



Wisconsin Leads The Way In Manufacturing

Nationally, the first Friday in October is annually observed as “National Manufacturing Day.” Wisconsin is well known for its robust manufacturing industry with products and brands that are internationally known and utilized – so it’s no surprise that in Wisconsin, the entire month of October has long been recognized as “Manufacturing Month.”

According to the Wisconsin Economic Development Corporation (WEDC), Wisconsin ranked 2nd in the nation for manufacturing job growth from 2016 to 2017. If states around the country want to create pro-growth policies that work for companies and hardworking families alike, lawmakers and state governments should study how Wisconsin stewarded an, “Open for Business” mentality as part of the agenda of Governor Walker and legislative leaders. These policies have helped to create a robust manufacturing state that not only keeps hard-working families in Wisconsin but also attracts great talent.

Wisconsin’s leaders, like Governor Scott Walker, know what it takes to grow an industry that has such strong roots and makes significant contributions to the state’s economy. As WEDC said in 2016,¹

“...Wisconsin has more than 9,300 manufacturers in the state that employ over 460,000 workers (16 percent of the state’s total employees) ... and these manufacturers produced over \$56 billion worth of output in 2016, accounting for 18 percent of the state’s gross domestic product...”¹

When Governor Scott Walker was elected in 2010, he wanted to make sure it was well known that “Wisconsin is Open for Business” and he worked with legislative leaders on providing tax credits to support job creation efforts and industry innovation, and encouraged the next generation to be ready for the jobs of today and tomorrow. Initiatives like these not only improve Wisconsin's economic climate, but help drive the economy forward in order to allow the state's businesses to expand -- and serve as a model for other states.

Wisconsin’s Strong Roots in Manufacturing

By 1900, America was known as “the world’s foremost industrial nation” and Wisconsin can trace many aspects of the growth of its skilled manufacturing industries to that time.² As explained by the Wisconsin Historical Society, key historical moments during the late 1800s that demonstrate Wisconsin’s manufacturing history include:

- “...Milwaukee built foundry, machinery, and metal-working businesses before the iron and steel industries were concentrated in Pittsburgh, Cleveland, and Chicago. Production of iron on a large scale began when the Milwaukee Iron Company opened its doors in Bay View in 1870. The plant produced iron rails for railroads--a seemingly inexhaustible industry as railroads expanded westward--that provided a base for an enlarged foundry and machinery industry in Milwaukee...”²
- “...Founded in 1861, the Allis Company (eventually Allis-Chalmers) constructed industrial machinery for manufacturers and would come to transform the flour-milling industry in the 1880s...By the late 1880s, the Allis Company was Milwaukee's largest industrial employer, building a world reputation as the center of heavy machinery for mines, power plants, and public utilities...”²
- “...Large-scale papermaking took root on the waterpower of the lower Fox River by the 1880s, after the migration of wheat to Minnesota and Iowa in the 1870s. The first wood pulp mill began operations in Appleton in 1871...”²
- “...Along Lake Superior and Lake Michigan, shipbuilding had been an important industry since the mid-nineteenth century and it expanded as industrial production techniques were applied in shipyards...”²

In 2019, Wisconsin not only recognizes its manufacturing roots but also celebrates the industry's importance to its current economy, the strength of its manufacturing companies, and the potential for industry growth in the state. Well-known brands that have operations based in Wisconsin include: Bemis Co., Brady Corp., Briggs & Stratton, Harley Davidson, Johnson Controls, Kimberly-Clark, Kohler Co., Menasha Corp., Mercury Marine, Oshkosh Corp., Plexus Corp., Quad Graphics, Rockwell Automation, S.C. Johnson, Schreiber Foods, Waupaca Foundry. ¹ WEDC also compiles several statistics on manufacturing in Wisconsin, such as:

- “...Wisconsin has more than 9,300 manufacturers in the state that employ over 460,000 workers (16 percent of the state's total employees) ... and these manufacturers produced over \$56 billion worth of output in 2016, accounting for 18 percent of the state's gross domestic product...”¹
- “Manufactured goods account for 86 percent of all Wisconsin exports, demonstrating a healthy worldwide demand for products and technologies originating in the state”³
- “58,046 [is the] annual wage for manufacturing employees in Wisconsin”³
- “There are more than 9,437 manufacturing establishments...”³
- There is an “88% greater employment concentration [in manufacturing] than [the] national average,” which makes Wisconsin the “2nd largest manufacturing concentration” in the nation³
- Wisconsin is “#2 in Midwest for manufacturing job growth from 2016 to 2017”³

It is with this strong background in manufacturing that Wisconsin's leaders have pursued legislative proposals that showcase “Wisconsin is Open for Business,” encourage manufacturing growth in Wisconsin, and develop Wisconsin's future workforce.

Wisconsin's Fabrication Laboratories Grant Program

In Wisconsin, a focus has been placed on preparing students for not only the jobs of today but also the jobs of tomorrow. Policies have supported the belief that “today’s students must have access to hands-on experience and training that allows them to put into practice concepts they have learned in science, technology, engineering, art and mathematics (STEAM) courses.”⁴

During Wisconsin’s 2015-17 Budget, \$500,000 was provided to WEDC in order to create the Fabrication Laboratories Grant Program.⁵ This grant was established for:

“...eligible recipients for purchases of equipment used in fabrication laboratories for instructional and educational purposes by grade school, junior high school, and high school students. Specify that a fabrication laboratory is a medium-scale, high-technology workshop equipped with computer-controlled additive and subtractive manufacturing components, including three-dimensional printers, laser engravers, computer numerical control routers, and plasma cutters...”⁵

In May of 2016, the first recipients of this grant program were announced with 25 school districts that were able to receive awards up to \$25,000.⁶ Within this announcement, Governor Scott Walker highlighted the importance of this grant program,

“Guaranteeing our students have the skills necessary to compete in our rapidly growing, technology-driven world is critical to our economy...Fab Labs provide hands-on learning to the next generation of workers to provide our students with the skills they need to obtain good-paying jobs. This ensures everyone who wants a job in Wisconsin can find a job.”⁶

Since the initial grant recipients were first announced in 2016, the last two governors have announced approximately \$500,000 to more than 20 school districts, each year, in 2017,⁷ 2018,⁸ and 2019⁹ “to establish or expand local fabrication laboratory (Fab Lab) facilities.”⁷ A map of all grant recipients from 2016-19 is available [here](#).

Wisconsin’s Fab Lab program is just one effort that the state has pursued in order to prepare students for the jobs of today and tomorrow, including careers within the manufacturing industry. As noted by WEDC, “Wisconsin's education programs and support have helped fuel our workforce talent” and there are “100+ UW manufacturing programs [that] achieved Center of Excellence status.”³

Last year, in recognition of celebrating October as “Manufacturing Month,” Wisconsin’s Department of Public Instruction joined the effort because as noted by the agency,

“...We recognize that manufacturing can empower a student to define their own success through the multitude of opportunities available. It is a career that requires skill, thought, and creativity. Manufacturing offers a wide range of

career paths for a student to pursue - like sales, working the assembly line, carpentry, computer programming, or engineering. A career in manufacturing means more than a life filled with hard labor and little growth...”¹⁰

Wisconsin’s Business Tax Credits

When Governor Walker took office in 2010, there was a focus to “...tell the world that Wisconsin is open for business [and] [u]pon taking office, he moved immediately to support Wisconsin's economy...”¹¹ It is through Governor Walker and the Wisconsin State Legislature’s leadership that Wisconsin saw positive economic impacts that supported Wisconsin’s job-creating businesses including the manufacturing industry. As noted by the Department of Workforce Development’s Secretary Ray Allen in 2018, “Wisconsin's manufacturing sector continues to drive the Wisconsin comeback, with the addition of 15,100 jobs over the past year ranking 2nd nationally.”¹²

In Wisconsin, there are a number of business tax credits that help reduce the tax burden for businesses including the Manufacturing and Agriculture Credit and Research Tax Credit.

Manufacturing and Agriculture Credit

In the 2011-13 Budget, Wisconsin legislators created the concept that would become known as the Manufacturing and Agriculture Credit.¹³ As explained by the Department of Revenue (DOR), this credit “...is available to claimants that derive qualified production activities income from property located in Wisconsin that is assessed as either manufacturing or agricultural...”¹⁴

In 2017, the Center for Research on the Wisconsin Economy at the University of Wisconsin-Madison released a report called, “The Impact of the Manufacturing and Agriculture Credit in Wisconsin.”¹⁵ This report notes that “[b]y focusing on the local labor markets on either side of the Wisconsin border, I estimate that the Manufacturing and Agriculture Credit had a significant impact on manufacturing and total employment in the state.”¹⁶ Highlights of this report include:

- “...After accounting for time and group effects, I find that since 2013 manufacturing employment has grown on average 1.9 percentage points (at an annual rate) faster in Wisconsin relative to counties just across the border.”¹⁵
- “Quantitatively, I find that every 1 percentage point cut in the effective manufacturing tax rate was associated with a nearly 0.9 percentage point increase in the manufacturing employment growth rate.”¹⁵
- “I also find significant spill-overs to the broader economy.”¹⁵
 - “Non-manufacturing employment has grown on average 0.7 percentage points per year faster on the Wisconsin side of the border since 2013, with each percentage point cut in the manufacturing tax rate associated with a 0.4 percentage point

increase in non-manufacturing employment growth with a one year lag.”¹⁵

- “I estimate that the cumulative impact of the MAC was that by September 2016 manufacturing employment in Wisconsin border counties was 6.6% higher and total employment 2.5% higher than they would have been in the absence of the tax credit.”¹⁵
- “Applying these border-county estimates to the whole state suggests that since its introduction the MAC accounted for a total gain of over 20,000 manufacturing jobs (a 4.6% increase) and over 42,000 total jobs (a 1.8% increase) in Wisconsin...”¹⁵

Research Tax Credit

In Wisconsin, research tax credits have been available to businesses for several decades.¹⁷ There are two kinds of research credits: Nonrefundable Research Credit and Refundable Research Credit.¹⁸ As explained by DOR,¹⁹ the research credit for increasing research is:

“...The credit for taxable years beginning in 2015 is equal to 5.75 percent of the amount by which the claimant's qualified research expenses for the taxable year exceed 50 percent of the average qualified research expenses for the 3 taxable years immediately preceding the taxable year for which the claimant claims the credit. If the claimant had no qualified research expenses in any of the 3 taxable years immediately preceding the taxable year for which the claimant claims the credit, the claimant may claim an amount equal to 2.875 percent of the qualified research expenses for the taxable year for which the credit is claimed...”¹⁹

For several years, the State’s Chamber of Commerce, Wisconsin Manufacturers & Commerce (WMC), has advocated for “[r]evitalizing the R&D credit,” which would be accomplished by “[e]nsur[ing] the state R&D tax credit is useful to companies that make significant research investments in Wisconsin by allowing currently unusable credits to become refundable.”¹⁷

Recently, the Legislative Fiscal Bureau provided the following discussion point on the Refundable Research Tax Credit,

“...Tax credits for qualified research are intended to incent the private sector to increase R&D investments by lowering the after-tax cost of R&D. This is meant to correct for the market's failure to reward firms for the spillover effects that would result from their increased investment. Further, compared to other states, the state research credit may induce researchers to conduct their activities in Wisconsin instead of another location...”²⁰

Along those lines, WMC notes that,

“...When companies decide where to invest in this expensive technology and skilled employees, they look at the total cost of the investment including incentives. Thirty-six states have a R&D credit. Wisconsin will lose out to other state for without an effective credit that sets it apart. Twelve states either have refundable R&D credits or allow excess non-refundable credits to offset another tax liability. To capture and maintain large research investments, Wisconsin should join the ranks of those states which offer a benefit above and beyond what most states do...”¹⁷

Conclusion

During October, it is important to reflect on the historical and current importance of manufacturing to Wisconsin’s economy. Wisconsin’s leaders have talked about their belief that preparing people for the jobs of today and tomorrow starts within our K-12 system and “fab labs” are just one statewide initiative that is making a difference towards that goal. However, it is also important to recognize state policies that can have an impact on a state’s major industries such as manufacturing. Proposals such as Wisconsin’s Manufacturing and Agriculture Credit and efforts to make R&D credits more effective intend to help strengthen industries that mean so much to employers, employees, and the economy overall.

¹ https://inwisconsin.com/wp-content/uploads/2017/10/TMH_Manufacturing_Profile_2017.pdf

² https://www.wisconsinhistory.org/turningpoints/tp-044/?action=more_essay

³ https://inwisconsin.com/rankings/?fwp_rankings_categories=manufacturing%2Cindustries

⁴ <https://wedc.org/wp-content/uploads/2018/01/2018-Fab-Labs-Program.pdf>

5

http://docs.legis.wisconsin.gov/misc/lfb/budget/2015_17_biennial_budget/101_comparative_summary_of_provisions_act_55_september_2015

⁶ <https://inwisconsin.com/blog/25-school-districts-selected-for-fab-labs-equipment-funding/>

⁷ <https://inwisconsin.com/blog/21-wisconsin-school-districts-awarded-fab-lab-grants/>

⁸ <https://inwisconsin.com/blog/22-wisconsin-school-districts-awarded-fab-lab-grants/>

⁹ <https://wedc.org/blog/20-wisconsin-school-districts-awarded-fab-labs-grants/>

¹⁰ <https://dpi.wi.gov/te/manufacturing-month>

¹¹ <https://doa.wi.gov/budget/SBO/2011-13%20Budget%20in%20Brief.pdf>

¹² https://dwd.wisconsin.gov/dwd/newsreleases/2018/180615_bls_data.htm

13

http://docs.legis.wisconsin.gov/misc/lfb/budget/2011_13_biennial_budget/100_comparative_summary_of_budget_recommendations_2011_act_32_including_budget_adjustment_acts_10_13_and_27_vol_1_august_2011

¹⁴ <https://www.revenue.wi.gov/Pages/FAQS/ise-MandA-general.aspx>

¹⁵ <https://crowe.wisc.edu/the-impact-of-the-manufacturing-and-agriculture-credit-in-wisconsin/>

¹⁶ <https://www.ssc.wisc.edu/~nwilliam/MAC.pdf>

¹⁷ https://www.wmc.org/wp-content/uploads/TaxPolicy_RD-refundable.pdf

18

http://docs.legis.wisconsin.gov/misc/lfb/informational_papers/january_2019/0006_business_tax_credits_informational_paper_6.pdf

¹⁹ <https://www.revenue.wi.gov/Pages/Businesses/incentives-research.aspx>

http://docs.legis.wisconsin.gov/misc/lfb/budget/2019_21_biennial_budget/102_budget_papers/325_general_fund_taxes_refundable_research_tax_credit.pdf