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A CONTEMPORARY ASSESSMENT OF PRIVATE ACTORS IN OUTER SPACE



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May 2021

Manipal Academy of Higher Education
Department of Geopolitics and International Relations

**A CONTEMPORARY ASSESSMENT OF
PRIVATE ACTORS IN OUTER SPACE**

**A Dissertation Submitted to the Department of Geopolitics and
International Relations in Partial Fulfilment for Master's Degree in
Geopolitics and International Relations**

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By
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May 2021



MANIPAL
ACADEMY of HIGHER EDUCATION

(Deemed to be University under Section 3 of the UGC Act, 1956)

Date: 15 June 2021

DECLARATION

I declare that the dissertation entitled "**A Contemporary Assessment of Private Actors in Outer Space**" submitted by me for the award of the degree of Master of Arts in Geopolitics and International Relations of Manipal Academy of Higher Education is my own work. The dissertation has not been submitted for any other degree of this University or any other University.

(Aleena Joseph)

CERTIFICATE

I recommend that this dissertation be placed before the examiners for evaluation.

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ABBREVIATIONS

Art.	Article
ASAT	Anti-Satellite
BSL	Basic Space Law
CD	Conference on Disarmament
CASC	China Aerospace Science and Technology Corporation
CASIC	China Aerospace Science and Industry Corporation Ltd
DARPA	Defense Advanced Research Projects Agency
ESA	European Space Agency
EU	European Union
FY	Fiscal Year
GGE	Group of Governmental Experts
ICoC	International Code of Conduct
ICT	Information and Communications Technology
IoT	Internet of Things
INSPACe	Indian National Space Promotion and Authorization Centre
ISRO	Indian Space Research Organization
ISS	International Space Station
JAXA	Japan Aerospace Exploration Agency
NASA	National Aeronautics and Space Administration
NSDD	National Security Decision Directive
NSIL	New Space India Limited
OECD	Organization for Economic Cooperation and Development
OSCAR I	Orbiting Satellite Carrying Amateur Radio
OST	Outer Space Treaty
P3	Public-Private Partnership
PAROS	Prevention of an Arms Race in Outer Space
PPWT	Treaty on the Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force against Outer Space Objects
SDG	Sustainable Development Goals
SDSAT	Space Dispute Settlement Appellate Tribunal
SRAI	Space Regulatory Authority of India
TCBM	Transparency and Confidence Building Measure
UAE	United Arab Emirates
UN	United Nations
UNCOPUOS	United Nations Committee on the Peaceful Uses of Outer Space
UNOOSA	United Nations Office for Outer Space Affairs
US	United States
USSR	Union of Soviet Socialist Republics

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ABSTRACT

The dissertation on the topic “A Contemporary Assessment of Private Actors in Outer Space” is a modest attempt to analyze the evolving dynamics of the actors in outer space, focusing on the emerging private space players. The emergence of private actors in space has gained much momentum in the last decade. Today with the spread of the concept of “NewSpace” and the increasing commercial aspects in the space domain, public-private partnerships are becoming an inevitable part of national space programs.

The contribution of private space players to the development of the national space program as well as the space economy implies the potential they possess. Nonetheless, the global regulatory framework addresses the state actors directly and the regulation of the private actors under the state actors. In this context, the dissertation has evaluated the growth and development of the private space players, especially the ones with launcher capabilities, and their role in the national space strategies and the world system. The study has taken the case of major national and transnational space programs including those of the United States, China, the European Union, Russia, India, and Japan for evaluating the various policy environments for the private space actors. The impact of their emerging role in the international system and further on the great power politics have been evaluated in the study. Subsequently, the regulatory framework for the private space players at the global level has been analyzed.

Private space players have evolved over the years and today have become an integral part of the space community. While countries like the United States have been engaging with the private actors in the space industry since the beginning, countries like India have opened up their space industry for the private space players only very recently. From the neoliberal perspective in the International Relations theory, the emergence of the private actors has led to more cooperative mechanisms through public-private partnerships. This has enabled the technological growth of the national space programs, along with the enhancement of the commercial prospects of their respective space industries. The national space policies of the countries are different across the globe. While countries like the United States are more open to engagement with the private space players, countries like Russia are still reluctant towards it. Hence, the growth of the private space players in the respective countries are different and so is reflected in the pace of growth of their national space industries.

With the emergence of the NewSpace movement across the world, the role of private space players also has led to spillover effects on great power politics as well. In the analysis of outer space geopolitics, which has been predominantly an outcome and subset of the larger great power politics, the increasing competition between the countries can best be understood from the neo-realist perspective. The impact of science and technology on power projection has played a vital role in geopolitics over time. With the increasing activities in the outer space domain and the emergence of NewSpace actors, countries are building a suitable means to extend their power and spheres of influence not just within but also beyond the earth. The rapid growth of companies like SpaceX and its impact on US space power has led to other countries trying to emulate a similar model to enhance their relative power.

Just like how a coin has two sides, the involvement of the private players in the space industry raises many critical issues, which the countries need to address at the global level. According to the Art. VI of the Outer Space Treaty, the private space players with the launcher capabilities can launch any space vehicle or conduct any space mission, with a permit from the respective country. Though there are several treaties and guidelines for the peaceful and sustainable use of outer space, none of them is related to the activities of the private space players. With the involvement of the private space players in the different sectors of the space industry, it is high time that this loophole in the global regulatory framework is addressed. With the militarization-weaponization processes and the development of counter-space capabilities by the space actors, the possibility for the private actors to be involved in these matters in the future cannot be ignored.

The NewSpace movement has become an outcome of the “Space for All” notion, where every actor will have equal responsibility and opportunity in the space matters. This is very much reflective of the constructivist theory in International Relations. The emergence and the involvement of the private space actors in this scenario can be considered as an initial phase towards this goal. In this regard, the untapped potential of the private space players can be utilized in the right manner, with the drafting and implementation of a global regulatory framework for private space activities.