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Outsourcing the final frontier: Space X, the East India Company and the political economy of space

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Abstract

Private corporations and state-owned enterprises are becoming increasingly important vehicles through which nations project power into space. This paper argues that the emerging political economy of space displays institutional dynamics reminiscent of an earlier era of frontier expansion: the Age of Sail dominated by the European East India Companies. Drawing on original data on the concentration of global launch capacity and on the historical record of chartered-company governance, we show how frontier firms can accumulate concentrated market power, exploit legal ambiguity, blur the boundary between public and private authority, and gradually acquire governance-like functions in domains beyond effective sovereign reach. Using Susan Strange's framework of structural power, we explain why geopolitical competition generates incentives for regulatory forbearance, as states become increasingly dependent on their national champions. The historical record suggests that once dependence on a dominant provider becomes entrenched, governance reform tends to occur only after crises, coming at high costs. We conclude by outlining policy implications for the governance of the emerging space economy.

Policy implications

- The concentration of launch capacity in a single private firm creates strategic dependencies for governments reminiscent of the structural power once exercised by chartered trading companies, strengthening the case for diversification strategies.
- Reusability, vertical integration, and learning-by-doing create self-reinforcing advantages in space launch, increasing the likelihood of highly concentrated market structures and making strategic dependence a growing governance challenge.
- Governments engaged in the space race face a structural dilemma: curbing the market power of their national champions may slow them down vis-à-vis their competitors. The historical record of chartered companies shows that this logic of forbearance can generate significant long-term governance costs.
- Corporations operating in domains of legal ambiguity tend to acquire quasi-sovereign functions over time. Policymakers should therefore establish regulatory frameworks early, before commercial practices and operational norms become entrenched.

1. Introduction

Space is rapidly becoming a major arena of economic and geopolitical competition. Spacefaring nations are powering ahead with ambitious new lunar exploration programmes, private space startups now number in the tens of thousands worldwide, and the global space economy already exceeds \$600 billion (Space Foundation, 2025). As space has become an economic marketplace responding predominantly to commercial incentives (Terzi and Nicoli, 2024; Weinzierl and Rosseau, 2025), a domain once dominated by national agencies pursuing scientific or military objectives is now organised around commercial actors; a shift widely labelled the ‘New Space’ era (Pelton, 2016; Peeters, 2021).

This transformation is reshaping not only the economics of space access but also its political economy. The firms leading the expansion into space are no longer merely contractors executing state missions. SpaceX and Blue Origin, alongside their Chinese state-owned counterparts, are set to increasingly shape the infrastructure, operational norms, and governance practices of a frontier where international institutions remain weak and legal ambiguities persist. In doing so they are likely to acquire a degree of autonomous authority that sits uncomfortably with conventional understandings of the relationship between states and markets.

Our applied economic history argument is that the emerging political economy of space reproduces institutional dynamics observed in the past, and specifically by the chartered companies of the Age of Sail (c. 1570–1860), when European joint-stock companies, the British, Dutch and French East India Companies chief among them, served as instruments of national power in ungoverned spaces. The parallel is more than rhetorical. Like then, there is now a risk of observing commercial entities operating with considerable autonomy at the edge of sovereign reach, accumulating dominant control over critical infrastructure, exploiting legal ambiguity to legitimate their activities, and exercising functions, from standard-setting to quasi-diplomatic engagement, that would ordinarily belong to states.

The paper expands on this historical parallel and makes three contributions. First, it links technological change in launch systems to industrial-organisation outcomes, showing how reusability, learning-by-doing and vertical integration generate increasing returns and, with them, market concentration. Second, it develops a comparative political-economy framework of frontier corporate power, drawing on Susan Strange’s concept of structural power to explain how firms acquire governance-like authority without formally displacing states. Third, it explains why geopolitical competition inhibits timely regulation, giving governments an interest in supporting rather than constraining their national champions. We then offer some historically informed policy recommendations for jurisdictions hosting dominant commercial space firms.

Because one single company – SpaceX – currently dominates the global launchers market, much of the paper and the examples provided are focussed on it. And in many ways, the United States (US) represents the most appropriate comparator to the era of the chartered companies, given its decision to rely on private launchers for its space access. However, we believe that the political economy dynamics put in motion when corporations are unleashed in an unregulated

environment as a branch of the state in a context of geopolitical confrontation apply more widely to other jurisdictions as well, including those considering the creation of a national champion (Europe), those pushing to unleash market forces to kick-start their space economy (India), or those leveraging quasi-state space companies (China). As we have noted in a previous contribution, they apply indeed also potentially to other sectors, such as the digital/AI field (Marcuzzi and Terzi, 2019).

Several disciplines have been treating the issue of space governance. The legal literature is particularly extensive, but is often more concentrated on explaining the state of affairs and an ideal first-best approach, rather than analysing the political economy forces shaping these developments (Jakhu and Pelton, 2017; Deplano, 2021). The economics literature remains extremely scant, and mostly focussed on the governance of space debris, read through the prism of a 'tragedy of the commons' (Adilov, Alexander and Cunningham, 2015; Grzelka and Wagner, 2019; Rouillon, 2020; Bongers and Torres, 2023). The political science literature is fast catching up with the implications of the commercialisation of space (Utrata, 2023; Fitzmaurice, 2025). Some historical parallels have been drawn between current space exploration and past economic developments to inform policy choices and business decisions, such as the 19th century 'scramble for Africa' or the rollout of the railway in the US (Fogel, 1966; Launius, 2014; Raswant, Nielsen and Buckley, 2025). Yet this transformation has a political economy dimension that deserves far more attention than it has so far received. A gap we aim to fill.

The remainder of the paper is organised as follows. Section 2 examines the economics of New Space and the concentration dynamics of reusable launch. Section 3 examines the evolving legal frameworks governing space activity. Section 4 places contemporary space enterprises in historical perspective, drawing systematic parallels with the East India Companies. Section 5 develops the analytical framework, centred on the dynamics of structural power at the frontier. Section 6 considers the governance and policy implications. Section 7 concludes.

2. The economics of New Space and market concentration

The economics of space access have been transformed in the past two decades (Terzi and Nicoli, 2024). According to recent estimates, the average cost of launching a kilogram of mass into Low Earth Orbit dropped from approximately \$87,000 in 1960 to \$15,000 in the early 2000s, and then fell sharply to less than \$4,000 by 2025, a cumulative reduction of over 95 per cent (Terzi and Nicoli, 2026). The advent of reusable rocket technology, spearheaded by SpaceX from 2016 onwards, constitutes a watershed moment (Gatti and D'Ottavio, 2025). Space launch vehicles, unlike aircraft, had historically been discarded after a single flight: a practice inherited from Cold War missile engineering (Nicoli and Terzi, 2026). Reusability broke this paradigm by recovering the booster stage and refllying the same hardware multiple times, cutting per-launch costs dramatically.

The significance of reusability extends beyond engineering; it is that it alters market structure. The barrier had long been a chicken-and-egg problem. Recovering and refllying a rocket requires

large upfront investment that pays off only at high launch cadence, yet cadence itself was constrained by high prices and thin demand. This equilibrium of expensive, disposable rockets and subdued demand persisted for half a century. Why SpaceX broke it, rather than a smaller European provider, is straightforward: the larger and costlier the rocket, the greater the waste in discarding it, and so the greater the payoff to recovery. Saving even a few Falcon 9 boosters rapidly repays the engineering investment in making them recoverable.

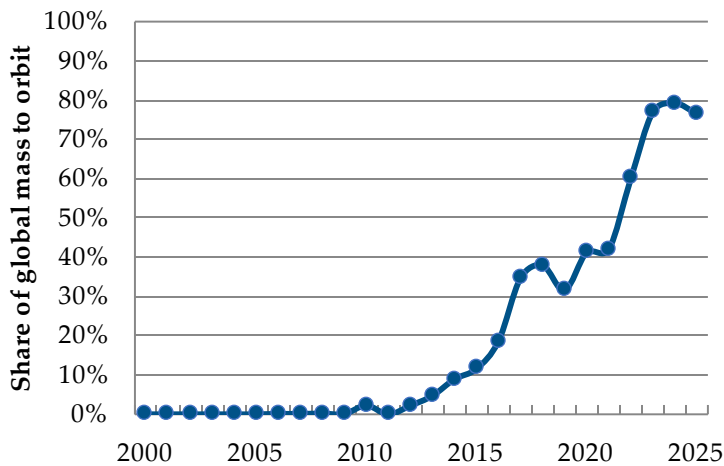
SpaceX's decisive move, however, was commercial. When external demand looked insufficient to sustain the launch rate that reusability required, the company manufactured its own demand by building Starlink, a broadband constellation requiring thousands of satellites and hundreds of launches. Vertical integration thus resolved the chicken-and-egg problem: reusable rockets made the mega-constellation viable, and the mega-constellation guaranteed the cadence that made reusability pay. In 2025, 72% of SpaceX's launches were devoted to its own Starlink satellites (AEI, 2026). In addition, Starlink constitutes a new revenue stream for SpaceX, with profits of around \$4.4bn in 2025, equivalent to the whole NASA Space Operations budget.

The result is a self-reinforcing dynamic. Higher launch frequency generates operational learning and lower costs; lower costs expand the constellation; constellation revenue funds further innovation. Competitors lacking both reusable systems and comparable internal demand face increasingly difficult barriers to entry, in an equilibrium that pulls further away with every passing year.

As a result, access to space has become dominated by a single firm to a degree that is unusual even by the standards of technology-intensive sectors. SpaceX's share of global mass launched to orbit rose from below 10 per cent in 2014 to close to 80 per cent by 2025 (Figure 1, panel A); in its domestic US market the figure reached 94 per cent in 2025 (Figure 1, panel B), despite NASA's deliberate attempt to safeguard competition through its Commercial Orbital Transportation Services (COTS) programme (Robinson and Mazzucato, 2019; Weinzierl and Rosseau, 2025, pp. 29–33).

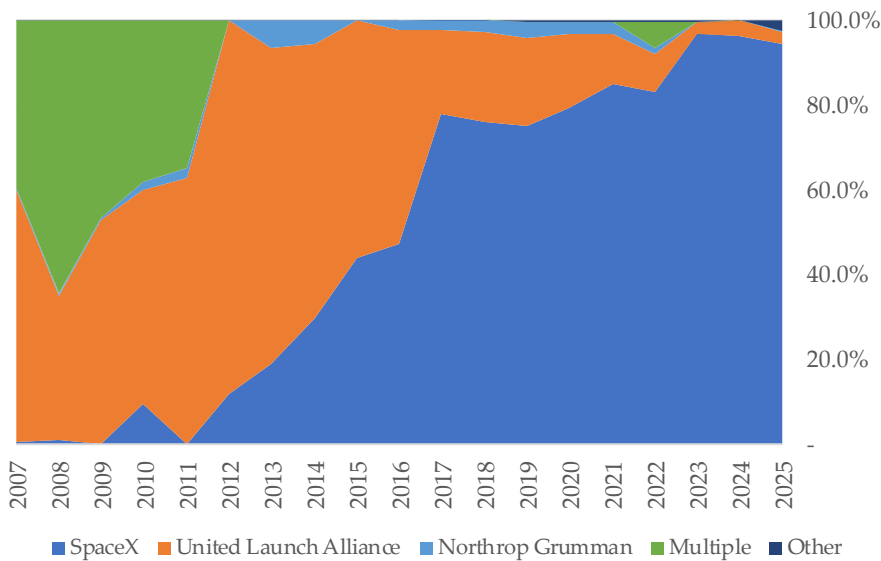
Figure 1.

Panel A: SpaceX's share of global mass launched to orbit, 2000 to 2025



Source: Authors' calculations based on Terzi and Nicoli (2026).

Panel B: Share of US mass to orbit by manufacturer



Notes: Chart identifies the manufacturer of each launcher and then weighs it by the mass it sent to orbit in each year.

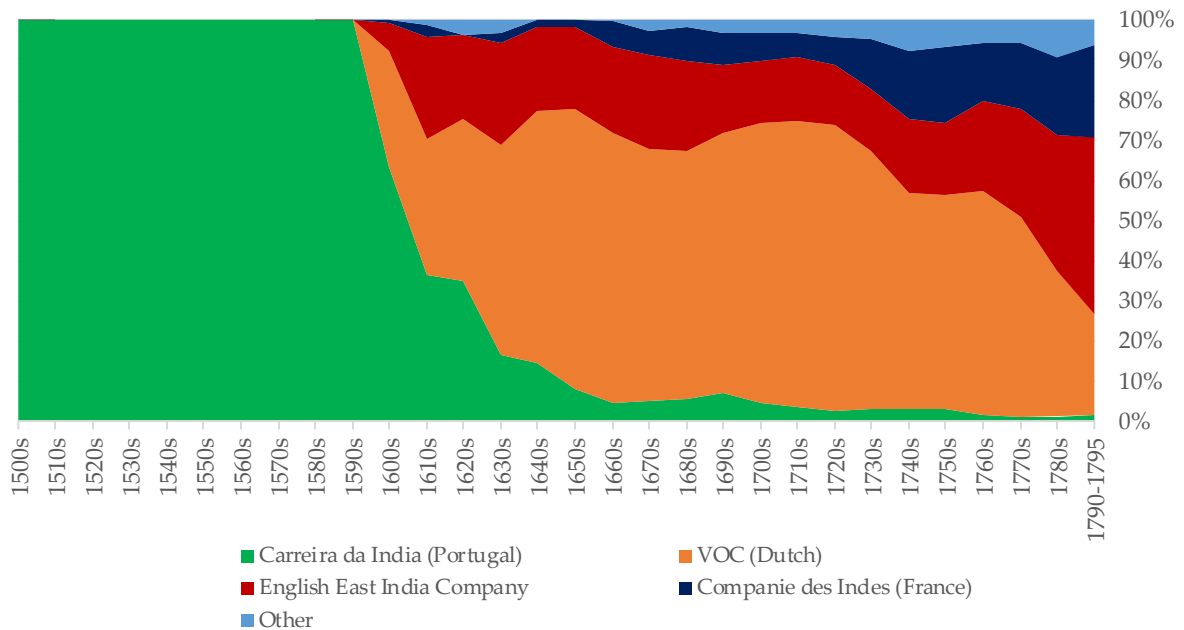
Source: Authors' calculations based on Terzi and Nicoli (2026).

In addition, with close to 10,000 satellites already in orbit (and 42,000 planned), SpaceX is absorbing orbital slots in Low Earth Orbit and radio frequencies that late entrants would need, contributing to higher barriers to entry (Bennett and Cudney, 2026). The overall result is a market structure for access to space that has more in common with the chartered trading companies of the 17th century than with the competitive markets of economics textbooks, or even the oligopolistic market that had characterised much of the previous state-led space era (Figure 2,

Panel A and B). Indeed, some have suggested that space transport could be seen as a natural monopoly (Weinzierl and Rosseau, 2025, p. 189).

Figure 2.

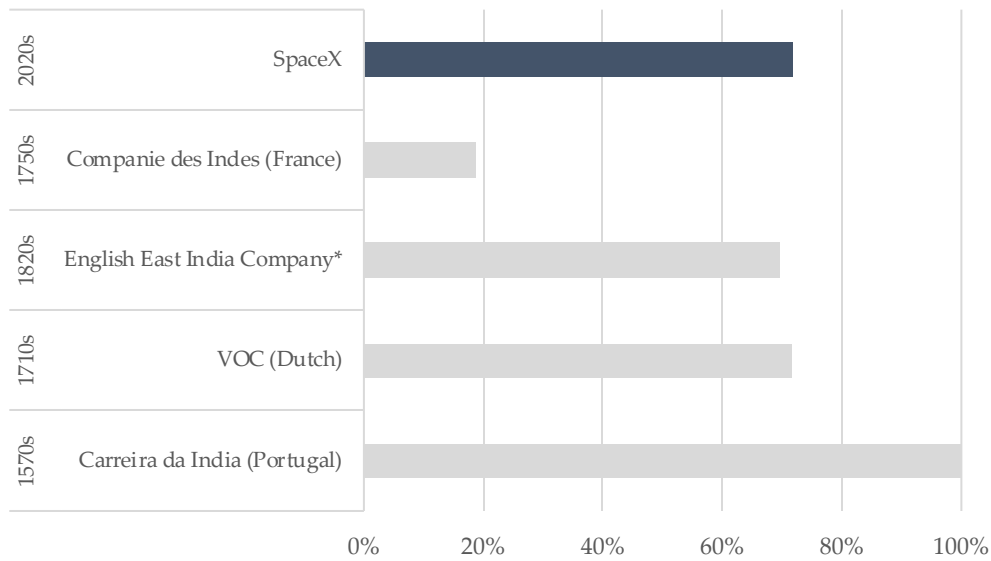
Panel A: Share of Cape-route trade tonnage by major East India Company (EIC), 1501-1795



Notes: 'Other' includes smaller chartered companies from Denmark, Oostende and Sweden. The English East India Company was founded in 1600, rechartered in 1657 and again in 1693, and succeeded by the United EIC in 1709. The Danish East India Company (1616-1650) was succeeded by a second company (1670-1729) and the Danish Asiatic Company from 1732 until dissolution in 1807. The French East India Company was founded in 1664, reorganised in 1684 and succeeded by the Compagnie des Indes (1719-1769), which was then nationalised.

Source: Authors based on de Vries (2003).

Panel B: Peak market share achieved in specific decades, Space X and East India Companies



Notes: Data for Carreira da India, Dutch Vereenigde Oost-Indische Compagnie (VOC), English EIC and Companie des Indes are based on outbound tonnage on the Cape-trade route. Data for SpaceX is based on tonnes of global payload to orbit. *Data for the 1820s derived from Solar (2013) refers to total British trade with Asia. However, the EIC lost its monopoly on trade with India in 1813, while the China monopoly continued until 1833. As such, this figure should be considered an upper-bound estimate for the EIC.

Source: Authors' calculations based on de Vries (2003), Solar (2013), and Terzi and Nicoli (2026).

3. Legal frameworks

The legal architecture governing space was designed for a different era. The 1967 Outer Space Treaty was built for a world in which space activity was a government monopoly: it declares space free for all, bars national appropriation of celestial bodies, and reserves exploration for the benefit of mankind, but it supplies no machinery for implementation or enforcement and no jurisdiction over commercial disputes. In response to this ambiguity, the United States has advanced the 2015 Commercial Space Launch Competitiveness Act, which grants citizens the right to sell resources they extract, and the Artemis Accords,¹ which affirm that resource extraction is not 'national appropriation' under the Treaty (Deplano, 2021). China has responded with the rival International Lunar Research Station (ILRS) framework, producing an emerging bifurcation in space governance (Hasin, 2023).

The parallel with the historical experience of chartered companies is instructive here. In the early modern period, European powers used legal instruments (royal charters, patents of monopoly, treaties of trade) to create the conditions under which their commercial enterprises could operate in ungoverned or weakly governed spaces. The British East India Company's charter, first granted in 1600, was both a licence to trade and a delegation of sovereign authority: the Company was empowered to make treaties, govern territories, administer justice, and wage war (Stern, 2023).

¹ As of mid-2026, 67 countries have signed the Accords.

The charter did not merely authorise commerce: it constituted a form of governance for spaces where no effective sovereign authority existed.

The Space Act and the Artemis Accords serve an analogous function. They create a legal framework that enables private appropriation of resources in a domain where international law is ambiguous and enforcement mechanisms are weak (Fitzmaurice, 2025). Just as the Company's charter was both a commercial licence and an assertion of national interest against rival powers, the Artemis Accords simultaneously facilitate American commercial space activity and consolidate US leadership in defining the rules of the road for a new domain.

4. Frontier corporations in historical perspective

The European chartered companies of the 17th and 18th centuries were, in Stern's phrase, the corporations that built colonialism; Phillips and Sharman call them 'company-states' (Phillips and Sharman, 2020, pp. 1–2; Stern, 2023, p. 1). They were instruments through which European states, even small ones, projected power across oceans, establishing trade monopolies, governing territories and reshaping the political economy of entire continents. They were at once commercial ventures and extensions of state power, occupying a grey zone between public authority and private enterprise. The comparison with today's space enterprises extends beyond metaphor (Utrata, 2023). Taken together, the parallels suggest that the political economy of space may be exhibiting patterns associated with earlier episodes of frontier expansion. We focus here on five historical features of that period that echo elements displayed in today's space economy.

First, dual purpose. The companies were never purely commercial. The British East India Company (EIC) was established with an explicit mandate to advance English trade and influence in Asia. The Dutch *Vereenigde Oost-Indische Compagnie* (VOC) was a creature of the Dutch States-General, which saw it as a tool for consolidating the young republic's strategic position. The French *Compagnie des Indes Orientales* was created by French finance minister Jean-Baptiste Colbert as an instrument of mercantilist state policy, directly controlled by the crown (Burbank and Cooper, 2010, p. 161). Today's space firms are similarly hybrid. SpaceX is NASA's primary launch provider and a critical enabler of US military and intelligence assets. It is crucial for the US's Artemis programme to win the race to the Moon vis-à-vis China. In foreign policy, Starlink became a strategic instrument the moment it was deployed at the battlefield in Ukraine, and has likewise enabled protests when the internet was shut down by authoritarian governments, such as Iran's in late 2025. China's main state-owned enterprise, the China Aerospace Science and Technology Corporation (CASC), which controlled 93% of its domestic market in 2025 (Terzi and Nicoli, 2026), is even more explicitly an instrument of state policy, retaining however also a commercial purpose. As such, in our historical analogy, it has a closer parallel to the French and Portuguese East India Companies than the English or Dutch equivalent.²

² In both the Portuguese and French cases, for example, the king remained a key shareholder in the company-states. Portugal's crown invested 80 percent of the capital of the *Estado da India*, with the bulk

Second, the legal vacuum. The chartered companies operated in spaces where European sovereign authority was, at best, notional. The Indian Ocean, Southeast Asia, or the West African coast were domains beyond the effective reach of any European legal order. The companies exploited this ambiguity, creating their own legal systems, minting currency, signing treaties with local rulers, and adjudicating disputes among their employees and subjects (Marcuzzi and Terzi, 2019). Edmund Burke famously called the EIC “a state in the guise of a merchant” (Dalrymple, 2019, p. 3). Space presents an analogous legal vacuum. The Outer Space Treaty establishes broad principles but lacks the institutional machinery for implementation or enforcement. No international body has jurisdiction over disputes arising from commercial space activity. In this vacuum, the entities that arrive first (which in practice means the companies contracted by NASA and their Chinese state-owned counterparts) will have the greatest influence over the norms and standards that emerge. They will possess greater knowledge of the operational realities of space than any government back on Earth, giving them an informational advantage that is likely to translate into regulatory influence.

Third, monopoly by design, and now by economic logic. Chartered companies were typically granted exclusive trading rights within defined geographic areas. The VOC held a monopoly on Dutch trade east of the Cape of Good Hope. The British companies held similar rights for trade with the East Indies, Russia, the Levant, North America or Africa – depending on the company. These monopolies were justified on grounds a modern economist would recognise: the high fixed costs and risks of long-distance trade required the concentration of capital and the assurance of returns that only monopoly could provide. The space launch industry is arriving at the same outcome not by legal fiat but by the market concentration dynamics described in Section 2.

Fourth, and most consequentially, the blurring of public and private interest. Chartered companies let states project power cheaply and with plausible deniability (Gelderblom, De Jong and Jonker, 2013). But this also meant that, at times, these companies would dominate their sovereign’s finances or drive their foreign policy. Some of these companies started acquiring parts of their countries’ national debt. This made the EIC, for example, virtually “unassailably creditworthy, which allowed it to take on great amounts of debt, largely in loans from the Bank of England and its own bond issues” (Stern, 2023, p. 130). The Company had thus become “like fiscal departments of government” (Burke, 1769, p. 94). When a general banking crisis in 1772 left lenders, especially the Bank of England, increasingly reluctant to extend the Company’s credit, it soon appeared that the EIC was, in the eyes of leading British figures, “too big to fail”, to the point that its collapse was considered to be equivalent to “the ruin of the whole edifice of the British Empire” (Pownall, 1781, p. 4). This not only allowed the EIC to mobilise funds and loans that would hardly have been available to rival companies, thereby reinforcing the EIC’s monopoly even in times of crisis; it also provided a further incentive against any alteration of its constitution.³ Critically, most of these companies had over time involved a growing number of

of remaining funds being drawn from government sources such as local municipalities. The French king similarly contributed one-fifth of the capital to the French company (Harris, 2009).

³ In 1677, the EIC was challenged by critics calling for greater role and oversight of the State on the Company and its enterprises (Stern, 2023, p. 110). The EIC’s advocates, however, countered that any

leading figures in their countries – officeholders, parliamentarians, nobles and even members of the royal court – in the management of the companies themselves. Dutch political and commercial elites, for example, were bound by close familial and patrimonial connections, which implied a strong identity of interest between them (Adams, 1994). These conflicts of interest systematically pushed back against reforms, abolition of the charters or the introduction of greater checks and balances in their constitution. Where this proved insufficient to fend off critics, the companies resorted to overt corruption to defend their privileges.⁴ Ultimately, similar reforms aiming to rein in the VOC, or at least pursue greater liberalisation within the Dutch system, failed as well for similar reasons (Nierstrasz, 2012; Wezel and Ruef, 2017).

The pattern is instructive: once hybrid enterprises are allowed to thrive in the grey zone between public and private spheres, they tend to break free of government control, and reclaiming public authority becomes exceedingly difficult.⁵ Comparable forms of blurring are emerging in space. SpaceX does not merely launch satellites; it operates communications infrastructure that governments depend on for civilian and military purposes. As activity on the Moon expands, firms are likely to be drawn into governance functions, setting safety standards, managing resource claims, coordinating between operators, that are sovereign in substance if not in name. In establishing a permanent presence on the Moon, corporations will be operating landing sites, perhaps mining lunar regolith for construction, and extracting water and oxygen from icy formations. According to the Artemis Accords (Section 11, §9), they are allowed to set up “safety zones” around these sites to protect “public and private personnel, equipment, and operations from harmful interference” (Gilbert, 2023). Who will define the extent of these safety areas? What if the safety area is breached by another corporation? Will they be fenced? Will they be guarded? These scenarios are plausible in the near future; despite the Moon’s vastness, nations are targeting the same few polar sites where ice is likely to be found (Jones, 2022; McKeown, Dempster and Saydam, 2022).

alteration of the existing charter would be a grave error. The Company had done critical public service, not least in its role as “a pillar of state finance.”

⁴ In 1693, it turned out that the EIC was using its own shares for buying parliamentarians, annually paying £1,200 to prominent MPs and ministers. The parliamentary investigation into this, the first corporate lobbying scandal, found the EIC guilty of bribery and insider trading. The possibility of bringing the Company and its territories under direct control of the government, or at least the Crown, was again discussed; but the EIC’s public connections once again showed, as British MPs – nearly a quarter of whom held Company stock that would have plummeted in value had the Crown taken over – voted against the proposal (Dalrymple, 2019, pp. xxxiii–xxxiv).

⁵ In 1783, the British Parliament felt again compelled by the rapid expansion of the EIC’s territorial empire in South Asia, to discuss structural reforms to the charter, including the replacement of the Company’s government with a ministry-appointed council. The EIC argued that concessions and territories gained in India through direct negotiations with Indian rulers were legal property of the Company, not the Government or the Crown – this despite the British government having spent an enormous sum on naval and military operations protecting the EIC’s acquisitions. The so-called India Bill eventually failed in the House of Lords, the Ministry fell, and the more moderate regulation introduced the next year ultimately left the charter intact and passed only “with the assent of the corporation.”

Fifth, interstate rivalry. The companies existed amid intense competition between European powers; the English charter was granted partly because England could not let the Dutch monopolise the spice trade, and the VOC was assembled to consolidate Dutch resources against Portugal and England⁶ (see Figure 2, Panel A). This fact alone echoes recent developments in the space economy, where European defence manufacturers Leonardo, Airbus, and Thales are seeking to merge their space activities, under the prospect of achieving scale to compete with non-European firms in a tense geopolitical context, however at the risk of creating a domestic quasi-monopoly (Hollinger, 2024).

At the time of chartered companies, the rivalry for primacy over Asian trade both opened new fronts for European wars and gave the companies leverage over their own governments' foreign policy: the VOC conspired to undermine Dutch reconciliation with Portugal, and resisted settlement of the Ambon affair for decades even as both states' strategic interests in Europe aligned.⁷ Governments sided with their champions because they could not afford to watch these 'fiscal departments of government' fail.

The US–China space race runs along the same grain. The history of chartered companies suggests that rivalry on Earth is likely to be exported to space. Indeed, both superpowers today have codified in official documents that dominance in space is essential to their broader geopolitical position (State Council of the People's Republic of China, 2022; National Science and Technology Council, 2023). For the United States, SpaceX's technological lead is a critical national asset. For China, the development of indigenous space capabilities, through state-owned enterprises integrated into the broader apparatus of industrial and military policy, is a matter of strategic priority. In both cases, the competitive dynamic creates incentives for governments to support, rather than constrain, the market power of their respective champions. This is the central political economy paradox of the new space race: the state has a strategic interest in maintaining the dominance of its national champion, even as that dominance accumulates a degree of structural power that could eventually challenge the state's own authority.

The historical analogy has its limits. Outer space has no indigenous populations or prior political orders and so lacks the coercive and extractive dimension – conquest, taxation, territorial administration – that defined much of what the chartered companies became. However, the factors at the heart of our argument (monopoly, legal vacuum, interstate rivalry, state dependence) are true irrespective of the presence or lack of pre-existing populations. The presence/absence of indigenous populations changes what companies do at the frontier, but not

⁶ The French Company too was created to ensure that France would not be excluded from the lucrative commerce of Asia and could in fact drive off – to the largest extent possible – all others (Wellington, 2006; Chartrand, 2024).

⁷ Its rivalry with the Estado da India pushed the VOC to systematically conspire “to undermine Dutch diplomatic efforts” towards a political reconciliation with Portugal. Likewise, the VOC's massacre of EIC employees in Ambon inflamed Anglo-Dutch relations at a time when both states' strategic interests in Europe were strongly aligned – and the VOC continued to resist a legal settlement of the Ambon incident for decades, preventing a reconciliation between two Protestant maritime states that had common enemies (Nijman, 1994, pp. 221–222; Clulow, 2007, p. 21).

the mechanisms of power accumulation in this context. Utrata (2023) likewise shows that this disanalogy should not obscure the wider fit of the parallel between early-modern chartered companies and space corporations. The crucial point, for us, is that the analogy isolates a single dynamic: the accumulation of structural power by firms operating at the frontier of sovereign reach—something we explore further in the next section.

5. Structural power and the political economy of space

To make sense of this dynamic we draw on Strange’s distinction between relational and structural power.⁸ Relational power is the familiar capacity to make others act against their preferences; structural power is the capacity to shape the frameworks within which others must operate, to set the rules of the game rather than win any single play. Strange identified four such structures – security, production, finance and knowledge – and space corporations are likely to wield power across all four. Take SpaceX, which now holds a commanding position in each dimension. In production it controls the critical bottleneck, access to orbit, on which all other space activities depend. In knowledge its unmatched launch cadence yields operational data and learning no rival can match, so that its lead compounds with every flight. In security, Starlink and Starshield (the secured government communication branch) have become indispensable military and civilian infrastructure, as discussed in Section 4. In finance, its dominant position attracts the capital that funds the next round of innovation, following what is set to be the biggest initial public offering (IPO) in history.

Strange’s own concern, developed in *The Retreat of the State* (1996), was precisely the growing asymmetry between state authority and market power, the diffusion of authority away from states and toward corporations. The space economy is perhaps one of the clearest contemporary instances: a single private firm holds structural power exceeding that of most national space agencies given its dominant role at national and global level, in an environment where states’ regulatory capacity is minimal and international law ambiguous.

One might object that rapid innovation could destabilise incumbents rather than entrench them, and indeed Figures 1 (Panel B) for the space economy and Figure 2 for the chartered companies do suggest that dramatic shifts in market power are possible. However, without ruling it out for the longer term, SpaceX is currently considered to be around 10 years ahead of its competitors, not least as it developed re-usability with its Falcon 9 in December 2015, something Blue Origin is trying to achieve nowadays (Weinzierl and Rosseau, 2025, p. 71). In the meantime, norms could crystallise and eventually become entrenched. The historical parallel is again instructive. The institutional arrangements established by the East India Companies in the 17th and 18th centuries (property rights regimes, trading networks, administrative structures, legal precedents) proved extraordinarily durable. Many persisted long after the companies themselves were dissolved (Stern, 2011).

⁸ Strange (1988, 1996). On structural power in space specifically, Morin and Tepper (2023).

From a political-economy standpoint this leaves the United States with a genuine dilemma. SpaceX's dominance is a source of advantage in the race with China; yet concentrating such critical capability in one private entity creates dependencies that may, in time, constrain Washington's freedom of action. Because curbing SpaceX might slow American progress, the government has little incentive to do so. The outcome is a de facto technological monopoly paired with a supportive state unable, or unwilling, to exercise strict regulatory control, a state that is nominally sovereign but structurally dependent on an actor whose cooperation it can court but not command. A recent flashpoint already illustrated this tension at play, when on the back of personal accusations, US President, Donald Trump threatened to cut SpaceX's government contracts and SpaceX's CEO then threatened to decommission its Dragon capsule, effectively cutting off the US government from the International Space Station (Foust, 2025).

6. Governance and policy implications

The actions of today's space enterprises raise significant governance challenges for the existing multilateral architecture. The Outer Space Treaty's ban on national appropriation sits awkwardly beside the Space Act's recognition of private resource rights, and its 'benefit of all mankind' principle beside the reality that the gains accrue overwhelmingly to a few firms in a few countries. The Artemis Accords are a genuine attempt to update the framework but are bilateral rather than multilateral, and do not bind China, Russia or most of the Global South. On resource extraction, they amount to an assertion that first movers set the rules, much as the treaties European companies signed with local rulers established trading privileges, resource extraction rights, and legal jurisdiction while dressing unilateral action in the language of mutual agreement. The bifurcation of space governance between the Artemis framework and the China/Russia ILRS, each backed by a major power and each seeking to attract adherents, echoes the early-modern period, when rival European powers established competing frameworks for governing overseas trade and territory (the Portuguese *padroado* system, the Dutch *mare liberum* doctrine, the English and French systems of chartered monopoly), each reflecting the strategic interests and institutional preferences of its sponsor (Burbank and Cooper, 2010, pp. 8, 161).

There is also a distributional dimension that cannot be ignored. The space economy, as currently constituted, is highly unequal. The benefits of commercial space activity flow predominantly to a handful of spacefaring nations and the firms based within them. This is not without precedent: the chartered companies created vast wealth for their shareholders and home countries while imposing costs on the territories and peoples they governed. The potential scale of future imbalances could be considerable. As the economic frontier of space expands, and the range of valuable space-produced goods grows from current 'space uniques' like satellite services toward 'space tradeables' and eventually 'space consumables' produced for in-space use (Terzi and Nicoli, 2024), the question of who has the right to extract and profit from space resources will become one of the defining issues of global governance.

In practical policy terms, our historical parallel points to a difficult truth: the structural incentives in the current space race push strongly against proactive governance. As we argued in the

previous section, no spacefaring government has a compelling short-term reason to constrain its national champion when doing so might hand an advantage to its rival. The historical record, however, suggests that this logic of forbearance carries significant long-term costs. The East India Companies were left largely unregulated for precisely the same reason: curbing the EIC risked losing ground to competitors. The eventual regulatory response, when it came, was economically and politically costly. The accelerating globalisation of European inter-state rivalries steadily undermined the company-states' ability to reconcile power and profit. "The more the VOC had to govern, the less it can support and augment commerce" (Weststeijn, 2014, pp. 21–22). The VOC slowly declined over the 18th century being effectively bankrupt by the time it was nationalised in 1795 (see Figure 2, Panel A). In the case of the EIC, it was the Company's unparalleled success in reinventing itself as a large-scale territorial power that paradoxically doomed it. The British government was ultimately forced to assume direct control of the Company's territories in 1858, after the costs of unregulated corporate power (famine, fiscal crisis, diplomatic entanglements) became too large to ignore. Another British chartered company, the Hudson's Bay Company (HBC) was eventually forced to sell off its chartered privileges, with the Company's lands transferred to the new Dominion of Canada in 1869 (Phillips and Sharman, 2020, pp. 110–112).

All these cases share a similar conclusion: state intervention tended to occur only once the costs of inaction had become politically difficult to ignore, and by then the institutional arrangements the Companies had created were deeply entrenched.

One might point to the Antarctic Treaty as proof that frontier domains can be governed cooperatively. However, the Antarctic Treaty of 1959 has never been seriously tested by commercial pressure: Antarctica has not proved profitable to exploit at scale, so no state has had reason to defect. Space is different: costs are falling, activity is expanding, and firms with real structural power are already shaping the domain. The Outer Space Treaty was built on similar *res communis* principles to the Antarctic Treaty (Fitzmaurice, 2025), but it is being subjected to pressures that its Antarctic counterpart has never had to face. The comparison in fact reinforces our argument: cooperative frameworks survive while commercial stakes are low and come under strain exactly when a frontier becomes valuable.

The policy lesson to draw for space governance is that while regulating national champions might carry short-term costs, the costs of delaying regulation compound, and the window for effective governance narrows as firms accumulate structural power and set precedents that are hard to reverse.

Any discussion of policy intervention must begin from political feasibility. Our analysis implies that measures calling for a government to constrain the competitiveness of its national champion are unlikely to prove politically sustainable under the logic of geopolitical competition. The interventions most likely to prove viable are those that reduce a state's dependence on its champion without diminishing the firm's competitive position. Under conditions of rivalry and strong increasing returns, highly concentrated market structures may prove difficult to avoid altogether. The more realistic governance objective is therefore not necessarily to prevent concentration outright, but to limit asymmetric dependence on any single provider while

preserving a measure of strategic oversight and state autonomy as frontier markets consolidate. Five measures, each with a chartered-era precedent, merit consideration. The measures below are addressed primarily to the United States, which is the only jurisdiction currently facing the tension identified in this paper in acute form; for the European Union, India, Japan and others, they read as a checklist for what to avoid replicating in pursuit of a national champion.

1. *Public procurement as sovereign leverage*

Governments can draw on their position as anchor customers. The space economy remains substantially underpinned by public procurement, without which much of it would not yet be commercially viable (Terzi and Nicoli, 2024). That purchasing power constitutes leverage: conditions preserving competition, interoperability, and data access can be incorporated into procurement while public demand still shapes the market. The historical analogue is the periodic renewal of the companies' charters, which served as a recurring occasion for the state to extract concessions; discipline operated through the conditional renewal of privileges rather than through external regulatory oversight.

2. *Preserve some degree of redundancy*

States could establish diversification requirements for launch capacity before dependence on a single provider becomes difficult to reverse. The Charter Act of 1813, which ended the EIC's trade monopoly, came only after decades of entrenchment had made the confrontation politically costly; earlier action would have been considerably less disruptive. NASA's efforts to sustain alternative launch capabilities beyond SpaceX can be interpreted in this light, even where such redundancy entails significant short-term costs.

3. *Government-appointed representative on the board*

Firms controlling critical infrastructure could be required to incorporate public-interest representation into decisions concerning safety zones, resource claims, and coordination with other operators. The precedent is the Regulating Act of 1773, which did not dismantle the EIC but introduced a government-appointed Governor-General where sovereign-like functions were being exercised. A comparable arrangement has recently been proposed for firms of critical national importance, including SpaceX (Falkenrath, 2026).

4. *Public minority ownership*

The state could partially align strategic oversight with commercial incentives through limited ownership stakes conferring strategic rights without operational control. Here the analogy points to the continental company-states: the French and Portuguese crowns held direct equity in their companies (footnote 4), whereas the Anglo-Dutch model relied more heavily on chartered discipline applied from outside. This distinction matters, since the dynamism of the US launch sector is widely attributed to its reliance on private incentives (Weinzierl and Rosseau, 2025). The recommendation is accordingly a limited one: a minority stake would preserve the commercial autonomy that made the model productive while securing a measure of strategic oversight. Such arrangements are no longer entirely hypothetical in the United States. Recent industrial-policy

interventions in strategically significant sectors, including a federal acquisition of an equity stake in Intel, indicate that the traditional reluctance toward public stakes in strategic firms has already softened under conditions of geopolitical competition and economic-security concern (Terzi, Sherwood and Singh, 2023).

5. Foster competition between Artemis partners

While the geopolitical rivalry described here reduces the likelihood of comprehensive multilateral space governance, it does not rule out coordination among allies. Artemis signatories share an interest in avoiding collective dependence on a single provider, and might in principle coordinate procurement to sustain at least one alternative. We note this possibility with caution: amid renewed economic nationalism and strained trust among allies, its political feasibility in the near term remains uncertain.

7. Conclusion

The East India Companies were among the most consequential institutions in history. They reshaped global trade, redrew political boundaries, and left patterns of governance and extraction that outlived them by centuries. They did so by exploiting a specific configuration: ungoverned frontiers, fixed costs that favoured monopoly, legal ambiguity that licensed autonomous action, and interstate rivalry that gave home governments every reason to support rather than restrain them.

Many elements of that configuration are increasingly visible in the space economy today. The parallels we have drawn are not merely illustrative. They reflect recurring structural features of frontier expansion: a context in which states and corporations enter relationships of mutual dependence that are inherently hard to regulate. Such relationships, once formed, tend to persist and deepen. The companies began as limited, temporary ventures and ended up governing hundreds of millions of people. The central implication is clear: unless governance develops alongside consolidation, it will often follow only after costly crises.

The deeper difficulty is that the very dynamics that make governance necessary also make it unlikely. The logic of the space race pushes governments to support, not constrain, their corporate champions, just as the logic of colonial competition pushed early-modern states to empower their chartered companies. The question for policymakers is whether awareness of the pattern is enough to break it: whether, knowing what the East India Companies became, we can build the governance scaffolding to keep their twenty-first-century successors from the same trajectory. The opportunity for shaping governance frameworks remains open, though it may narrow as market structures consolidate.

Humanity has always looked to space in awe. Since the 1950s it has engaged with it directly, but mostly for scientific or military ends largely immune to economic logic. That era is over: space is now a marketplace. The choices made in the coming years, over property rights, market structure, the division of authority between states and firms, and the distribution of benefits between

spacefaring and non-spacefaring nations, will shape that world in ways that are difficult to reverse. History suggests we should not leave them to be made by default, by the actors with the strongest incentive and the greatest capacity to shape them in their own interest. That, in essence, is the lesson of the East India Companies.

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