

NewSpace and Capitalism: Balancing Regulation and Innovation

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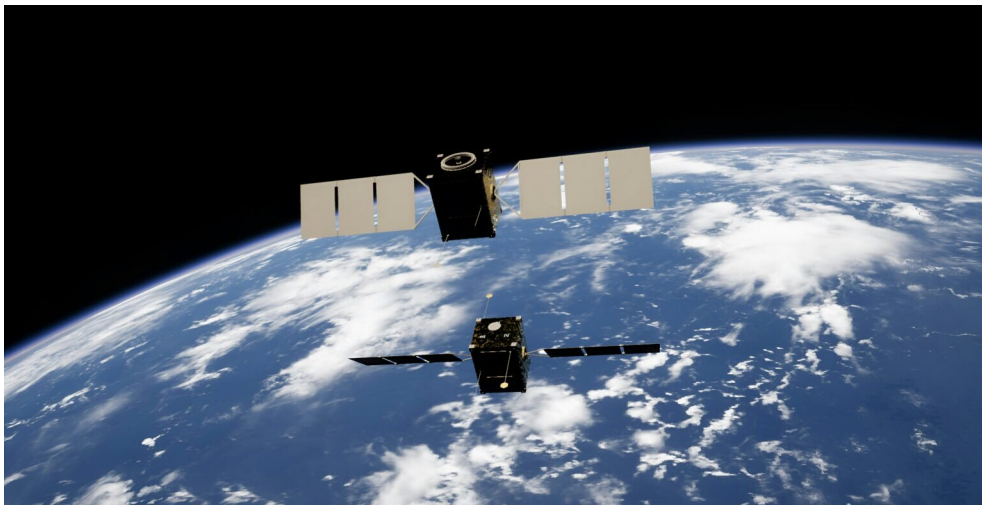


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1. What is NewSpace?

The expansion of market enterprise into strategic domains has long defined modern globalisation. While the early space age of the mid-twentieth century was driven almost exclusively by state-funded geopolitical competition, the commercialisation of space and its integration into the broader economy is now increasing at a fast pace. Today, “NewSpace” refers to the shift from public monopolies to a dynamic, privately driven space ecosystem. This is no longer an emerging niche, but a cornerstone of national sovereignty and technological resilience.

By dramatically lowering launch costs and barrier-to-entry thresholds, private competition has transformed space from a distant frontier into vital critical infrastructure. Downstream applications now power core terrestrial sectors, from agriculture and global logistics to autonomous mobility and continuous environmental monitoring.

The rapid commercial deployment raises urgent challenges: environmental issues resulting from a more crowded orbit and the question of a modernised space law to keep NewSpace companies accountable.

As calls for comprehensive modern space governance grow louder, policymakers face the question of how governments should regulate private space companies without harming innovation.

2. The Transformation of the Space Sector through Private Companies

The growing involvement of private companies in the space sector is changing how space activities are organised, financed and carried out. For a long time, space activities were mainly organised and financed by governments and public institutions. Today, private companies such as SpaceX and Blue Origin are increasingly taking on tasks in this area. They develop rockets, spacecraft and satellites and provide various services to public and private customers.

There have also been changes in technologies and production methods. Private companies have introduced new approaches to the space sector, including reusable launch systems, smaller satellites and large satellite constellations. According to the OECD (2023), such developments have contributed to reducing costs in certain areas and have enabled new commercial applications.

In addition, private companies can approach their decisions differently from public institutions. Government space programmes often pursue several goals at the same time. These include, for example, political priorities, long-term research programmes and the use of public funds. Private companies can align their decisions more closely with expected demand and economic opportunities (OECD, 2024). This gives companies different incentives when developing and financing space technologies.

Despite these differences, private companies work closely with government actors. Governments are important customers and clients and also establish the framework conditions for companies' activities. One example is NASA's Commercial Crew Program. The OECD (2023) shows that such government procurement programmes have contributed to the emergence and growth of markets for commercial space services.

3. Power, Security and Public Interests

The crowdedness of space is, in large part, a consequence of the rapid commercialisation of the orbit (World Economic Forum, 2022). NewSpace was, from its outset, driven by the ambitions of a small number of billionaire-led ventures, most prominently Jeff Bezos, Elon Musk, and Richard Branson (Virgin Galactic). Their shared goal is to make space more accessible by lowering the cost and complexity of spaceflight: a race unfolding both between nations and between commercial providers competing to reach key technological milestones.

A central problem in a capitalist market is the potential for extreme concentration. Where space companies once depended almost entirely on government contracts under cost-plus arrangements, the sector has shifted toward diversified private funding and fixed-price models. This

shift has brought real benefits: sharp cost reductions, higher launch cycles, and reusable infrastructure.

SpaceX is the clearest example of where this trend leads. The company is widely regarded as holding a de facto monopoly in the global orbital launch market: its Starlink constellation controls roughly 90% of the low-latency satellite internet market.

This level of dominance gives such companies the theoretical ability to engage in predatory pricing and other anti-competitive behaviour. Market concentration of this scale also gives private entities a form of extra-national power: the ability to make unilateral decisions with global geopolitical consequences.

The clearest illustration came in March 2025, when Elon Musk and Polish Foreign Minister Radosław Sikorski clashed publicly after Musk suggested Ukraine's front line would collapse without Starlink (Looker & Abdurasulov, 2025). This showed how a commercial actor can effectively dictate terms within a geopolitical negotiation. In its aftermath, it also appeared to stall a separate €1.6 billion contract negotiation between SpaceX and Italy (Reuters, 2025). Market dominance can also be leveraged against the state directly: Blue Origin's lawsuit against NASA over contract allocation is one example of how financially powerful firms can contest and potentially disrupt government funding and procurement processes (Sheetz, 2021).

Formal control over these firms is concentrated in the hands of a small number of private founders and shareholders. At SpaceX, Musk retains approximately 82.4% of voting power (SpaceX, 2026). It means a single individual can retain unilateral control over infrastructure that governments and militaries increasingly depend on.

Yet these companies are not fully independent of state oversight. The NewSpace ecosystem operates on a hybrid model: firms like SpaceX still rely extensively on government contracts, with NASA and the US Department of Defence acting as anchor customers who fund private technology development. This produces an uncomfortable duality: the same firms accused of near-monopoly power in commercial markets remain structurally dependent on public money and public contracts, which arguably gives states more leverage over them than the "unchecked private power" framing suggests, even as it also means public funds are indirectly reinforcing that same concentration of power.

Modern space law rests on a small set of UN treaties negotiated between 1967 and 1979, chief among them the Outer Space Treaty. They say nothing about commercial launches, space tourism, satellite mega-constellations, or the extraction of extraterrestrial resources (Sutherland & Mifsud, 2026). The result is a reliance on soft-law guidance rather than binding rules, leaving uncertainty and gaps in oversight just as the orbital environment grows more congested and contested.

Orbits are becoming increasingly congested as the number of objects in orbit – active satellites, defunct hardware, and debris grows alongside the rise of mega-constellations (Cornet et al., 2026). Left unchecked, this threatens continued access to space for everyone.

The practical consequences are already visible. Operators are increasingly forced into evasive maneuvers to avoid collisions, which drains fuel and shortens the operational lifespan of spacecraft. More significantly, rising object density increases the systemic risk of in-orbit collisions, with the possibility of a chain-reaction cascade of debris known as the Kessler Syndrome, a scenario that could render entire orbital shells permanently unusable (Erkel, 2023).

4. How Much Regulation Does NewSpace Need?

Space activities take place under conditions in which the activities of one company can affect other actors. Space debris is one example: an increasing number of satellites increases the use of existing orbits and therefore also the risk of collisions (ESA, 2026). According to the OECD, there were around 9,100 active satellites in orbit at the beginning of 2024. At the same time, there are more than 100 million pieces of space debris larger than 1 cm that pose a risk to active satellites and other spacecraft. The consequences can also affect government and socially important infrastructure, including satellites used for weather forecasting, climate monitoring and communication.

Such problems can only be addressed to a limited extent by individual companies. A company can take measures to remove its own satellite from an orbit after the end of a mission or to avoid collisions. However, the long-term use of orbits requires many different operators to follow certain standards and share information. The UN therefore recommends that states establish national regulatory requirements for space activities and adapt them to the increasing involvement of non-governmental actors.

Such requirements can also involve additional costs and administrative burdens for companies. This particularly affects young and smaller companies, which often have fewer financial and human resources than established space companies. A high regulatory burden can make it more difficult for new companies to enter the market. The OECD, for example, identifies high insurance requirements and complex approval procedures as potential barriers to market entry.

The effects of regulation on innovation are also not clear-cut. Additional requirements can slow the development of new technologies, but OECD (2024) research on environmental regulations suggests that well-designed requirements can also encourage it; though this evidence is not space-specific, it complicates the assumption that additional rules automatically mean less innovation.

Companies operating across several countries also face inconsistent approval procedures and requirements, particularly in Europe, where

member states currently apply different national regulations to space activities. This inconsistency is viewed by the European Commission as an obstacle to cross-border activity and the single market.

How these requirements affect companies and innovation therefore depends in particular on how regulation is designed in practice. Extensive approval and insurance requirements can create a greater barrier for young companies. At the same time, certain regulatory requirements could create incentives for the development of new technologies.

5. What Should Governments Do?

Space Governance is currently characterised by a fragmented legal landscape, driven increasingly by private actors, commercial competition and global supply chains. This is especially true for rocket launches, which operate within a mix of international law, domestic regulation and commercial arrangements. International law – foremost the Outer Space Treaty – holds launching states responsible for all space activities carried out by their nationals. Yet different states have different rules, or none at all, which hinders young start-ups from operating across borders and undermines commercial development more broadly. Shared norms across states are therefore necessary for the actor to function effectively in an interconnected world.

This state liability should compel governments to redefine their domestic space licensing frameworks: streamlined licensing procedures, liability caps, and insurance requirements would reduce both cost and uncertainty for private operators.

There is a broad consensus on the need for binding international standards, space traffic management, and common enforcement principles to manage orbital congestion and the risk of the Kessler Syndrome.

Private actors should be directly involved in international standard-setting processes to ensure that commercial and technical realities are reflected in the resulting norms. At the same time, there is also the risk of overregulating the NewSpace sector.

As noted before, this trade-off cuts both ways: weak safety requirements risk accidents and failures that erode trust among mission partners, investors, and the public, while excessive requirements risk higher costs, slower approvals, and less room for the experimentation new technologies require.

This tension extends to the state itself, since government missions increasingly depend on launch capacity from private providers such as SpaceX, and, in the future, Isar Aerospace.

Due to the nature of fragmented governance systems, this balance is also a competitive one: a state that adopts more lenient risk norms could put more strictly regulated competitors at a disadvantage in the global market, creating pressure toward a regulatory race to the bottom rather than toward common standards.

6. Conclusion

NewSpace is changing the role of private companies in space activities. Companies are taking on more responsibility for the development of technologies and the provision of space-based services, while states continue to play an important role as customers, investors and regulators.

This matters because, if economic and technological capabilities become concentrated among a small number of companies, their decisions can have consequences beyond their own business interests. Security, environmental protection, and access to space-based services can therefore not be considered from a commercial perspective alone.

This is where government regulation becomes important. Governments need to set rules for areas where the actions of individual companies can create risks for others or affect the long-term use of space. At the same time, regulation creates costs and can make market entry more difficult, particularly for smaller and newer companies. The goal should therefore be a regulatory framework that addresses relevant risks without creating unnecessary barriers to innovation.

Governments should establish clear and consistent safety and environmental standards while leaving companies sufficient freedom to develop new technologies and services. Greater cooperation between states, particularly within the EU, could also reduce differences between national requirements. Private companies should have sufficient freedom to innovate, while governments should intervene where economic interests alone do not adequately address important risks or public interests.

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