

6-6-2024

Looking Back and Beyond: The Economic Impact of NASA Glenn

Jack Yochum

Cleveland State University, j.yochum@csuohio.edu

Georgina Figueroa

Cleveland State University, g.figueroa@csuohio.edu

Follow this and additional works at: https://engagedscholarship.csuohio.edu/urban_facpub



Part of the [Urban Studies and Planning Commons](#)

[How does access to this work benefit you? Let us know!](#)

Repository Citation

Yochum, Jack and Figueroa, Georgina, "Looking Back and Beyond: The Economic Impact of NASA Glenn" (2024). *All Maxine Goodman Levin School of Urban Affairs Publications*. 0 1 2 3 1855.

https://engagedscholarship.csuohio.edu/urban_facpub/1855

This Presentation is brought to you for free and open access by the Maxine Goodman Levin School of Urban Affairs at EngagedScholarship@CSU. It has been accepted for inclusion in All Maxine Goodman Levin School of Urban Affairs Publications by an authorized administrator of EngagedScholarship@CSU. For more information, please contact library.es@csuohio.edu.

CLEVELAND STATE UNIVERSITY

Center for Economic Development

EDA University Center

LOOKING BACK AND BEYOND: THE ECONOMIC
IMPACT OF NASA GLENN

June 6, 2024

Jack Yochum

Georgina Figueroa



Levin.

CENTER FOR ECONOMIC DEVELOPMENT

CARLOS JAVIER
PHOTO

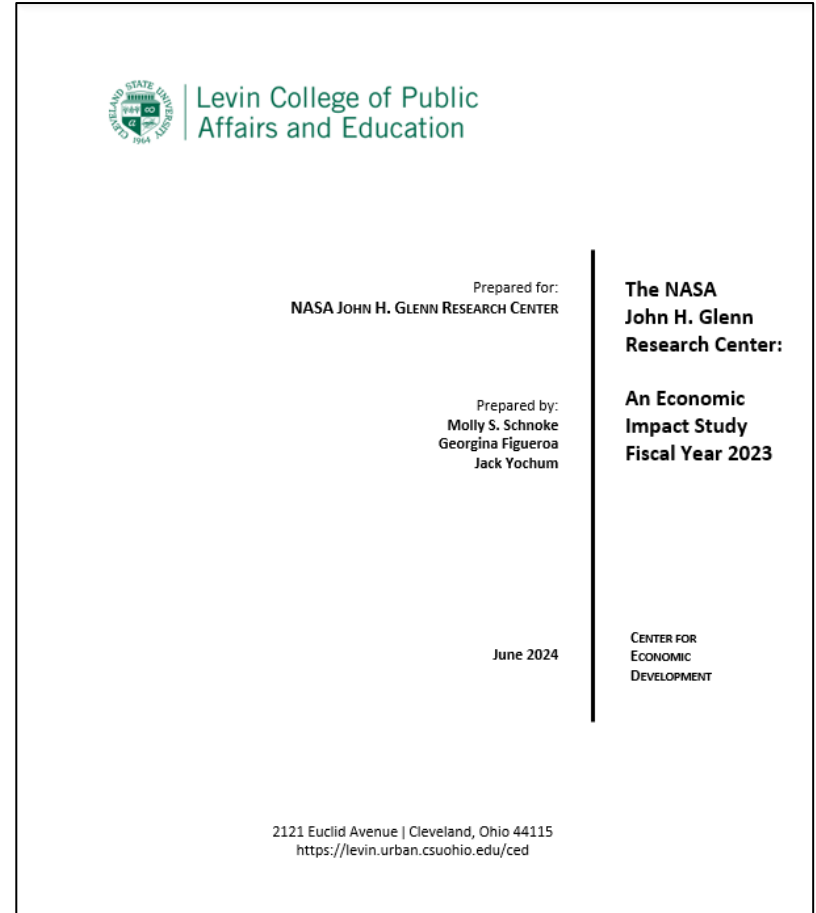
THE NASA JOHN H. GLENN RESEARCH CENTER

- Formed in 1941 with a \$5.21 billion investment.
- Two locations:
 - Lewis Field (next to Cleveland Hopkins International Airport)
 - Armstrong Test Facility (Sandusky, Ohio).
- Performs research, engineering development, and testing to advance aviation, enable exploration of the universe, and improve life on Earth.



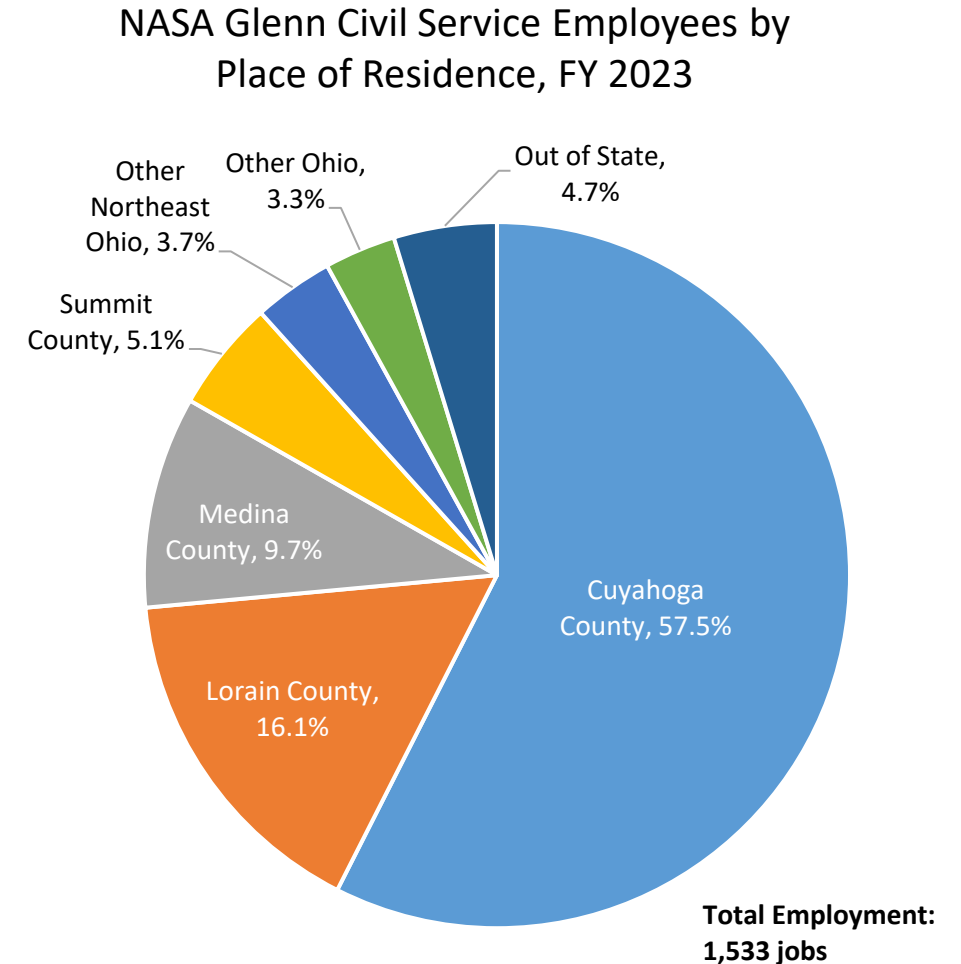
Project History

- Began in 2005 with an evaluation of the FY 2004 Economic Impact, which also looked back to FY 1998
- Annual impact report covering expenditures, payroll, and taxes paid by NASA Glenn and its employees
- Deliverable is an annual report also published publicly on EngagedScholarship



NASA GLENN RESEARCH CENTER: AN OVERVIEW (FY 2023)

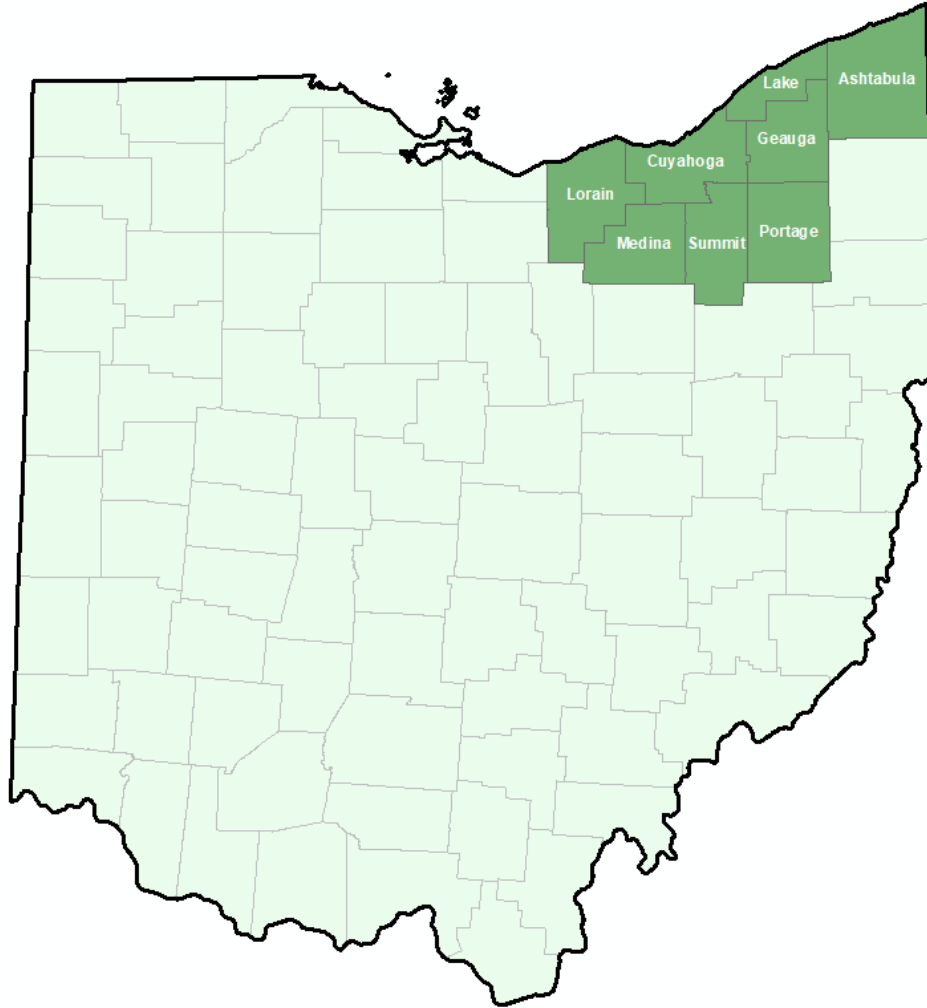
- Highly skilled labor force of 1,533 civil service employees + 1,743 local contractors.
- 73% of civil service employees are Scientists & Engineers.
- 57.5% reside in Cuyahoga County.
- Average wage per civil service employee was \$129,161.



Overview of Expenditures

- NASA Glenn expenditures reached all 50 states, the District of Columbia, and seventeen foreign countries.
- Ohio received the largest share (46.9%) of total expenditures, with \$378.2 million going to state vendors.
- Cuyahoga County received the largest share of ALL spending (42%).
- Funding to colleges and universities totaled nearly \$14.7 million in 34 states and Great Britain, with \$6.1 million (42%) going to Ohio institutions
- Total revenue reached \$1.04 billion.
- Income tax paid by NASA Glenn employees totaled \$34.4 million. \$9.8 million were paid to local and state governments.

ECONOMIC IMPACT METHODOLOGY



- Since this project's inception, the research team has looked at NEO and Ohio
 - NEO is not MSA, CSA, nor 18 County
- Beginning in 2019, the research team switched to MRIO to better quantify the impact on NEO
- Results are reported to NASA at 2-digit NAICS detail

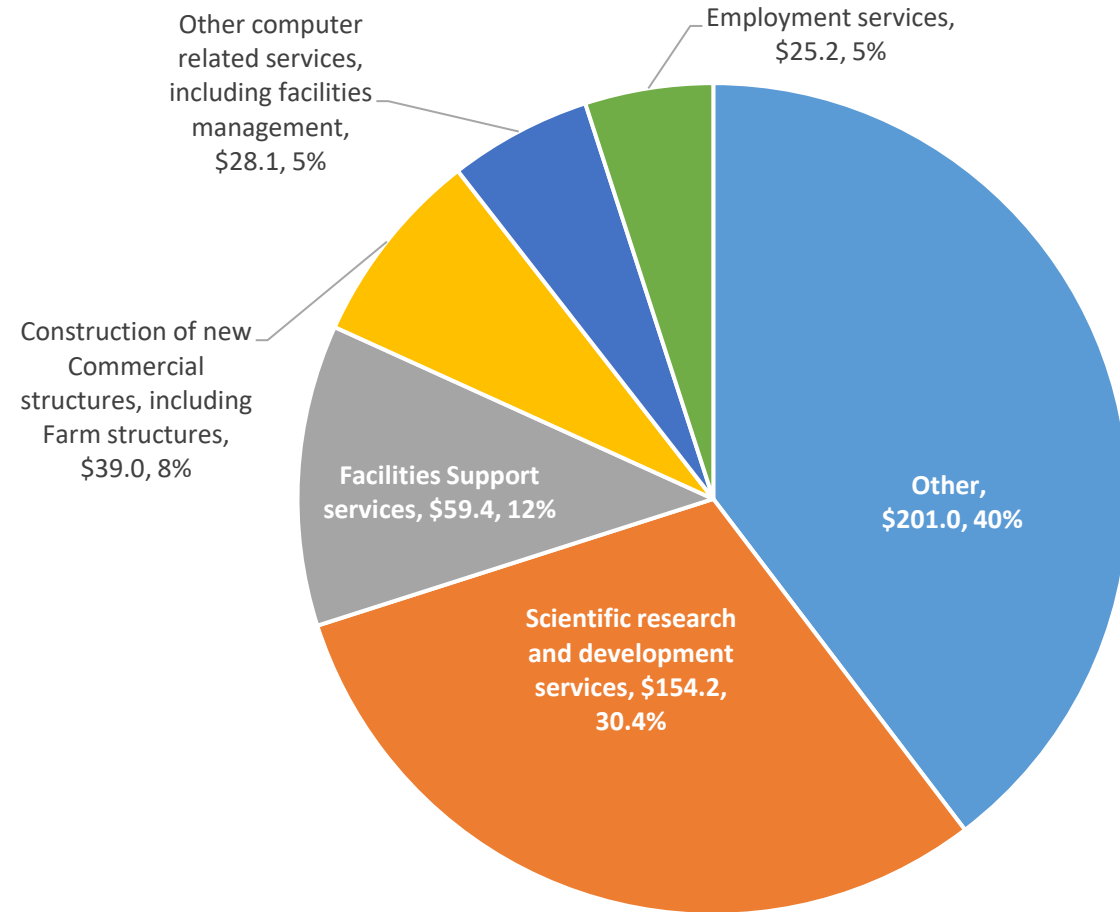
Economic Impact Overview

- FY 2023 expenditures totaled \$1.11 billion
 - Operations (excl Payroll): \$378.2 million (Ohio) and \$346.8 million (NEO)
 - Payroll: \$260.8 million (Ohio) and \$254.3 million (NEO)
 - Taxes: \$34.4 million
- Most significant industry investments include Scientific research and development (464), Facilities support services (471), Construction of New nonresidential structures (55), and Other computer related services (461), which make up 76% of NEO Operations and 77% of OH Operations

Economic Impact	Northeast Ohio	State of Ohio
Output	\$1,870.0 million	\$2,029.5 million
Value Added	\$1,149.2 million	\$1,229.5 million
Employment	8,334 jobs	8,958 jobs
Labor Income	\$795.8 million	\$842.0 million
Taxes	\$208.9 million	\$222.8 million

NASA Glenn-Driven Industries (NEO)

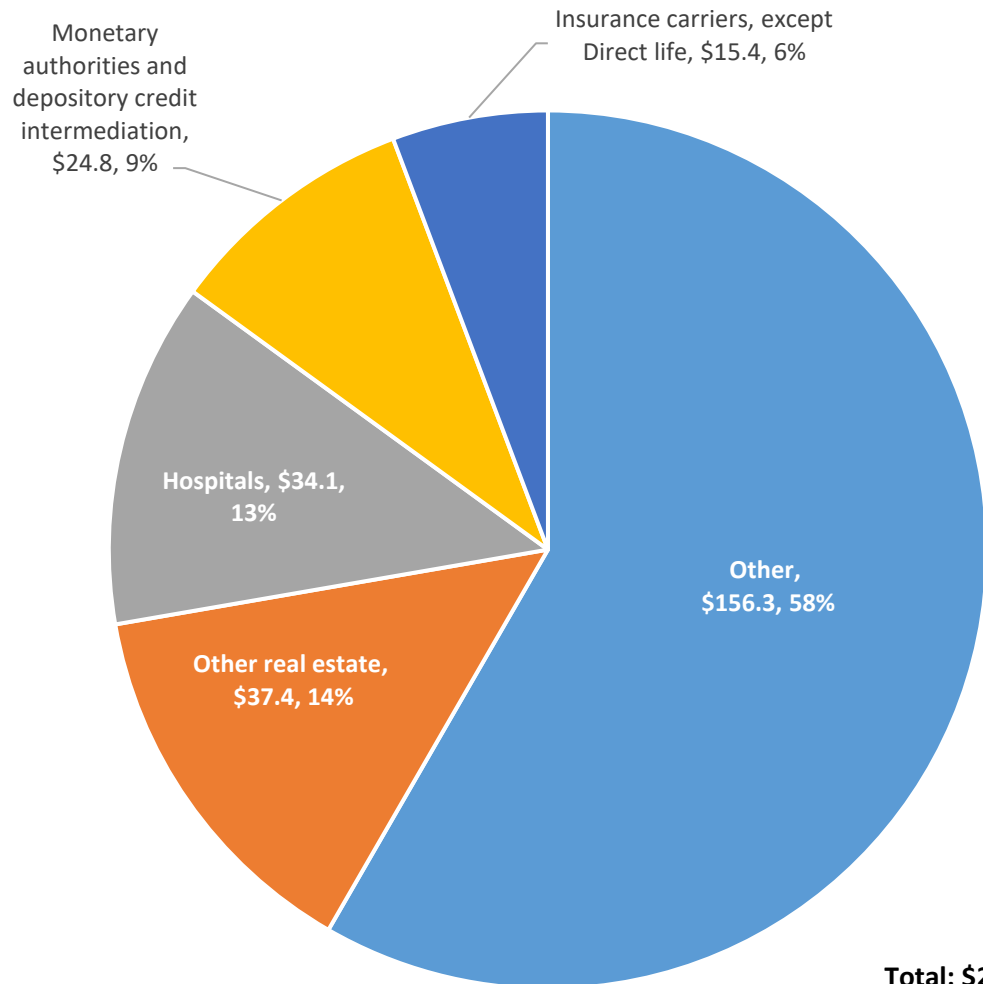
- NASA requests details on NASA-driven industries – 67 sectors that NASA Glenn’s activities directly influence
- The impact on these industries makes up \$506.9 million in NEO.
- 39% of NASA Glenn’s impact in the region comes from Glenn-driven industries.



Total: \$506.9 million

Consumer-Driven Industries (NEO)

- Consumer-driven industries – 66 sectors that benefit from household spending that results from NASA Glenn's activities.
- The impact on these industries makes up \$268 million in NEO.
- 20.6% of NASA Glenn's impact in the region comes from Consumer-driven industries.



Total: \$268.0 million

Historical Impacts



Levin.

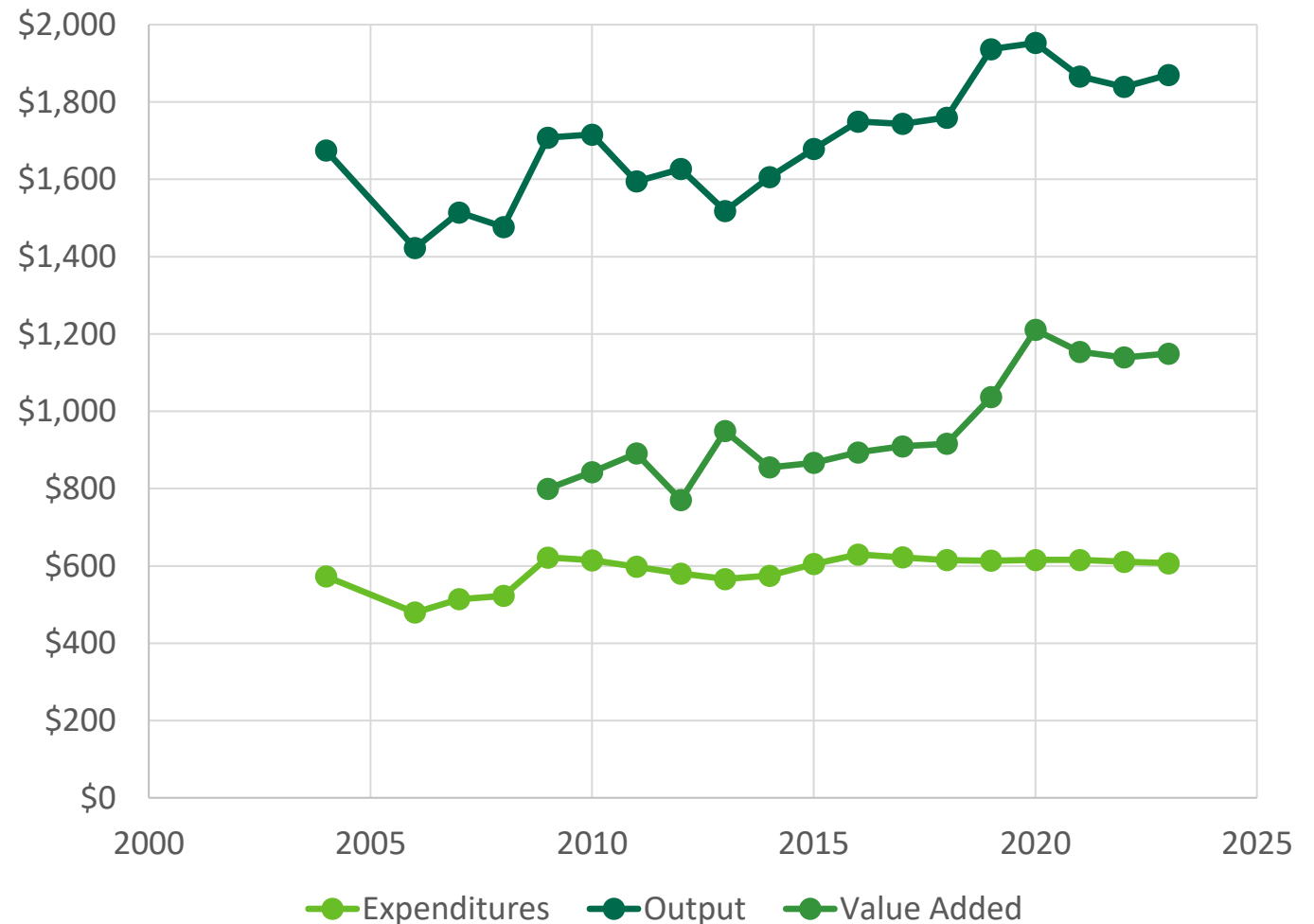
CENTER FOR ECONOMIC DEVELOPMENT

CARLOS JAVIER
PHOTOGRAPHY

Expenditures, Output, and Value Added

- Despite a steep drop in expenditures between FYs 2004 and 2006, the site's activity bounced back in FY 2009
- Large uptick in Output and Value Added coincides with the implementation of MRIO and also an uptick in funding overall
- Output peaked at just under \$2B in FY 2020

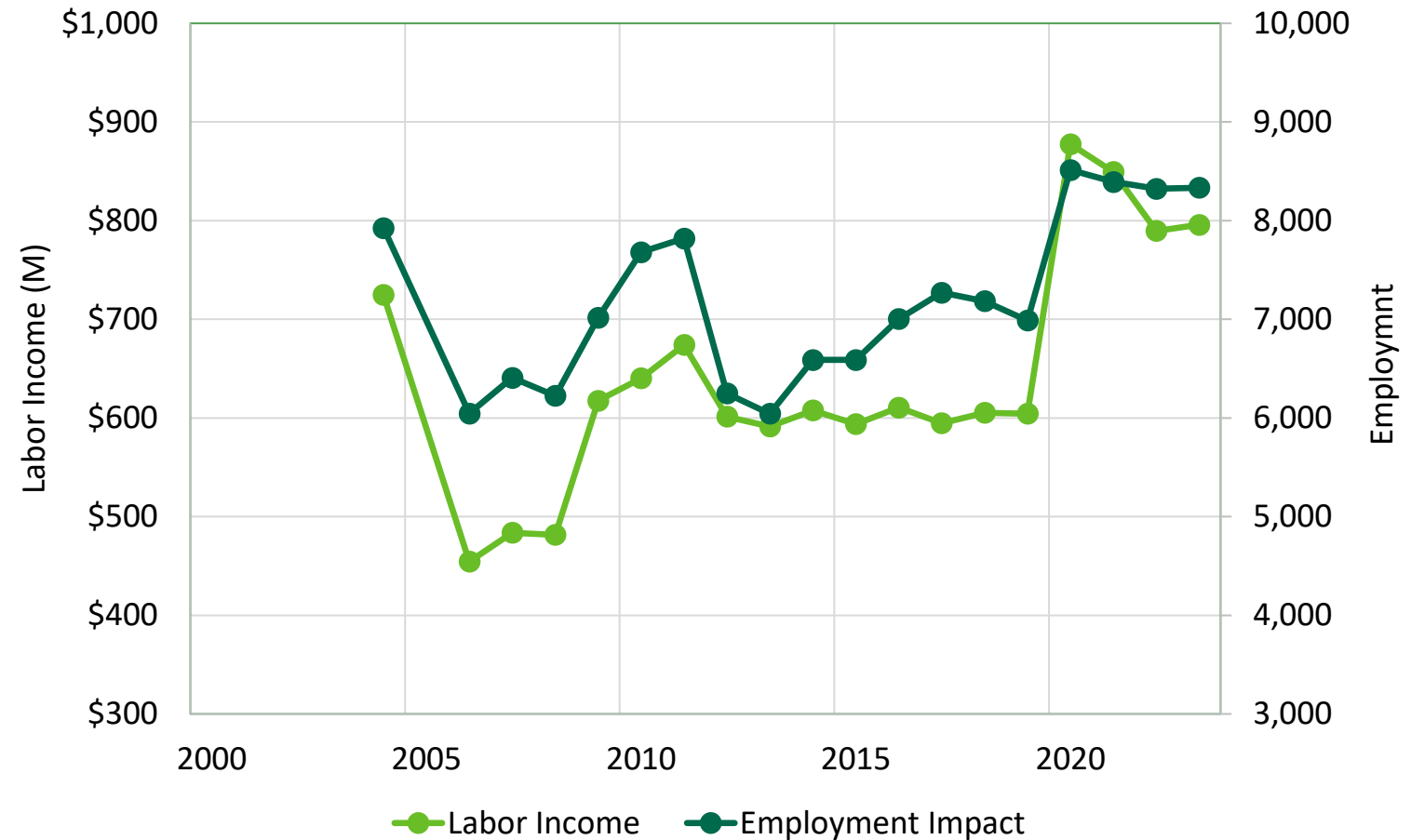
Expenditures, Output, and Value Added (NEO)



Employment and Labor Income

- NASA Glenn's economic activity contributes heavily to the region's employment and labor income in scientific, technical, and construction industries
- Largely follows the trends seen with expenditures and output, with the notable exception of 2021

Employment and Labor Income Impacts (NEO)



Discussion



NASA Glenn has been a steady yet significant presence for Ohio's economy



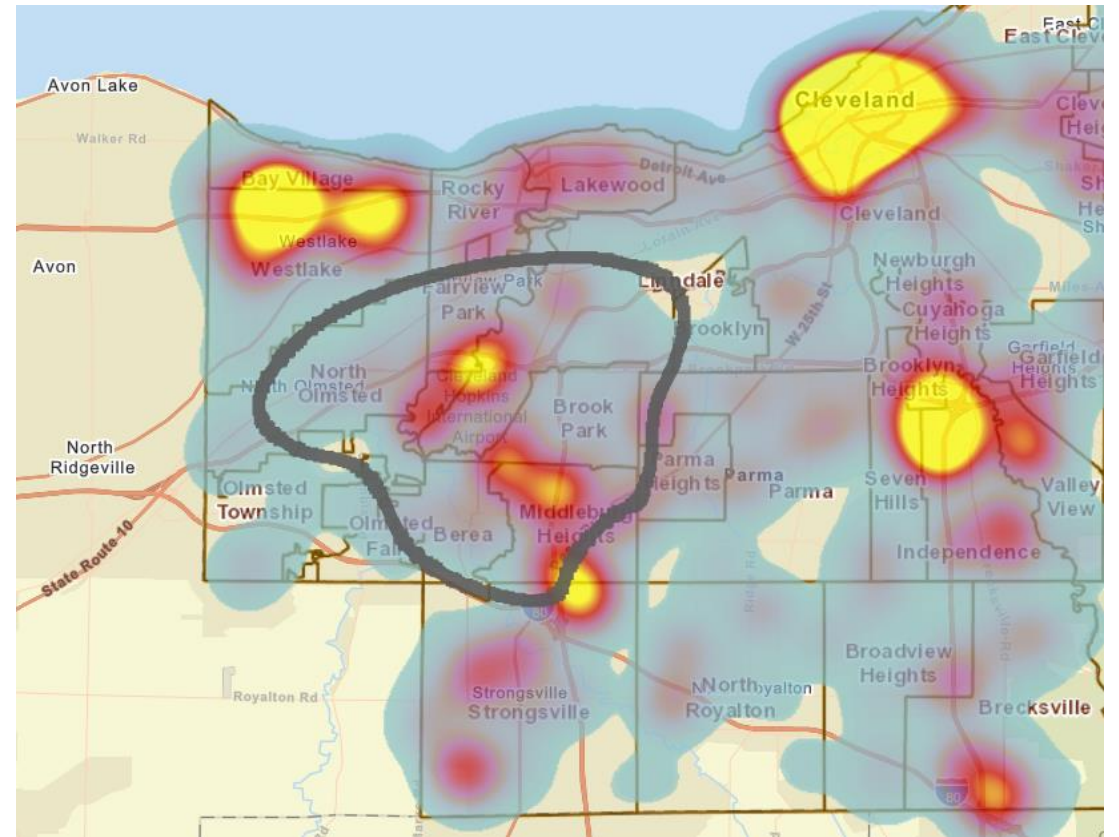
Importantly, it keeps talent local



Significant amounts of research supported at Universities statewide

Looking Forward – The Aerozone

- In May 2023, the Aerozone was announced as a combination Innovation District and “Aerotropolis”
- Anchors are NASA Glenn and Cleveland Hopkins International Airport
- Attempting to foster Live, Work, and Play to attract more workers and firms to the region



CLEVELAND STATE UNIVERSITY

CENTER FOR ECONOMIC DEVELOPMENT

EDA UNIVERSITY CENTER

Molly Schnoke

Director, Center for Economic Development

Maxine Goodman Levin School of Urban Affairs

Levin College of Urban Affairs and Education

m.s.schnoke@csuohio.edu

Center's Publications

bit.ly/CED_pubs

Visit us online

levin.urban.csuohio.edu/ced



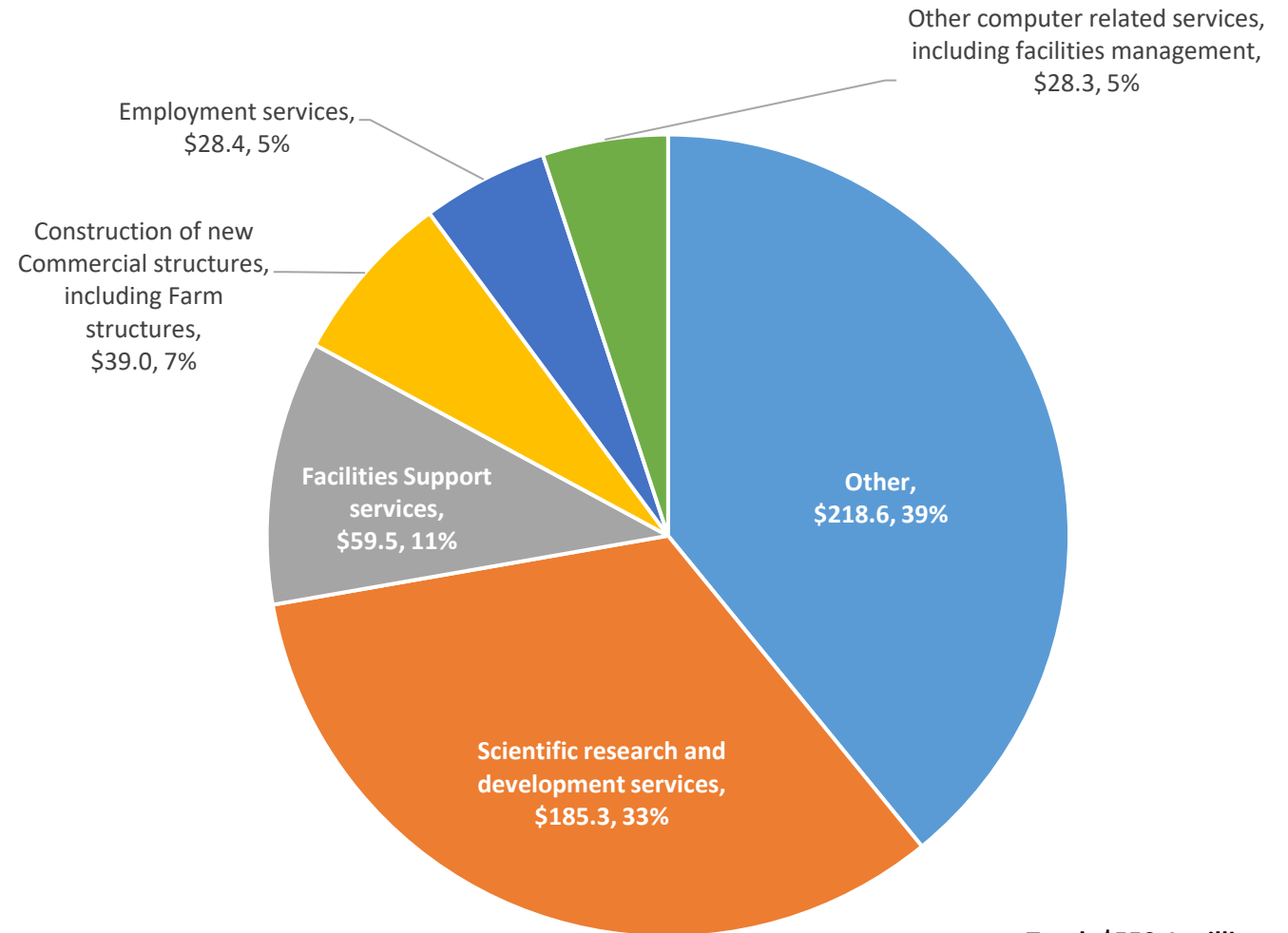
Levin.

CENTER FOR ECONOMIC DEVELOPMENT

CARLOS JAVIER
PHOTOGRAPHY

NASA Glenn-Driven Industries (OH)

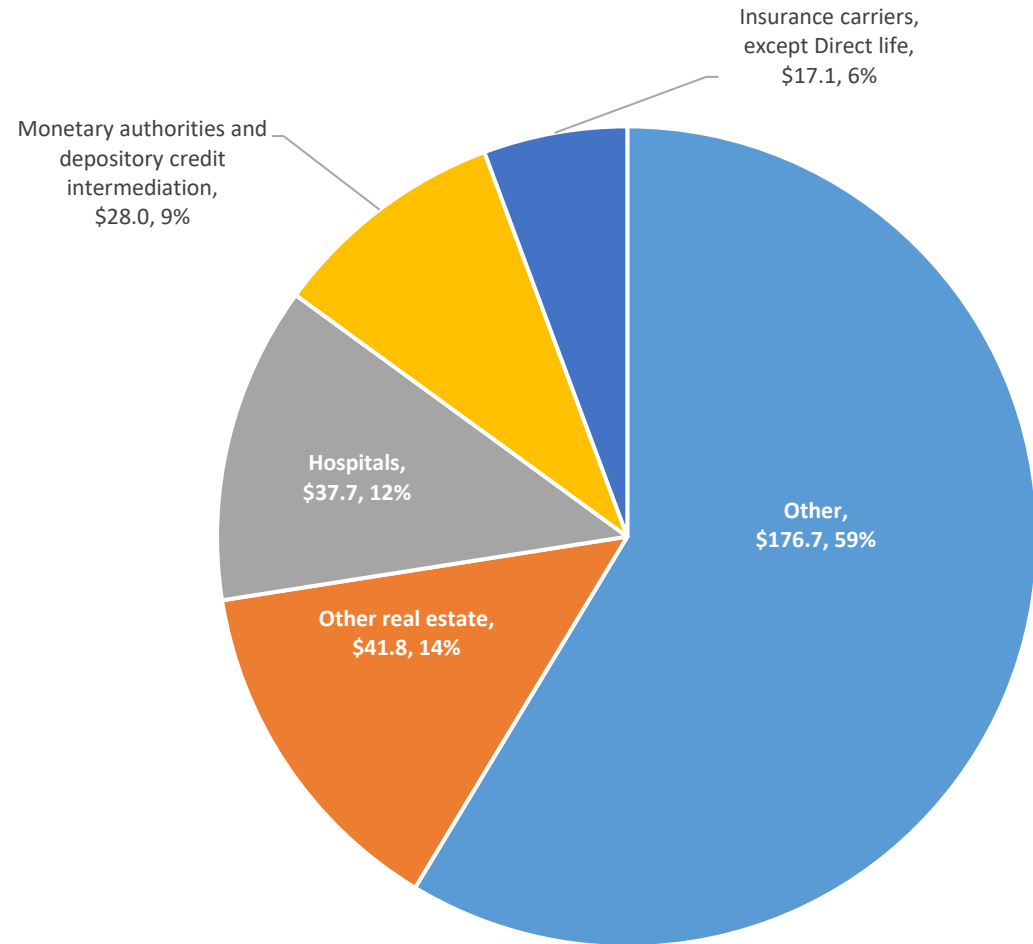
- NASA requests details on NASA-driven industries – 67 sectors that NASA Glenn's activities directly influence
- The impact on these industries makes up \$559.1 million in NEO.



Total: \$559.1 million

NASA Consumer-Driven Industries (OH)

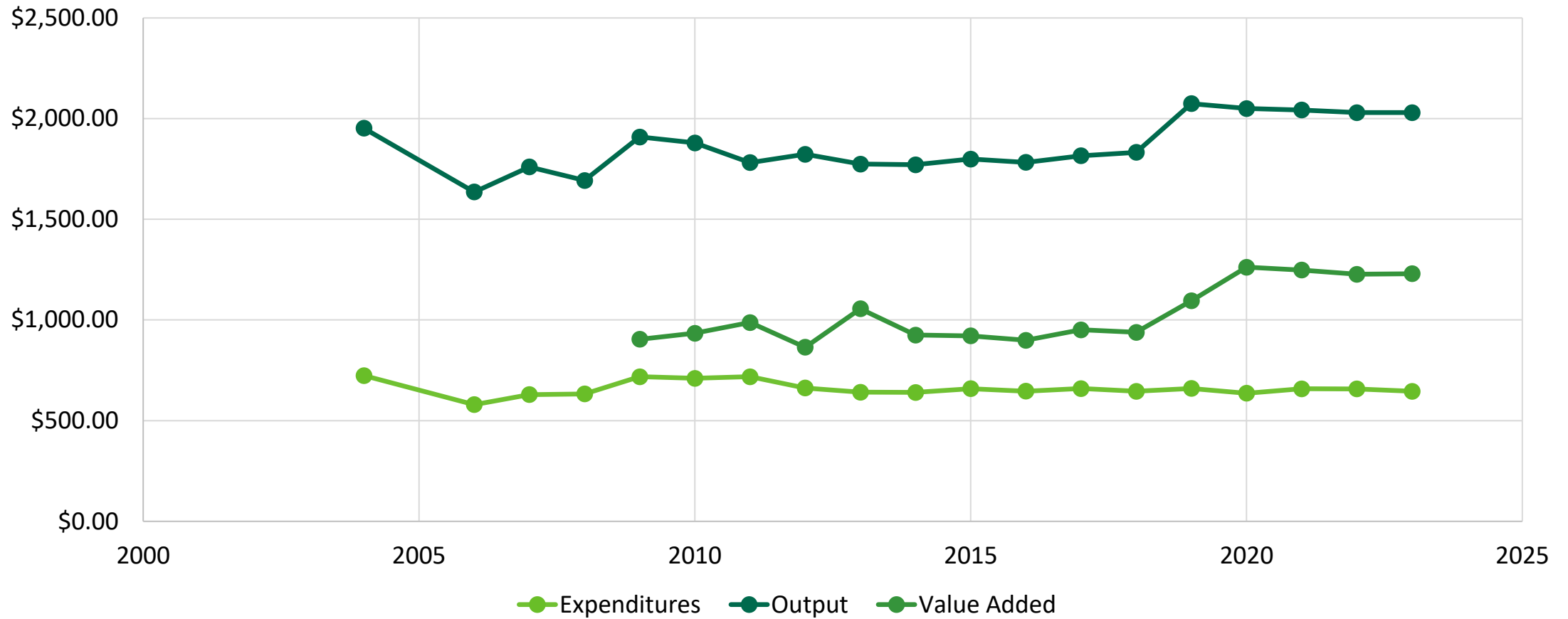
- Consumer-driven industries – 66 sectors that benefit from household spending that results from NASA Glenn’s activities.
- The impact on these industries makes up \$301.2 million in OH.



Total: \$301.2 million

Expenditures, Output, and Value Added

Expenditures, Output, and Value Added (OH)



Employment and Labor Income

Employment and Labor Income Impacts (OH)

