
PRESENCE OF POLICY AND NEED FOR REGULATION FRAMEWORK FOR SPACE COMMERCIALIZATION IN INDIA

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ABSTRACT

The world knows the potential of outer space exploration. The global players like the USA, China, the UK, etc are working in the field of space exploration. They have opened the market for the private players. The private players will be helping to expand outer space exploration activities in many ways. The governments are working independently and even in collaboration with private players for space exploration. In this regard only, India has also made the Indian National Space Promotion and Authorization Center (IN-SPACe) and the New Space Policy for the promotion of private player participation in outer space exploration activities.

India has opened the door for the private sector to participate in space exploration activities. It is imperative to understand that a new boom of opportunities will be rising in the path of outer space exploration like satellite launches, disaster management systems, communication, navigation systems, etc. The nation is working hard to boost the space economy and commercializing space activities will help to boost the country's overall economy. The nation has made policies for the promotion and protection of private players in outer space activity. But it is needed that the Space policy must be backed by the proper legislation also. The authors are concerned about the lack of laws in the context of controlling and encouraging private players. The authors have given viable suggestions for encouraging of participation of the private players.

Keywords: Commercialization, Law, Space Law, Private Players, and Space Policy.

Introduction

The outer space is full of opportunities for exploration. The rise in outer space activities has been seen in the last few decades¹. The names of SpaceX and Blue Origin² are examples to prove that private players have significantly contributed to the commercialization of outer space activities. Even India has worked in this regard by welcoming the New Space Policy³.

The space sector is booming at a fast pace and the entry of private entities in this sector has emerged the need of the legal framework. The authors have tried to analyze the legal gap and its complexities in the promotion of commercialization of space activities for private players.

Origin of Space Activities in India

Space activities started in India with the formation of the Indian Space Research Organisation (ISRO) (1969)⁴. The journey started with space exploration, but the exploration was done by the government institutes only. The launching of communication satellites, moon missions, mars missions, orbit satellites, disaster management networks, etc was handled by government entities⁵.

The formation of the Indian National Space Promotion and Authorization Center (IN-SPACe)

The government of India was aware of the potential capacity of the private players in this regard. They established the Indian National Space Promotion and Authorization Center (IN-SPACe)⁶ to encourage the participation of private entities in outer space exploration. The

¹ The race to conquer space in the 21st century has changed significantly, allowing other major countries such as China, the European Union, India, and Japan to enter the space race.

But the conquest of space is no longer limited to geopolitical tensions; it has broadened its horizons, opening up to large private companies such as Elon Musk's SpaceX and its Mars colonisation programme, or Blue Origin founded by Amazon's Jeff Bezos and focused on aerospace transportation.

Global Issues- Outer Space, <https://www.un.org/en/global-issues/outer-space> (last visited Jan. 1, 2025).

² A new race to space, Global Issues- Outer Space, <https://www.un.org/en/global-issues/outer-space> (last visited Jan. 1, 2025).

³ Norms, Guidelines and Procedures for Implementation of Indian Space Policy-2023 in respect of Authorization of Space Activities (NGP), Indian National Space Promotion and Authorization Centre, Department of Space, Government of India (May 2024) https://www.inspace.gov.in/sys_attachment.do?sys_id=5d532e37877102503b0f0d060cbb35cf (last visited Jan. 2, 2025).

⁴ The Indian Space Programme, [https://www.isro.gov.in/media_isro/pdf/ResourcesPdf/SpaceIndia/publication\(6\).pdf](https://www.isro.gov.in/media_isro/pdf/ResourcesPdf/SpaceIndia/publication(6).pdf) (last visited Jan. 2, 2025).

⁵ Id.

⁶ About IN-SPACe, https://www.inspace.gov.in/inspace?id=inspace_about_inspace (last visited Jan. 1, 2025)

participation of private players will also bring private investments⁷. The private players have better funding sources through collaborations with the global players. Even the mega projects can also be initiated on Indian soil through global collaboration.

Steps for the encouragement of the private players

The Indian Space Sector is currently open for private players in India to explore outer space activities. Space activities have increased which results in private participation for profits. The less explored sector of the country i.e. Space, is now open for the private players to explore. The potential of this sector has not only attracted the national private entities but also the foreign players.

To manage the activities of space for commercial profits, the Non-Government-Private-Entities (NGPEs)⁸ are welcomed. These NGPEs have widened the scope of the space economy⁹ for the coming time. ICT (Information and Communication Technology) has integrated with space technology and has paved the path for the further growth and development of the space sector. This growth of the space sector is directly contributing to the growth of the space economy¹⁰.

To manage the space sector, the following steps are seen –

i- to maximize the profits from the space sector, it was proposed to change the model from a “Supply Based Model” to a “Demand Based Model”.

ii- NewSpace India Limited (NSIL) will be handling the work for operational launch vehicles, launches of a commercial nature, and operations related to satellites.

iii- The NGPE’s will be working through an Indian National Space Promotion and Authorization Center (IN-SPACE)

iv- ISRO will be focusing on the capacity-building activities for the space and the resources

⁷ Id.

⁸ Emerging trend in Space Sector, <https://www.isro.gov.in/Emerging.html#:~:text=The%20activities%20are%20on%20a,to%20provide%20space%20based%20services> (last visited May 24, 2024)

⁹ Ibid.

¹⁰ Opening Up Indian Space Sector For Private Sector –Reforms, <https://www.isro.gov.in/Reforms.html> (last visited May 24, 2024)

will be shared by NSIL and NGPE's.

The Indian Space Policy 2023 (hereafter ISP, 2023) came up with a solution to provide the framework in the path of private entities' participation in outer space exploration. The ISP, 2023 came up with the idea of creating a space economic structure that must be favorable for private entities. The ISP, 2023 encourages private sector participation through a regulatory structure for the smooth functioning relating to space activities in India.¹¹

Benefits of the Private entities' involvement

As per the Union Minister Dr Jitendra Singh “because of the arrival of the ISP, 2023, Indian Space Economy expected to grow from around \$8.4 billion to \$44 billion Indian by 2033”¹². This shows the potential of the space sector of India. He emphasized that the Space Start-Ups has increased to \$ 124.7 Million in 2023. This increase directly shows the private participation scope in the space industry. The involvement of the private sector will help to foster the space economy and private players can contribute through their satellites in the management of natural disasters, agriculture, monitoring of environmental concerns, etc.¹³ Dr Jitendra Singh said that the NGE (Non-Government Entities) have launched their sub-orbital launch vehicle and even the mission control center being established by the NGE.

Indian startups like Agnikul, etc are working for innovations in outer space explorations¹⁴. The launching of satellites is also done by these private entities. With the support of the ISRO, these private players will be working to boost their exploration and launching activities.

¹¹ Aditya A. Variath and Khooshi Mukhi, Indian Space Policy 2023: Future of Commercialization of Space and Reviewing the Role of IN-SPACe, Centre for Research in Air and Space Law (May 27, 2023).

<https://www.crasl.in/post/indian-space-policy-2023-future-of-commercialization-of-space-and-reviewing-the-role-of-in-space> (last visited May 24, 2024)

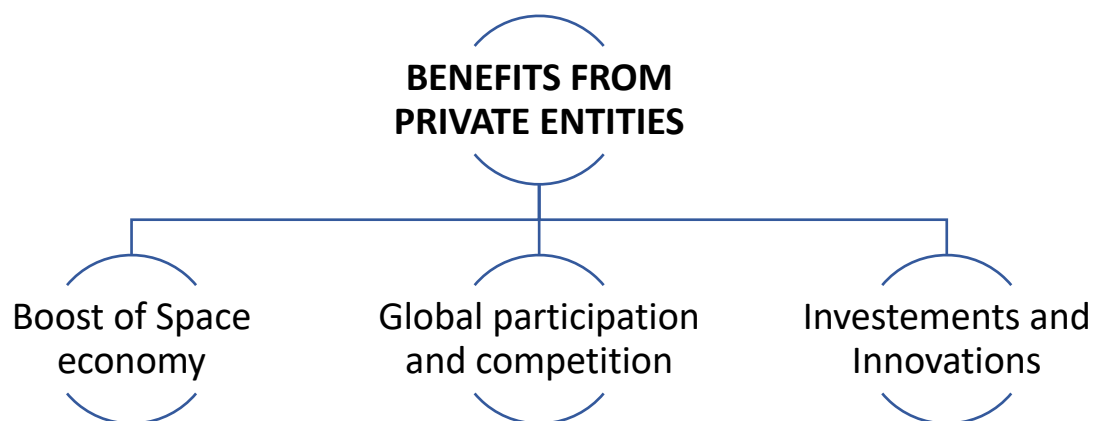
¹² “Indian Space Economy expected to grow from around \$8.4 billion to \$44 billion Indian by 2033”

Posted On: 20 DEC 2023 7:24PM by PIB Delhi,

<https://pib.gov.in/PressReleasePage.aspx?PRID=1988864#:~:text=%E2%80%9CIndian%20Space%20Economy%20expected%20to,%2444%20billion%20Indian%20by%202033%E2%80%9D&text=by%20PIB%20Delhi-,The%20number%20of%20Space%20Start%20DUs%20have%20gone%20up%2C%20from,Dr%20Jitendra%20Singh%20said%20today> (last visited 24 May, 2024)

¹³ Ibid.

¹⁴ Ramesh Kuruva, How Agnikul Cosmos & India's Spacetechn Startups are Transforming Space Exploration (Jul 09, 2024) <https://blog.ynos.in/p/how-agnikul-cosmos-and-indias-spacetechn> (last visited Jan 2, 2025)



*Source- This chart is created by the authors.

This chart tells that outer space exploration with the involvement of private players helps to boost the space economy. The satellite networks have numerous uses in¹⁵ like Satellite Communication Applications, radio network, television, tele-medical help, tele-education, disaster management, climate surveillance, meteorology, Satellite Aided Search and Rescue (SAS&R), Standard Time and Frequency Signal Dissemination Services, GPS Aided Geo Augmented Navigation (GAGAN), Civil Aviation management, geographic data collection, space weather, marine navigation, etc¹⁶. Thus, the space economy will be boosted. This private participation will bring global competition and global cooperation will improve. The growing space economy will be increasing at a fast pace and to explore outer space, mega funds are required. The private players will encourage global collaborations for the investments and innovation from the global players¹⁷.

The Legal gap

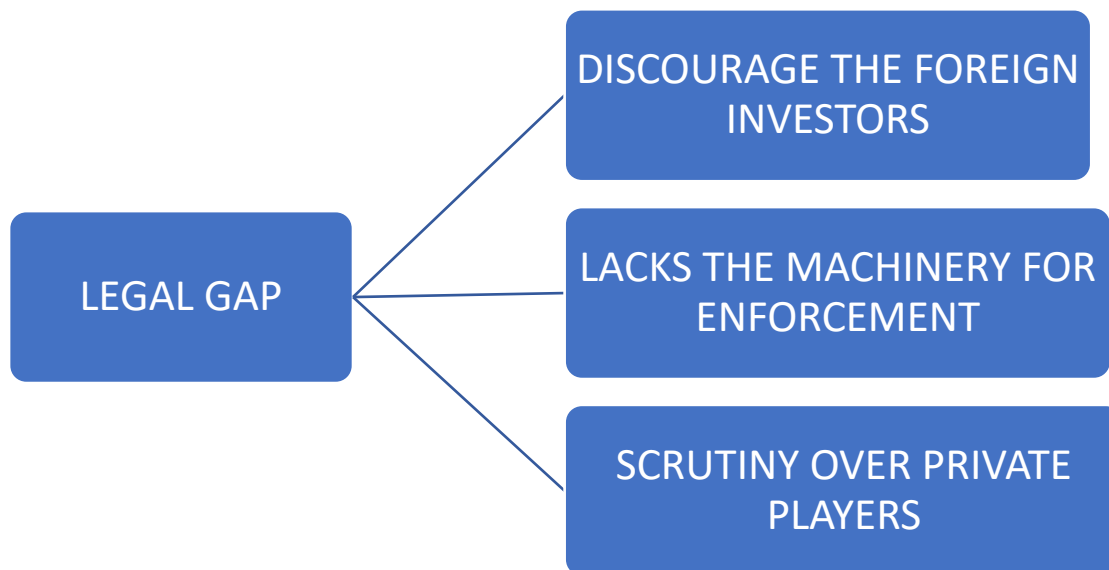
Apart from all the benefits from this private participation, still the gap of legal framework will be creating hindrances for private participation in outer space exploration¹⁸.

¹⁵ Space Applications, <https://www.isro.gov.in/SpaceApplications.html> (last visited Jan. 01, 2025)

¹⁶ Id.

¹⁷ Empowering India's Space Economy: Rs. 1,000 Crore Venture Capital Fund Initiative for Innovation and Growth, (OCT. 25, 2024) PIB Delhi, <https://pib.gov.in/PressReleasePage.aspx?PRID=2068155> (last visited Jan. 01, 2025)

¹⁸ Monica Shaurya Gohil, Need For Comprehensive And Robust Indian Space Laws, ILI Law Review (Summer Issue 2021) <https://ili.ac.in/pdf/3.pdf> (last visited Jan. 03, 2025)



*Source- This chart is the created by authors

This chart shows that the lack of legal framework first discourages the private payers from participating in space exploration. As the streamline law, helps the private players to ask for funds and collaborations. The lack of laws in this regard discourages investors from investing concerning for safety and accountability of funds. Outer space exploration or the launch of satellites, etc these resources use dangerous chemicals or equipment which can create a huge destruction. To secure the safety of the nation and its citizens and to bound these private players to follow the legislations, the need for a special law for this sector is of utmost importance¹⁹.

Conclusion

The government has taken a necessary step in the path of exploration of outer space activities. In this regard, outer space activities must be explored in all possible ways. So, India has allowed private players in the commercialization of space activities. The private entities are actively working in this field. From launching satellites to managing satellites, are now being encouraged for the private sector. The New Space Policy was made to encourage private participation in outer space exploration. It is imperative to understand that the legal framework lacks in this regard. It will create hindrances in the boosting of space exploration activities through private players. Thus, to create a special legislation in this regard is the need of the hour.

¹⁹ Id.

Suggestions

- 1- The Outer Space Law for the private sector must be made.
- 2- The establishment of a legal framework must be flexible to boost the private player's participation.