



Florida TaxWatch
ECONOMIC COMMENTARY

The Economic Impact of a Rebounded and
Revitalized Space Program on Florida's Space Coast

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On August 2nd, a SpaceX capsule carrying two NASA astronauts successfully splashed down in the Gulf of Mexico, officially concluding a historic mission to return astronauts to the International Space Station (ISS). For the first time in nearly a decade, NASA astronauts destined for the ISS launched off from American soil, and for the first time in over four decades, an American space capsule splashed down in the ocean, reminiscent of the bygone Apollo era that first sent humans to the moon.

Last month's historic achievement does more than simply showcase human ingenuity and exploration; for residents on Florida's Space Coast, the SpaceX mission signifies an economic rebound ten years in the making. For a local economy once devastated by the Space Shuttle Program's end and the Great Recession, achievements in the private space industry have promoted a revitalized economy that continues to display an upward trajectory.

A HARD LANDING

From 1981 to 2011, the Space Shuttle Program brought in a mix of engineers, technicians, logisticians, specialists, and more to the Space Coast region and supported the creation of numerous other jobs indirectly related to the space program. The infusion of NASA spending into the local and state economy generated an overall economic impact of more than \$4.1 Billion in 2008, translating into 40,802 jobs, \$2.1 billion in household income, and \$103 million in state and local taxes.¹ Over 98 percent of the total economic output centered in Central Florida, where direct NASA spending totaled \$1.82 billion in Brevard County and \$83 million in other Central Florida counties. The average annual salary for a Kennedy Space Center (KSC) on-site worker was \$77,235 in Fiscal Year 2008, nearly twice the average wage in Brevard County during that time.²

¹ See "Economic Impact of NASA in Florida: FY 2008" https://www.nasa.gov/centers/kennedy/pdf/318131main_economic-impact08.pdf

² Ibid.

When the Space Shuttle Atlantis ascended into space for the final time in July 2011, the ensuing job layoffs began to make their economic impact known. The final Shuttle missions marked the end for over 7,500 direct KSC employees, dropping the KSC's workforce to around 8,500 workers, far smaller than its peak in the mid-2000s.³ According to analyses by local career centers, the direct space center layoffs also coincided with up to 14,000 indirect jobs lost in local hotels, restaurants, retail stores, and other small businesses that supported the KSC.⁴ These businesses indirectly related to the Space Program not only catered to KSC workers and their families but also to the many tourists who came to watch the Shuttle launches each year. No more shuttle viewings meant loss in customers and revenue, and by July 2011, Brevard County's unemployment rate rose to 11.2 percent, above the state average of 10.1 percent.⁵

From daycares and schools, to restaurants and retail establishments, organizations across the Space Coast faced a precarious situation as uncertainty over NASA's layoffs rippled throughout the entire local economy. Yet as the future of American space travel seemed doubtful, a new alternative seemed to emerge, one that would ultimately encompass the ingenuity of private enterprise and restart a struggling local economy.

LAUNCH TAKEOFF

To fill the void created by the Shuttle Program's end, many private space companies began to undertake concerted efforts to transform space travel into a cost-efficient, commercial alternative. SpaceX, an early contender in commercial space travel, was one of the first to capitalize on the area's aerospace focus. On May 25, 2012, an un-crewed spacecraft called "Dragon" became the first commercial spacecraft to transport goods to the ISS. Five years later in 2017, the company set history once again in when it successfully took off and landed a reusable rocket. Shortly after SpaceX began its space venture in early 2012, other companies soon followed.

Blue Origin, founded by Amazon CEO Jeff Bezos, laid claim to a historic launchpad to develop its new rocket called the New Glenn. The company had also built a rocket manufacturing facility nearby requiring a \$200 million capital investment and creating over 330 new jobs. Close by, OneWeb, a satellite company with plans to provide Internet service worldwide delivered from space, also began expanding its operations. In 2019, two startup rocket companies, Firefly and Relativity, announced deals to refurbish and restructure launch pads that had laid dormant for years. Furthermore, these companies joined larger, private defense-industry companies such as Boeing, Northrup Grumman, Lockheed Martin, and L3 Harris Technologies, which had partnered with the federal government for years.

In total, the arrival of major private space companies infused a mixture of capital investment, job creation, and industry diversification into a struggling economy. Between October 2010 and September 2017, there were over 49 new private projects, 8,700 new jobs, and a capital investment around \$1.68 billion, according to the Space Coast Economic Development Commission.⁶ Efforts by Space Florida, the state's aerospace economic development agency, to retain and recruit aerospace companies to the region resulted in 37 new space-related companies and nearly 7,639 jobs between 2018 and 2019. These jobs boasted an average annual wage well above \$91,000.⁷

3 "Space Workers Struggle a Year Since Layoffs After Last Shuttle." The St. Augustine Record. Published Jul 15, 2012.

4 "End of Space Shuttle Program To Have Far Reaching Impact." CNBC News. Published Jul 8, 2011.

5 Unemployment statistics come from FRED - Federal Reserve Bank of St. Louis.

6 See the Space Coast EDC's economic dashboard: <https://www.spacecoastheadlight.com/index>. The figures presented were discussed in a released news article titled, "Florida's Once-Struggling Space Coast booms from aerospace, defense firms." United Press International (UPI). Published on Nov 21, 2018 by Ray Downs.

7 See Space Florida's 2018 and 2019 Annual Reports: <https://www.spaceflorida.gov/about/annual-reports/>. The figures represent aggregated numbers from the two respective reports.

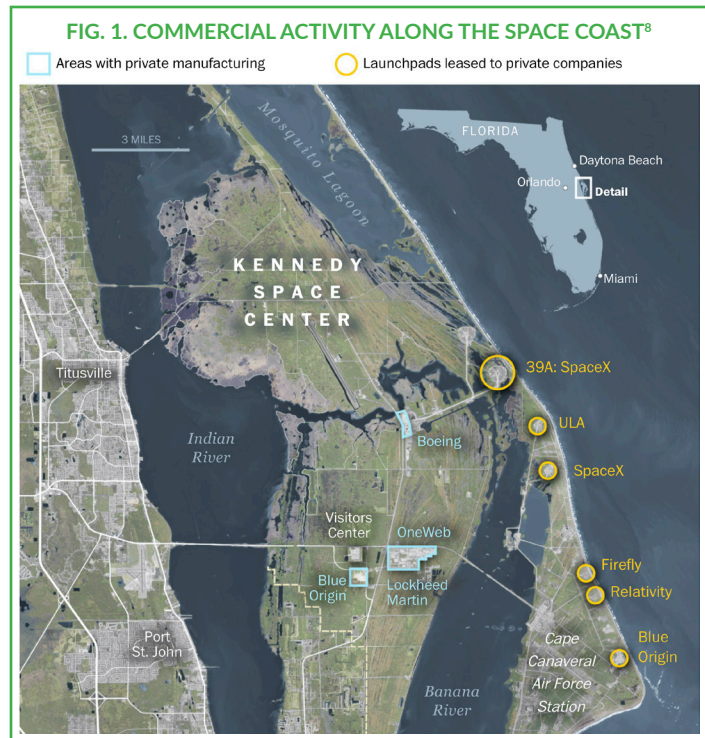
These economics advancements in the private space industry spilled over into other sectors of the local economy, such as real estate, retail, and hospitality. Across the river in Titusville, where for-lease signs once sprang up following the Shuttle’s final departure, an 18,000-square foot day-care center was constructed, hotels and condominiums broke ground, and a once defunct shopping mall was rebuilt into a new shopping center. The city’s tax base skyrocketed from nearly \$450 million in 2010 to around \$850 million by 2018.⁸ Once again, visitors from across the world have arrived to watch launches, nostalgic for a coast that has seen launches from the Apollo to the Space Shuttle Programs.

AN UPWARD TRAJECTORY

In coming months, SpaceX will send four astronauts to the ISS aboard the SpaceX Dragon capsule with ambitious plans to send a manned spacecraft to Mars by the decade’s end. Blue Origin was recently selected to begin advancing NASA’s Artemis program, a program to return astronauts to the moon by 2024. Even NASA continues to play an integral role in the furtherance of space exploration by refining its Space Launch System (SLS) and successfully sending a new rover, called “Perseverance,” to the Martian surface.

Dubbed the “Comeback Coast” by a Washington Post article,⁹ the Space Coast is certainly a prime example of how private enterprise, ingenuity, and persistence can redefine a locality once decimated by unfortunate economic circumstances. In the ten years since the Shuttle’s retirement, private space companies, such as SpaceX, Blue Origin, OneWeb, along with larger defense industry companies to the likes of Boeing and Lockheed Martin, have fueled the area’s economic rebound, creating an aerospace ecosystem with tremendous economic benefits.

The lasting effects of the area’s economic diversification and revitalization remain to be seen, especially in light of the ensuing COVID-19 pandemic; however, if the past few years are any indication for what is to come, the Space Coast will continue to push the frontier on economic growth as space exploration once again invigorates a local economy and captivates the curiosity of a nation.



⁸ “The Comeback Coast.” The Washington Post. Published on May 16, 2019. <https://www.washingtonpost.com/graphics/2019/business/florida-space-coast-spacex-boeing-blue-origin/>

⁹ Ibid.

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