



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.

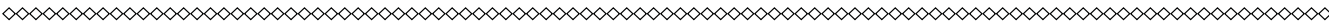
Industry clusters are comprised of specific six-digit North American Industry Classification System, or NAICS, codes. They are mutually exclusive, so that no two clusters contain the same NAICS code. Currently, there are 12 clusters identified, along with several critical sub-clusters. Combined, these 12 industry clusters account for nearly 83 percent of all employment in the commonwealth.

Cluster Summary

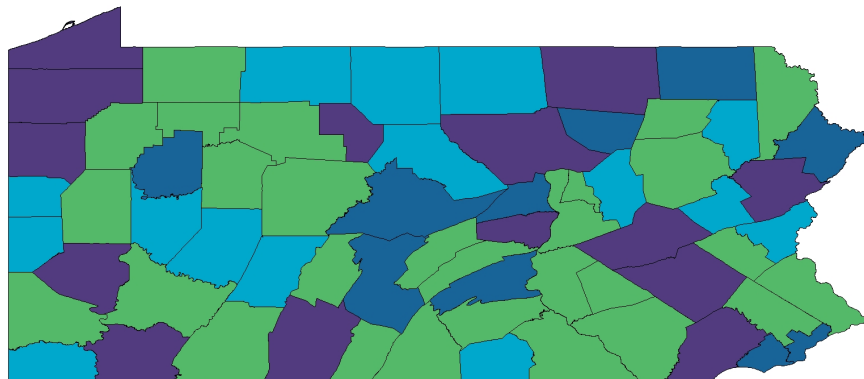
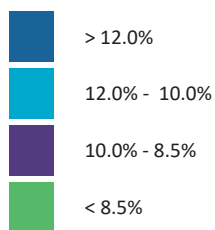
The Education (ED) cluster provides a full view of educational institutions in the state. The cluster encompasses elementary schools through universities, as well as technical schools and junior colleges. Finally, public agencies that oversee educational programs are also included in the cluster.

	2016	2019	2021
Employer Units	13,338	13,611	13,904
Number of Jobs	553,591	561,859	528,901
Percent of Total Pennsylvania Jobs	9.6%	9.5%	9.4%
Average Annual Wages	\$50,129	\$54,059	\$59,306
Location Quotient (LQ)	1.01	1.00	1.01
LQs greater than one suggest a competitive advantage.			

Employment in this cluster has slightly decreased by 4.5% from 2016 to 2021 and is only slightly higher than the national average with a competitive Location Quotient (LQ) at 1.01. The cluster responds to changes in demographics and state and local taxes, making it difficult to determine competitiveness in relation to the other industry clusters.

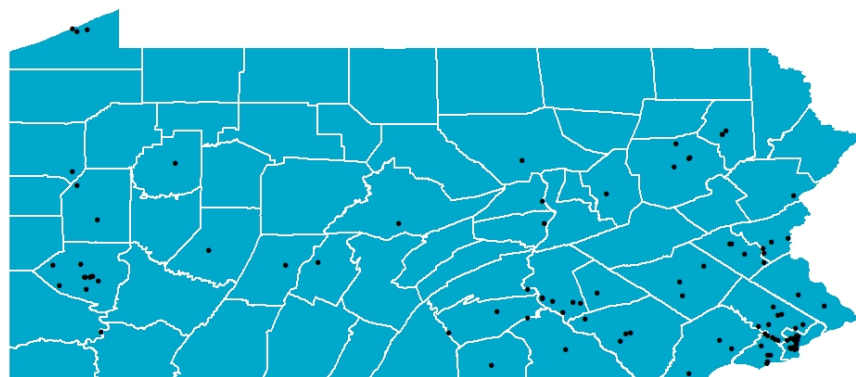


Percent Employment by County



Major Employers

- University of Pennsylvania
- Pennsylvania State University
- University of Pittsburgh
- PA State System of Higher Education
- Temple University



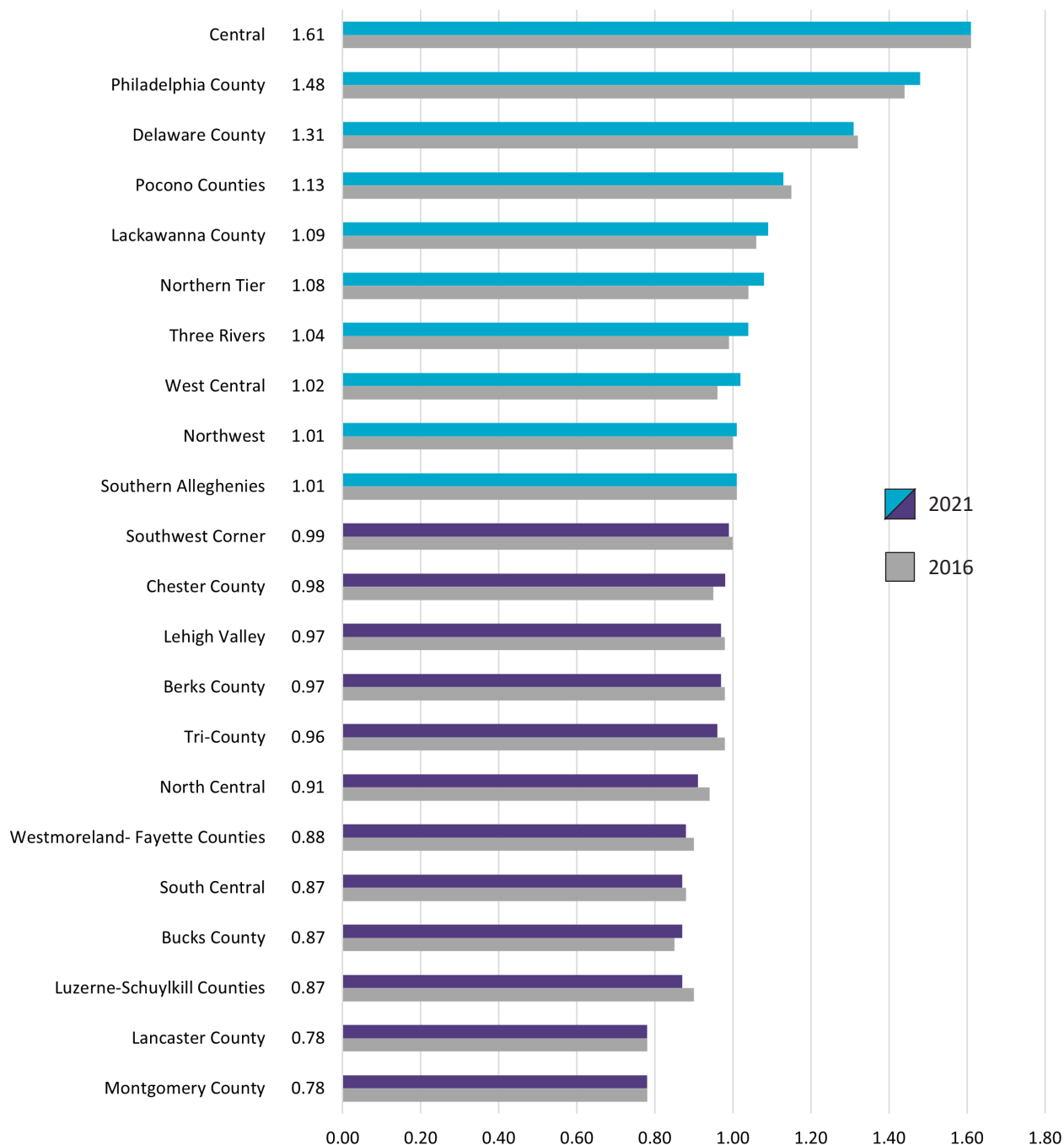
Top Industries Based on Employment

- | | |
|--|--|
| • Elementary & Secondary Schools | • Miscellaneous Schools & Instruction |
| • Colleges & Universities | • Management Training |
| • Child Day Care Services | • Apprenticeship Training |
| • School & Employee Bus Transportation | • Administration Of Education Programs |
| • Junior Colleges | • Cosmetology & Barber Schools |
| • Educational Support Services | • Computer Training |
| • Libraries & Archives | • Automobile Driving Schools |
| • Fine Arts Schools | • Language Schools |
| • Exam Preparation & Tutoring | • Flight Training |
| • Other Technical & Trade Schools | |



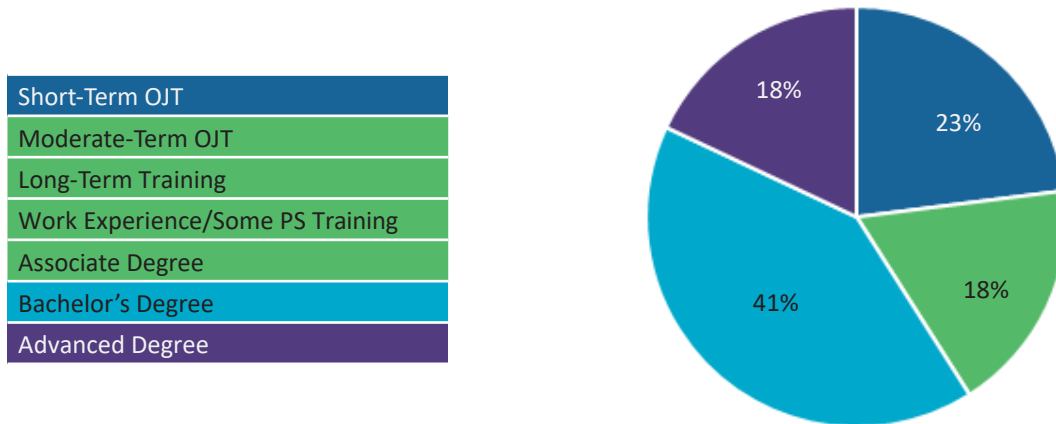
Employment Concentration

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. The Philadelphia County, Lackawanna County, Northern Tier, Three Rivers, West Central and Northwest Workforce Development Areas (WDAs) all had an LQ greater than one and experienced an increase in competitiveness since 2016.



Educational Requirements

This graph illustrates the minimum educational attainment levels for jobs found in this cluster's various industries. Not surprisingly, almost 60 percent of ED jobs require at least a Bachelor's Degree, making it the most educationally demanding industry cluster.



Occupations with Significant Employment

The following table lists occupations that employ at least 4,800 in the ED cluster.

			Annual Demand	
SOC Code	Occupation	Average Wage	All Industries	Industry Cluster
25-1000	Postsecondary Teachers	\$94,791	6,531	6,302
25-9045	Teaching Assistants, Non-Postsecondary	\$30,980	4,625	4,191
25-2021	Elementary School Teachers	\$69,700	3,961	3,891
25-2031	Secondary School Teachers	\$73,810	3,670	3,558
53-3058	Passenger Vehicle Drivers	N/A	5,620	2,778
37-2011	Janitors & Cleaners	\$33,550	12,485	2,474
39-9011	Childcare Workers	\$27,330	5,691	2,183
43-9061	Office Clerks, General	\$41,880	16,622	1,918
25-2022	Middle School Teachers	\$71,140	1,711	1,692
35-3023	Fast Food & Counter Workers	\$25,330	32,762	1,685
43-6014	Secretaries & Administrative Assistants	\$41,310	8,528	1,549
25-2011	Preschool Teachers	\$33,120	2,002	1,382
25-3031	Substitute Teachers, Short-Term	\$38,580	1,623	1,127
27-2022	Coaches & Scouts	\$54,970	1,302	842
35-2012	Cooks, Institution & Cafeteria	\$33,990	2,228	759

*The 2022 average annual wage reflects wages across all industries and is not specific to the cluster.