Starlink's Rise as a Geopolitical Disruptor

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On January 7, 2025, Bloomberg reported that Italy is considering a €1.5 billion investment in Starlink services to enhance secure connectivity for government operations. SpaceX's Starlink constellation of 7,000 satellites in low Earth orbit provides high-speed, secure internet access to remote areas beyond the reach of traditional land-based networks. The news sent ripples through the European space community. After years of struggling to push its own secure connectivity initiative, IRIS², across the finish line, Europe now faces the prospect of one of its largest economies turning to an American private company for critical infrastructure. While Italy's decision is likely driven by the need for a reliable backup during natural disasters, a national outsourcing deal with Starlink raises urgent questions about internet sovereignty, economic independence, and global power dynamics. At what point does reliance on a foreign satellite network blur the line between partnership and dependency? And when does a sovereign state risk becoming a client state?

The assertion that Starlink, with its upcoming 1-terabit-per-second (Tbps) Gen 3 satellites, could turn every country into a client state, is not far-fetched. Each Gen3 satellite will deliver impressive capabilities, boasting a 1 Tbps downlink speed and up to 160 Gbps uplink capacity—offering more than a tenfold improvement in downlink performance and roughly 24 times the uplink capacity of its predecessors (Italy's current download speed is averagely 83.5 megabit-per-second, Mbps). By 2027, these high-capacity satellites are expected to dominate Starlink's constellation, presenting a cost-effective alternative to traditional fiber-optic networks for residential, municipal, and commercial connectivity.

Fiber-optic infrastructure on the other hand has long been considered the gold standard for high-speed internet due to its capacity for low latency and virtually unlimited scalability. However, its deployment costs are substantial, particularly in remote or rural areas. In contrast, Starlink's satellite-based connectivity offers a cost-effective solution to deliver broadband to underserved regions. Elon Musk has claimed that the "last mile" cost of fiber-optic installations far exceeds the expense of deploying Starlink ground stations and satellites. This is especially true in areas where trenching and installing cables is logistically complex and economically prohibitive.

For example, installing fiber-optic infrastructure typically costs between $3,000 and $4,000 per building in urban areas and significantly more in rural settings. By comparison, leasing capacity from Starlink is far cheaper, with costs expected to drop further as generation 3 satellites roll out. Starlink's proposition of ubiquitous coverage and a straightforward pricing model enables municipalities and businesses to re-evaluate the practicality of local fiber projects. This creates a scenario where Starlink's internet service disrupts the traditional calculus of infrastructure investment.

To assess the viability of Starlink as a replacement for fiber-optic networks, let us consider a hypothetical scenario where municipalities, residential buildings, and businesses worldwide evaluate this option. Assuming that Starlink's 1 Tbps satellites dominate its constellation by 2027, the mega-constellation service could offer better capacity at a more competitive price.

Each 1 Tbps satellite can support approximately 10,000 buildings with 100 Mbps peak demand at 20% concurrency. This equates to roughly 200,000 buildings per satellite at standard residential and commercial usage patterns. If 10% of global buildings (total approximately 350 million) transition to Starlink for broadband, the peak bandwidth demand would reach 7,000 Tbps. Meeting this demand would require a fleet of around 7,000 generation 3 satellites. Deploying and maintaining a 7,000-satellite constellation would cost significantly less than installing fiber infrastructure to connect 10% of global buildings. Starlink's modular, scalable approach also allows for rapid deployment, making it an attractive option for governments and private enterprises.

Currently, Starlink is primarily marketed for rural communities, maritime navigation, and, more recently, military and defense operations—not urban areas. However, as often seen with SpaceX, what is true today does not necessarily define the future. Starlink's role could evolve to include urban connectivity down the line."

Starlink's proposition threatens to disrupt national telecom providers, which often rely on government subsidies to expand fiber and wireless networks. For most residential and commercial applications, including streaming, video conferencing, and basic online activities, Starlink's latency and bandwidth are "good enough." This disrupts the competitive edge of traditional providers and shifts the market dynamic in favor of satellite-based solutions. Exceptions exist for low-latency applications such as high-frequency trading and certain industrial automation processes. These specialized use cases may continue to require fiber-optic networks or other ultra-low-latency solutions. However, for the majority of users, Starlink's capabilities suffice, raising the possibility that it could become the default global standard for internet connectivity.

Starlink stands out due to its unprecedented scale—its currently orbiting fleet of 7,000 satellites offers global coverage and rapid connectivity. In an era of rising geopolitical tensions, particularly with strained relations between Russia and the complex diplomatic landscape with China, an independent, space-based communication network is seen as a critical strategic asset. However, the widespread adoption of Starlink poses critical questions about national sovereignty. Unlike fiber-optic networks, which are typically owned and operated by local or national entities, Starlink's infrastructure is entirely controlled by SpaceX, a private U.S.-based company designed to serve American civil and military interests while generating revenue.

Starlink may be available globally, but it is by no means a neutral platform. Starlink is controlled by Elon Musk, a figure whose political leanings and decisions have often been polarizing and volatile. He pledged to offer Nigel Farage's far-right party, Reform UK, potentially up to £100,000,000 only to call for his replacement a few days later, and he unilaterally imposed limitations on Ukrainian military operations and temporarily halted services until the Pentagon intervened with a proper contract. These episodes highlight the fragility of depending on a private actor for national security.

Countries that rely heavily on Starlink for broadband effectively surrender control over a critical part of their digital infrastructure to an external, privately owned entity. This dependence creates vulnerabilities that could be exploited during geopolitical conflicts or disputes. A recent example of what this could mean for Europe came during J.D. Vance's recent speech at the Munich Security Conference, where he accused European governments of "censoring citizens, closing churches, and canceling elections." His remarks underscored how the U.S. is willing to use its influence to shape European internal politics—and few tools are as powerful in this regard as satellite communications.

In a dystopian scenario where Starlink becomes the primary backbone for digital connectivity, every internet-based communication—whether access to independent press, personal chats, or critical infrastructure—could be subject to control, throttling, or outright restriction. Beyond the geopolitical risks, Starlink also operates outside local telecom regulations, complicating efforts to enforce data sovereignty, net neutrality, and national security policies. Additionally, its widespread adoption could undercut domestic telecom providers, leading to job losses and reduced competition.

Ultimately, governments must weigh the economic benefits of cheaper connectivity against the potential costs of industry disruption. To determine the threshold where reliance on Starlink becomes "too much," countries must evaluate the following three issues:

1. Critical infrastructure reliance: Heavy reliance on satellite-based internet for essential services like public

services, healthcare, and education may expose these systems to vulnerabilities beyond national control.
2. Domestic economic impact: Widespread Starlink adoption could significantly impact domestic telecom industries, necessitating government intervention to support local providers and ensure fair competition.
3. Strategic autonomy: Depending on Starlink might undermine a country's ability to act independently on the global stage, affecting cybersecurity, data sovereignty, and geopolitical leverage.

The potential for SpaceX's Starlink to disrupt traditional internet infrastructure is both a technological opportunity and a geopolitical challenge. By offering a cost-effective alternative to fiber-optic networks, Starlink enables municipalities, businesses, and governments to rethink their connectivity strategies. However, the centralization of control over such a critical resource raises profound questions about sovereignty and national security.

As Starlink's Gen 3 satellites roll out and its capacity expands, countries must carefully evaluate the trade-offs between economic efficiency and strategic autonomy. The key question is not whether Starlink is "good enough" but rather how much reliance on a single, foreign-controlled system is too much. Addressing these challenges requires a balanced approach that combines the benefits of satellite-based connectivity with safeguards to protect national interests.

About the author:

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