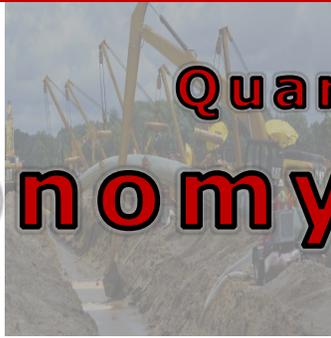


Quarterly Economy Tracker



The Institute for Public Policy & Economic Development is a partnership among Geisinger Commonwealth School of Medicine, Johnson College, Keystone College, King's College, Lackawanna College, Luzerne County Community College, Marywood University, Misericordia University, Penn State Scranton, Penn State Wilkes-Barre, The Wright Center, University of Scranton, and Wilkes University

In PA, One in Five Adults Has Student Debt

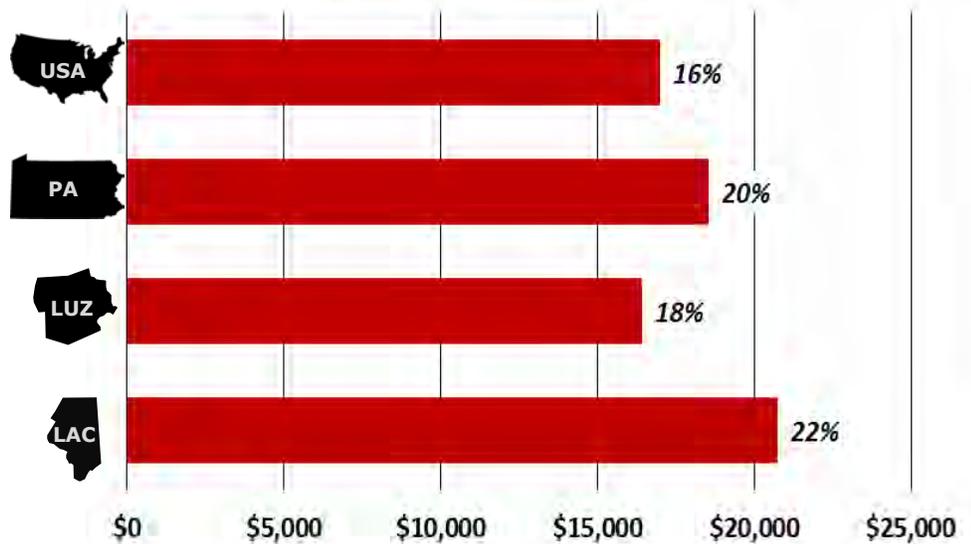
By Kara McGrane, Research Assistant

Student loan debt has become a key factor shaping the personal finances of millions of Americans. One-fifth of Pennsylvania residents with a credit bureau profile have student debt, with an average debt amount of over \$18,500. The Commonwealth's average loan amount and share of the population with student debt exceed the national averages.

Lackawanna County has a higher student loan balance average, higher average monthly payment, and share of population with student debt than Luzerne, Pennsylvania, and the United States as a whole. Luzerne County's average loan balance is lower than other regions, but the share of population with a loan is higher than the national average.

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Average Student Loan Balance & Percent of Population with Student Debt



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The Economy Tracker is a quarterly publication of The Institute for Public Policy & Economic Development which seeks to explore economic data, trends, and issues related to our region's economy. Subscribe at www.institutepa.org to receive an electronic edition of the Tracker free of charge. In all its publications, The Institute uses the most current data available at the time of release.

Labor Market at a Glance

In both counties, Pennsylvania, and the United States, unemployment rates fell in 2018, based on the first eleven months of the year. At the time of this publication, December 2018 unemployment rate data is preliminary so it was not analyzed. Furthermore, the unemployment rate fell over the course of the year, with the final three months analyzed falling to about four percent in Lackawanna County and under five percent in Luzerne.

Though region continues to have generally higher unemployment rates than the Commonwealth and United States as a whole, these statistics suggest that both regionally and nationally, the labor market is at or approaching full employment, the baseline unemployment rate below which higher rates of inflation and wage growth can be expected. The remaining unemployment regionally can be largely expected to reflect frictional unemployment, the short-term unemployment during the time it takes a worker to find a new job after becoming unemployed.

Regionally, these trends are driven by both increases in total employment (higher in 2018 than prior to the last recession) and modest growth in the size of the labor force since 2017.

Unemployment Rate (Not Seasonally Adjusted)				
	Lackawanna	Luzerne	Pennsylvania	United States
2009	8.2	9.0	8.0	9.3
2010	9.0	10.0	8.5	9.6
2011	8.8	9.6	7.9	8.9
2012	8.8	9.8	7.8	8.1
2013	8.3	9.4	7.4	7.4
2014	6.6	7.3	5.9	6.2
2015	5.8	6.5	5.3	5.3
2016	5.7	6.3	5.4	4.9
2017	5.1	5.9	4.9	4.4
2018 YTD*	4.6	5.4	4.3	3.9
Sep 2018	4.0	4.9	3.9	3.6
Oct 2018	4.1	4.9	3.9	3.5
Nov 2018	4.0	4.8	3.8	3.5

Source: US Bureau of Labor Statistics, Local Area Unemployment Statistics
 *2018 YTD average includes January through November

Labor Force & Employment				
	Lackawanna County		Luzerne County	
	Labor Force	Employment	Labor Force	Employment
2009	107,192	98,396	161,298	146,781
2010	106,990	97,405	159,763	143,863
2011	107,274	97,814	159,843	144,500
2012	107,640	98,121	160,855	145,103
2013	107,645	98,710	160,767	145,691
2014	106,718	99,692	159,038	147,381
2015	106,408	100,205	158,764	148,514
2016	106,792	100,755	158,791	148,775
2017	106,305	100,852	158,265	148,913
2018 YTD*	106,454	101,599	158,589	150,026
Sep 2018	106,701	102,394	159,026	151,208
Oct 2018	107,220	102,798	159,677	151,798
Nov 2018	107,885	103,555	160,705	152,918

Source: US Bureau of Labor Statistics, Local Area Unemployment Statistics
 *2018 YTD average includes January through November

What's New at The Institute: Indicators 2019

By Teri Ooms, Executive Director &
 Susan Magnotta, Director of Community Outreach

Indicators 2019 is Approaching

You don't want to miss this wealth of social, environmental, and economic data! Join us on **May 9, 2019** not only to find out what the future has in store, but also to participate in a dialogue that identifies priorities and sparks purposeful action.

Registration Now Open

The program will include breakfast and networking and presentations of regional data and trends. The Institute's community-based research task forces will present special research projects in the areas of jobs and economic development, education and workforce development, housing, health, and

planning, land use, transportation, and infrastructure. For more information, visit www.institutepa.org.

Sponsorship Opportunities

For organizations wishing to get more involved, it's not too late to become an event sponsor. For more information, email Susan Magnotta at Magnotta@institutepa.org. ♦

Student Debt — Continued from Page 1

Debt In Collections

In Luzerne County, Pennsylvania, and the nation, two percent of student loan borrowers have debt in collections. In Lackawanna County, this share is higher, at three percent.

This share is relatively low compared to several other types of debt. For the regions analyzed, delinquency is slightly higher for auto loans, and considerably higher for medical debt—15 percent or more.

Regional Education Levels

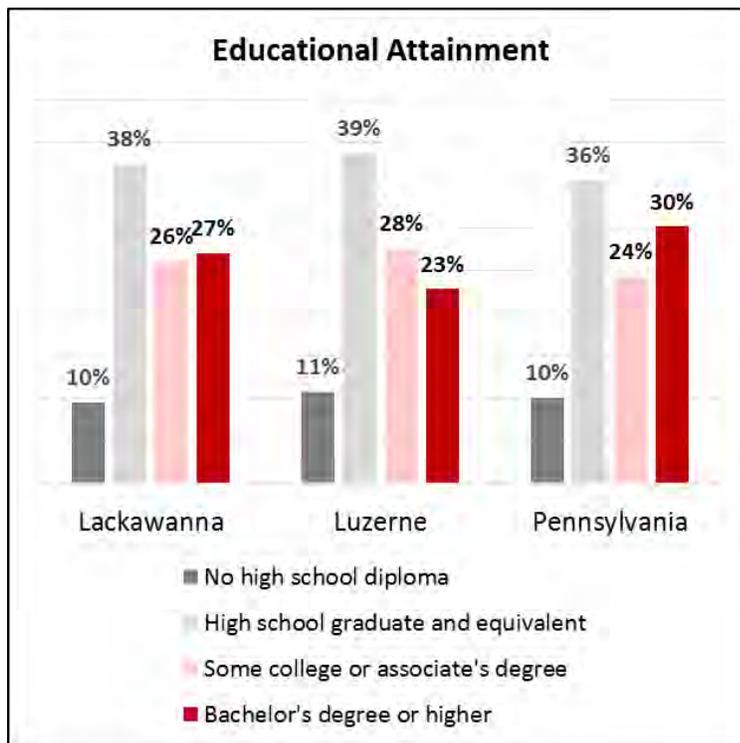
Both counties have overall educational attainment levels below the statewide average. In Lackawanna County, 27 percent of adults age 25 or older have a bachelor's degree compared with 30 percent statewide. In Luzerne County, this share is lower, at 23 percent. Luzerne County's lower levels of college attainment are likely related to its lower prevalence of student debt and lower average loan balance.

Lackawanna County's rates of college attainment are somewhat lower than the statewide average, though it has a higher average student debt burden compared with the Commonwealth as a whole.

Cost & Benefit of Higher Education

In Lackawanna and Luzerne Counties, earnings increase as higher education increases, but at a much smaller rate than that of the US or Pennsylvania. Statewide, a bachelor's degree holder earns nearly 1.9 times the annual earnings of a worker with a high school diploma alone, on average. Regionally, four year college graduates earn about 1.6 times the earnings of high school graduates. There is also an earnings advantage, though smaller, among workers with some college but less than a bachelor's degree, including holders of associate's degrees and technical certificates.

Continued on Page 5



Source: US Census Bureau ACS

"Statewide, a bachelor's degree holder, on average, earns nearly 1.9 times the annual earnings of a worker with a high school diploma alone."

Student Loan Borrowing

	Lackawanna County	Luzerne County	Pennsylvania	USA
Average loan balance	\$20,734	\$16,422	\$18,544	\$16,995
Average monthly payment	\$183	\$156	\$180	\$169
Share of total population with student debt	22.0%	18.0%	20.0%	16.0%
Share of loan borrowers with debt in collections	3.0%	2.0%	2.0%	2.0%
Average amount of loan in collections	\$8,999	\$9,691	\$8,359	\$8,060

Source: Urban Institute

How Well Will Our Region Weather the Next Downturn?

By Andrew Chew, Senior Research & Policy Analyst

Though labor market statistics and GDP growth rates indicate a strong national economy, it is inevitable that there will be an eventual tide change. Though the timing, severity, and nature of any future downturn is nearly impossible to predict, it is important to understand how well-positioned our region is for weathering structural economic changes or valleys in the business cycle.

One measure that may be useful to better understanding our recession resilience is economic diversity. Because downturns and other economic changes is nearly assured to affect different industries unevenly, having a large share of the workforce concentrated in relatively few industries is a liability should those industries experience severe hardship. Many parts of Northeastern Pennsylvania were severely impacted by the decline of coal mining, and many regions around the country that relied heavily on manufacturing have also been disproportionately impacted by economic shifts.

The table above shows the percentage of all employment that is within the four largest industries in each geography. In both Lackawanna and Luzerne, the top four industries account for about half of all employment.

Economic Diversity: Percent of Employment in Four Largest Industries			
	2018	2015	Change
Lackawanna County	49.48%	49.52%	0.0%
Luzerne County	50.46%	48.69%	1.8%
7 Neighboring Counties (in Aggregate)	51.50%	51.37%	0.1%
Pennsylvania	45.10%	45.29%	-0.2%
United States	42.20%	42.09%	0.1%

Source: Chmura Economics via JobsEQ

Unsurprisingly, Pennsylvania and the United States both have smaller shares of employment in the four largest industries, reflecting the greater economic diversity found at a larger geographic scale. Less geographic diversity can be found in the combined seven county region that includes each county adjacent to Lackawanna and Luzerne (excluding Sullivan, for which data is limited due to its small size).

Local Level Resilience

Similar data was collected at the ZIP code level. ZIP code tabulation areas with fewer than 100 total jobs were excluded from the analysis due to their size.

Of the remaining ZIP codes, there was an average of 67 percent of

employment within the top four industries, ranging from 43 percent in ZIP code 18512, covering parts of Scranton as well as Dunmore and Throop, to 95 percent in ZIP code 18602, a small ZIP code covering the borough of Bear Creek Village. The average ZIP code has 30 percent of employment in its largest industry, ranging from 13 percent in 18512 to more than two-thirds in the Educational Services industry in Factoryville ZIP 18419.

Economic Diversity Index

For each ZIP code area analyzed, a score was calculated that comprised the average of the percentages of employment in the top single industry and top four industries. An adjustment factor was applied to control for total employment size within a ZIP code area—areas with more employment overall tended to have more economic diversity. Index scores range from 48 to 142 with an average of 104.

Higher scores indicate greater economic diversity. The map below shows the five ZIP code areas with highest scores in green and the five lowest scoring ZIP codes in red.

Several of the lower scoring ZIP codes were rural and/or smaller, indicating an increased reliance on a single industry. However, another comprised the Hill Section, where over half of all employment is in the healthcare industry.

Continued on Next Page

ZIP Code Level Economic Diversity

Percent of Employment in Largest Single Industry		
Minimum	Average	Maximum
13%	30%	68%
ZIP 18512 Scranton/Dunmore/Throop (Manufacturing)		ZIP 18419 Factoryville (Educational Services)
Percent of Employment in Top Four Industries		
Minimum	Average	Maximum
43%	67%	95%
ZIP 18512 Scranton/Dunmore/Throop		ZIP 18602 Bear Creek

Source: Chmura Economics via JobsEQ

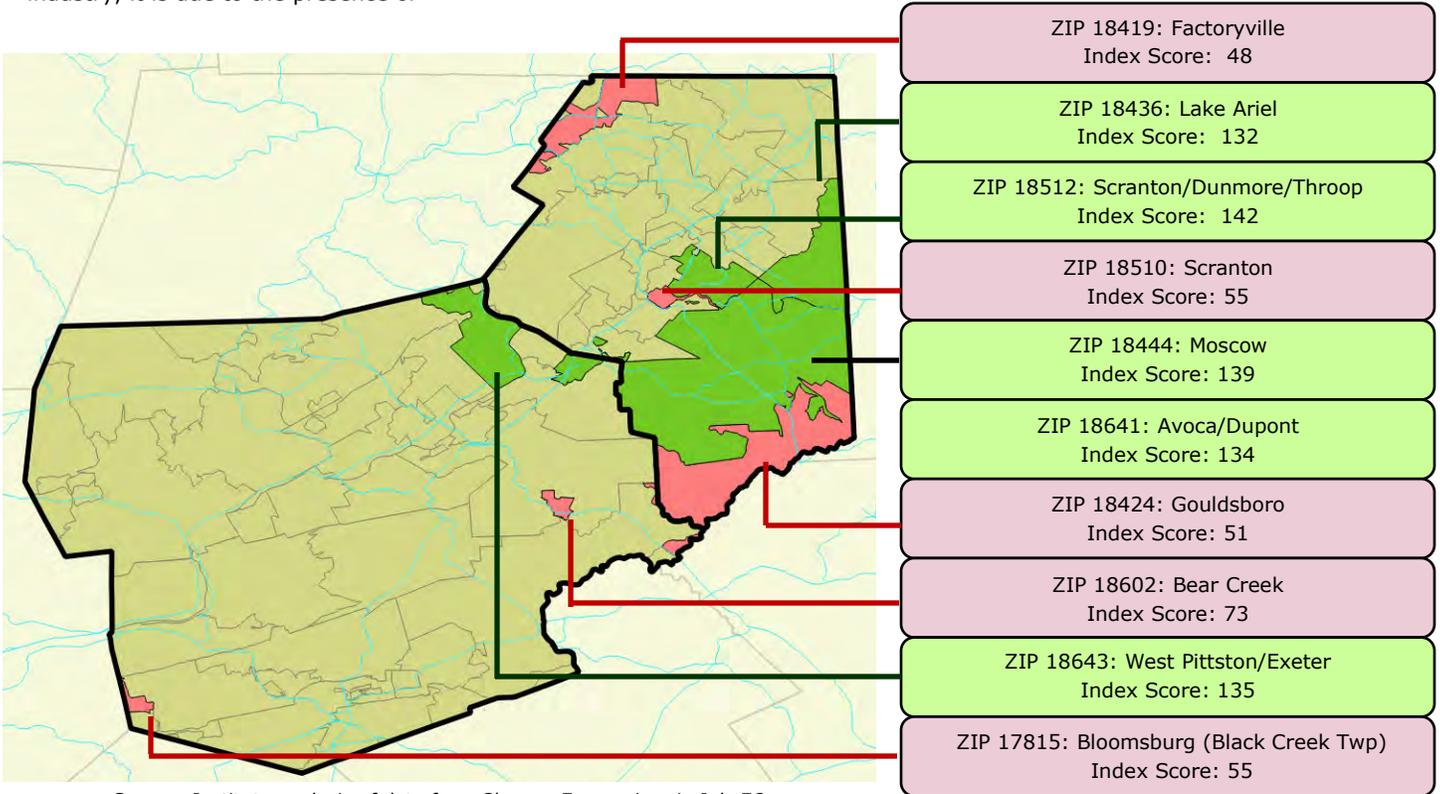
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Implications

One limitation of this analysis is that in reality different industries have different risk profiles due to economic change. Though Factoryville has a large percentage of its employment in a single industry, it is due to the presence of

Keystone College. Areas whose economies are built around stable institutions such as health care centers, educational institutions, and government entities are likely to be more resilient than those that rely on a single private sector employer.

Regardless, it is important that all communities carefully consider ways in which their economic base could be vulnerable to structural shifts and cyclical downturns in the national economy. ♦



Source: Institute analysis of data from Chmura Economics via JobsEQ

Student Loan Debt

Continued from Page 3

Thus, despite rising costs of higher education and the significant burden of student loan debt, furthering ones' education is still often a good economic investment.

There are also other important considerations, however. The income differential for bachelor's degree holders only . Furthermore, the region's labor market has significant demand for many occupations that require less than a four-year college degree. There are diverse opportunities for high school graduates to train for jobs in manufacturing, health care, and other industries without borrowing as much as students who pursue more advanced degrees. ♦

Earnings & Education



Statewide, Bachelor's degree holders earn **1.9** times the earnings of someone with a high school diploma alone.



Bachelor's degree holders in Luzerne County earn **\$61,616** per year on average, compared with **\$38,008** per year among workers with a high school diploma alone.



In Lackawanna, bachelor's degree holders earn **\$61,392** per year on average, compared with **\$37,111** per year among workers with a high school diploma alone.

Source: Chmura Economics via JobsEQ

Growth Forecast for Green Energy Industries

By Saidat Sanni, Graduate Assistant

The region’s economy has long been shaped by energy, from coal mining to natural gas and renewables. For this analysis, green energy industries including energy production from hydroelectric, wind, solar, and biomass.

Though green energy remains a small part of the region’s economy, in the past five years, Lackawanna and Luzerne

Counties combined with their neighboring counties have seen growth in green energy industries outpacing the statewide rate.

Furthermore, in the next five years, employment in the green industry in the region is forecast to increase faster than the statewide rate, with an expected average annual growth rate of

9.2 percent exceeding the statewide rate of five percent.

Regionally and statewide, the biomass energy industry is the driver of this trend, with an anticipated annual growth rate of over ten percent per year. Growth is also forecast in wind energy in the region. ♦

Employment Growth Rate: All Green Energy Industries



“Employment in the green industry in the region is forecast to increase faster than the statewide rate.”

Source: Chmura Economics via JobsEQ

Larger Share of Households Have Limited Income

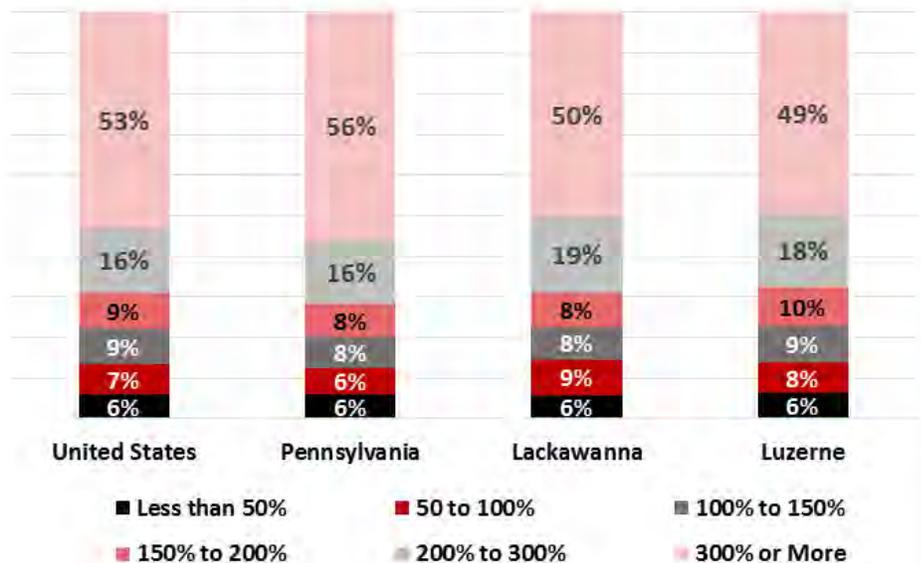
By Joe Gallo, Research Assistant

As The Institute’s past research on Living Wages in the region has shown, many households in the region are above the federal poverty level (FPL) yet do not meet a standard of family economic security. In both Lackawanna and Luzerne Counties, the share of the population living below 300 percent of the FPL is higher than state and national levels. This includes half of the population in Lackawanna County and 51 percent of people in Luzerne County. Additionally, one in three residents of Luzerne County lives on an income below 200 percent of FPL.

Individuals and families living close to the federal poverty level are particularly vulnerable to the effects of financial emergencies, such as costly medical bills or the loss of a job. ♦

The Institute’s Living Wage Study is available on www.institutepa.org

Ratio of Income to Poverty Level



Source: U.S. Census Bureau American Community Survey

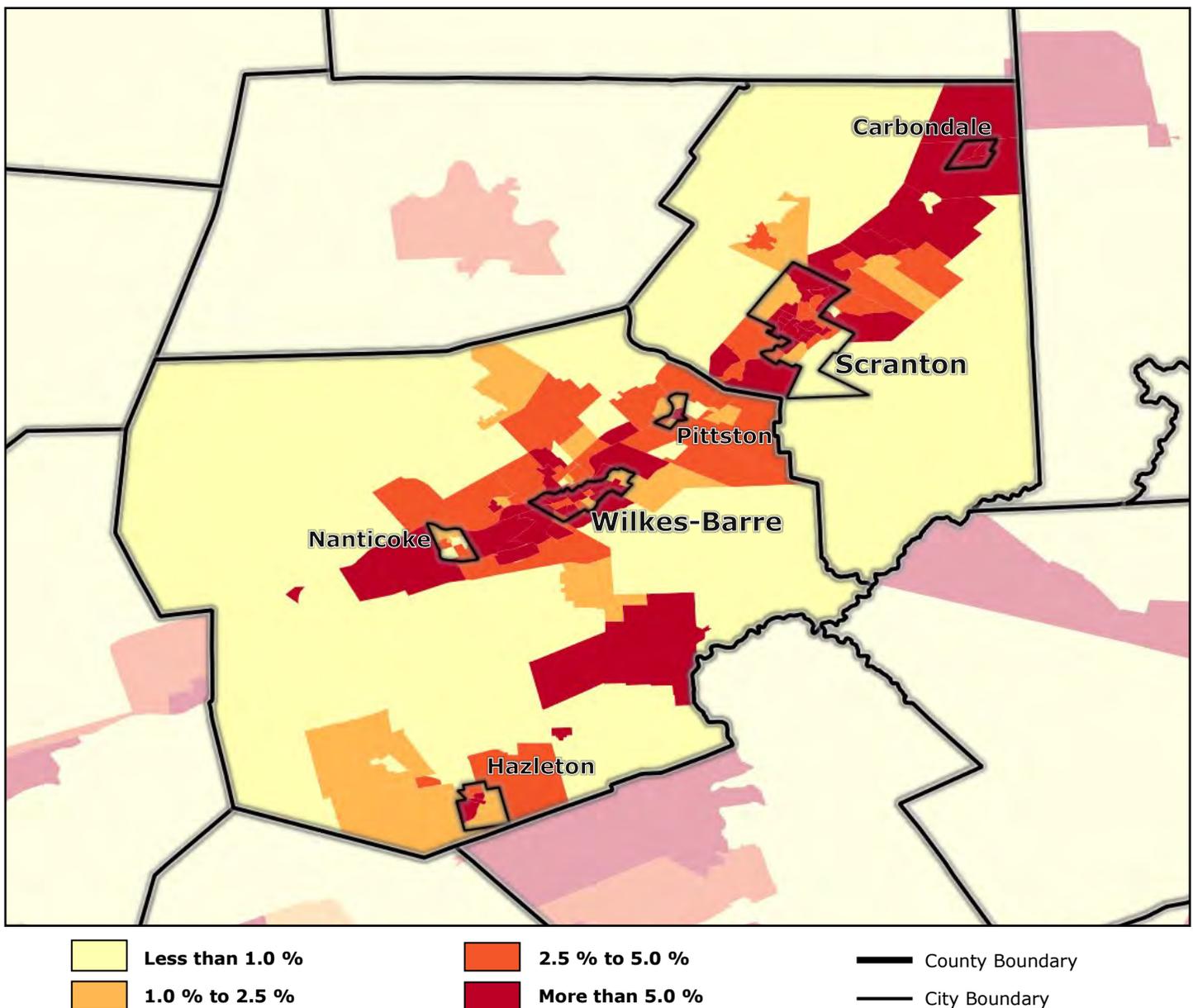
Cartography Corner

Long-Term Vacancy of Business Addresses

Data on residential and business vacancy, at the address level, is collected by the US Postal Service and made available by the Department of Housing and Urban Development. The map below shows the percentage of all businesses addresses for each Census Tract that have been identified as vacant for 12 months or more. Many tracts, particularly in less densely populated areas, had long-term business vacancy of less than one percent. However, many tracts in the urban cores, and throughout other parts of the region, saw more than five percent long-term vacancy rates. This indicates challenges in returning vacant business spaces to productive use in some communities, but also shows that opportunities are available for new businesses in the region.

Percent of Business Addresses Vacant for 12 Months or Longer (2018)

by Census Tract for Lackawanna and Luzerne Counties



Source: United States Postal Service, via US Department of Housing and Urban Development

Data Spotlight

Top Industries by Location Quotient

Location Quotients are a measure of the relative concentration of an industry or occupation in a region compared to a reference area such as the United States as a whole. Higher scores indicate that the region has a higher than expected share of that occupation or industry compared with the national average. A score of 1.00 indicates the same share regionally as in the nation. This table presents the top 20 broad industry groups for the two county region.

The top industries largely reflect the region's largest manufacturing industries. Manufacturing and reproducing of magnetic and optical media has the highest LQ, at nearly 20 times the expected share based on the national average. This is followed by spring and wire product manufacturing, sugar and confectionery product manufacturing, and other furniture related product manufacturing. Of the top 20 industries by location quotient, 14 were manufacturing industries.

Warehousing and storage also features prominently, at over six times the national average share of employment. Finally, two categories of bus transportation, and several health care industries including residential care facilities, ambulatory services, and specialty hospitals, are represented.

Top 20 Industries by Location Quotient			
Industry (4-digit NAICS)	Employment	Average Wages	Location Quotient
Manufacturing and Reproducing Magnetic and Optical Media	472	\$67,097	19.64
Spring and Wire Product Manufacturing	897	\$49,885	12.59
Sugar and Confectionery Product Manufacturing	1,170	\$60,689	9.09
Other Furniture Related Product Manufacturing	439	\$49,461	7.26
Warehousing and Storage	12,351	\$37,921	6.74
Textile and Fabric Finishing and Fabric Coating Mills	202	\$55,038	3.96
Forging and Stamping	631	\$53,935	3.84
Interurban and Rural Bus Transportation	148	\$45,466	3.71
Plastics Product Manufacturing	3,525	\$52,272	3.66
Glass and Glass Product Manufacturing	510	\$56,373	3.50
Apparel Accessories and Other Apparel Manufacturing	78	\$41,303	3.49
Converted Paper Product Manufacturing	1,474	\$51,074	3.31
Clay Product and Refractory Manufacturing	216	\$47,683	3.20
School and Employee Bus Transportation	1,228	\$16,573	2.91
Bakeries and Tortilla Manufacturing	1,494	\$39,129	2.79
Medical Equipment and Supplies Manufacturing	1,419	\$43,440	2.74
Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	3,127	\$33,197	2.58
Other Ambulatory Health Care Services	1,428	\$40,335	2.55
Soap, Cleaning Compound, and Toilet Preparation Manufacturing	470	\$35,508	2.55
Specialty (except Psychiatric and Substance Abuse) Hospitals	1,085	\$50,036	2.51

Data Spotlight

Top Occupations by Location Quotient

Location Quotients are a measure of the relative concentration of an industry or occupation in a region compared to a reference area such as the United States as a whole. Higher scores indicate that the region has a higher than expected share of that occupation or industry compared with the national average. A score of 1.00 indicates the same share regionally as in the nation. This table presents the top 20 broad occupations for the two county region.

The top two occupations are related to the nuclear power generation industry, and both have location quotients above five times the national share for that occupation. Many other occupations associated with manufacturing and warehousing are also represented, including several categories of machine operators. Several mining-related occupations are also disproportionately concentrated in the region: roof bolters and mine shuttle car operators. However, both of these have small employment totals.

Finally, several other occupations across a broad range of types are represented, including eligibility interviewers for government programs, funeral service managers, residential advisors, emergency medical technicians and paramedics, and other ambulance personnel other than EMTs.

Top 20 Occupations by Location Quotient			
Occupation (5-digit SOC)	Employment	Average Wages	Location Quotient
Nuclear Technicians	99	\$91,300	7.87
Nuclear Engineers	171	\$94,600	5.62
Conveyor Operators and Tenders	221	\$41,000	4.42
Eligibility Interviewers, Government Programs	868	\$47,600	3.89
Ambulance Drivers and Attendants, Except EMTs	117	\$21,600	3.61
Industrial Truck and Tractor Operators	3,074	\$35,100	3.27
Funeral Service Managers	130	\$99,700	3.05
Forming Machine Setters, Operators, and Tenders, Metal and Plastic	577	\$36,000	2.85
Highway Maintenance Workers	502	\$40,400	2.30
Printing Workers	933	\$36,500	2.16
Residential Advisors	401	\$26,600	2.09
Laborers and Material Movers, Hand	13,002	\$29,900	2.04
First-Line Supervisors of Helpers, Laborers, and Material Movers	646	\$59,900	2.04
Power Plant Operators, Distributors, and Dispatchers	193	\$84,600	1.98
Roof Bolters, Mining	12	\$64,000	1.95
Packaging and Filling Machine Operators and Tenders	1,235	\$32,100	1.90
Miscellaneous Production Workers	2,817	\$33,500	1.89
Mine Shuttle Car Operators	5	\$63,500	1.82
Emergency Medical Technicians and Paramedics	739	\$29,200	1.82
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	352	\$40,100	1.80

Amid Growing Automation, Which Workers Succeed?

By Christopher Ritter, Research Analyst

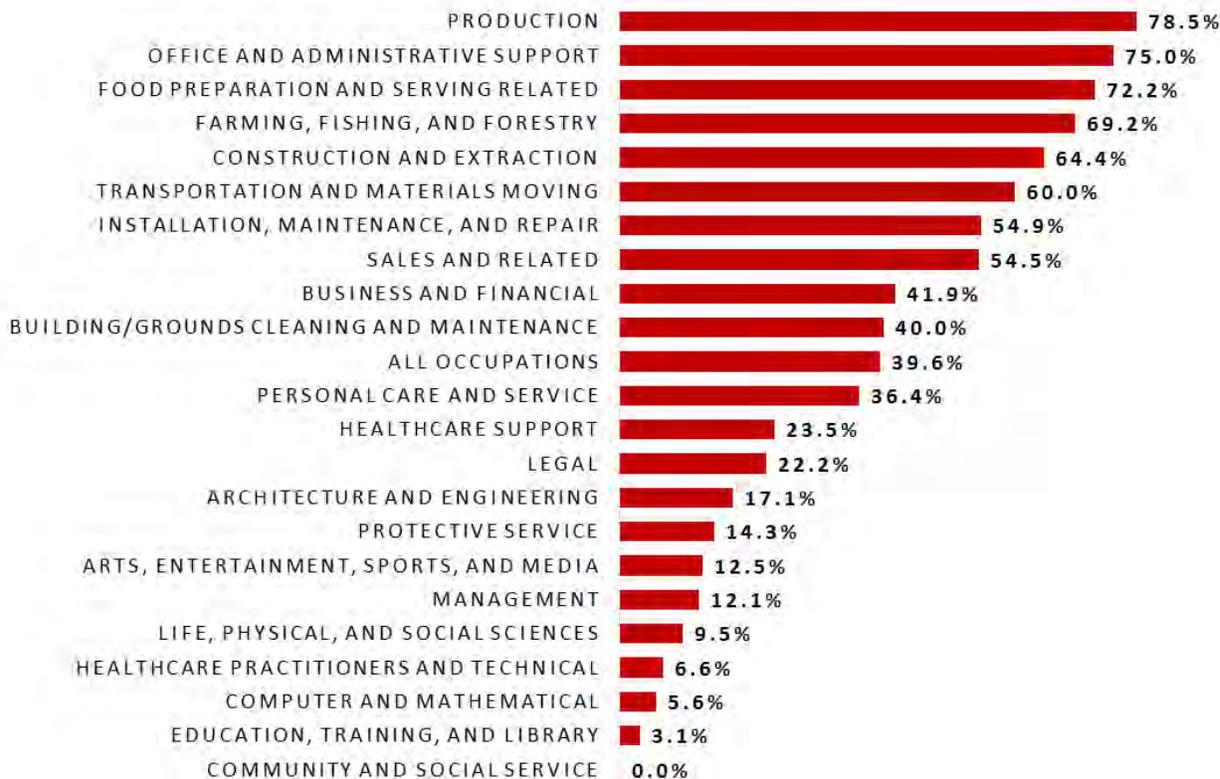
Over the coming decades, employers and employees alike throughout Northeastern Pennsylvania will have to confront the potential for workforce automation – the possibility that certain occupations (or, at least some responsibilities of these occupations) will be eliminated through advancements in artificial intelligence, machine learning, or other technological developments. In support of a forthcoming analysis examining the potential for regional workforce disruption through automation, The Institute identified occupations that are deemed to have at least a 70 percent chance of being automated in some capacity during the coming decades. The geographic scope of this analysis includes eleven counties in Northeastern Pennsylvania.

Nearly half of all workers in Northeastern Pennsylvania (49.2 percent) currently work in an occupation that faces a 70

percent or greater risk of automation in some capacity over the coming decades. The chart below shows the percentage of occupation titles within each broad category with a 70 percent or greater chance of automation. At-risk occupations consist of nearly 40 percent of all occupations throughout Northeastern Pennsylvania. Vulnerable occupations representing over 60 percent of occupations in: (1) Production; (2) Office and Administrative Support; (3) Food Preparation and Serving; (4) Farming, Fishing, and Forestry; (5) Construction and Extraction; and (6) Transportation and Material Moving. Declines in these industries will also disproportionately impact low-income workers across the region, as careers in these occupations earn an average of \$33,600 annually – 20 percent beneath the average wage of \$42,200 among all regional occupations.

Occupational categories left comparatively unaffected by automation are characterized by careers with higher educational or training-related barriers to entry, as well as those that rely on human contact. Such occupations include: (1) Life, Physical, and Social Science; (2) Healthcare Practitioners; (3) Computer and Mathematical Occupations; (4) Education, Training, and Library; and (5) Community and Social Services. Careers in these occupations often require an advanced degree and pay above average wages. Thus, while automation might disproportionately impact some workers more than others, the accumulation of credentials, training, or skillsets serve as a partial shield against these effects, though the broad-based nature of this disruption will require a reconceptualization of labor market policies to meet these challenges. ♦

HIGH-RISK AUTOMATION OCCUPATIONS BY CATEGORY



Source: Chmura Economics via JobsEQ

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The Willary Foundation is a family foundation dedicated to developing ideas and projects that are interesting, creative and imaginative and which benefit communities in Northeastern Pennsylvania. Willary seeks to foster groups with unique, innovative or unusual ideas and efforts.

The Foundation is disposed to leveraging the impact of its grants by encouraging efforts that could have a ripple effect in the community or by supporting projects in conjunctions with other sources of funding. The Foundation wishes to promote the special qualities of the people of Northeastern Pennsylvania.

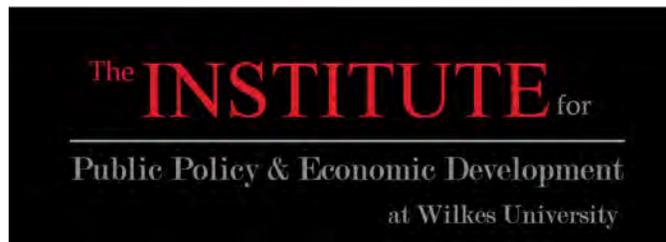
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