



# The Space Economy Cannot Succeed Without Private Ownership

By [Rainer Zitelmann](#) September 25, 2025

## NASA Hubble

After the Moon Landing of 1969, manned space travel stagnated for over half a century. The space shuttle was far too expensive and never lived up to expectations. It was only with the advent of private space exploration that the cost of transporting a kilogram of payload into space fell dramatically. In fact, it now costs Elon Musk only around three percent as much to transport one kilogram into space as it used to cost NASA with the Space Shuttle.

Plans to establish a base on the moon – and later on Mars – or mine asteroids are becoming increasingly achievable thanks to the massive drop in launch costs. Today, there are more legal than technical obstacles to such visionary plans becoming reality. This is because governments will not be able to finance such ambitious undertakings, or will at least not be able to finance them alone. What it will take are strong economic incentives – and a secure legal framework.

Without private ownership, there will be no successful space economy. Most successful countries permit the private ownership of land. Where this does not exist, it is at least possible to buy usage rights from the state for 50 to 70 years, which can also be resold – as in Vietnam and China, for example. North Korea is the only country where even that is not possible. But a space economy based on legal conditions such as those in North Korea will never work.

The basis of space law is the 1967 Outer Space Treaty (OST), which has since been signed by 139 states and ratified by 117, including all major spacefaring nations, including the United States, China, and Russia.

According to Article I, the exploration and use of outer space “shall be carried out for the benefit and in the interest of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind.” Article II outlines another key principle: “Outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation or by any other means.”

There is a consensus among lawyers that nations cannot claim ownership due to the prohibition of appropriation in Section II of the Outer Space Act. Opinions differ as to whether this prohibition also applies to private individuals and companies.

Some lawyers argue that the acquisition of property by private individuals would impair the freedoms of access, exploration, and use guaranteed for all states in Article I. If private ownership was allowed, they say, these freedoms would be restricted and the legal status of outer space as a “global commons” beyond territorial sovereignty would be jeopardized.

By contrast, some argue that private corporations are not barred from acquiring ownership rights over celestial bodies. This interpretation rests on the legal doctrine *expressio unius est exclusio alterius*: the explicit mention of one element entails the exclusion of those not explicitly referred to.

Although the OST states that nations may not acquire property in outer space, it does not expressly forbid governments from allowing their citizens to do so. The so-called Moon Treaty of 1984, which was not signed by the major spacefaring nations, is different: it explicitly excludes the acquisition of property. Some lawyers argue that because the authors and signatories of the Moon Treaty felt it necessary to include an explicit prohibition on private property, this proves the OST did not already contain such a ban.

The space lawyer Ezra Reinstein arrives at the following sobering conclusion, "... we have a choice between interpreting the OST as truly hostile to private development, or merely vague." Reinstein argues that the Outer Space Treaty should be renegotiated. However, renegotiating an international treaty can take years, often even decades, and it is unlikely that the Outer Space Treaty will ever be renegotiated.

The United States has adopted a different approach. The Commercial Space Launch Competitiveness Act, which U.S. President Barack Obama signed in 2015, gave all U.S. citizens and companies the right "to possess, own, transport, use, and sell [any] asteroid resource or space resource obtained in accordance with applicable law, including the international obligations of the United States."

In 2020, Donald Trump signed an "Executive Order on Encouraging International Support for the Recovery and Use of Space Resources," explicitly rejecting the notion of space as a "global commons." This was followed in the same year by NASA's Artemis Accords, which has since been signed by 56 countries, but has been flatly rejected by China and Russia, among others. The Artemis Accords states: "The Signatories affirm that the extraction of space resources does not inherently constitute national appropriation under Article II of the Outer Space Treaty, and that contracts and other legal instruments relating to space resources should be consistent with that Treaty." Unfortunately, the addition of the qualification "not inherently" creates new ambiguity.

But the "safety zones" mentioned in the Artemis Accords could be an indirect way of establishing de facto private property. It is logical that areas where raw materials are mined must somehow be secured and demarcated. But such mining can last for decades, and the distinction between temporary use and de facto occupation of any territory is hazy.

So, what would make economic sense (regardless of the legal status quo)? Without full private ownership, there will be no colonization of Mars, and the economic use of the asteroids and the Moon will also be problematic. In any case, who should be allowed to own land on Mars, the Moon, or the asteroids first?

My answer: Those who have the financial means to get there and develop and utilize the land. For instance, if SpaceX succeeds in reaching Mars and starts to build permanent settlements on the Red Planet, then the ownership of land should go to SpaceX first. Not of the entire planet, of course, but of a practicable area, for example the size of Singapore.

SpaceX could fund its flight and development costs by listing the land on Mars as a real estate investment trust (REIT). The price would be determined by the market. Most people would buy shares not to live there themselves, but in the hope of value appreciation. As an incentive for people to settle on and develop Mars, colonists could be offered stocks at a preferential price as a "welcome" once they reach Mars and spend at least five years there.

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