Jon Tetzlaff / iStockphoto

Launching Florida's Future: Modernizing Space Regulations for Economic Growth

Kristian Stout

Executive Summary

The rapid growth of private launch activity has exposed tensions between regulatory frameworks designed for an era of government-led space exploration and the requirements of a modern, commercially driven industry. Nowhere are these tensions more salient than in Florida, the primary locus of American launch operations. While the state's geographic and infrastructural advantages remain unmatched, federal licensing procedures have become a significant source of delay and uncertainty. These regulatory frictions raise the core questions: how do institutional rules shape investment incentives in high-technology industries,

and to what extent does regulatory uncertainty function as a barrier to entry in markets characterized by high fixed costs and rapid innovation cycles?

This paper examines the implications of outdated launch regulation for Florida's role in the commercial space economy. It situates the problem within broader debates over regulatory design, focusing on how licensing regimes affect firm behavior, the allocation of capital, and the comparative position of the United States relative to foreign competitors. By analyzing Florida's existing comparative advantages alongside the costs imposed by federal regulatory delays, this paper evaluates the risk that institutional inefficiency may reallocate investment toward other jurisdictions or nations.

The analysis contributes to ongoing discussions of federalism and industrial policy by framing launch regulation not only as a matter of technical safety oversight, but also as a determinant of competitive dynamics in a strategically significant sector. In particular, this paper highlights how regulatory timing and predictability operate as economic levers—shaping returns to scale, the pace of technological learning, and ultimately the distribution of economic rents across states. Florida's case provides a valuable study in how regulatory institutions interact with geography, infrastructure, and workforce capacity to influence long-term patterns of industrial location.

1. Regulatory Constraints and Their Economic Consequences

The federal launch licensing regime illustrates a persistent problem in administrative design: regulatory procedures that may have been functional in an earlier, state-led model of space activity now impose significant costs in a commercial setting characterized by rapid innovation and competitive pressures. Licensing requirements, originally structured to manage infrequent government launches, have become sources of delay when applied to private firms whose business models depend on frequent testing and iteration.[1]

In the case of SpaceX's Starship, licensing approvals for test flights have sometimes lagged technical readiness by multiple months, particularly when FAA reviews required environmental or mission profile modifications. For instance, the FAA indicated it would not decide on Starship's Flight 5 authorization until late November, even though the vehicle was in a reportedly flyable state months earlier.[2] Meanwhile, Chinese launch providers have increased their cadence significantly. In one year, China executed 55 orbital launches, surpassing the U.S. count of 51.[3] This trend suggests a contraction of the technological and commercial lead once held by American launch firms. While individual delays are often framed as technical or environmental in nature, their cumulative effect is to slow domestic innovation relative to international competitors.

Worse yet, these delays impose costs not only through direct revenue losses but also through the creation of uncertainty in expected returns. Where firms cannot reliably predict approval timelines, they must discount investment projects more heavily, effectively raising the cost of capital. This uncertainty functions as a form of implicit taxation: projects with otherwise positive

net present value may be foregone or relocated to jurisdictions with more predictable regulatory regimes. In industries with high fixed costs, such as commercial space launch, the timing of regulatory approvals can determine which firms and states capture the durable advantages of early market entry.

2. Florida's Natural Advantages and the Risk of Erosion

Florida's prominence in the American space industry is not accidental but reflects a combination of geographic, infrastructural, and historical factors that have produced durable comparative advantages. Because of its relatively low latitude, launches from Florida can access many desirable orbital inclinations with lower delta-v compared to higher-latitude sites, and its Atlantic coastline provides overwater corridors that reduce overflight of populated areas and ease range safety constraints.[4] Over decades, sustained federal investment in Merritt Island and Cape Canaveral has yielded a robust launch infrastructure that supports both government and private missions. [5] Since the 1960s, NASA has developed facilities at Kennedy as its principal human spaceflight launch center, erecting complexes such as LC-39A for Saturn V / Apollo (and later Shuttle/Artemis) use. This combination of physical endowment and accumulated institutional capacity has made Florida synonymous with American launch activity.

The economic significance of these advantages is considerable. Over 150,000 jobs throughout Florida are related to the space industry in some way.[6] Kennedy Space Center alone generates billions in annual economic impact, supplemented by the growing contributions of private firms that cluster around the Space Coast.[7] These spillovers extend beyond direct aerospace employment, with multiplier effects on related sectors such as advanced manufacturing, engineering services, and education.

Yet these advantages are not immune to institutional frictions. Lengthy federal licensing processes and regulatory bottlenecks may alter the calculus of private investment, especially in a sector where speed to market is critical. This is particularly true when other jurisdictions are vying to alter the investment calculus for space industries. In Texas, for example, the state legislature has allocated over $150 million to the Texas Space Commission's SEARF grant fund to attract space-related firms, and the Commission recently approved $21.5 million in grants.[8] In California, authorities have used tools such as the CAEATFA sales-and-use tax exclusion and local aerospace incentives (e.g. in Palmdale) to lower capital costs for space or aerospace firms.[9] From an economic perspective, this illustrates that geographic endowment, while important, is insufficient on its own to secure long-term industrial concentration. Firms will weigh the expected costs of regulatory delay against the benefits of location, and in contexts where timing confers durable competitive advantages, even modest increases in uncertainty can drive relocation. Florida's challenge is thus to ensure that institutional inefficiencies do not erode the structural advantages that have historically underpinned its role in the U.S. space economy.

3. Regulatory Design and Economic Outcomes in the Space Sector

In industries characterized by high fixed costs, rapid innovation cycles, and network effects, even modest changes in regulatory design can meaningfully alter the incentives of firms and the trajectory of markets. The commercial space sector illustrates this dynamic particularly well.

By contracting with private firms under milestone- and performance-based agreements, NASA shifted development risk onto contractors, reducing cost exposure relative to traditional procurement.[10] Analyses suggest that firms like SpaceX under the Commercial Crew paradigm achieved lower per-seat or operational costs—thanks in part to contractual flexibility, milestone incentives, and economies of scale.[11] This experience demonstrates how institutional arrangements that relax rigid bureaucratic control can enhance efficiency while maintaining safety and reliability.

Regulatory modernization in the licensing domain would extend these gains. More predictable and timely approvals would likely permit higher launch cadence, allowing firms to amortize fixed infrastructure costs over a larger number of missions and capture scale efficiencies. Regular launch opportunities also enable faster feedback loops, which are critical in industries where iterative design drives technological improvement. Perhaps most importantly, certainty in approval timelines reduces the option value of delay, lowering the effective cost of capital and encouraging long-term commitments of investment.

The economic spillovers of a robust launch sector likely extend far beyond aerospace employment. For example, NASA's economic impact studies report significant indirect and induced effects in supply chains and consumer spending.[12] Space-technology transfer efforts document over 2,000 commercial 'spinoff' products derived from space research and engineering, including innovations in wireless communications, medical devices, and advanced materials.[13] These patterns are consistent with multiplier effects in the broader economy, though the precise ratio of additional jobs per direct job in the launch segment remains an open empirical question. These spillovers exemplify positive externalities: innovations initially developed for a specialized sector generate widespread social value once adapted to broader markets. The scale of these effects underscores why regulatory design in commercial space should be evaluated not only in terms of compliance or safety, but also for its broader impact on innovation and long-run economic growth.

4. Conclusion

Florida's structural advantages in commercial space activity, including its geography, infrastructure, and historical role, are necessary but not sufficient conditions for continued leadership. Institutional design, particularly the regulatory environment governing launch approvals, will play a determinative role in shaping where capital and talent flow. As such, there are important priorities that Florida policymakers should take into account.

At the federal level, the most immediate concern is ensuring that the transition toward a modernized licensing framework

achieves its intended effect of reducing uncertainty and delay. The White House's recent Executive Order on Enabling Competition in the Commercial Space Industry provides an opportunity to align agency practices with the needs of a rapidly expanding sector.[14] Florida policymakers, given the state's stake in launch activity, should play an active role in congressional oversight and appropriations processes to ensure that implementing agencies are sufficiently resourced and held accountable to predictable timelines. Predictability in regulatory outcomes reduces the effective cost of capital and encourages firms to make long-horizon investments in launch infrastructure and vehicle development.

Florida must also recognize that it is competing not only internationally but domestically. Texas, through the creation of a dedicated Space Commission and targeted incentive funds, has positioned itself as an alternative hub for commercial launch. California, despite higher operating costs, remains attractive due to its access to venture capital and dense aerospace supply chains. Florida cannot assume that its geographic advantages alone will lock in industrial concentration. Institutional quality—predictability, efficiency, and policy support—functions as a margin of competition between states, much as it does between nations.

The commercial space industry is emblematic of sectors where regulatory efficiency functions as economic policy. For Florida, the task is to align its natural and historical advantages with institutional reforms that reduce uncertainty and facilitate investment. Workforce development remains an important complement to these reforms, as the availability of technically skilled labor enhances the returns to fixed capital investment. National security considerations provide an additional rationale: maintaining robust launch capacity within Florida contributes not only to the state's economy but also to the resilience of the U.S. defense industrial base.

The question is not whether regulation is necessary—launch activities clearly implicate safety and environmental concerns—but whether existing frameworks are calibrated to minimize deadweight loss while preserving incentives for innovation. Florida's leadership should therefore pursue a dual strategy: advocate for predictable and timely federal licensing, while sustaining the state-level conditions that support investment and skilled labor supply. Doing so will position Florida to capture the durable rents associated with early leadership in a sector likely to define economic and strategic competition in the 21st century.

Kristian Stout is the Director of Innovation Policy at the International Center for Law & Economics.

ENDNOTES

1 See Rachel Lindbergh, *Commercial Space Launch and Reentry Regulations: Overview and Select Issues* , Cong. Research Serv. R48582 (2025), *available at* https://www.congress.gov/crs_external_products/R/PDF/R48582/R48582.2.pdf (noting how the FAA licensing process includes multiple stages (safety, policy, payload, environmental, etc.), and that the FAA may "'toll' the review period — that is pause the statutory 180-day review clock" if the application lacks sufficient information.") ; *see also* Jeff Foust, *"Pending Regulatory Approval": Launch Companies Struggle with Licensing, The Space Review* (Sept. 23, 2024), available at https://www.thespacereview.com/article/4861/1 (noting SpaceX's Starship program has repeatedly modified its license between flights and how delays result from environmental review and other procedural changes. For example, it reports that for "Flight 5," FAA revised estimates pushed the license decision months into the future.)

2 Marcia Smith, *SpaceX Complains of Starship Licensing Delay as House Committee Questions FAA Regs*, *SpacePolicyOnline.com* (Sept. 11, 2024), https://spacepolicyonline.com/news/spacex-complains-of-starship-licensing-delay-as-house-committee-questions-faa-regs/; Mike Wall, *SpaceX's Starship Won't Be Licensed to Fly Again Until Late November, FAA Says*, *Space* (Sept. 12, 2024), https://www.space.com/spacex-starship-flight-five-late-november

3 Ling Xin, *China Catches Up in Commercial Space: An Interview with Ji*, *PubMed Central* (Apr. 13, 2022), *available at* https://pmc.ncbi.nlm.nih.gov/articles/PMC9337983/

4 Thomas G. Roberts & Jacque Schrag, *Spaceports of the World* 3, CSIS Aerospace Security (Mar. 13, 2019), available at https://aerospace.csis.org/wp-content/uploads/2019/03/190313__SpaceportsOfTheWorld.pdf; Ali Mohammed Alkhaleefah, *A Proposed Method for the Site Selection of Spaceports,* Ph.D. dissertation, Purdue University, School of Aeronautics and Astronautics, (May 2025), *available at* https://hammer.purdue.edu/ndownloader/files/52874030

5 Scott Colleredo, *Kennedy Space Center Transformed and Transforming,* Nasa Kennedy Space Center (2014), available at https://commons.erau.edu/cgi/viewcontent.cgi?article=1025&context=stm

6 Talia Blake, *To Infinity and Beyond: How Space Impacts Florida's Economy*, Central Florida Public Media (Oct. 3, 2023), available at https://www.cfpublic.org/economy/2023-10-03/to-infinity-and-beyond-how-space-impacts-floridas-economy

7 Linda Herridge, *NASA Generates Billions in Economic Impact for Florida, Space Coast*, Nasa (June 8, 2022), *available at* https://www.nasa.gov/general/nasa-generates-billions-in-economic-impact-for-florida-space-coast/

8 Michelle Pector, Jared Wilkerson, Heidi Rasmussen, Douglas W. Baruch, Russell R. Bruch & Justin D. Weitz, *Texas Soars into the Future: Driving Innovation and Growth in the Space Industry*, Morgan Lewis LawFlash (Jan. 29, 2025), available at https://www.morganlewis.com/pubs/2025/01/texas-soars-into-the-future-driving-innovation-and-growth-in-the-space-industry

9 California Governor's Office of Business and Economic Development (GO-Biz), *Aerospace & Defense*, California Business Portal, available at https://business.ca.gov/industries/aerospace-and-defense/ (last visited Sep. 30, 2025) ; City of Palmdale, *Incentive Programs*, https://www.cityofpalmdaleca.gov/1383/Incentive-Programs (last visited Sept. 30, 2025).

10 NASA, *Commercial Crew Program – Essentials*, *available at* https://www.nasa.gov/humans-in-space/commercial-space/commercial-crew-program/commercial-crew-program-essentials/ (last updated Mar. 14, 2025).

11 Id.

12 NASA, *FY 2023 Economic Impact Report* (Oct. 2024), available at https://www.nasa.gov/wp-content/uploads/2024/10/final-fy23-nasa-ecomomic-impact-report.pdf

13 NASA, *Technology Transfer and Spinoffs*, available at https://www.nasa.gov/space-technology-mission-directorate/technology-transfer-spinoffs/ (last updated June 26, 2025).

14 *Enabling Competition in the Commercial Space Industry*, White House (Aug. 13, 2025), *available at* https://www.whitehouse.gov/presidential-actions/2025/08/enabling-competition-in-the-commercial-space-industry/