International Center for Law & Economics

Comments of the International Center for Law & Economics

RE: Proposal for a Regulation of the European Parliament and of the Council on the Safety, Resilience and Sustainability of Space Activities in the Union, COM(2025) 335

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I. Introduction and Overview

This submission provides an economic and legal assessment of the proposed Regulation on the Safety, Resilience, and Sustainability of Space Activities in the Union (the EU Space Act).[1] Our analysis is founded on the principles of law & economics, concentrating specifically on how the design of the EU Space Act (in particular, the provisions detailed in preferred Policy Option 2+) would affect market structure, costs, and international competitiveness.

The stated objectives of the EU Space Act are commendable: laying down a coherent framework to foster innovation, ensure trackability of space objects, reduce space debris, tailor a cybersecurity framework for space infrastructure, and create a common method to assess environmental impact.[2] Furthermore, the Commission aims for this action to strengthen the functioning of the internal market, leading to increased legal certainty and global competitiveness for the EU space industry.[3]

A closer examination of the EU Space Act, however, reveals that its mechanisms introduce economic distortions and structural barriers that are likely to impede, rather than enhance, the goals of competitiveness and predictable regulation. The act's architecture selectively targets foreign (specifically, U.S.-based) large-constellation operators through discriminatory registration requirements, novel technical thresholds, and a structural conflict of interest embedded within the oversight body.

As detailed in the International Center for Law & Economics' (ICLE) previous analysis submitted during the consultation conducted by the U.S. Commerce Department and U.S. State Department, we maintain that the EU Space Act functions as a non-tariff barrier (NTB) under World Trade Organization (WTO) principles.[4] The proposed structure imposes disproportionate burdens on foreign actors providing services in the EU market, thus undercutting the stated objective of establishing a competitive and open single market.

This comment addresses specific questions raised by the Commission's Regulatory Scrutiny Board (RSB) during the impact-assessment process, focusing particularly on the proportionality of costs, the impact on small and medium-sized enterprises (SMEs) and startups, and the efficacy of the enforcement mechanisms.[5] To achieve the goal of a robust, safe, and competitive market, the Commission must revise the EU Space Act to align its technical requirements with global standards,

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[1] *Proposal for a Regulation of the European Parliament and of the Council on the Safety, Resilience and Sustainability of Space Activities in the Union, 2025/0335 (COD)*, EUR. PARL. (25 June 2025) [hereinafter "EU Space Act"].

[2] *Id.* at 1, 117.

[3] *Id.* at 4.

[4] Kristian Stout & Eric Fruits, *ICLE Comments to U.S. Departments of State and Commerce on the EU Space Act*, INT'L CTR. FOR LAW & ECON. (13 August 2025), *available at* https://laweconcenter.org/wp-content/uploads/2025/08/EU-Space-Act-Comments.pdf [attached as Appendix A].

[5] Regulatory Scrutiny Board Opinion, *EU Space Law*, COM(2025) 335, SWD(2025) 335-336 (22 February 2024) [hereafter "RSB Opinion"].

clarify ambiguous regulatory requirements through timely adoption of implementing acts, and eliminate administrative structures that create conflicts of interest and regulatory friction.

II. The EU Space Act as an Economic Barrier to Trade

An examination of the EU Space Act's chosen legal basis—Article 114 of the Treaty on the Functioning of the European Union (TFEU)—reveals that its primary objective is the "establishment and functioning of the internal market".[6] The Act explicitly avoids using Article 189 TFEU, the legal basis for space policy, because that article prohibits the harmonization of national laws.[7] The stated rationale for the EU Space Act is to prevent "fragmentation of the internal market" and enhance the "competitiveness of the Union space industry".[8]

Such legal framing is telling, in that it demonstrates the legislation's principal driver is industrial policy and market integration, not a response to an external safety imperative that requires a novel, EU-specific regime. The safety, resilience, and sustainability objectives, while laudable, are thus positioned as instruments to achieve the primary goal of constructing and protecting the EU's internal market. This context is crucial to understand the EU Space Act's protectionist character under the World Trade Organization's (WTO) Technical Barriers to Trade (TBT) Agreement, which is centrally concerned with preventing the use of legitimate policy objectives as pretext for trade distortions.[9] In contrast, the EU Space Act's bespoke technical requirements force non-EU operators to make EU-specific investments in engineering, legal compliance, and administrative systems that provide no value in other markets.

A. Discriminatory Thresholds and Scope

The EU Space Act's structural design establishes explicit discrimination through size-based technical categorization. Article 73 defines the "giga-constellation" category as those constellations comprising more than 1,000 operational satellites.[10] Exceeding this threshold triggers additional compliance obligations, including requirements for intra-constellation collision avoidance and specific reporting obligations.[11]

As ICLE notes in Appendix A, this categorization is a unilateral innovation, lacking grounding in established international technical standards developed by bodies like the Inter-Agency Space Debris

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[6] EU Space Act, *supra* note 1 at 3.

[7] *Id.*

[8] *Id.* at 2, 5, 8, 16, 118.

[9] *Agreement on Technical Barriers to Trade*, WORLD TRADE ORG. (1995), https://www.wto.org/english/docs_e/legal_e/tbt_e.htm [hereinafter "TBT Agreement"] ("measures necessary to ensure the quality of its exports, or for the protection of human, animal or plant life or health, of the environment, or for the prevention of deceptive practices" should "not [be] applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade".).

[10] EU Space Act, *supra* note 1 at Art. 5.

[11] EU Space Act, *supra* note 1 at Art. 73.

Coordination Committee (IADC) or the International Organization for Standardization (ISO). Risk assessment in these established international frameworks typically relies on operational parameters and orbital density, not an arbitrary numerical cutoff.

The economic consequence of this singular definition is market exclusion. The requirement is tailored to capture foreseeable or currently operating large U.S. satellite systems, while exempting current and projected EU systems like the IRIS² program, which is anticipated to deploy approximately 264 satellites.[12] This discriminatory scope alters the competitive dynamics, functioning as an NTB designed to burden foreign firms and implicitly favor domestic EU actors. For example, research by Richard Baldwin and Paul Krugman on strategic trade policy demonstrates how regulations requiring market-specific investments can deter entry by raising the minimum efficient scale needed to profitably serve that market.[13]

B. Fragmentation Costs and Deviation from Global Standards

The EU Space Act mandates that launch and spacecraft operators comply with technical requirements laid down in its annexes.[14] While aiming for standardization, the act introduces bespoke EU rules that deviate from globally accepted best practices established by international bodies like the IADC and ISO, thereby leading to fragmentation costs. When different jurisdictions adopt incompatible technical standards, firms face higher costs to serve multiple markets and lose economies of scale from standardization. Aaditya Mattoo and Arvind Subramanian's work on regulatory barriers demonstrates how divergent standards can be as trade-restrictive as traditional tariffs, particularly in technology-intensive sectors where interoperability is crucial.[15]

For instance, Annex II sets out specific requirements for space-debris mitigation for launchers, and Annex V details mitigation plans for spacecraft. The EU Space Act forces operators serving multiple jurisdictions to maintain parallel compliance systems by requiring compliance with EU-specific collision-avoidance protocols and reporting requirements. This requirement reduces the economic benefits of achieving global economies of scale and undermines interoperability across the space sector. The existence of diverse, uncoordinated requirements across EU member states already

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[12] Jean-Pierre Diris, *IRIS²: Everything You Need to Know About This New European Constellation*, POLYTECHNIQUE INSIGHTS (11 March 2025), https://www.polytechnique-insights.com/en/columns/industry/iris2-everything-you-need-to-know-about-this-new-european-constellation.

[13] Paul R. Krugman, *Import Protection as Export Promotion: International Competition in the Presence of Oligopoly and Economies of Scale*, *in* IMPERFECT COMPETITION AND INTERNATIONAL TRADE (Gene E. Grossman ed., 1992) (demonstrating that, in an oligopolistic market with economies of scale, "giving a domestic firm a privileged position in one market, a country gives it an advantage in scale over foreign rivals".); Richard Baldwin & Paul Krugman, *Market Access and International Competition: A Simulation Study of 16K Random Access Memories*, *in* EMPIRICAL RESEARCH IN INDUSTRIAL TRADE (Robert C. Feenstra ed., 1987) (demonstrating that a protected home market was a crucial advantage to domestic firms, "which would otherwise have been uncompetitive both at home and abroad".)

[14] EU Space Act, *supra* note 1 at Art. 15.

[15] *See, e.g.*, Aaditya Mattoo & Arvind Subramanian, *Regulatory Autonomy and Multilateral Disciplines: The Dilemma and a Possible Resolution*, 1 J. INT'L ECON. L. 303 (1998).

creates barriers.[16] The imposition of new and unique EU-wide standards risks replacing national fragmentation with EU-centric fragmentation, contradicting the objective of promoting the EU as a global standard setter.[17]

III. Proportionality, Cost Assessment, and Impacts on Competitiveness

The Regulatory Scrutiny Board (RSB) raised specific concerns regarding the clarity and consistency of the cost-benefit analysis, emphasizing the need to quantify impacts on competitiveness, particularly for SMEs and startups.[18] The EU Space Act should demonstrate that the costs imposed are proportionate to the benefits gained, especially within the context of the Commission's mandated "One In, One Out" (OIOO) approach.[19]

A. Disproportionate Compliance Costs and the OIOO Mandate

The proposed mandatory binding framework (Option 2+) carries significant costs for the industry, as it is estimated to increase satellite-manufacturing costs by 3% to 10%.[20] These increased costs, categorized as direct adjustment costs, are necessary to comply with heightened technical requirements for debris prevention and resilience.

As ICLE notes in Appendix A, these compliance costs function as sunk fixed-entry barriers. They disproportionately affect new entrants and smaller entities seeking to access the EU market. While the total calculated costs (€322.8 million annually) are projected to be offset by operational benefits (€1,000.8 million annually), justifying a net benefit, the distribution of these costs is uneven.[21]

The RSB explicitly required the impact assessment to comprehensively present administrative and adjustment costs within the OIOO framework.[22] For non-EU operators, the costs associated with

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[16] *Commission Staff Working Document, Impact Assessment Report*, Part 1/2, COM(2025) 335, SEC(2025) 335, SWD(2025) 336, EUR. COMM. (25 June 2025), at 8 [hereafter "Impact Assessment 1"] ("While the growing number of players in the space industry fosters cross-border activities, the increasingly diverse licencing requirements will create barriers for the space industry in the single market, with a negative impact on its competitiveness".).

[17] *Id.* at 28 ("A common approach at EU level could position the EU as a global leader in setting standards in a field that is urgently calling for solutions63. The EU space industry would contribute to shaping regulations and creating EU norms, which would lead to mutual recognition agreements between the EU and non-EU countries".); EU Space Act, *supra* note 1 at 118 ("the successful implementation of the Regulation would enhance the ability of the Union to influence global standards in the space domain and increase the competitiveness of the Union industry in the global markets".); RSB Opinion, *supra* note 5 at 7 ("The implementation of a comprehensive legal framework on space activities by the EU could catalyse global regulatory efforts, positioning the EU as a standard-setter, similarly to what was achieved through GDPR in terms of data privacy".)

[18] RSB Opinion, *supra* note 5 at 1, 14.

[19] *Id.* at 2, 11.

[20] Impact Assessment 1, *supra* note 16 at 46, 59.

[21] *Commission Staff Working Document, Impact Assessment Report*, Part 2/2, COM(2025) 335, SEC(2025) 335, SWD(2025) 336, EUR. COMM. (25 June 2025), at 41 [hereafter "Impact Assessment 2"].

[22] RSB Opinion, *supra* note 5 at 2.

meeting EU-specific technical demands—which necessitate EU-specific investments in engineering and administrative compliance—are burdens that cannot be easily offset or recouped in other jurisdictions, thus inhibiting market entry.

B. Regulatory Uncertainty and Investment Deterrence

A further, and largely unacknowledged, component of the cost burden is regulatory uncertainty. The EU Space Act delegates critical technical details—including specific criteria for debris mitigation, reflectivity standards, and operational parameters—to future implementing acts (IAs).[23] These IAs are deferred, potentially until months before the law takes effect in 2030, with agency technical opinions due in 2028. Such open-ended delegation allows for the selective imposition of burdens that can be crafted to fit emerging EU industrial-policy goals, rather than neutral safety objectives.

In capital-intensive industries such as satellite-constellation deployment, finance theory—specifically the real-options analysis described by Avinash Dixit and Robert Pindyck—demonstrates that firms facing irreversible investments will significantly delay commitment until regulatory obligations are clearly defined.[24] By magnifying the uncertainty of future regulatory requirements, the EU Space Act increases the projected risk for investment returns. This increased risk reduces the confidence of private operators and consequently reduces or eliminates the incentives to invest the massive capital required to serve the EU market, thereby slowing the pace of innovation and the introduction of new capacity.

C. Impacts on SMEs and the Proportionality Principle

The RSB sought clarification on how lighter regulatory regimes would be implemented to protect the competitiveness of SMEs and startups.[25] The impact assessment acknowledges the unique challenges faced by smaller actors, noting that they often lack the financial and human resources to adapt easily to new technical requirements.[26]

The proposed solution involves proportionality criteria and support measures. Lighter regimes are envisaged for small-sized enterprises or research and educational institutions, primarily relating to

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[23] *See* EU Space Act, *supra* note 1 at Art. 40

[24] Avinash K. Dixit & Robert S. Pindyck, *Expandability, Reversibility, and Optimal Capacity Choice* (NBER Working Paper No. 6373, January 1998), *available at* https://www.nber.org/system/files/working_papers/w6373/w6373.pdf.

[25] RSB Opinion, *supra* note 5 at 2, 14.

[26] Impact Assessment 1, *supra* note 16 at 61 ("Because SMEs often lack the financial and human resources to easily adapt to new operational and technical requirements, introducing new requirements are likely to increase costs for all industry, including SMEs, potentially resulting in an increase in manufacturing costs ranging from 3% to 10%. For smaller actors it would be proportionally more expensive to comply with such measures".); Impact Assessment 2, *supra* note 21 at 142 (Option 2 is likely to trigger additional costs for SMEs across the three areas (safety, resilience and environment) due to mitigation measures (a 3 to 10% increase in manufacturing costs). … This would lead to one-off and recurrent financial and human resources costs, which would impact the competitiveness of SMEs).

resilience obligations (simplified risk management for critical assets) and temporary exemptions from the environmental-footprint (EF) calculation.[27]

The efficacy of the proposed mitigation measures (such as technical assistance, capacity building, and one-stop-shop approaches) is, however, insufficient to counteract the initial fixed-cost burdens created by the new regulatory framework. For a non-EU SME seeking to enter the EU market, navigating the mandated dual-track registration process (discussed below) remains a significant overhead cost, regardless of whether a one-stop-shop portal exists for internal EU compliance.

Surveyed SMEs have acknowledged that binding measures are necessary to create a level playing field, but 67% expressed concern that nonbinding measures provide less legal clarity.[28] The crucial economic requirement is for the initial mandated technical requirements to be aligned globally. If the baseline requirements compel specialized, EU-unique investments, the administrative support merely subsidizes the cost of complying with an inherently protectionist structure.

IV. Governance, Conflict of Interest, and Enforcement

The EU Space Act establishes distinct governance and enforcement paths for EU and non-EU operators. EU-based firms register through national competent authorities, possibly utilizing qualified technical bodies (QTBs) established under national law. Non-EU operators, conversely, face a compulsory dual-track process overseen by the European Union Agency for the Space Programme (EUSPA).

A. Structural Conflict in Dual-Track Registration

The dual-track system requires third-country space operators providing services in the EU to undergo authorization and ongoing compliance checks by a compliance board housed within EUSPA.[29] This structure presents a clear and inherent conflict of interest.

ICLE notes in Appendix A that EUSPA is statutorily tasked with critical regulatory and technical assessment functions. Simultaneously, EUSPA participates in the management and operation of EU constellations, such as IRIS^2. This positions EUSPA as both a regulator of, and a *de facto* competitor to, the foreign constellation operators it reviews.

Regulatory scrutiny requires that QTBs possess independence and an absence of conflict of interest.[30] By housing the ultimate compliance authority for non-EU actors within an agency intimately involved in developing competing EU space assets, the EU Space Act creates a system vulnerable to regulatory capture. EUSPA staff and compliance board members—though required to act independently—may have structural incentives to advise the Commission on technical

[27] EU Space Act, *supra* note 1 at 26.

[28] Impact Assessment 2, *supra* note 21 at 142.

[29] EU Space Act, *supra* note 1 at Chapt. II.

[30] EU Space Act, *supra* note 1 at 32.

specifications and registration requirements that favor the EU's proprietary systems, such as the mandatory collision-avoidance (CA) services managed by EU Space Surveillance and Tracking (EU-SST) Partnership, which EUSPA oversees. Moreover, it would do so while creating technical and administrative friction for foreign competitors. This lack of objective and impartial assessment undermines the goal of transparent and fair market access.

B. The Extraterritorial Inspection Authority

The EU Space Act grants the Commission and EUSPA broad investigative powers, including the authority to conduct inspections and investigations at space-services providers' premises.[31] The act's text holds that third-country space operators providing services in the EU must designate a legal representative within the EU to ensure effective cooperation and compliance.[32]

Critically, the EU Space Act grants the European Commission the right to request inspections of non-EU operators' facilities located outside the EU as a condition of market access.[33] This provision introduces a "poison pill" barrier for U.S. operators. Allowing foreign regulators to inspect facilities outside the EU conflicts directly with national-security controls, notably U.S. export-control laws, such as the International Traffic in Arms Regulations (ITAR).[34] ITAR restricts the sharing of certain technical data and access to controlled facilities, making compliance with the EU Space Act's inspection requirement a potential breach of U.S. law. The Commission could use a denial of access—even on the basis of protecting national-security interests—as grounds to withhold licensing and market access, effectively coercing compliance incompatible with U.S. sovereignty and security policy.

V. Need for Alignment and Predictability

To successfully support the internal market and global competitiveness, the EU Space Act must immediately address the regulatory uncertainty and non-alignment with international practices.

A. International Alignment and Technical Standards

As noted above, the EU Space Act currently defers the development of key technical standards to future implementing acts. This ambiguity contrasts starkly with robust and long-established international standards and guidelines for space safety, sustainability, and debris mitigation. These include frameworks developed by:

- The International Standards Organization (ISO);
- The Inter-Agency Space Debris Coordination Committee (IADC);

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[31] EU Space Act, *supra* note 1 at Art. 50.

[32] EU Space Act, *supra* note 1 at 18.

[33] EU Space Act, *supra* note 1 at Arts. 48(4) & 52.

[34] *See, e.g.*, Parts 120(10), 121 Cat. IV(h)(3), 124.1, 127.1.

- The National Aeronautics and Space Administration (NASA); and
- The Federal Communications Commission (FCC).

For instance, the act specifies technical requirements for spacecraft manoeuvrability for orbits above 400 km and limits for orbital lifetime.[35] But by creating EU-specific metrics, it fragments the market. Achieving global market access and strengthening the EU's role as a standard setter requires adopting these established international frameworks directly into the EU Space Act text. Alignment would reduce operational friction and avoid forcing firms into specialized, high-cost compliance regimes designed solely for the EU market.

B. The Mandatory Collision-Avoidance Requirement

The EU Space Act mandates that all EU spacecraft operators subscribe to the CA services provided by the EU's designated provider (the EU-SST Partnership).[36] Third-country space operators must also subscribe to a public or commercial CA provider that meets certain technical requirements.[37]

This mandatory subscription—particularly when coupled with EUSPA's governance role—eliminates competition in the EU market for CA services. Competition drives innovation and efficiency. By mandating the use of a service overseen by a state-affiliated entity, the EU Space Act risks stifling innovation in safety technology and could potentially lead to higher long-term costs or lower service quality than would prevail in an open, competitive market.

VI. Conclusion and Recommendations

The EU Space Act, particularly Policy Option 2+, provides a legislative baseline intended to address the fragmentation of the single market and ensure the safe use of space. The economic reality, however, is that the proposed structure functions primarily as a non-tariff barrier, imposing disproportionate costs and regulatory uncertainty on non-EU actors, while undermining the goals of competitiveness and predictable investment.

To rectify these deficiencies and ensure the EU Space Act delivers genuine benefits—namely, regulatory certainty, open-market access, and enhanced safety outcomes—the Commission should execute the following revisions:

1. **Eliminate discriminatory market thresholds**: Immediately remove the arbitrary size-based "giga-constellation" threshold and instead structure technical requirements based solely on recognized orbital risk and operational metrics, consistent with international standards from IADC and ISO.
2. **Ensure regulatory certainty**: Accelerate the definition and adoption of technical implementing acts. Failure to clarify critical operational and technical requirements in a

[35] EU Space Act, *supra* note 1 at Art. 66.

[36] EU Space Act, *supra* note 1 at Art. 64.

[37] EU Space Act, *supra* note 1 at Art. 15.

timely manner would increase regulatory uncertainty, dramatically reducing the incentives for irreversible, capital-intensive investment in serving the EU market, consistent with the findings of real-options theory.

3. **Resolve structural conflict of interest**: Separate the regulatory function from competitive market roles. The mandate to review and enforce compliance for non-EU operators (via the EUSPA Compliance Board) must be transferred to a body demonstrably independent from the design or operation of competing EU space systems.
4. **Align with international standards**: Require technical specifications to conform to widely adopted global orbital-safety standards (*e.g.*, ISO, IADC, FCC, NASA). This would prevent market fragmentation, maximize economies of scale, and reduce unnecessary, market-specific adjustment costs for all global operators.
5. **Reconsider extraterritorial enforcement**: Eliminate the authority to compel inspections of foreign facilities outside the EU. This provision creates insurmountable legal conflict with the national-security laws of key partners and operates as an explicit barrier to market access.

The EU Space Act must prioritize regulatory coherence and proportionality over protectionist industrial policy. Implementing these recommendations would transform the act into a globally responsible and economically sound legislative framework, promoting safety and resilience, without sacrificing the principles of open competition and international trade.