Space Sovereignty: Does Elon Musk's Starlink infrastructure constitute a new form of unregulated geopolitics?

May 2, 2026 | SnugLab Research | readme.snuglab.com

Executive Summary

Yes, Elon Musk's Starlink infrastructure constitutes a new form of unregulated geopolitics, as the evidence suggests it concentrates strategic communications control in a single private entity, operating largely outside binding international frameworks and traditional state oversight. This dynamic leads to a "delegation of sovereignty" where critical decisions influencing state behavior and military operations are made by a private actor, creating structural vulnerabilities and eroding the state monopoly on strategic communication [2, 6, 10, 13]. While some regulatory frameworks exist, they do not adequately address the geopolitical power wielded by Starlink in its operational decisions, allowing for significant influence over global events [10, 15].

Key Findings

Erosion of State Sovereignty and Unregulated Geopolitics

Starlink's infrastructure erodes exclusive state sovereignty by delegating control over strategic communications to private actors, operating within a regulatory vacuum that constitutes unregulated geopolitics [2, 6, 10, 13]. Traditional notions of space sovereignty, which emphasize the exclusive right of nation-states, are increasingly challenged by Starlink's dominance [2, 6]. This creates a "delegation of sovereignty" where critical decision-making power over strategic communications rests with a private individual rather than the state [2, 6]. Nations like Iran have formally asserted that Starlink violates their national sovereignty, leading many governments to ban the service to protect national control [2, 6, 19].

The system is accurately described as "unregulated geopolitics" due to a significant "global governance gap" [10]. Multilateral institutions lack binding international frameworks to limit satellite deployments or enforce standards for emergency service

continuity [10]. The foundational Outer Space Treaty struggles to keep pace with rapid private space developments, and existing regulations are largely non-binding [1, 15]. Within this regulatory vacuum, Starlink's control over a critical communications layer grants its owner outsized geopolitical influence, allowing an unaccountable technology company to shape global events and influence state behavior in conflicts across Ukraine, Iran, and Sudan [2, 6, 10]. Experts consequently characterize Elon Musk as a "geopolitical actor" operating outside traditional state constraints [10].

Structural Vulnerabilities and Coercive Geopolitical Leverage

State reliance on Starlink creates a profound structural vulnerability by effectively delegating national sovereignty to a private, unaccountable executive [2, 6]. This dependency translates into coercive geopolitical power through specific technical, economic, and political mechanisms.

Technically, SpaceX controls a massive Low Earth Orbit (LEO) constellation of 9,357 satellites as of December 2025, with plans for significant expansion [6]. This scale creates a quasi-monopoly with high barriers to entry, leaving states with few alternatives [13]. SpaceX exercises direct technical control through geofencing and authentication protocols, allowing it to unilaterally enable or disable connectivity in specific conflict zones [6, 7]. For example, SpaceX implemented authentication controls in 2024 to disrupt unauthorized Russian use in Ukraine [6]. Starlink's architecture routes user data through international gateways, often in the United States, bypassing local infrastructure and creating a "data sovereignty gap" that leaves host nations vulnerable to foreign data access [10, 12].

Economically, Starlink's cost-effectiveness in remote regions and the massive capital required for LEO systems lock states into its ecosystem [1, 13]. Governments face significant financial commitments, such as the U.S. Department of Defense's estimated $120 million commitment for Starlink service in Ukraine in late 2022, followed by nearly $400 million for the subsequent year [6]. This financial entanglement creates a dilemma for sovereign alternatives; for instance, Italy considered a â‚¬1.5 billion investment in Starlink for secure government connectivity [1].

Politically, the dependency grants Elon Musk and the U.S. government outsized power over sovereign nations. Musk has acted as a "geopolitical actor" by making unilateral decisions that dictate military capabilities, such as refusing to activate Starlink near

Russian-occupied Crimea in 2022 due to personal concerns about escalation [6, 7, 10]. The U.S. government has also used this dependency as leverage; in early 2025, U.S. negotiators allegedly threatened to limit Ukraine's Starlink access to secure a critical minerals deal [6], and former President Donald Trump reportedly threatened to shut off the service to force Kyiv into peace concessions [5, 7]. Additionally, Starlink market access has been used as a coercive bargaining chip, with the Trump administration using tariff relief to compel countries like Lesotho, India, and Vietnam to grant the company market entry [8].

Private Proxy Warfare and Undermining Wartime Communications

Starlink's discretionary control over network access in active conflict zones effectively functions as private proxy warfare, directly eroding the traditional state monopoly on strategic communication. By controlling a critical communications layer, SpaceX grants its owner the unilateral power to dictate which military operations a state can conduct, a dynamic described as a "delegation of sovereignty" [2, 6]. For example, in 2022, Elon Musk refused to activate Starlink coverage near Russian-occupied Crimea to support a Ukrainian naval drone operation, citing personal concerns about escalation risks [6, 7]. This unilateral decision effectively transferred real-time decision-making power over combat engagement from the sovereign state to a private corporation [6].

This dependency erodes a state's decision-making capacity, transforming reliance on platform monopolies into a profound sovereignty issue [13]. Starlink is not a neutral platform; its concentrated control allows unaccountable technology companies to gain outsized influence over geopolitics and human societal functions [2, 6]. The volatility of this arrangement is evident in reports that U.S. political figures, including former President Donald Trump, have threatened to shut off Starlink in Ukraine to compel Kyiv to make concessions in peace negotiations [5, 7]. Consequently, the traditional state monopoly on wartime strategic communication is fundamentally undermined, as the power to determine who connects, where, and under what technical constraints now rests with a private entity operating largely outside binding international frameworks [6, 7, 10].

Regulatory Gaps and State Countermeasures

Nations and international bodies currently lack binding frameworks for private satellite control in conflict zones, relying on fragmented rules and ad hoc actions [3, 10, 15]. The

Federal Communications Commission (FCC) in the United States, through its Space Bureau, authorizes satellite systems and manages spectrum, and is considering new rulemaking for spectrum allocation and dispute resolution [1]. However, US management of private satellite control in conflict zones often relies on executive actions, such as the covert provision of Starlink kits to Iran in January 2026 [6].

The International Telecommunication Union (ITU) coordinates frequencies, and Iran has filed formal complaints regarding Starlink's alleged violation of national sovereignty, leading to an ITU ruling that Starlink was operating illegally in the country [1, 6, 26]. Despite this, no binding international framework currently limits the number of satellites a single entity can deploy or establishes enforceable standards for equitable access and emergency service continuity in conflict zones [10].

In response, sovereign states have implemented various countermeasures:

- **Legal and Regulatory Statutes:** India's Department of Telecommunications (DoT) introduced 29 regulations requiring satellite providers to store user data locally, handle DNS resolution domestically, and integrate the NavIC satellite navigation system by 2029 [9, 11, 19]. Starlink is also mandated to source at least 20% of its ground infrastructure equipment from India within five years of commercial launch [9, 11]. South Africa and Namibia withheld authorization due to requirements for local ownership and foreign participation [4, 14, 16]. Cameroon banned the importation and ordered the seizure of Starlink kits in April 2024 [22]. Iran criminalized the possession of satellite internet terminals [23]. Sri Lanka paused Starlink's rollout in May 2026, citing "security and sovereignty concerns" over its inability to monitor traffic [25]. Pakistan has delayed Starlink's permanent operating license due to concerns about bypassing local firewalls and content regulation [27].
- **Technical Countermeasures:** Iran deployed electronic warfare tactics since early 2026, using Russian-supplied Krasukha-4 and Tirada-2 systems to jam Starlink, increasing packet loss rates from 30% to over 80% in targeted neighborhoods [21]. Iranian forces also employ GPS spoofing to hijack terminal receivers [21]. Iran is also constructing a Huawei-based National Information Network to sustain critical domestic services independently [7, 17].
- **Diplomatic Constraints and Agreements:** The European Union launched Govsatcom operations in early 2026 to pool national satellite resources and plans to deploy its own IRIS2 constellation by 2029 to achieve space sovereignty [24]. Conversely, the United States, under the Trump administration, engaged in diplomatic

pressure from early 2025, intervening in nations like Gambia to fast-track Starlink licenses by using foreign aid concerns to override local regulatory constraints [20].

Market Competition and Enduring Influence

While the emergence of state-backed and commercial Low Earth Orbit (LEO) competitors is creating market fragmentation, Starlink's entrenched first-mover advantages and economies of scale strongly suggest it will retain outsized geopolitical influence, perpetuating a form of unregulated geopolitics that challenges state sovereignty [6, 13].

Competitors are actively entering the market. The European Union is developing the IRIS2 secure satellite network, comprising 170 satellites, expected to be operational by 2029 [2, 5, 7]. China is advancing two massive state-backed systems: Guowang, planned to include up to 13,000 satellites for national and military purposes, and the commercial Qianfan project, estimated at 12,000 satellites, with mass launches scheduled for 2026 [5, 7]. Commercial competitors like Amazon's Project Kuiper, which surpassed 200 satellites by February 2026, and the merged Eutelsat OneWeb, operating approximately 650 satellites, are also expanding [2, 5, 6, 7].

Despite this growing competition, Starlink's structural advantages make it unlikely that the market will fragment enough to fully restore state sovereignty in the near term. The economics of LEO satellite systems generally favor a single dominant player due to the scale required [13]. Starlink benefits from a first-mover advantage, early spectrum access, and vertically integrated launch capabilities, creating high entry barriers for competitors [13]. As of mid-December 2025, Starlink operated 9,357 satellites in orbit, with FCC authorization for an additional 7,500 second-generation satellites, aiming for a total near 17,000 [6]. The rise of competitors does not guarantee a return to traditional state sovereignty or improved governance, as there is no assurance that new corporate or state-backed entities will prioritize universal access or human rights more than SpaceX [2].

Implications

The findings indicate that Starlink's infrastructure has fundamentally altered the landscape of global geopolitics by introducing a powerful, privately controlled layer of strategic communication that operates with limited international oversight. This shift has

significant implications for national security, international law, and the balance of power. States face a dilemma: embrace the benefits of Starlink's ubiquitous connectivity while ceding a degree of sovereignty, or invest heavily in sovereign alternatives to mitigate dependency. The current regulatory environment, largely designed for state actors and older space technologies, is ill-equipped to manage the geopolitical influence of private mega-constellations. This necessitates the urgent development of new, binding international frameworks that address issues of private control in conflict zones, data sovereignty, and equitable access to critical space infrastructure to prevent further erosion of state authority and ensure accountability.

Limitations and Caveats

The research is limited by the evolving nature of both Starlink's operations and the regulatory responses. Specific financial terms, service-level agreements, and termination clauses in contracts between Starlink and sovereign nations are not publicly available in the provided research, which limits a full understanding of the legal mechanisms binding or limiting SpaceX's discretion [9, 13, 18]. Furthermore, the long-term impact of emerging competitors on Starlink's market dominance and geopolitical influence remains to be fully seen, as many alternative systems are still in early deployment phases or not yet operational [2, 5, 7]. The sufficiency of existing legal frameworks to address new technological realities is a subject of ongoing policy interpretation and debate.

Sources

[1] [edu] Starlink Spectrum Wars Examining The Fccs Role In Regulating - legaljournal.princeton.edu - https://legaljournal.princeton.edu/starlink-spectrum-wars-examining-the-fccs-role-in-regulating-the-new-space-age/

[2] Starlink And Sovereignty - newamerica.org - https://www.newamerica.org/insights/starlink-and-sovereignty/

[3] Houston We Have A Problem International Laws Inability To Re - nyujilp.org - https://nyujilp.org/houston-we-have-a-problem-international-laws-inability-to-regulate-space-exploration/

[4] [gov] Stories - geoportal.un.org - https://geoportal.un.org/arcgis/apps/storymaps/stories/dac07ab85ecd4600b586d6b98dea12c0

[5] Starlink How Elon Musks Company Influences Geopolitics - dw.com - https://www.dw.com/en/starlink-how-elon-musks-company-influences-geopolitics/a-75963477

[6] Starlink Spacex Musk Geopolitics War Ukraine Russia Iran - foreignpolicy.com - https://foreignpolicy.com/2026/03/20/starlink-spacex-musk-geopolitics-war-ukraine-russia-iran/

[7] Starlink How Elon Musks Company Influences Geopolitics - globalnation.inquirer.net - https://globalnation.inquirer.net/309181/starlink-how-elon-musks-company-influences-geopolitics

[8] [blog] Elon Musk And The Geopolitical Power Shift How One Mans Tech - medium.com -

https://medium.com/@bettybassett63/elon-musk-and-the-geopolitical-power-shift-how-one-mans-tech-empire-is-reshaping-global-governance-444ca5f366b2

[9] Starlink Targeted Geopolitical Conflicts 224417070 - yahoo.com - https://www.yahoo.com/news/articles/starlink-targeted-geopolitical-conflicts-224417070.html

[10] Geopolitical Risks Of Monopolised Infrastructure In Orbit Th - theinternationalriskpodcast.com - https://theinternationalriskpodcast.com/geopolitical-risks-of-monopolised-infrastructure-in-orbit-the-case-of-starlink/

[11] [peer-reviewed] Full - tandfonline.com - AUTHORS UNAVAILABLE - https://www.tandfonline.com/doi/full/10.1080/21622671.2025.2594491

[12] Geopolitical Shifts Bring Opportunities And Headaches For Sa - spacenews.com - https://spacenews.com/geopolitical-shifts-bring-opportunities-and-headaches-for-satellite-execs/

[13] From Starlink To The State When Platform Monopolies Become P - independentaustralia.net - https://independentaustralia.net/politics/politics-display/from-starlink-to-the-state-when-platform-monopolies-become-political-power,20820

[14] journals.sagepub.com - https://journals.sagepub.com/doi/10.1177/13540661241260653

[15] Article Frontier Justice Navigating The Future Legal Landsca - wiley.law - https://www.wiley.law/article-Frontier-justice-navigating-the-future-legal-landscape-for-private-actors-in-space-law

[16] Space Law Under Pressure History Of Disputes And Emerging Go - globalarbitrationreview.com - https://globalarbitrationreview.com/guide/the-guide-aviation-and-space-disputes/second-edition/article/space-law-under-pressure-history-of-disputes-and-emerging-governance-needs

[17] Private Sector Space Projects Take Off - skadden.com - https://www.skadden.com/insights/publications/2023/12/2024-insights/other-regulatory-developments/private-sector-space-projects-take-off

[18] e-ir.info - https://www.e-ir.info/pdf/107622

[19] [edu] Beyond The Blackout Satellite Connectivity And The Erosion O - kcl.ac.uk - https://www.kcl.ac.uk/beyond-the-blackout-satellite-connectivity-and-the-erosion-of-informational-sovereignty-in-iran

[20] [news] Trump Musk Starlink State Department Gambia Africa Pressure - propublica.org - https://www.propublica.org/article/trump-musk-starlink-state-department-gambia-africa-pressure

[21] Starlink License On Hold Telecom Regulatory - ciobulletin.com - https://ciobulletin.com/telecom/starlink-license-on-hold-telecom-regulatory

[22] When Satellites Cross Sovereignty - africa-usforum.africa - https://www.africa-usforum.africa/when-satellites-cross-sovereignty/

[23] Spacex Prods Fcc Act Now 194717031 - finance.yahoo.com - https://finance.yahoo.com/economy/policy/articles/spacex-prods-fcc-act-now-194717031.html

[24] Starlink Sovereignty Irans Internet - habtoorresearch.com - https://www.habtoorresearch.com/programmes/starlink-sovereignty-irans-internet/

[25] Satellite Internet Trust And Data Governance - isocfoundation.org - https://www.isocfoundation.org/project/satellite-internet-trust-and-data-governance/

[26] Starlink Still Works In Unauthorized Countries Despite Warni - news.bloomberglaw.com - https://news.bloomberglaw.com/tech-and-telecom-law/starlink-still-works-in-unauthorized-countries-despite-warnings

[27] 631553 GOETSCH MARCO ANDREA - tesi.luiss.it - https://tesi.luiss.it/43496/1/631553_GOETSCH_MARCO%20ANDREA.pdf