



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.

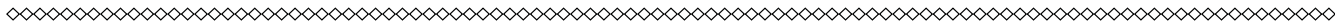
Cluster Summary

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.

	2012	2017
Employer Units	13,416	13,395
Number of Jobs	564,532	556,761
Percent of Total Pennsylvania Jobs	10.1%	9.6%
Average Annual Wages	\$45,506	\$51,262
Location Quotient (LQ)	1.01	1.01

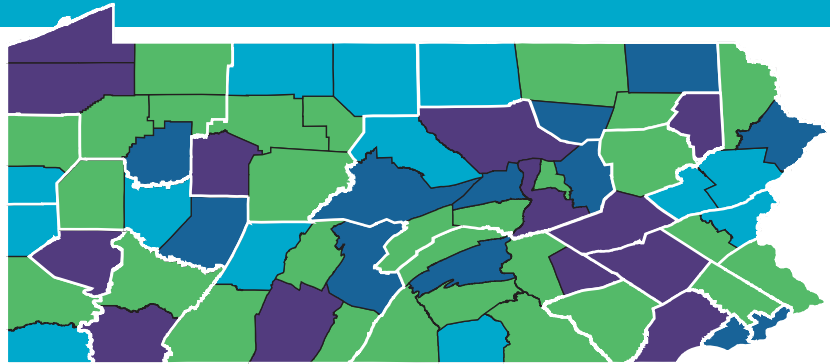
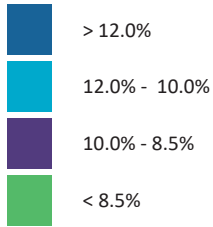
LQs greater than one suggest a competitive advantage.

Employment in this cluster has remained rather steady in Pennsylvania (minimally decreased by 1.4%) and is only slightly higher than the national average with a competitive Location Quotient (LQ) at 1.01. This cluster is the most unfettered to changes in the market economy (Health Care a close second). 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.



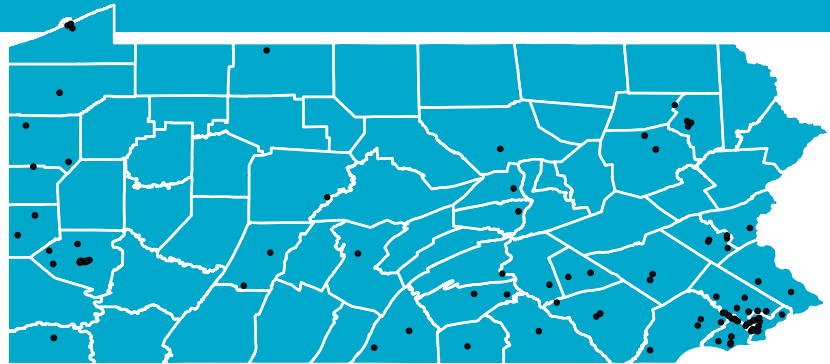
Center for Workforce Information & Analysis
 651 Boas St.
 Harrisburg, PA 17121
www.workstats.dli.pa.gov

Percent Employment by County



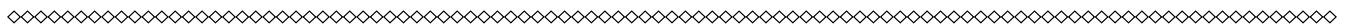
Major Employers

- Pennsylvania State University
- University of Pennsylvania
- School District of Philadelphia
- University of Pittsburgh
- PA State System of Higher Education
- Temple University



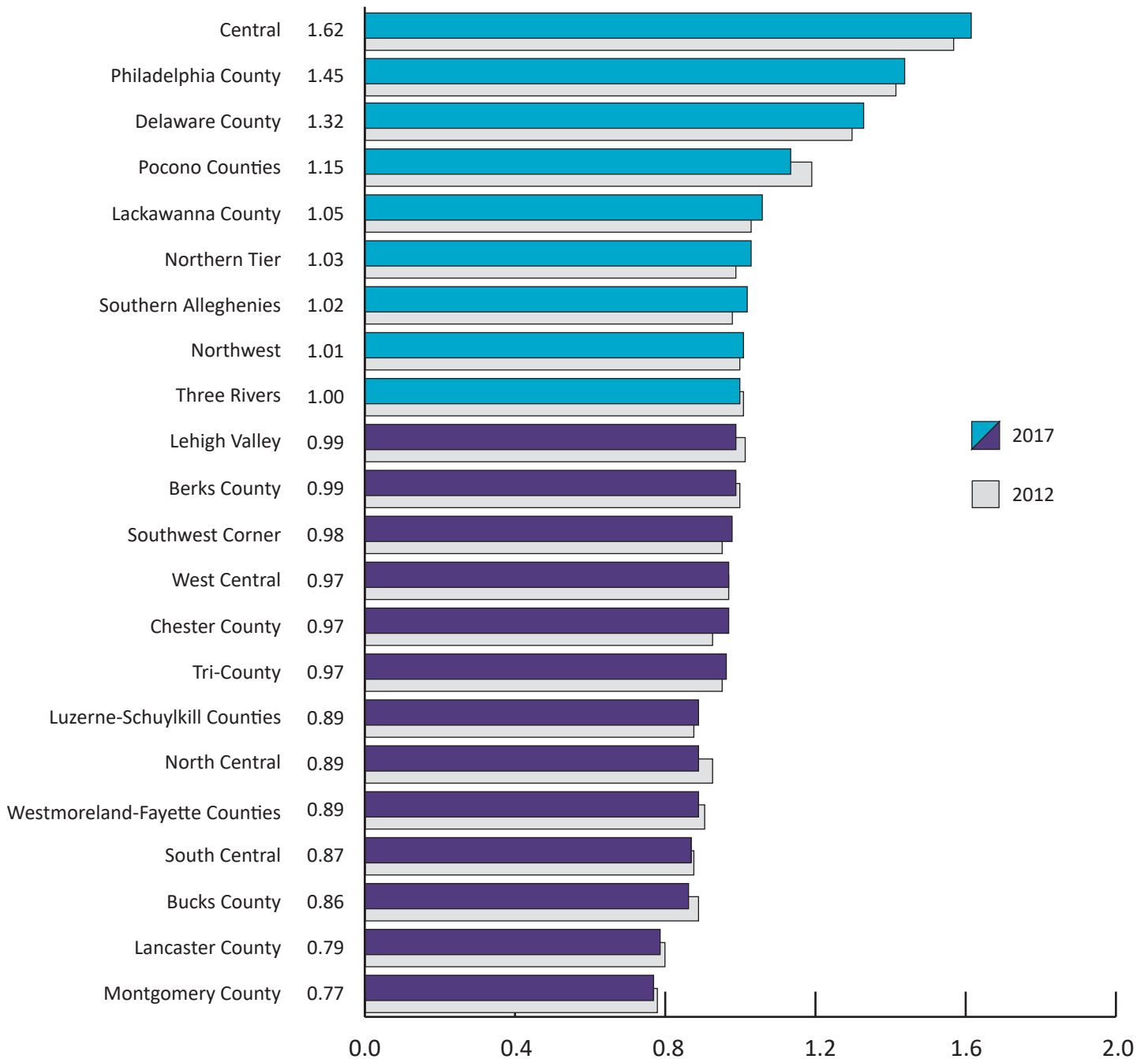
Top Industries Based on Employment

- | | |
|--|---|
| <ul style="list-style-type: none"> • Elementary & Secondary Schools • Colleges & Universities • Child Day Care Services • School & Employee Bus Transportation • Junior Colleges • Libraries & Archives • Educational Support Services • Fine Arts Schools • Exam Preparation & Tutoring • Other Technical & Trade Schools | <ul style="list-style-type: none"> • Miscellaneous Schools & Instruction • Management Training • Apprenticeship Training • Administration Of Education Programs • Cosmetology & Barber Schools • Computer Training • Language Schools • Automobile Driving Schools • Flight Training • Business & Secretarial Schools |
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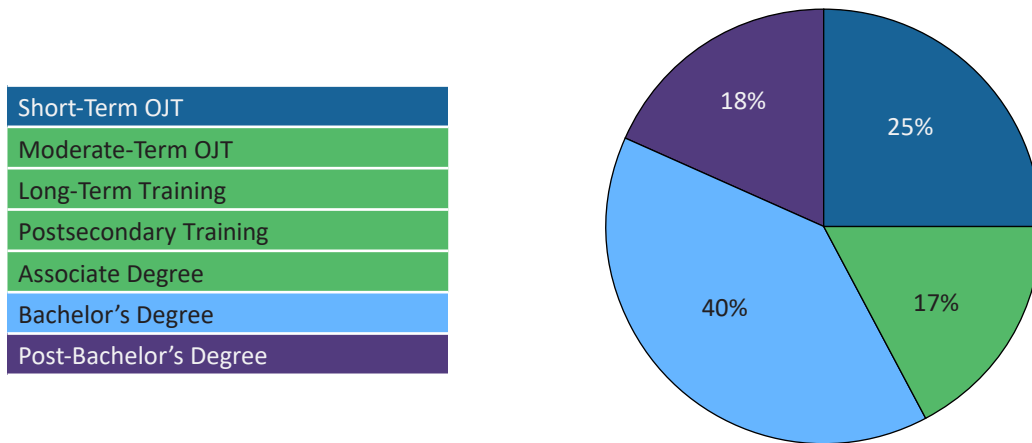
Employment Concentration

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. The Central, Philadelphia County, Delaware County, Lackawanna County, Northern Tier, Southern Alleghenies and Northwest Workforce Development Areas (WDAs) all had an LQ greater than one and experienced an increase in competitiveness since 2012.



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 7,000 in the ED cluster.

SOC Code	Occupation	Cluster Wage 2017	Job Openings	
			Industry Cluster	All Industries
25-2021	Elementary School Teachers	\$65,365	1,171	1,227
25-2031	Secondary School Teachers	\$65,778	1,153	1,206
25-9041	Teacher Assistants	\$26,197	1,105	1,230
53-3022	Bus Drivers, School or Special Client	\$28,078	462	566
25-2022	Middle School Teachers	\$65,257	509	558
37-2011	Janitors & Cleaners	\$32,067	515	2,387
43-6014	Secretaries	\$36,387	233	1,330
39-9011	Childcare Workers	\$22,166	548	1,646
43-9061	Office Clerks, General	\$35,934	355	3,071
25-3098	Substitute Teachers	\$29,303	290	339
25-2011	Preschool Teachers	\$28,247	412	581
25-2052	Special Education Teachers, Kindergarten & Elementary	\$64,605	193	196
21-1012	Educational, Guidance, School & Vocational Counselors	\$63,612	205	283
35-3021	Combined Food Preparation & Serving Workers	\$23,021	348	5,983
11-9032	Education Administrators, Elementary & Secondary	\$101,424	214	223