



Pennsylvania defines industry clusters to serve as the basis for data-driven workforce development policies. An industry cluster includes industries closely linked by common products, labor pools, technologies, supplier chains and training needs. They take on strategic importance for long-term economic planning as changes that benefit one group member will generally impact other members of the cluster.

Industry clusters are comprised of specific six-digit North American Industry Classification System, or NAICS, codes. They are mutually exclusive, so that no two clusters contain the same NAICS code. Currently, there are 12 clusters identified, along with several critical sub-clusters. Combined, these 12 industry clusters account for nearly 85 percent of all employment in the commonwealth.

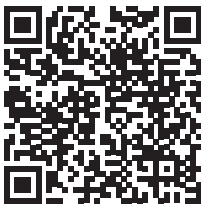
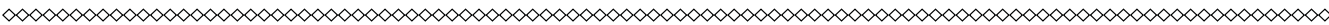
Cluster Summary

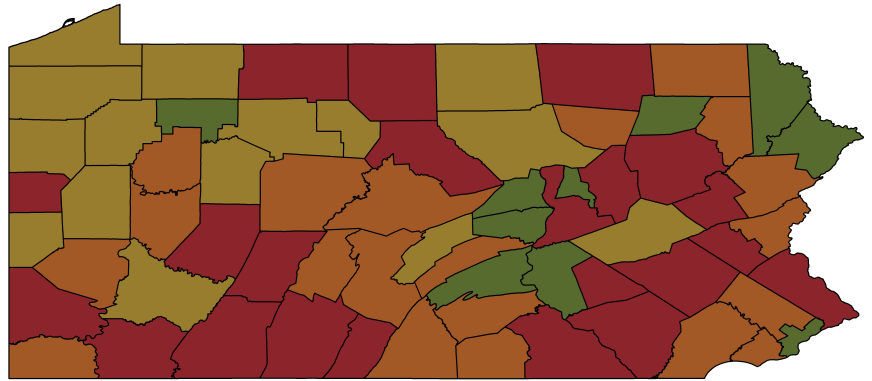
The Advanced Manufacturing (AM) cluster is made up of mostly durable goods manufacturing but also includes wholesalers, and some retailers such as car dealers. Other industry clusters contain segments of manufacturing within them, while the AM cluster is focused around its four sub-clusters:

- Chemicals, Rubber & Plastics (AM- CRP)
- Electronics (AM-E)
- Metals (AM-M)
- Vehicles & Vehicle Equipment (AM-VVE)

	2018	2023
Employer Units	23,152	23,079
Number of Jobs	437,654	430,909
Percent of Total Pennsylvania Jobs	7.5%	7.2%
Average Annual Wages	\$59,696	\$71,863
Location Quotient (LQ)	1.00	1.01
LQs greater than one suggest a competitive advantage.		

AM employment has decreased 1.5% from five years ago in Pennsylvania. The state remains competitive and the majority of Workforce Development Areas (WDAs) also have competitive location quotients (LQs) (as seen on page 3). The cluster pays a reasonable average wage and is above the statewide average for all jobs in 2023 (\$69,300).





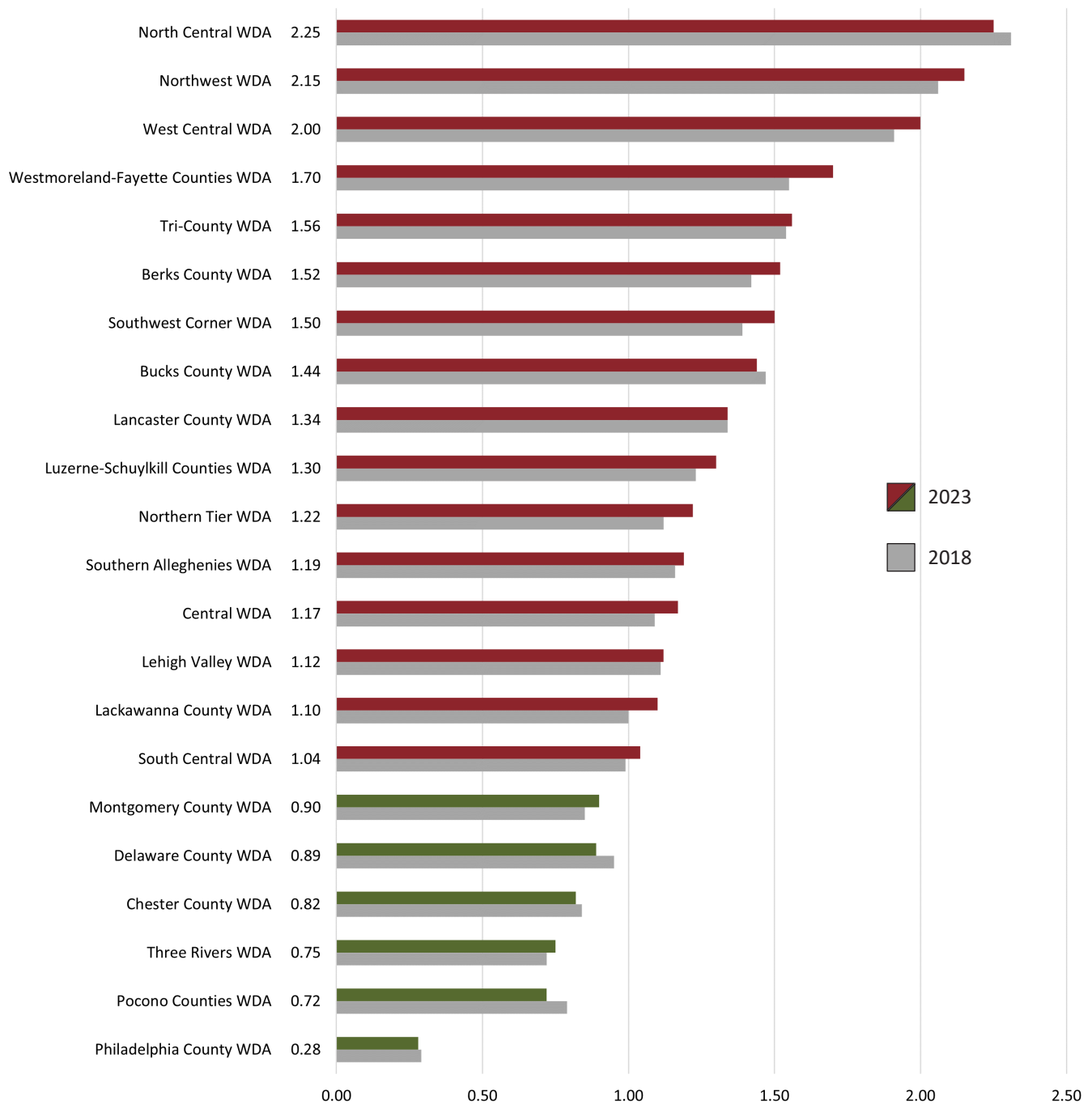
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- A map of Pennsylvania with its county boundaries delineated by thin black lines. The state is filled with a light gray color. Numerous black dots are scattered across the map, representing the locations of sampling sites. These sites are distributed throughout the state, with notable concentrations in the western and southwestern regions, particularly in the areas around Erie, Harrisburg, and the Philadelphia region. There are also several sites in the northern and eastern parts of the state.

Top Industries Based on Employment

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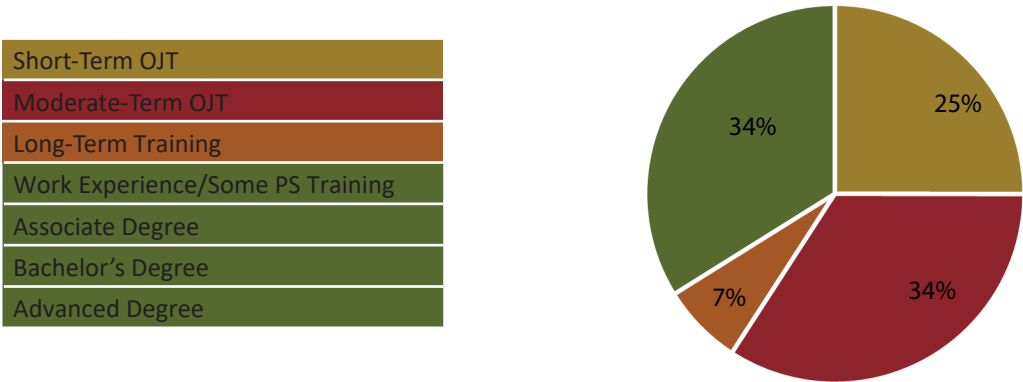
Employment Concentration

A location quotient, or LQ, compares a cluster's share of local employment to its share of national employment. This value can be used when evaluating the strength of an industry cluster within an area. An LQ greater than one indicates that the cluster has, on average, more employees locally than typically expected implying a possible competitive advantage. Westmoreland-Fayette Counties, Southwest Corner, Northern Tier, and Lackawanna County Workforce Development Areas (WDAs) all have LQs greater than one and have also increased their competitiveness greater than 8% since 2018.



Educational Requirements

This graph illustrates the minimum educational attainment levels for jobs found in this cluster’s various industries. Almost 60 percent of AM jobs require less than one year of on-the-job training to enter employment. As technology plays an ever-increasing role in the day-to-day processes of this cluster, it is likely that educational expectations will continue to increase for many workers.



Occupations with Significant Employment

The following table lists occupations that employ at least 5,600 people in the AM cluster.

			Annual Demand	
SOC Code	Occupation	Average Wage	All Industries	Industry Cluster
41-2031	Retail Salespersons	\$34,320	22,324	2,770
49-3023	Automotive Service Technicians & Mechanics	\$52,690	3,142	2,354
51-2090	Misc. Assemblers & Fabricators	\$44,950	5,131	1,991
53-7062	Laborers & Freight/Stock/Material Movers	\$42,240	20,336	1,866
41-4012	Sales Representatives	\$80,780	5,344	1,237
53-3033	Light Truck Drivers	\$44,770	5,072	1,116
51-2028	Elec. & Electromechanical Assemblers	\$44,590	1,686	1,102
41-2022	Parts Salespersons	\$40,920	1,227	1,075
51-1011	Supervisors- Production & Operating Workers	\$74,070	2,628	1,040
53-7061	Cleaners of Vehicles & Equipment	\$36,030	1,777	1,012
51-4121	Welders, Cutters, Solderers & Brazers	\$53,210	1,724	946
51-4041	Machinists	\$54,810	1,315	943
51-9161	CNC Tool Operators	\$57,310	945	733
49-9041	Industrial Machinery Mechanics	\$65,960	1,886	673
49-3021	Automotive Body & Related Repairers	\$56,580	555	492

*The 2024 average annual wage reflects wages across all industries and is not specific to the cluster.

