Privatization of Space Law - Negotiating of Commercial and Benefit-Sharing Issues in the Utilization of Outer Space

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Abstract

Space law is not a "self-contained" body of law; its main source is international law. One of the important consequences of that is to make states the main actor in the utilization of outer space. As can be seen from the five space treaties, the original character of space law is public law that specifically governs state activities in outer space. However, the privatization and commercialization of outer space that has taken place intensively in the last two decades has also been followed by privatizing space law – directing space law to be more responsive to private and commercial issues. Article VI of Space Treaty allows non-governmental entities to engage in outer space activities. This means that privatization and commercialization of outer space activities are legally acceptable. This Article, however, does not make any limitations of which outer space activities that can be commercialized and which ones are not? If the Article will be read that all outer space activities can be commercialized, the main question is, whether it is not contrary to the basic spirit of the utilization of outer space: for the common interest of all mankind? In Addition, the Article tends to be read only in the context of liability in case of an accident and failure in outer space activities, and does not relate this with the concept of outer space as a common heritage of mankind that creates the obligation of sharing benefit. This paper argues that the orientation and form of the privatization of space law should be within the basic spirit of the utilization of outer space: for the common interest of all mankind.

1 Introduction

Entrepreneurial spirit aimed at space has been around since at least the beginning of the space age. For decades, there have been people who see outer space as more than just a research lab for the scientific and engineering elite, or

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a "high ground" for military and intelligence interests. They see it as a place ripe for economic development, and industrial park of unfathomable size.[1]
The existing international space law had significantly been influenced by the orientation of space activities of the U.S. and the Soviet Union, which focused on military and security purposes. The end of the Cold War has changed the orientation of space activities from military to commercial purposes and other functions which are more applicable such as telecommunications. The existing space law is becoming obsolete, or at least totally inadequate, partially because it is based on the assumption that only states are to deploy space activities, or that space activities always have to come, in all respects, under the responsibility and liability of states, states being the only subjects of international outer space law. Only states enjoy the freedom of exploration and use of outer space.[2]
More specifically, only space powers enjoy the freedom of exploration and use of outer space.
Article VI of Space Treaty allows non-governmental entities to engage in outer space activities. This means that privatization and commercialization of outer space activities are legally acceptable. This Article, however, does not make any limitations of which outer space activities that can be commercialized and which ones are not? If the Article will be read that all outer space activities can be commercialized, the main question is, whether it is not contrary to the basic spirit of the utilization of outer space: for the common interest of all mankind? In Addition, the Article tends to be read only in the context of liability in case of an accident and failure in outer space activities, and does not relate this with the concept of outer space as a common heritage of mankind that creates the obligation of sharing benefit. This paper argues that the orientation and form of the privatization of space law should be within the basic spirit of the utilization of outer space: for the common interest of all mankind.

2 The Nature of Space Law: An Estatist Regime

Space law is An Estatist Regime, a legal regime that gives the states privilege in the utilization of outer space.[3] As states are the most representative public institution, space law has been considered as and possessed a public law character. The Corpus Juris Spatialis which consists of five international treaties

1 James A.Vedda (2004)) in Eligar Sadeh (ed.) Space Politics and Policy, Kluwer Academic Publishers, Dordrecht, p. 201.
2 See also Henri A. Wassenbergh (1997), "The Law of Commercial Space Activities", in Gabriel Lafferanderie and Daphne Crowther (eds.), Outlook on Space Law Over the next 30 Years, Kluwer law International, The Hague, p. 173.
3 Ibid.

governing outer space activities[4] have determined that states are the main actors in outer space activities and that states shall bear international responsibility for national activities in outer space. More importantly, at the time of its formation, space law focused on the role of states in that activity.[5]
This epitomizes the origins of space activities, which had been part of and were strongly influenced by the ideology of the Cold War.[6] In addition, the nature of space activities and national space programs were dominated by military and foreign affairs. As a result, international space law represents a pro-state and anti-free enterprise orientation.[7] This can be seen for example, in the Article XIII of the Outer Space Treaty (OST) which states:

> The provisions of this Treaty shall apply to the activities of States Parties to the Treaty in the exploration and use of outer space, including the moon and other celestial bodies, whether such activities are carried on by a single State Party to the Treaty or jointly with other States, including cases where they are carried on within the framework of international inter-governmental organizations (emphasizes added).

This provision depicts the character of space law in the classical period that received strong influences from classical international law that makes states as the primary subject of international law.
Space law also provides that states are the sole entity responsible for space activities that are carried on by governmental agencies or by non-governmental entities. Article VI of the OST states as follows:

> States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty.

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4 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, 1967 (the Outer Space Treaty); Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, 1968 (the Rescue Agreement); Convention on International Liability for Damage Caused by Space Objects, 1972 (the Liability Convention); Convention on Registration of Objects Launched into Outer Space, 1975 (the Registration Convention); and Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, 1979 (the Moon Treaty).

5 Peter Malanczuk (1997), "Actors: States, International Organizations, Private Entities", in Gabriel Lafferanderie and Daphne Crowther (eds.), Outlook on Space Law Over the next 30 Years, Kluwer Law International, The Hague, p. 23.

6 Wassenbergh, supra note 2.

7 Nathan C. Goldman (2004), "Space Law" in Eligar Sadeh (ed.) Space Politics and Policy, Kluwer Academic Publishers, Dordrecht, p. 164.

This provision implicitly states that non-governmental entities are responsible indirectly for their space activities which in most cases are commercial in nature.[8] Private entities are not a qualified subject of the Treaty.[9] Gyula Gal asserts that the provisions of the OST unequivocally establish a system of direct responsibility of states for private space activities.[10] Article VI of OST states further:

> The activities of non-governmental entities in outer space, including the moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty.

The words "shall require authorization and continuing supervision by the appropriate State Party to the Treaty" imply states responsibility and the need for establishing supervision mechanism as well as form and mechanism of responsibility of non-governmental entities by means of establishing national legislation.[11] Historically, this was a compromise provision of two contrasting views, the U.S. and its allies that were committed to free enterprise while the Soviet Union and its allies (the Communist) were opposed. The state liability provision was established as fundamental compromise that legitimated a nationally regulated status for space commerce.[12]

The notion of space law as an etatist regime is self-evidence. International treaties governing outer space activities stipulate that the state is the main actor in such activities. It is true that there has been the transformation of space law from its original pro-sate, military, and governmental emphases into a legal regime that accommodates and encourages private, commercial, transnational, and multinational activities in space. Some have observed that the evolution of space law consists of three phases, namely the classical period (1957-1979), transitional period (1980-1991), and the modern period (1992-present). But actually it is the evolution of interpretation concerning state and its role in space activities.[13]

The age of formal space law treaties may have closed.[14] Space law still remains as it was.

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8 See also Malanczuk, supra note 5, p. 31.

9 Yun Zhao (2004), "The 1972 Liability Convention: time for revision?", Space Policy, Vol. 20, p. 118.

10 Gyula Gal (2001), "State Responsibility, jurisdiction and private space activities", Proceedings of the 44th Colloquium on the Law of Outer Space, Toulouse, France, 1-5 October, p. 62

11 See also Luis F. Castillo Arganaras, "Some Thoughts on State Responsibility and Commercial Space", Proceedings of the 44th Colloquium on the Law of Outer Space, Toulouse, France, 1-5 October, p. 69.

12 See Stephan Hobe, Bernhard Schmidt-Tedd, and Gerardine Meishan Goh (eds.), Cologne Commentary on Space Law, Vol. 1, Carl Heymanns Verlag, 2009, p. 105. See also Goldman, p. 166.

13 Goldman, supra note 7.

14 Francis Lyall and Paul B.Larsen (2009), Space Law: A Treatise, Ashgate, England, p. 468.

In the classical period, the formation of space law had significantly been influenced by the orientation of space activities of the U.S. and the Soviet Union, which focused on military and research purposes. Customary space law is no more than state practices developed by the U.S. and the Soviet Union. This is one of the best examples of the so-called instant customary international law. Its formation and acceptance by states is not based on the mechanisms that should meet both material element in the form of a constant and uniform state practice and psychological conditions in the sense that the practice should be accepted as law.[15] Hence, states considered that it is necessary to govern space activities on the basis that it will affect not only the two countries but also international community as a whole. In this period, states have completely played tri-partite role as policy makers, regulators and actors in space activities. Space law is truly a branch of international law, which had not been elaborated into domestic law.

The transition period is marked by strengthening the role of national space legislation. This is in line with space shifting activities from civil to commercial sectors such as telecommunications, remote sensing and satellite launch services (space commerce). In addition, more states becoming involved in space activities with the main interest is that how they have access to and benefit from the commercialization of outer space. Hence, national space legislation found its momentum to govern space activities. Unlike the classical period which conferred states privilege to use and exploitation of outer space, in this period states opened for private sector participation in space activities. The economic reality of space application is creating not only new commercial endeavours in space, but also commercial space. As a result, international space law entered into a vacuum, domestic law and private international space law became important.[16] With the strengthening of domestic law, states seemed to be more focused on the function of policy makers and regulators of space activities.

The end of the Cold War marked the beginning of the modern era in the development of space law. The main objective of international space law is no longer to find a balance of political interests between the communists and the capitalist system. Instead space law, can again pursue the promotion of common interests, a stable cooperation between the states and sustainable economic development in which all states participate.[17] There is de-monopolization of state control over space activities and that change the paradigm of space activities from single to multi-actors by opening up opportunities for private sectors participation. To sum up, it is the emergence of private international space law. It is interesting to observe that the evolution of space law does not change space law as an etatist regime. State remains the main subject of space law. What is clear, it is the evolution of actor in space activities, from single to

15 See further Bin Cheng (1965), "United Nations Resolution on Outer Space: Instant International Customary Law?", Indian Journal of International Law, Vol. 5, p. 23-43.

16 Goldman, supra note 7, p. 170.

17 Wassenbergh, supra note 2.

multi-operators. There is a shifting role of states from the tripartite role as policy makers, regulators, and actors or operators to be more emphasizing on the role of policy maker and regulator of space activities.

3 Benefit Sharing vs. Commercialization of Space

To discuss benefit sharing vs. commercialization of space, it is important to set the scene by recalling the words of the first paragraph of Article I of the OST. It states in relevant part that:

> The exploration and use of outer space, including the moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind (emphasizes added).

The words "benefit" and "the interests of all countries" are the main idea of this provision which then led to the discourse on benefit sharing in the exploration and exploitation of space. This clause speaks of the benefit and the interests of countries and not of State actors. This clarifies the general direction of this clause that the respective benefit of the activity in outer space shall not only be for those countries that have taken an investment or have undertaken the activity, but shall be done in the interest of all countries. More specifically, the words, "irrespective of their degree of economic or scientific development" of benefitting states are the particular hint to a philosophy of substantive rather than only formal equality. All states shall be entitled to the benefit of space exploration and use.[18]

This formulation makes it clear that the common benefit principle provides in principle for equal opportunities for all countries.[19] This clause appears to be an "enabling" clause in the sense that the space-faring countries should enable the non-space faring countries to participate more actively in space exploration and use. To sum up, with reference to the spirit and the motives of the preamble of the OST, this clause affirms that non-space faring countries should benefit from the result of space activities.[20]

Controversy arose as to whether this clause contains a firm and enforceable legal principle or merely a moral obligation.[21] The writer is of the opinion that it is a moral obligation to strive to become enforceable legal principle. Although the meaning of the words "shall be the province of all mankind" are subject to much of academic debate, but it implies that space is the area that should

18 Hobe at all, supra note 12, p. 38.

19 Ibid.

20 Ibid.

21 See also Tanja Masson-Zwaan (2008), "Article VI of the Outer Space Treaty and Private Human Access to Space", paper presented at the 3rd Eilene M.Galloway Symposium on Critical Issues in Space Law, Washingto, D.C., p. 536.

benefit to all mankind.[22] This is one of the consequences of the absence of state sovereignty in outer space.

Borrowing the economic term, outer space can be divided into three categories. First, space is a resource subject to scarcity such as geostationary orbit (GSO). It has a physical closeness with certain countries, mostly developing countries (Equatorial states). Claims of state sovereignty proposed by some equatorial states did not receive a positive response from other countries. Understandably, it would allow unilateral exploitation that might be harm to the interest of other countries to the GSO. Secondly, space is a place for public infrastructure. A good example of that is International Space Station (ISS). As the first ISS modules were assembly in 2000, nearly 4,000 proposals had been submitted to NASA for station-based research.[23] Thirdly, space is a public good. A special characteristic of activities that produce public goods is that many people can benefit from them simultaneously without reducing their availability to others or adding to the costs of these activities.[24]

The fact that only a few countries, that have the ability to involve in space activities, benefit sharing has been a pertinent issue between the developed and developing worlds. This is a plausible claim as developing countries do not have the technological capability; they only have conventional rights to be involved in space activities. In this context, benefit sharing appears to be the issue of the tension between the owners of space technology and the parties who want to enjoy their conventional rights without technological capabilities. For developed countries such as the U.S. the need to maintain technological leadership is inseparable from national security, making the sharing of technology an untenable demand. For the same reason, developing countries also recognize the economic importance of space industries. So they argue for the implementation of the common heritage principle and an international regulatory agency, which gives them advantages such as enabling them to reach economic and political parity with developed countries and establishing a new, more stable, international economic order based on cooperation for the mutual benefit of all nations.[25] Hence, the main question is how to negotiate two opposing positions - between developed and developing countries, so that they can carry out the spirit and mandate of the OST.

At the outset it is important to distinguish "economic" from "commercialization". The "economic" of space means the host of values and costs that are associated with space activity, from space transportation and space-based

22 I.H.Ph. Diederiks-Verschoor (1993),An Introduction to Space Law, Kluwer Law and Taxation Publishers, Deventer-Boston, p.23. See also Carl Q. Christol (1991), Space Law: Past, Present, and Future, Kluwer Law and Taxation Publishers, Deventer-Boston, p. 71.

23 Molly K. Macauley (2004) in Eligar Sadeh (ed.) Space Politics and Policy, Kluwer Academic Publishers, Dordrecht, pp. 186-93.

24 Ibid.

25 Kim Alaine Rathman (1999), "Outer space commercialization and its ethical challenges to international law and policy", Technology in Society, Vol. 21, p. 140.

telecommunications, to planetary exploration, and research and development activities that take place on the space station.[26] Commercialization represents the activities undertaken by private sector companies as distinguished from governmental activities. However, economics and commercialization naturally overlap. For instance, space transportation and space-based telecommunications are carried out by both the commercial and government sectors of the economy, and government regulations govern commercial space activities from launches to frequency allocations.[27]

The term "space commerce" and "commercialization of space" have been used to describe a variety of activities. However, all these activities are profit-oriented. Although commercialization of space can be carried out either by the government or private sectors, the private sector is generally more dominant. Therefore, a space commerce venture can result from privatization.[28]

Developed countries such as the U.S. see the commercialization of space in terms of advantages, such as:[29]

- Forming a creative frontier of technological research and development;
- Developing economies of scale that are essential to economic growth on the global level;
- Enhancing industrial and educational capabilities, thus advancing a country's standing on the international "learning curve";
- Enabling them to acquire hard currency in the global market; and
- Promoting national pride and international prestige.

Unlike the issue of benefit sharing that emphasizes the sharing benefit of space exploration and use, space commercialization is profit oriented in nature. They have different motives and objectives. The question is how to put these two contradictory issues within the framework of the OST. Benefit sharing is the conventional clause; it is not only the spirit and motive of the OST but also one of its main objectives. In this context, both developed and developing countries have an obligation to realize it in practice. Meanwhile, space commerce is merely a permitted activity under the OST. States do not have a legal obligation to do so, but they are responsible for such activities either carried on by governmental agencies or non-governmental entities.

4 Negotiating of Commercial and Benefit-Sharing Issues in Space Activities

Benefit sharing is the conventional norm to strive to become a reality, while the space commercialization is a present reality and also the future of space activities. Constantly contrasting both of them will only make it as an everlasting

26 Macauley, supra note 23, p. 181.
27 Ibid.
28 Vedda, supra note 1.
29 Rathman, supra note 25.

problem. Negotiating their differences is the most rational and factual choice as well as providing the legal framework for setting the future of space activities.
Article VI of the OST which restricts non-governmental entities activities in outer space by means of authorization and continuing supervision by the appropriate State Party to the Treaty implies three things. First, unlike governmental agencies, space activities of non-governmental entities are subject to limitations. Secondly, space activities of non-governmental entities are residual in nature in the sense that it is subject to authorization of the government, for instance by means of issuing license. For some reasons, governments may prohibit or restrict certain space activities of non-governmental entities. Given that a state governs the lawful activities of persons and entities under its jurisdiction, it has power to allow or to restrict access to space to them[30]. Thirdly, not all space activities can be privatized or commercialized.
In sum, space commercialization is subject to limitations. Hence, it is important to identify space activities which cannot be commercialized, and which is open for private sector participation. Article VI of the OST provides that space commercialization is prohibited unless it is permitted by the appropriate state - the state with the best connection to it.
Two criteria can be used to determine which outer space activities that can be commercialized and which ones are not, namely, economic criteria and national interest.
From an economical point of view, space activities subject to limitations are space resources subject to scarcity such as GSO, space resources which are places for public infrastructure such as International Space Station (ISS), and space as public goods. States have their own national interest which covers among other things economic, politic as well as national security. Hence, space commercialization is subject to restrictions if it has a potential conflict with the national interests. This arrangement will encourage competition in the utilization of outer space. By shifting space activities from military to commercial sectors, there is also a changing of space actors from the dual (the U.S. and the Soviet Union) to multi actors, from domination to competition of space activities.
International space law is silence concerning regulation of space commercialization. The drafters of the existing space law treaties did not foresee changes in both the actors and scope of space activities. The absence of provisions that specifically govern space commercialization implies that it leaves to states to establish their national legislation on it. In this context, national legislation is designed to keep the balance of both international and national interest of space activities.
Many new issues that need a legal response can best be regulated by national legislation, some of it implementing “codes of practice”.
Commercial use of space, particularly by non-governmental entities, requires regulation in a manner not inconsistent with international law. Requirements range from launch permits, debris mitigation and the assignment of radio

30 See also Lyall and Larsen, supra note 14, p. 470.

frequencies to restrictions with a state may impose for reasons of national security.[31] In addition, private commercial users of outer space enter into private law contracts, e.g. as to the launch of their satellites and their construction, as to constituting securities over their space assets, and for resolution of disputes. Commercial operators are therefore regulated by private as well as by public laws.[32]

5 Privatization of Space Law

Privatisation has become an icon of economic and political reform in both developed and developing countries.[33] It is hard to find a country without a privatisation program, or a sector of activity not susceptible to private management, if not ownership. However, some writers and researchers believe that the term and concept are still in need of academic refinement. They complain that the term privatisation is indeed very omnibus and its concept is imprecise.[34] In the words of Starr, "privatisation covers a great range of ideas and policies, varying from the eminently reasonable to the wildly impractical".[35] The idea of privatisation, however, can be traced back to the old debate on the concept of public versus private ownership that took place between Plato and his student Aristotle. Plato claimed that private ownership was evil.[36] By contrast, Aristotle argued that communal ownership was inefficient as it allowed the lazy to take advantage of the industrious.[37] Predicated on this philosophical debate, privatisation may be defined as a shift from the public to the private sector.
In terms of space activities, privatization has two meanings. First, it refers to de-monopolization of states in outer space activities. There is a shifting in space

31 Ibid, p. 468.
32 Ibid.
33 Steve H. Hanke, Ed., (1987), Privatization and Development, ICS Press, San Francisco, California, p. 3. Stephen King & Rohan Pitchford (1998), "Privatization: does reality match the rhetoric?" Industry Economics Conference, Washington, p. 23. Peter Stredder (1989), "The Principles of Privatization" in Eamonn Butler (Ed.), Privatization Now, the Potential and Practice of Privatization in Developing Economics, Adam Smith Institute, London, p. 8.
34 B.N.Ghosh, Ed. (2000), Privatization: The ASEAN Connection, Nova Science Publishers, Inc., New York, p. 6. Paul Starr (1988), "The Meaning of Privatization", Yale Law and Policy Review, Vol. VI, No. 1, p. 6. Bulent Seven (2002), Legal Aspects of Privatization: A Comparative Study of European Implementations, Dissertation. Com, USA, p. 4. Harold J. Sullivan (1987), "Privatization of Public Service: A Growing Threat to Constitutional Rights", Public Administration Review, No. 47, p. 461
35 Starr, supra note 34, p. 6.
36 Plato (2000), The Republic, Translated by Tom Griffith, Cambridge University Press, Cambridge, p. 110.
37 Aristotle (1959), Aristotle's Politics and Athenian Constitution, Edited and Translated by John Warrington, J.M. Dent & Sons Ltd. London, p. 34.

actors, from single (dual) to multi-actors, namely private sectors. Secondly, it accommodates space activities for commercial purposes. Allowing private sectors to involve in space activities will bring space law to be more accommodating to commercial orientation of the private sectors (privatization of space law). The term "non-governmental entities" has been considered as a strong indication that the OST opens for private sectors participation in outer space activities.

Privatisation pertains to government policy regarding the level of state involvement in space activities. It involves change only in the form of the state's involvement, rather the role of involvement itself. In other words, Privatization creates multi-actors in space activities, which in turn will encourage competition and innovation. To ensure that the use of outer space whether such activities carried on by governmental agencies or non-governmental entities is consistent with international space law, states should play the role as an independent privatisation is a policy of changing, not removing the state involvement in outer space activities. Hence, privatization of space leaves the question about the role of the state after privatization and the form of space regulation when states are no longer the sole actor in outer space activities.

regulatory body. Privatization changes the tripartite role of state, as policy makers, regulators and actors of space activities to be more focus on the function as policy maker and regulator of space activities. Thus, it will strengthen the position of national legislation to regulate space activities.

6 Concluding Remarks

The privatization and commercialization of outer space that has taken place intensively in the last two decades has also been followed by privatizing space law – directing space law to be more responsive to private and commercial issues. Article VI of Space Treaty allows non-governmental entities to engage in outer space activities. This means that privatization and commercialization of outer space activities are legally acceptable. This Article, however, does not make any limitations of which outer space activities that can be commercialized and which ones are not? If the Article will be read that all outer space activities can be commercialized, the main question is, whether it is not contrary to the basic spirit of the utilization of outer space: for the common interest of all mankind? In Addition, the Article tends to be read only in the context of liability in case of an accident and failure in outer space activities, and does not relate this with the concept of outer space as a common heritage of mankind that creates the obligation of sharing benefit. The orientation and form of privatization of space law should be within the basic spirit of the utilization of outer space: for the common interest of all mankind.