orbit.**
- These orbits are also referred to as **"Low Earth Orbit (LEO)"** which enables the on-board camera to take images of the earth under the **same sun-illumination conditions** during each of the repeated visits, thus making the satellite useful for **earth resources monitoring**.
- It passes over any given point on Earth's surface at the **same local solar time**.

Geosynchronous Orbit

- Geosynchronous satellites are launched into orbit in the same direction the Earth is spinning and can have any inclination.
- When the satellite is in orbit at a specific altitude (approximately **36,000km above** the Earth's surface), it will exactly match the rotation of the Earth.
- While, **Geostationary orbits** fall in the same category as geosynchronous orbits, but with that **one special quality of being parked over the equator.**
- In the case of geostationary satellites, the Earth's force of gravity is exactly enough to provide acceleration required for circular motion.

Panel for Roll Out of 5G Services by 2020

The nine-member Steering Committee, headed by Stanford University Professor AJ Paulraj, submitted the report, **Making India 5G Ready**, to the telecom secretary.

> Committee suggested that Government should announce its 5G policy by December 31, 2018 and 5G services should be made operational in country by 2020.

Key Recommendations of Committee

- Spectrum Policy
  - India's spectrum allocation should be enhanced significantly on various frontiers to realize digital infrastructure as a core utility under Digital India.
  - The cost of spectrum relative to per-capita GDP is high and it is important that India builds a more favourable spectrum policy in the 5G era.
- Regulatory policy

  Regulatory policy support for deployment of mobile networks is critical for its success due to its close linkages with the physical, financial and security infrastructure of the country.

- Education and Awareness Promotion Program
    - Given the economic potential of 5G. It is important to promote awareness of 5G and advance the related skills development within the country.
    - The Committee recommended three initiatives - Attract global 5G conference events to India, set up national 5G events and create a comprehensive skills development program.
- Applications and Use Case Labs
    - Deeper and faster deployment of 5g in India can greatly benefit from the setting up of Applications and Use Case Labs.
    - These labs will provide multiple functions – interoperability testing for new applications, fostering innovation in 5G use cases, and promote entrepreneurship to develop locally tailored solutions.
- Development of Information Technology Standards
    - With the advent of 5G and its rich applications potential, many fresh requirements will arise.
    - India is in its initial years of engagement in the global standards ecosystem. 5G offers a new opportunity to engage in the standards process. The Committee recommends both short term and longer term initiatives to develop a ten year strategy for Information Technology Standards.
- Participation in International Standards
    - The Committee recommended short term initiatives like setting up 'Standards Project Teams' with funding enabling consistent participation to participate in standards activities.
    - For the longer term, the Committee recommended that an expert committee be constituted to recommend a ten year strategy for Information Technology Standards in India.
- Technology Demonstration and Major Trials

  The Committee recommended that the major global Original Equipment Manufacturers should be invited to conduct major 5G trials in India in collaboration with local partners.

Positive Impact of 5G on Indian Economy

- 5G services would have a cumulative economic impact of over $1 trillion by 2035.
- By early deployment of 5G services, India can accelerate the dividends and can also become an innovator.
- As per the OECD Committee on Digital Economic Policy, 5G technologies will help in:
    - Increasing GDP
    - Creating Employment
    - Digitizing the economy

What is 5G?

The 5G standards envisage various types of wireless services -

- High speed links with peak rates of 2 to 20 Gbps,
- Low speed links but with high connection density (one million per Sq. Km.) for sensing and actuating devices (IoT),
- Low latency (the response time after tapping the screen or pressing a key)
- High connection reliability (link outage of 0.99999).

Important Facts for Prelims (24 August 2018)

National Statistical Commission

- Recently, the National Statistical Commission (NSC) has sought public comments on a report which showed that the economy grew at fastest pace in 2006-07. The back series data on GDP report was prepared by the Committee on Real Sector Statistics.
- The NSC was set up by the Government of India through a resolution with effect from 12th July 2006 on the recommendations of the Rangarajan Commission, which reviewed the Indian Statistical System in 2001.
- Its mandate is to evolve policies, priorities and standards in statistical matters. It is also mandated to constitute professional committees to assist it on various technical issues.
- Therefore, the Ministry of Statistics and Programme Implementation (MOSPI) constituted the following five professional Committees on the recommendation of NSC in 2016:
  - Committee on Real Sector Statistics
  - Committee on Financial Sector Statistics
  - Committee on Fiscal Statistics
  - Committee on Online Reporting System
  - Committee on Analytics.
- The NSC has four Members besides a Chairperson, each having specialization and experience in specified statistical fields.
- The Chief Executive Officer (CEO) of the NITI Aayog is an ex-officio member of the NSC.
- The Chief Statistician of India (CSI) is the Secretary to the Commission. He has a dual role, as he also discharges the functions of the Secretary to the Government of India in the
- Ministry of Statistics and Programme Implementation (MOSPI).

Bondi Bond

- Blockchain Operated New Debt Instrument (Bondi) Bond is the world's first public bond created and managed using only blockchains by the World Bank. It is named with reference to Australia's most famous beach (Bondi beach).
- The prototype deal is being viewed as an initial step in moving bond sales away from manual processes towards faster and cheaper automation.

What is Blockchain Technology?

- The blockchain is the backbone technology on which bitcoins run.
- It acts like a digital public ledger that records every transaction. Once a transaction is entered in the blockchain, it cannot be erased or modified.
- Blockchain removes the need for using a trusted third party such as a bank to make a transaction by directly connecting the customers and suppliers.
- While the origin of the technology is not clear, it is widely believed that a person or group of people by the pseudonym Satoshi Nakamoto, who invented bitcoins, released the technology to support cryptocurrency.
