



## PRIVATE SECTOR IN SPACE INDUSTRY - GS III MAINS

Q. The privatization of the Indian space sector holds immense potential, attracting investments and fostering innovation. Elucidate (15 marks, 250 words)

**News:** *Private sector has huge possibilities in country's space arena: ISRO Chairman*

### What's in the news?

- Indian Space Research Organisation (ISRO) Chairman S. Somanath has said that there are tremendous possibilities and potential for private players in the country's space sector.

### India's Space Industry:

- According to a report by the Confederation of Indian Industry (CII), the Indian space industry is expected to reach USD 50 billion by 2025, driven by the demand for satellite-based services such as telecommunication, navigation, and earth observation.
- The report also estimates that the industry has the potential to generate around 100,000 direct and indirect jobs. The space industry has been predominantly controlled by organizations, government-owned
- Indian industry had a barely 3% share in a rapidly growing global space economy. Currently, the value of the global space industry is estimated to be \$360 billion.

### Need for Private Sector Participation in the Space Sector:

#### 1. Unleashing the True Potential of Space Economy:

- Currently, India's space economy is worth \$8 billion. This is just 2 percent of the global space economy.

#### 2. Space Station:

- India intends to launch its own space station by 2035. Thus, it would require funding not only from the government sector but private sector.

#### 3. Strategic Goals:

- Space has become one of the dimensions of modern warfare. This requires optimal use of space and private sector participation can help in achieving this objective.

#### 4. Lowering the burden on ISRO:

- Enhanced private sector participation would allow the Indian Space Research Organization to exclusively focus on research and development.

### Advantages of Private Sector Participation in Space Programme:

#### 1. Reduction in Cost:

- Participation of private sector and start-ups in the space sector have an advantage in terms of low-cost operations.



## 2. Technology and Innovation:

- Participation of the private sector will give rise to new innovations and technology.

## 3. Investment and Capacity Development:

- Private sector facilitates investments in technology development and acquisition, capacity-building and space exploration, including planetary exploration.

## 4. Harvesting Talent Pool:

- India has a huge talent pool and is searching for opportunities. So, participation of private entities in the space sector helps to harvest a sizable talent pool available outside ISRO.

## 5. Transparency and Accountability:

- Expanding the number of stakeholders with participation of private entities will ensure more transparency and better accountability and regulatory practices.

## 6. Competitiveness:

- With low cost, innovation and better talent pool in India's space will make it more competitive with respect to globally reputed, private space industry.

## 7. Fill Communication Infrastructure Deficit:

- The vast amount of potential and resources available with the private sector will help the space industry to grow and fill in the communication infrastructure deficit by looking beyond the traditional modes of internet delivery and look for space-based solutions.

## Challenges Associated with Private Sector Participation:

### 1. Conflicts of Interest:

- Private sector participation in space in India may lead to tensions with government agencies due to conflicting interests between profit-making and national interests.
- For example - ISRO acts both as operator and regulator which is a conflict of interest.

### 2. Procedural Hurdles:

- Private sector participation in space in India faces complex regulations and lengthy approval processes, which can result in delays and increased costs.
- For example - in 2017 a US based company that announced a 500 million dollar satellite communication in India is yet to receive any approval or timeline.

### 3. Lack of Clarity on the Level of Private Involvement:

- There is a lack of clarity on the extent to which private players can participate in the Indian space industry, leading to confusion and uncertainty.

### 4. Absence of Coherent Policy:



- The absence of a comprehensive policy framework for private sector participation in space in India has created uncertainties regarding investment and technology transfer.

## 5. Limited Technological Advancements:

- The Indian space industry lags behind in terms of technology development and innovation, which can limit the scope of private sector participation.

## 6. Monopolistic Trends:

- The entry of large private players in the Indian space industry may lead to monopolistic tendencies, reducing competition and innovation and excluding smaller players and start-ups.

## 7. Social Welfare may take a Backseat:

- The focus on profit-making and commercialization may lead to neglect of public goods such as infrastructure, education, and healthcare.

## Government Measures:

### 1. IN-SPACE:

- This was launched to provide a level playing field for private companies to use Indian space infrastructure.

### 2. New Space India Limited (NSIL):

- Its aim is to use research and development carried out by ISRO over the years for commercial purposes through Indian industry partners.

### 3. Indian Space Association (ISpA):

- It aims to open the Indian space industry to private companies and startups.
- For example - around 190 startups are working in this area.

### 4. Liberalized FDI Regime:

The government has allowed following fields under automatic route such as

- Firms in satellite manufacturing and operation, satellite data products and ground segment, and user segment can get FDI up to 74 %.
- For manufacturing components and systems/subsystems for satellites, 100 % FDI is allowed.

### 5. Indian Space Policy 2023:

- The policy seeks to institutionalize the private sector's participation in the space sector while allowing the Indian Space Research Organisation (ISRO) to focus on research and development of advanced space technologies.
- The policy delineates the roles of ISRO, New Space India Limited (NSIL), and Indian National Space Promotion and Authorization Center (IN-SPACe), and the operational part of ISRO's missions will be moved to NSIL.



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## Way Forward:

### 1. Demand-driven Approach:

- Optimizing the utilization of space assets such as satellites and launch capacity by determining accountability amongst various stakeholders.

### 2. Upskilling the Human Power:

- It would provide a boost to private sector participation in the space sector.
- India is already conducting ISRO Technical Training Programme (ITTP) at various National Skill Training Institutes (NSTIs) across the country for upskilling of ISRO human assets in four to five years in a phased manner.

The privatization of the Indian space sector holds immense potential, attracting investments and fostering innovation. Despite its potential, challenges like funding and regulatory issues need addressing.

