Europe Economics

EU Space Act – Cost Impact Assessment

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1 Introduction

The European Commission has proposed a new regulation, the EU Space Act, to strengthen safety, resilience, governance, and competitiveness of space activities in the EU market. While the legislation primarily aims to enhance security, sustainability, and regulatory coherence, it also introduces new compliance requirements for firms operating in the European space economy. In its associated impact assessment[1], the EU identifies a range of additional costs imposed on private space businesses across the EU value chain.

This report assesses the economic implications of these measures by exploring the downstream effects of these cost increases on prices, demand, investment activity, research and development, and capital expenditure.

We model these effects not only for individual product segments in the local European space market, but also for US and Chinese exports into the EU.

This report thus provides a first quantitative assessment of how the EU Space Act may affect the competitiveness, investment capacity, and long-term growth prospects of the European space sector, while also quantifying spillover impacts on international exporters to the EU.

The report proceeds in three stages:

1. We estimate what effects the increases in prices will have on costs, prices, and demanded quantities.
2. We then estimate how firms will respond to these shifts and what relative effects this will have on profits, investments, research and development spending, and capital expenditure.
3. Lastly, we map the global space economy and investment activity, to see what the absolute effects in the relevant regions will be in the short- and long-term.

[1] European Commission (2025), Proposal for a Regulation of the European Parliament and of the Council on the safety, resilience, and sustainability of space activities in the Union – Impact Assessment Report [Link]

2 Cost and Demand Effects

2.1 Methodology

We quantify European space sector activity by identifying annual revenue of European space companies as published in the Eurospace Report 2024. The survey consolidates returns from more than 400 industrial units and reports final sales to customers.[2] These sales figures are classified into five product segments: Launcher Systems, Satellite Application Systems, Scientific Systems, Ground Systems/Services, and Other/Unknown.

To construct similar industry revenue proxies for the European proportion of American and Chinese space activity, we use Eurostat extra-EU import data, mapped to space-relevant product groups using the closest corresponding HS trade codes. Each of our five categories is aligned to specific Eurostat[3] classifications: Launcher systems (HS 88026090 for suborbital/spacecraft launch vehicles and 88079030 for launcher parts), Satellite application systems (HS 88026010 for spacecraft including satellites and 88026011 for telecommunications satellites), Scientific systems (HS 88026019 for non-telecommunication spacecraft), Ground systems/services (HS 90142080 for space-navigation instruments and 90142020 for inertial navigation systems), and Other (HS 88079029 for parts of spacecraft, n.e.s.).

Once these revenues are aligned, we identify which of them are directly affected by the EU Space Act. For instance, we recognise that the increased costs in satellite application systems relate to platform manufacturing and thus revenues of downstream satellite services are not affected. We then apply average profit rates of the relevant proxy industries within the EU to the affected revenue base, generating an estimate of the total profit and costs relevant to this exercise.

Our profit-margin assumptions draw on the European EBITDA-to-Sales benchmarks published by NYU Stern (Aswath Damodaran)[4], using the closest available sectoral analogues for each space segment. For launcher systems, we apply an 11% margin, matching the Aerospace/Defence category, which reflects similar capital intensity, programme structure and procurement models. For satellite application systems, we use a 25% margin based on the Wireless Telecoms sector, as this best mirrors the revenue characteristics of satellite communications services. Scientific systems are linked to government-funded research and educational missions, so we adopt the Education sector margin of 15% as a proxy for publicly funded activities. Ground systems and services map most closely to Telecommunications Equipment providers, where margins average 12%, reflecting hardware-plus-services business models. For other or unclassified activities, we reuse the 11% Aerospace/Defence margin as a neutral default when no direct proxy exists. These proxies ensure consistency with European corporate profitability while recognising the differing cost structures across space industry segments.

The European Commission's own impact assessment of the EU Space Act estimates a range of cost increases to the private European space industry as a consequence of increased compliance and operational requirements arising from the Space Act. Namely, they identify increases in Satellite Manufacturing Costs, Launch Vehicle Compliance, Environmental Compliance, Licensing Fees, Cybersecurity Compliance, and Admin Overhead. These cost categories are mapped back to the five product segments to determine industry cost effects.

[2] ASD-EUROSPACE (2025), Eurospace Facts & Figures 2025 Sneak Peak [Link]
[3] Eurostat (2025), EU trade since 1988 by HS2-4-6 and CN8 [Link]
[4] NYU Stern (2025), Profit margins (net, operating and EBITDA) - Europe [Link]

In light of these cost increases, firms are faced with a choice on how to react (see Approaches 1 & 2 in Section 3.1). In estimating price and demand impacts, we build on the assumption that firms would seek to maintain constant profit levels (cost increases are not absorbed as reduced profits with unchanged prices). The additional costs would then compel them to increase prices accordingly.

To evaluate the demand-side effect of this price increase, we further estimate demand elasticities, drawing on published economic studies matched to each product segment. For launcher systems, NASA analysis[5] shows LEO launch demand is elastic (>1) while GTO is inelastic (~0.5), so we apply a midpoint elasticity of 0.75. For satellite application systems, we combine findings that satellite-TV demand is highly elastic (~4)[6] with market data showing that satellite TV accounts for 70% of all satellite service revenues[7]; weighting 70% at elasticity 4 and 30% at elasticity 1 (for more stable EO/navigation demand) yields 3.45. Scientific systems rely on government procurement, which NASA characterises as highly price-insensitive, so we apply a low elasticity of 0.25. Ground systems/services are linked to broadband markets where historical studies report elasticities of 0.7-1.5[8], and we adopt a conservative midpoint of 1. For other/unknown categories, we assign unit elasticity in the absence of suitable empirical evidence.

Applying these demand elasticities to each product segment price increase, we ultimately produce an estimated drop in demand for the EU and for Chinese and American exports into the EU.

All estimates and analysis are conducted under the assumption that no current or proposed regulatory measures, nor any form of consumer activism, impose obligations on US or Chinese firms comparable to those set out in the EU Space Act. For consistency across all jurisdictions, we then apply the same elasticity values, profit-rate assumptions, and affected-cost rates as those used for EU producers, as all figures refer to sales made within the European market.

2.2 Results

	in Million EUR	*in Million EUR*	*in Million EUR*
Product segments	**Total Sales EU**	**Extra-EU Imports - US**	**Extra-EU Imports - China**
Launcher systems	1305	10	0.0
Satellite application systems	3910	228	0.0
Scientific systems	1189	0	0.0
Ground systems/services	2289	862	10.1
Other/unknown	142	3	0.4
Total	8835	1104	11

Table 1: Total Revenue by Region[9]

Table 1 shows the baseline space activity by region, as estimated from the product segement sales for the EU, and the imports mapped against these segments. For the EU, the segments' contributions to the total space activity are relatively balanced with satellite application systems being the biggest category. Most chinese exports into the EU are ground systems and services, while the US also exports substantial satellite application systems. As outlined above, we apply conservative proportions to some product segments in our following calculations to account for the revenues that would be affected by the EU Space Act.

[5] Webb (2016), Is It Worth It? The Economics of Reusable Space Transportation [Link]
[6] Chicagobooth (2002), Consumers and Their Satellite Dishes [Link]
[7] Jewett (2024), Inside SIA's 2024 State of the Satellite Industry Report [Link]
[8] Dutz et al. (2012), The Liftoff of Consumer Benefits from the Broadband Revolution [Link]
[9] As regards the Total Sales EU column, original data licensed from ASD-Eurospace, used with permission.

2.2.1 EU

Product segments	Total affected revenues (in Million EUR)	Assumed profit rate	Affected costs (in Million EUR)	Total Cost Increase (in Million EUR)	Relative Price increase	Elasticity	Demand Drop
Launcher systems	1305	11%	1161	26	2.0%	0.75	1.5%
Satellite application systems	2737	25%	2053	108	3.9%	3.45	13.6%
Scientific systems	951	15%	809	39	4.1%	0.25	1.0%
Ground systems/services	2289	12%	2014	24	1.1%	1	1.1%
Other/unknown	142	11%	126	2	1.1%	1	1.1%
Total	7424	17%	6163	199	2.7%	1.76	4.7%

Table 2: Cost and Price Effects - EU

Assuming constant profits, the estimated cost increases result in an average price rise of 2.7% across the EU space industry. The most substantial price increases are prediceted in satellite application systems and scientific systems, driven by the increase in satellite platform manufacturing costs of 3-10%, as reported in the EC's impact assessment. Because satellite application systems have much higher demand elasticity than other segments, it also dominates the 4.7% drop in demand seen across the industry, with us estimating a 13.6% lower quantity sold in this segment.

2.2.2 US and Chinese Exports

Product segments	Total affected revenues (in Million EUR)	Assumed profit rate	Affected costs (in Million EUR)	Total Cost Increase (in Million EUR)	Relative Price increase	Elasticity	Demand Drop
Launcher systems	10.1	11%	9.0	0.2	2.0%	0.75	1.5%
Satellite application systems	159.9	25%	119.9	6.3	3.9%	3.45	13.6%
Scientific systems	0.0	15%	0.0	0.0	4.1%	0.25	1.0%
Ground systems/services	862.4	12%	758.9	9.2	1.1%	1	1.1%
Other/unknown	3.0	11%	2.6	0.0	1.1%	1	1.1%
Total	1035.3	14%	890.4	15.7	1.5%	1.50	2.3%

Table 3: Cost and Price Effects - US

Product segments	Total affected revenues (in Million EUR)	Assumed profit rate	Affected costs (in Million EUR)	Total Cost Increase (in Million EUR)	Relative Price increase	Elasticity	Demand Drop
Launcher systems	0.0	11%	0.0	0.0	2.0%	0.75	1.5%
Satellite application systems	0.0	25%	0.0	0.0	3.9%	3.45	13.6%
Scientific systems	0.0	15%	0.0	0.0	4.1%	0.25	1.0%
Ground systems/services	10.1	12%	8.9	0.1	1.1%	1	1.1%
Other/unknown	0.4	11%	0.4	0.0	1.1%	1	1.1%
Total	10.6	12%	9.3	0.1	1.1%	1.00	1.1%

Table 4: Cost and Price Effects - China

Because the identified inter-segment effects are relative, we conclude the same price increases and demand drops within each product segment. The differences in total industry effects therefore arise only from the variations in product composition between the local EU space industry and the imports from China and the US. As noted above, Chinese exports are dominated by ground systems and services, while the US also exports a sizable number of satellite application systems, though still less than in EU production. In the EU ,

the overall price and demand effects were driven by satellite application systems, however, because of this lower proportion, we see a smaller aggregate effect in US and Chinese export. We estimate an average increase in prices of 1.5% for US exports and 1.1% for Chinese exports, corresponding to demand drop of 2.3% and 1.1% respectively.

3 Profit and Investment Effects

3.1 Methodology

Using the estimated cost increases and demand changes, we model firms' profit responses under two alternative approaches.

1. ***Approach 1 – Absorption of cost increases in lower profits***

Firms do not change their prices in response to higher production costs to avoid a reduction in demand. Instead they absorb the costs themselves, meaning profit declines directly with the cost increase.

$$Profits_{new} = Revenue - (Costs + Cost\ Increases)$$

2. ***Approach 2 – Pass-through of cost increases in higher prices***

Instead of absorbing the costs, the firms respond to the higher operating costs by increasing prices proportionately. As outlined above, the increased prices will cause a drop in demand, i.e. a lower quantity sold, which will lower revenue and costs. As the price increase was set to compensate for the additional costs, the resulting change in profit depends solely on the decline in quantity sold.

The change in average profits has direct implications at both the business level and the wider macroeconomic level.

When firms experience lower profit rates this translates into reduced expected rates of return available to investors, shifting investment away from the affected sectors. To model this investment effect, we again employ a proxy to produce an elasticity: Gilchrist and Zakrajšek (2007) find that in capital intensive US industries, namely manufacturing and utilities, a percentage point increase in the user cost of capital, i.e. a lower rate of return, implies a reduction in the investment rate of 0.5 to 0.75 percentage points in the short run. Taking the midpoint, we thus apply a 0.625 investment elasticity onto the change in profit. Following the study, we also apply a long-run investment elasticity of 1, i.e. a 1% decrease in profit leads to 1% lower investment.

Beyond lower external capital attractiveness, the lower profit is also expected to constrain firms' internal investment. Hall (1992) finds that US manufacturing companies expand their research and development (R&D) spending and their capital expenditure (CapEx) by 0.28% points and 0.46% points respectively, when experiencing a 1% increase in profit. That implies elasticities of 0.28 and 0.46, which would also apply to a decrease in profits, as seen in our model.

For the sake of our analysis, we apply these investment elasticity to all firms operating in the EU market because the underlying data on sales, margins and cost structures represent activity generated within Europe, regardless of where a company is headquartered.

In practice, however, investment behaviour may still vary across regions. Firms based in the United States or China often hold internationally diversified portfolios of space-related assets, which means that reduced returns in the EU can be partially offset by opportunities elsewhere. Their overall investment response to an EU-specific profit shock is therefore likely to be smaller. By contrast, EU-based firms typically have assets that are more concentrated within Europe and cannot easily be shifted into unaffected activities. As a result, they are expected to adjust their investment more sharply when European profitability falls.

3.2 Results

3.2.1 EU

Product Segment	Approach 1: Change in Profits	Short-Term Change in Investment (e = 0.625)	Long-Term Change in Investment (e = 1)	Change in R&D (e = 0.28)	Change in CapEx (e = 0.46)
Launcher systems	-18.4%	-11.5%	-18.4%	-5.2%	-8.5%
Satellite application systems	-15.7%	-9.8%	-15.7%	-4.4%	-7.2%
Scientific systems	-27.2%	-17.0%	-27.2%	-7.6%	-12.5%
Ground systems/services	-8.9%	-5.6%	-8.9%	-2.5%	-4.1%
Other/unknown	-9.7%	-6.1%	-9.7%	-2.7%	-4.5%
Total	-15.8%	-9.9%	-15.8%	-4.4%	-7.3%

Table 5: Approach 1: Investment and Downstream Effects

Product Segment	Approach 2: Change in Profits	Short-Term Change in Investment (e = 0.625)	Long-Term Change in Investment (e = 1)	Change in R&D (e = 0.28)	Change in CapEx (e = 0.46)
Launcher systems	-1.5%	-1.0%	-1.5%	-0.4%	-0.7%
Satellite application systems	-13.6%	-8.5%	-13.6%	-3.8%	-6.2%
Scientific systems	-1.0%	-0.6%	-1.0%	-0.3%	-0.5%
Ground systems/services	-1.1%	-0.7%	-1.1%	-0.3%	-0.5%
Other/unknown	-1.1%	-0.7%	-1.1%	-0.3%	-0.5%
Total	-7.9%	-4.9%	-7.9%	-2.2%	-3.6%

Table 6: Approach 2: Investment and Downstream Effects - EU

Between the two approaches, it becomes clear that the profit impacts are significantly worse when the cost increases are absorbed directly, i.e. when companies choose approach 1. Specifically, we estimate an average reduction in relative profit from approach 1 of around 15.8% across the EU space industry, corresponding to an investment reduction of 9.9% in the short-term and 15.8% in the long-term. Similarly, we expect a reduction in R&D spending and capital expenditure of 4.4% and 7.3% respectively.

In comparison, when firms pass through the regulatory and compliance cost increases to customers via offsetting price adjustments (approach 2), the overall effect is noticeably smaller. As in the case of demand effects, the aggregate outcome is driven primarily by the significant drop in profits seen in satellite application systems, which results in lower industry profits by an average of 7.9%. Applying the same investment elasticities, we estimate 4.9% lower short-term industry investments, and 7.9% lower long-term investments. R&D spending and capital expenditure is estimated to drop by 2.2% and 3.6% respectively.

Assuming optimal behaviour, we conclude that EU firms would pass-through these cost increases, meaning that approach 2 is the more robust and realistic scenario.

3.2.2 US and Chinese Exports

Product Segment	Approach 1: Change in Profits	Short-Term Change in Investment (e = 0.625)	Long-Term Change in Investment (e = 1)	Change in R&D (e = 0.28)	Change in CapEx (e = 0.46)
Launcher systems	-18.4%	-11.5%	-18.4%	-5.2%	-8.5%
Satellite application systems	-15.7%	-9.8%	-15.7%	-4.4%	-7.2%
Scientific systems	-27.2%	-17.0%	-27.2%	-7.6%	-12.5%
Ground systems/services	-8.9%	-5.6%	-8.9%	-2.5%	-4.1%
Other/unknown	-9.7%	-6.1%	-9.7%	-2.7%	-4.5%
Total	-10.9%	-6.8%	-10.9%	-3.0%	-5.0%

Table 7: Approach 1: Investment and Downstream Effects - US

Product Segment	Approach 2: Change in Profits	Short-Term Change in Investment (e = 0.625)	Long-Term Change in Investment (e = 1)	Change in R&D (e = 0.28)	Change in CapEx (e = 0.46)
Launcher systems	-1.5%	-1.0%	-1.5%	-0.4%	-0.7%
Satellite application systems	-13.6%	-8.5%	-13.6%	-3.8%	-6.2%
Scientific systems	-1.0%	-0.6%	-1.0%	-0.3%	-0.5%
Ground systems/services	-1.1%	-0.7%	-1.1%	-0.3%	-0.5%
Other/unknown	-1.1%	-0.7%	-1.1%	-0.3%	-0.5%
Total	-4.5%	-2.8%	-4.5%	-1.3%	-2.1%

Table 8: Approach 2: Investment and Downstream Effects - US

Product Segment	Approach 1: Change in Profits	Short-Term Change in Investment (e = 0.625)	Long-Term Change in Investment (e = 1)	Change in R&D (e = 0.28)	Change in CapEx (e = 0.46)
Launcher systems	-18.4%	-11.5%	-18.4%	-5.2%	-8.5%
Satellite application systems	-15.7%	-9.8%	-15.7%	-4.4%	-7.2%
Scientific systems	-27.2%	-17.0%	-27.2%	-7.6%	-12.5%
Ground systems/services	-8.9%	-5.6%	-8.9%	-2.5%	-4.1%
Other/unknown	-9.7%	-6.1%	-9.7%	-2.7%	-4.5%
Total	-9.0%	-5.6%	-9.0%	-2.5%	-4.1%

Table 9: Approach 1: Investment and Downstream Effects - China

Product Segment	Approach 2: Change in Profits	Short-Term Change in Investment (e = 0.625)	Long-Term Change in Investment (e = 1)	Change in R&D (e = 0.28)	Change in CapEx (e = 0.46)
Launcher systems	-1.5%	-1.0%	-1.5%	-0.4%	-0.7%
Satellite application systems	-13.6%	-8.5%	-13.6%	-3.8%	-6.2%
Scientific systems	-1.0%	-0.6%	-1.0%	-0.3%	-0.5%
Ground systems/services	-1.1%	-0.7%	-1.1%	-0.3%	-0.5%
Other/unknown	-1.1%	-0.7%	-1.1%	-0.3%	-0.5%
Total	-1.1%	-0.7%	-1.1%	-0.3%	-0.5%

Table 10: Approach 2: Investment and Downstream Effects - China

We proceed in the same fashion for our US and Chinese export figures. As with our findings for the EU market, approach 1 exhibits significantly higher changes in profits, investment, R&D spending, and capital expenditure. In this scenario, we model 10.9% lower profits, 6.8% lower short-term investment, 10.9% lower long-term investment, 3% lower R&D spending, and 5% lower capital expenditure for the share of US exports into the EU. For Chinese exports, on the other hand, we estimate 9% lower profits, 5.6% lower short-term and 9% lower long-term investment, and lower R&D and capital expenditure of 2.5% and 4.1% respectively.

Alternatively, in approach 2, we estimates much smaller changes in profit, namely 4.5% lower for the US and 1.1% for China. This corresponds to US investments falling by 2.8% in the short-term and 4.5% in the long-term, while we see drops of 0.7% and 1.1% in China. Lastly, internal investment is also modelled to drop, with R&D falling by 1.3% and 0.3%, and capital expenditure going down by 2.1% and 0.5% respectively.

Macro-Economic Effects and Summary of Results

	in Million EUR	*in Million EUR*	*in Million EUR*	*in Million EUR*
Region	**Annual Revenue lost (Approach 2)**	**Annual Profit lost**	**Short-Term Annual Investment lost**	**Long-term Annual investment lost**
EU	245	100	696	3448
US	85	7	11	50
China	0	0	0	0

Table 11: Absolute annual losses in revenue, profit, and investment across all three regions

Following approach 2, we estimate a lower annual revenue of EUR 245 million per annum across the European space industry. This corresponds to lost profits in the range of EUR 100 million yearly. Meanwhile, we predict that the US will experience EUR 85 million lower revenue from their exports into the EU as a consequence of the higher regulatory and operational costs of the EU Space Act, resulting in profits falling by about EUR 7 million annually. Given China's small exposure to the European market, totalling less than EUR 11 million of export revenue annually, the effect on their revenue and profit is marginal in absolute terms.

Equipped with the relative changes in investment, we are further able to apply these to absolute investment figures to produce estimates for the total annual investment lost.

An 2025 European Commission report titled "A vision for the European Space Economy"[10] estimates that annual investment totalled EUR 14.1 billion in 2024. Applying the 4.9% drop in short-term investment, this equates an absolute loss in short-term annual investment of almost EUR 700 million. To model the long-term effects, we take the most recent annual growth rate of global public (~10%) and private (~22%) sector investment from the latest "Generation Space Index" (Q3-2025) published by Seraphim, a specialist investor in SpaceTech, and apply it as a cumalitive annual growth rate (CAGR) across 10 years to the public and private sector investment figures we collated. Using the long-term change in investment calculated earlier, we produce a long-term estimate of almost EUR 3.5 billion lost in annual EU investment activity alone.

We follow this same procedure for the US and China, and find total short-term investments of EUR 71.3 billion and EUR 19 billion respectively, which is expected to grow to EUR billion 208 and EUR billion 57.8 in the next 10 years. We then calculate the proportion of their exports into the EU against their total space economy. We find that exports into the EU account for about 1% of US space activity and less than 0.1% of Chinese activity. Applying the proportionate investment figures to the changes in investment then results in an estimated loss in US investment of EUR 11 million in the short-term and EUR 50 million in the long-term. Again, because of China's marginal exposure to the EU, effects are estimated to be near neglible.

[10] European Commission (2025), A vision for the European Space Economy [Link]