

EXAMINING THE MULTIPLIER EFFECT OF MANUFACTURING INVESTMENTS IN OHIO

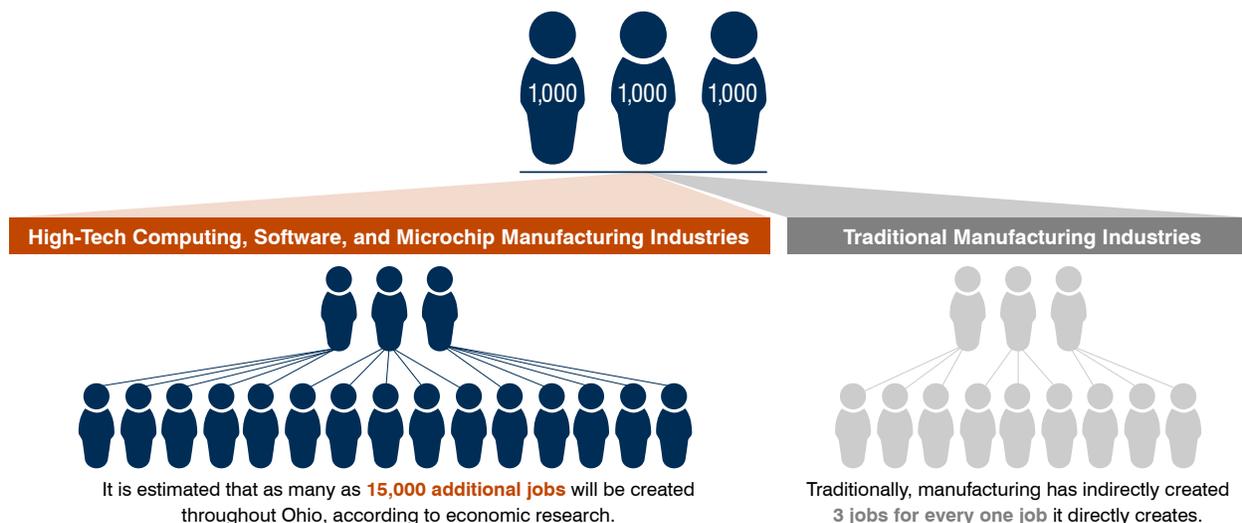
A mini-series examing the importance of Ohio's Intel project • March 2022

In its [initial phase](#), Intel's new \$20 billion microchip plant in central Ohio will directly create 3,000 new jobs, paying an average annual salary of [\\$135,000](#). As many as 15,000 additional Ohio jobs are estimated to be indirectly created by supplier companies and businesses supported by the economic activity of Intel employees.

The multiplier effect of large manufacturing investments has been proved through both academic research and Ohio's real-world experience with previous projects.

UNDERSTANDING THE HIGH-TECH JOB MULTIPLIER EFFECT

In the first phase of Intel's Ohio project, the company will directly create **3,000 jobs** at its new Licking County facility.



HIGH-TECH'S MULTIPLIER EFFECT:

University of California economist Enrico Moretti is considered a leader in analyzing the effects of high-tech manufacturing. His research regarding the economic impact of the computing, software, and microchip industries was documented in his book "[The New Geography of Jobs](#)" (Harper Business, 2012).

For every job these industries directly create, [five additional jobs](#) are indirectly established, according to Moretti. As an example, he cites Apple, whose 12,000 jobs at its Silicon Valley headquarters (2012 figures) supported more than 60,000 other jobs in the region on an ongoing basis.

"When a high-tech company hires one person, five other new jobs follow."

-Enrico Moretti, Economics professor, University of California, Berkeley

OHIO'S EXPERIENCE WITH ADVANCED MANUFACTURING MEGA-PROJECTS:

Ohio's experience with large (and advanced) manufacturing investments aligns with the findings of economic researchers. [Examples](#) include the following:

GE AVIATION — HAMILTON COUNTY: GE Aviation's production of airplane engines began in 1949 on the site of a former Wright Aeronautics plant. Over the decades, the plant has grown to approximately 10,000 employees who support 30,000 military and commercial aircraft engines worldwide. This Ohio facility continues to receive major investments from GE Aviation and recently completed \$500 million in upgrades. The company's [2017 analysis](#) of its overall statewide economic impact put its then-total direct employment in Ohio at 14,000 jobs and indirect employment at 37,000 jobs.

LIMA REFINERY — ALLEN COUNTY: Founded in 1886 by John Rockefeller's Standard Oil Co. after oil was discovered in northwest Ohio, the refinery is the [oldest continuously operating refinery](#) in Ohio. It has the capacity to refine around 175,000 barrels of oil a day into gasoline, jet fuel, and diesel – and it produces approximately [25% of Ohio's gasoline](#). While its 800 directly created jobs puts this facility on a different scale, its significance flows from the longevity of its economic benefits to Lima and the region. For 136 years, the refinery – with its numerous other petrochemical businesses located within the fence line – has served as a regional economic engine, drawing talent to the area while providing well-paying opportunities for generations of Ohioans.

HONDA OF AMERICA — UNION COUNTY: In [1979](#), Honda became the first Japanese automaker to locate vehicle manufacturing in the U.S. with 64 employees in Marysville assembling motorcycles. What started as a \$35 million investment has grown to a \$14 billion network of five plants employing approximately 15,000 associates. Taking into account Honda's 158 Ohio suppliers, as well as its other economic impacts, independent economic analysis [as far back as 2004](#) has calculated Honda's indirect job creation at approximately 40,000 statewide.



Husky Refinery — Allen County:

Founded in 1886 by John Rockefeller's Standard Oil Co. when oil was first discovered in northwest Ohio, this facility has gone through successive generations of ownership and investment. It is still going strong and **today employs more than 800 workers who turn 175,000 barrels of oil a day into gasoline, jet fuel and diesel.**



GE Aviation — Hamilton County:

GE's manufacture of airplane engines began in 1949 on the site of a former Wright Aeronautics plant. Over the years the plant has **grown to employ 10,000 people supporting 30,000 military and commercial aircraft engines in service worldwide.** It continues to receive major investments from GE and in recently years completed \$500 million in upgrades.



Honda of America — Union County:

In 1979, Honda became the first Japanese automaker to start vehicle manufacturing in the United States when it chose Ohio for its first venture. What began as a \$35 million investment employing 64 people making motorcycles has **grown to five plants, approximately 15,000 employees, and 158 Ohio suppliers that received \$37 billion in Honda orders over the past five years.**

THE BIG PICTURE:

The steady flow of manufacturing investments into Ohio ensures the Buckeye State will continue to be a global manufacturing leader with all the essential assets: workforce, infrastructure, and a pro-growth climate.

These ongoing investments are a key reason why manufacturing leads other Ohio private industry in economic contributions to the state. Ohio's annual manufacturing GDP has climbed from \$84 billion in 1997 to [more than \\$118 billion today](#).

The multiplier effect of the Intel project will further elevate and propel Ohio for decades to come, serving as a magnet for continued manufacturing investment.