

Florida TaxWatch
ECONOMIC COMMENTARY
**BUILT FOR SUCCESS: MANUFACTURING'S ROLE
IN FLORIDA'S ECONOMY**
JUNE 2022

Advancing Florida's standing on the global stage requires a state economy conducive to innovation, capable of withstanding disruptions, and constantly cultivating talent. A robust manufacturing sector stands at the crossroads of these priorities and, as the COVID-19 pandemic demonstrated, the sector's importance cannot be understated. From medical devices and electronics to aviation and aerospace, high-value manufacturing is integral to both industry and consumers. As the world economy continues to transform, there is a defining opportunity for Florida's manufacturing sector to sow the seeds of economic success and deliver recurring taxpayer value; however, capturing the opportunity will require collaborative action and strategic investment.

MEASURABLE IMPACT ON THE FLORIDA ECONOMY

Florida's manufacturing ecosystem is large and diverse, home to more than 22,000 establishments stretching across urban and rural areas, producing a variety of goods, such as computers, pharmaceuticals, batteries, medical devices, and semiconductors. More than 80 percent of manufacturing companies in the state employ 20 or fewer workers, showcasing the enormous benefit the sector has to small and local businesses.¹

As of April 2022, statewide manufacturing employment numbered 405,000 workers—roughly 4.4 percent of the state's entire nonagricultural employment.²

FIGURE 1. SINCE HITTING A LOW DURING THE GREAT RECESSION, MANUFACTURING EMPLOYMENT HAS RISEN BY 97,000 WORKERS
MANUFACTURING EMPLOYMENT IN FLORIDA, THOUSANDS OF PERSONS



Source: Bureau of Labor Statistics (BLS)

The April 2022 job figure represents a 16,300 job increase compared to the February 2020 employment level leading up to the pandemic.³ Pre-coronavirus, Florida's manufacturing sector had embarked on a decade-long climb, emerging from the Great Recession as a key performing sector. A testament to the state's ability to attract and develop high-value, high-tech businesses, Florida added manufacturing jobs at nearly three times the national rate between 2015 and 2019.⁴

More than just providing ample employment growth, Florida's manufacturing sector delivers a substantial boost through higher wages and economic activity. Jobs in the manufacturing sector pay about 116 percent of average annual wages in Florida. In 2021, the sector's average annual wages were \$69,939.⁵

Manufacturing also has a notable "multiplier effect," meaning economic activity in other industries, such as trade and logistics, rise in tandem with more Florida-based production. On a macro-level, every \$1 in manufactured goods

¹ Bureau of Labor Statistics (BLS), Florida Economy at a Glance, Accessed on Jun. 27, 2022.

² Florida Trend, "COVID-19's Impact on Florida's Manufacturing Sector," Apr. 27, 2020.

³ Florida Department of Economic Opportunity, Bureau of Workforce Statistics and Economic Research (WSER), Quarterly Census of Employment and Wages (QCEW) Program. Note: Values were obtained by averaging wages across each quarterly report in 2021.

¹ FloridaMakes, Manufacturing Ecosystem: Data & Statistics – Manufacts, Accessed on Jun. 27, 2022.

² Florida Department of Economic Opportunity, Florida April Employment and Unemployment Release, May 20, 2022.

produces \$3.60 across all other sectors.⁶ As discussed in last month's Florida TaxWatch economic commentary, among other benefits, manufacturing forms the basis for Florida's international trade, which totaled \$55.6 billion in exports in 2021.⁷

A SPOTLIGHT ON PRODUCTIVITY

"When it comes to the overall competitiveness of Florida's manufacturing economy, both nationally and internationally, productivity is the measure that captures the value of the goods our workforce produces, and is also a key indicator of the quality and skill of that workforce. High value products—from a highly skilled workforce—employing advanced technologies."

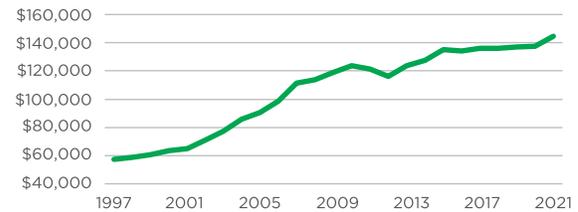
— KEVIN CARR, CHIEF EXECUTIVE OFFICER, FLORIDAMAKES

Accounting for all the production and value-added to Florida's economy, manufacturing contributed \$56.1 billion in direct economic output in 2021 after adjusting for inflation.⁸ Of this total, durable goods (e.g., electronics, vehicles, furniture) constituted 64 percent and nondurable goods (e.g., food, apparel, chemicals) accounted for 36 percent of statewide output. Florida's manufacturing sector was directly responsible for 5.6 percent of the state's total economic output in 2021.⁹

More important than just the economic output of a given sector—in this case, manufacturing—productivity growth is a powerful indicator for long-term economic prosperity and competitiveness. Productivity refers to the amount of output per worker, and a highly productive manufacturing sector can more efficiently produce valuable goods to meet rising demand. Robust productivity growth is key to a higher standard of living, translating into business return on investment, higher wages, consumer well-being, and steady government revenue.

In 2000, each manufacturing worker in Florida accounted for \$63,503 in economic output after adjusting for inflation but, by 2021, each manufacturing worker generated \$144,481 in output (See Figure 2).¹⁰ Following the Great Recession slowdown, Florida's productivity growth in manufacturing grew by an exceptional 17 percent between 2010 and 2021.¹¹ Significant productivity gains are reflective of major progress in the state's ability to develop advanced manufacturing over the past decade.

FIGURE 2. FLORIDA'S MANUFACTURING PRODUCTIVITY HAS GROWN BY 27 PERCENT SINCE THE GREAT RECESSION AND 128 PERCENT SINCE THE TURN OF THE CENTURY
MANUFACTURING OUTPUT PER WORKER IN FLORIDA
(ADJUSTED FOR INFLATION)



Source: U.S. Bureau of Labor Statistics (BLS); U.S. Bureau of Economic Analysis (BEA)

Manufacturing productivity growth has been impressive in historical context, yet when compared to the national average and other heavy industrial states, the state lags. The national average for manufacturing productivity (output per worker) was \$188,879 in 2021.¹² If Florida's manufacturing sector had the same level of output per employee as the national average, the sector would have been \$17.2 billion larger in 2021. This gap suggests the state is missing out on considerable economic gains.¹³

Achieving a higher, nationally-leading productivity rate is imperative for the state of Florida to propel even larger economic output through manufacturing. Capitalizing on productivity growth can also help the state develop a competitive advantage over other states and attract relocating manufacturers who often pay close attention to productivity potential in a given area.

BUILDING ON FLORIDA'S PROGRESS

Building Florida's future success will undoubtedly require a collaborative approach involving government, the business community, and education partners. Beyond just physical capital (e.g., machines), developing human capital must be prioritized for a well-equipped talent pipeline capable of meeting future technological needs. Furthermore, reauthorizing performance-based programs in targeted industries can aid in the state's diversification, resilience, and ability to recruit advanced manufacturers.¹⁴

WORKFORCE EDUCATION AND THE TALENT PIPELINE

Ensuring Florida's manufacturers can hire workers with the requisite skills needed to excel is essential for the sector's economic trajectory. Whether through upskilling, reskilling, apprenticeships, or other career and technical training, a well-educated workforce can boost the state's manufacturing productivity growth—a core goal as discussed earlier.

⁶ FloridaMakes, Manufacturing Ecosystem: Data & Statistics – Manufacts, Accessed on Jun. 27, 2022.

⁷ Florida TaxWatch, International Trade as a Catalyst for Florida's Economy, May 2022.

⁸ U.S. Bureau of Economic Analysis (BEA), GDP by State: Florida, Accessed on Jun. 27, 2022. Table SAGDP9N_FL_1997_2021

⁹ U.S. Bureau of Economic Analysis (BEA), GDP by State: Florida, Accessed on Jun. 27, 2022. Table SAGDP9N_FL_1997_2021.

¹⁰ To calculate productivity growth, Florida TaxWatch gathered manufacturing economic output data from the U.S. Bureau of Economic Analysis (BEA) and employment data from the U.S. Bureau of Labor Statistics (BLS). Productivity = Output / Employment. Note: Annual averages were used for calculations.

¹¹ In 2010, Florida's manufacturing productivity (output per worker) was \$123,753 and in 2021, productivity stood at \$144,481.

¹² To find the national productivity, Florida TaxWatch divided the national, inflation-adjusted gross domestic product (GDP) for manufacturing in 2021—\$2.3 trillion—by the national employment in 2021—12,347,000.

¹³ The difference between national output per worker (\$188,879) and Florida output per worker (\$144,481) rounds to \$44,398. When multiplied by the number of manufacturing employees in Florida (388,083), the output gap is \$17.2 billion in 2021.

¹⁴ Florida TaxWatch, Manufacturing a Transformational Shift: Expanding Florida's Workforce Development Through Sector Strategies – A Summary of the 2021 MakeMore Manufacturing Summit, Feb. 2022.

FloridaMakes' Industrial Manufacturing Technician (IMT) apprenticeship program is a prime example of an initiative that advances both career advancement and employee retention. The competency-based program includes 200 hours of online curriculum and 2,000 hours of on-the-job training, offering apprentices great flexibility while learning.¹⁵ Training grants offered through CareerSource Florida are another tremendous resource available for manufacturers to develop talent. These state-level training grants reimburse businesses for employee training in technical, foundational, or business-specific skills. More than 2,800 businesses and 190,000 employees have benefited from these grant programs so far.¹⁶

Tapping into underutilized adult talent pools and attracting the next generation of manufacturers in K-12 settings must be part of any comprehensive workforce development strategy. Veterans, Floridians with disabilities, and eligible inmates are all population groups that can supply manufacturers with a steady stream of workers. For younger students, encouraging local manufacturing companies to engage with the local school system and construct pathways can engender interest while also tailoring the training to meet local needs.¹⁷ Increased engagement between local manufacturers and schools can also help to dismantle any negative perceptions or stigmas surrounding manufacturing careers.

THE QUALIFIED TARGET INDUSTRY (QTI) PROGRAM

Alongside efforts to bolster the state's talent pipeline, the state of Florida should also support smart economic development tools with a proven track record of return on investment (ROI). One such program—the QTI Tax Refund—has been shown to provide a “robust and stable” ROI over time. During the latest review cycle in 2020, the program had an ROI of 5.3, suggesting that for every dollar the state invested (through tax refunds), the state received \$5.30 back in tax revenue.¹⁸

The QTI program's impressive ROI can be explained in part to its focus on high-value industries and performance-based design—the program only refunded some taxes to a business after meeting the contracted requirement, oftentimes the promised increase in high-wage jobs. Qualified targeted industries include aviation and aerospace, life sciences, clean technology, and defense and homeland security.

Despite having the largest ROI of any statewide economic development program, the QTI expired in 2020. The state of Florida is now at a competitive disadvantage with other states like Texas and Georgia when competing for businesses. As such, Florida should reestablish the QTI program to support

its long-term economic development goals and regain its competitive footing.¹⁹

TECHNOLOGICAL ACCELERATION AND ADOPTION

New technologies are constantly revolutionizing the ways manufacturers do business, and a new era known as “Industry 4.0” is powering interconnectivity, machine learning, real-time data, automation, artificial intelligence, and other smart manufacturing methods. Industry 4.0 technologies can foster innovation while improving operational efficiency, providing a spark for sizeable productivity gains in Florida.²⁰

For Florida's manufacturing sector, rapid technological adoption must be considered alongside talent development. On one end, digital technology can be instrumental in attracting younger workers who may be accustomed to certain technologies (e.g., smart devices); however, advanced technologies may be beyond the scope of some entry-level skills and require a higher level of training. For this reason, the state of Florida should prioritize incorporating Industry 4.0 technologies in K-12 and career and technical settings. When modernized workforce technologies are available in schools, students are more prepared to develop the necessary skills for future manufacturing.

LOOKING AHEAD

Advancements in new technology, an emphasis on workforce education, and a favorable business climate will all be conducive to future growth for Florida's manufacturing sector. Economic projections are favorable: between 2021 and 2029, employment in the sector is expected to grow by 37,000 jobs, or around 10 percent.²¹ Prior Florida TaxWatch research on the 2021 MakeMore Manufacturing Summit details sector strategies to spur manufacturing job growth and elevate the sector's competitiveness going forward.²²

A looming factor ahead will be ongoing developments in international trade and global supply chains. Last month's Florida TaxWatch economic commentary on international trade underlines how manufacturing can serve a decisive role in reinforcing Florida's trade over the long-term.²³ Although Florida's manufacturing sector has experienced considerable progress in recent years, there is much room to grow, especially in the area of productivity growth. Yet with steady leadership and smart investments, Florida can continue strengthening as an economic powerhouse in a post-pandemic world, built on manufacturing.

15 FloridaMakes, Bridging the Skills Gap: Training Florida's Future Manufacturing Workforce, Accessed on Jun. 28, 2022.

16 CareerSource Florida, Business Services: Train and Retain Grants, Accessed on Jun. 28, 2022.

17 Florida TaxWatch, Manufacturing a Transformational Shift: Expanding Florida's Workforce Development Through Sector Strategies – A Summary of the 2021 MakeMore Manufacturing Summit, Feb. 2022.

18 Florida Legislature Office of Economic & Demographic Research (EDR), Economic Evaluation for Select State Economic Development Incentive Programs, Jan. 2020.

19 Florida TaxWatch, 2022 Legislature Should Reauthorize the Qualified Target Industry (QTI) Tax Refund Program, Sept. 2021.

20 Florida TaxWatch, Manufacturing a Transformational Shift: Expanding Florida's Workforce Development Through Sector Strategies – A Summary of the 2021 MakeMore Manufacturing Summit, Feb. 2022.

21 Florida Department of Economic Opportunity (DEO), Employment Projections Data: 2021 – 2029 Statewide Projections, Accessed on Jun. 28, 2022.

22 Florida TaxWatch, Manufacturing a Transformational Shift: Expanding Florida's Workforce Development Through Sector Strategies – A Summary of the 2021 MakeMore Manufacturing Summit, Feb. 2022.

23 Florida TaxWatch, International Trade as a Catalyst for Florida's Economy, May 2022.



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Florida TaxWatch
106 N. Bronough St.
Tallahassee, FL 32301

o: 850.222.5052
f: 850.222.7476

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Primary Author – **Jonathan Guarine, MS**, Research Economist

Tony Carvajal, Executive Vice President

Chris Barry, Vice President of Communications & External Affairs

Senator George S. LeMieux, Chairman of the Board of Trustees

Dominic M. Calabro, President and CEO, Publisher & Editor

Florida TaxWatch Research Institute, Inc.

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