

Quarterly Economy Tracker

Special Edition: Tracking the Impact of Novel Coronavirus COVID-19

The Institute

Turning Information into Insight

The Institute 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 for Graduate Medical Education, University of Scranton, and Wilkes University

Closures Could Impact 90,000 Workers in Non-Life-Sustaining Industries in Lackawanna & Luzerne

By Andrew Chew, Senior Research & Policy Analyst

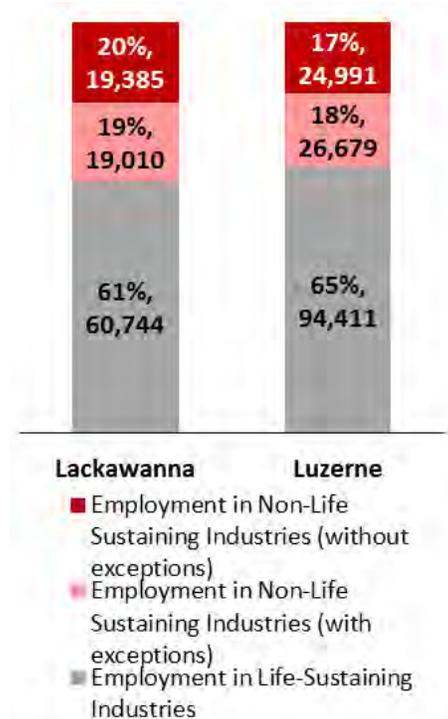
Since the beginning of the statewide shutdown of non-life-sustaining businesses, there has been an unprecedented economic disruption that has left thousands of workers unemployed and negatively affected the bottom line of businesses of almost all sizes and types.

The shutdown order allowed for the continuation of operations in life-sustaining industries. The Institute gathered data on employment to determine how many workers and which industries have been most impacted by the crisis.

The chart at right shows that over 60 percent of workers in both counties work in life-sustaining industries, which includes several of the largest industries

by employment in the region—health care, transportation and warehousing, and many manufacturing industries. However, nearly 40 percent of workers in Lackawanna County and 35 percent in Luzerne County work in non-life sustaining industries, with or without exceptions to operate under limited circumstances. This amounts to over 90,000 displaced workers in the two counties, though some are likely continuing to receive paychecks and/or can perform their jobs from home.

This measure is an imperfect estimate of workers displaced, as many businesses that would be considered life-sustaining may have nonetheless made the business decision to cease operations.



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In This Special Issue:

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.

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For more research and analysis on COVID-19's impact please visit us on Facebook, Twitter, and LinkedIn and our website!

COVID-19 Labor Market Update

COVID-19 has forced businesses to close, reduce their services, or alter their operations to continue providing services deemed essential. As a result, many workers have been laid off and hiring activity has slowed dramatically. While regional unemployment claims data is not yet available, across Pennsylvania nearly 1.5 million workers have filed for initial unemployment benefits since mid-March, according to weekly claims reported by the Department of Labor, current as of April 30, 2020. That represents almost 23 percent of Pennsylvania's 6.6 million civilian labor force.

Local level data is available through February 2020, when the unemployment rate stood at 5.6 percent in Lackawanna and 6.6 percent in Luzerne County compared to 5.1 percent statewide and 3.5 percent nationally. While the national unemployment rate continued to fall from 2018 to 2019, in both counties and the Commonwealth, the 2019 annual average was higher than the prior year. In the first two months of 2020, before the extent of the COVID-19 pandemic was fully apparent, unemployment was about one half of one percentage point higher than the same two months in 2019, indicating that even prior to reaching crisis levels, the regional labor market had loosened slightly from the low unemployment that marked 2017 through 2019. ♦

Unemployment Rate (Not Seasonally Adjusted)				
	Lackawanna	Luzerne	Pennsylvania	United States
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	6.4	5.3	5.3
2016	5.6	6.3	5.4	4.9
2017	5.1	5.8	4.9	4.4
2018	4.5	5.4	4.2	3.9
2019	4.9	5.7	4.4	3.7
Jan 2020	5.7	6.7	5.1	3.6
Feb 2020	5.6	6.6	5.1	3.5



Data Sources: US Department of Labor, Bureau of Labor Statistics.

The Institute Insights on COVID-19

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

COVID-19 has already been responsible for significant impacts on Northeastern Pennsylvania, including loss of over 160 lives in Lackawanna and Luzerne Counties as of the end of April.

Additionally, several thousand in the region have become ill, and many more thousands have been financially impacted by reduced work hours, furloughs, and layoffs. These impacts will reverberate to affect needs for social services, housing, food security, and education.

The Institute has responded to this crisis by embarking on a timely and ambitious program of research, *Institute Insights*

on COVID-19. This research agenda examines the effects of the pandemic on our region. We are providing data-driven "Institute Insights" to help understand, address, and overcome the new challenges facing NEPA.

We invite all stakeholders in NEPA to follow along as we report research findings from this initiative in the coming weeks and months.

The Greater Scranton Chamber of Commerce, UGI Utilities, Wells Fargo Foundation, and the NEPA COVID-19 Fund have already committed to sponsoring this major research initiative. ♦



Business Closure Impacts — continued from page 1

This analysis also does not consider businesses in non-life sustaining industries granted waivers to operate. To understand the economic effects of COVID-19 on businesses and workers, it is also useful to analyze other indicators of disruption.

The table below shows non-life-sustaining employment (with or without exceptions) as well as several other indicators:

Job Loss Projections

This measure was calculated by economics firm Chmura Economics as part of a nationwide Vulnerability Index. It was based on industry research and surveys, and the percentages shown represent the high end of a range of projected temporary job losses. Additional discussion of the Vulnerability Index can be found on page 8.

Job Postings

Data was gathered on online job postings from a 30 day period in March-April 2020 and the equivalent period in 2019. The value in the table below is the decline in jobs for the Top 10 occupations by employment within each

industry, weighted by that occupation's share of employment. Negative values represent industries where the 10 largest occupations showed a weighted net decline in job postings, while positive values indicate a weighted net increase in posting activity, a leading indicator of hiring.

Expert Panel Survey

In April 2020, The Institute surveyed economic leaders in Lackawanna and Luzerne Counties, including representatives from chambers of commerce, economic development agencies, and small business service providers. Respondents rated the relative level of disruption they perceive in each industry on a scale of 1 to 5, with 1 representing minimal disruption and 5 representing severe disruption.

Telework Potential

A study by Jonathan I. Dingel and Brent Neiman released by the National Bureau of Economic Research used survey data to estimate the percent of jobs that can feasibly be done at home. More on this study can be found on page 8.

Conclusions

These factors sometimes are in conflict for an industry group—for example, the Management of Companies and Enterprises industry has 100% of employees classified as non-life-sustaining and a moderate decline in related job postings, but a low projected job loss and high telework potential. For each industry, a qualitative classification on a four-point scale was assigned based on the five indicators.

The industry groups assigned as having the highest potential disruption were Construction, Retail Trade, Arts, Entertainment and Recreation, and Accommodation and Food Service. These industries account for 26 percent of regional private employment. Another 25 percent of workers are employed in industries with medium-high disruption.

Though significant variation within each broad category is certain, many workers in these industries are likely seeing job losses, furloughs, or reduced hours, creating a significant economic ripple effect. ♦

NAICS Description	2-County Total Employment	Chmura Econ. Job Loss Projections (High End)	Weighted Job Posting Decline (Top 10 Occupations)	Survey of Regional Expert Panel	Telework Potential (NBER)	Overall Qualitative Classification	
Agriculture, Forestry, Fishing and Hunting	560	0.0%	5%	3.53	3.50	8%	Low-Medium Disruption
Mining, Quarrying, and Oil and Gas Extraction	369	0.0%	10%	100.61	4.00	25%	Low-Medium Disruption
Utilities	2,312	0.0%	5%	-34.73	2.00	37%	Lower Disruption
Construction	10,466	100.0%	10%	-24.71	4.44	19%	High Disruption
Manufacturing	26,847	33.8%	10%	5.76	3.50	22%	Medium-High Disruption
Wholesale Trade	9,594	16.2%	25%	88.54	3.50	52%	Low-Medium Disruption
Retail Trade	29,673	46.5%	25%	-84.59	4.89	14%	High Disruption
Transportation and Warehousing	21,744	0.4%	25%	247.98	3.25	19%	Low-Medium Disruption
Information	3,943	6.9%	25%	-30.52	2.13	72%	Lower Disruption
Finance and Insurance	10,432	7.0%	5%	-38.79	2.75	76%	Lower Disruption
Real Estate and Rental and Leasing	2,328	70.0%	5%	-27.37	4.33	42%	Medium-High Disruption
Professional, Scientific, and Technical Services	7,534	84.4%	5%	-10.84	3.50	80%	Low-Medium Disruption
Management of Companies and Enterprises	2,782	100.0%	5%	-36.55	4.00	79%	Medium-High Disruption
Administrative and Support and Waste Management and Remediation Services	16,490	65.2%	5%	10.57	3.22	31%	Lower Disruption
Educational Services	18,616	100.0%	5%	-13.75	5.00	83%	Medium-High Disruption
Health Care and Social Assistance	48,309	8.0%	5%	38.44	4.33	25%	Low-Medium Disruption
Arts, Entertainment, and Recreation	3,430	100.0%	60%	-51.88	5.00	30%	High Disruption
Accommodation and Food Services	20,259	13.8%	60%	-88.61	4.78	4%	High Disruption
Other Services (except Public Administration)	9,533	40.3%	25%	-14.69	4.22	31%	Medium-High Disruption

Data Sources: Chmura Economics via JobsEQ, Chmura Economics Vulnerability Index, National Bureau of Economic Research

Job Postings Indicate Shifts in Labor Market Demand

By Megan Stachowiak, Research Analyst

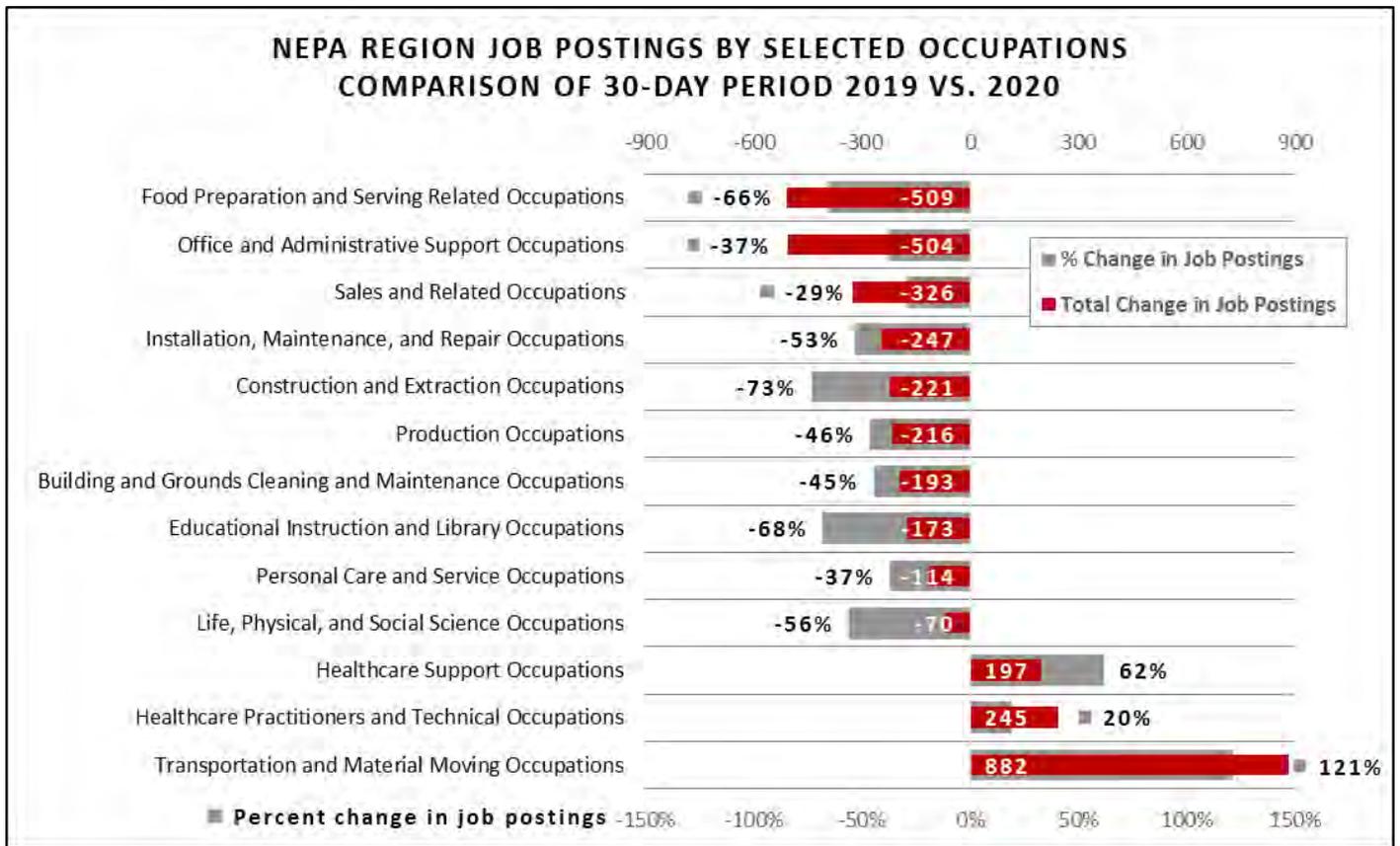
Online job postings can be analyzed as a leading indicator of labor market activity and compared to historical trends to assess labor market demand and show the real-time impacts of COVID-19 on the regional economy. In Lackawanna and Luzerne Counties, online job postings over the 30-day period from March 17 to April 16, 2020 declined by 20 percent or more compared to the equivalent period of 2019. In the Greater NEPA region of counties surrounding Lackawanna and Luzerne Counties, there has been a nine percent decline in job postings compared to last year. In all three regions, there was a sharp decline in the number of job postings following Governor Wolf's March 19th order to close non-essential businesses. Since that time, daily job posting activity in all three regions has generally trailed 2019 levels and has continued to decline as the coronavirus crisis has persisted.

An analysis of the job posting activity for the broader NEPA region (including Lackawanna and Luzerne counties and the following counties surrounding them: Bradford, Carbon, Clinton, Columbia, Lycoming, Monroe, Montour, Pike, Schuylkill, Sullivan, Susquehanna, Tioga, Wayne, and Wyoming) from mid-March to mid-April 2020 compared to a similar timeframe in 2019 indicates occupations in the region are being affected differently, although very few show overall growth. The occupation groups with both the largest overall total and percentage declines in job postings compared to last year include: Food Preparation and Serving Related Occupations; Construction and Extraction Occupations; and Installation, Maintenance and Repair Occupation. Office and Administration Support Occupations, and Sales and Related Occupations have high declines in total

job postings, but on a percentage basis, the declines are not as significant.

On the positive side, positions in transportation and material moving and healthcare positions have demonstrated growth compared to the comparable 2019 period. The Transportation and Material Moving Occupation group has demonstrated the largest growth in job postings, increasing 121 percent compared to 2019. There has also been growth in health-related occupations, with job postings for Healthcare Support Occupations increasing 62 percent compared to last year, and job postings for Healthcare Practitioners and Technical Occupations increasing 20 percent.

Further analysis into these occupational groups can help identify which specific occupations are most at risk based on changes in job posting activity. Within the Food Preparation and Serving Related



Data Source: Chmura Economics, via JobsEQ. Based on job posting activity from March 19 - April 18, 2019 compared to activity from March 17 - April 16, 2020. NEPA region includes the following counties: Bradford, Carbon, Clinton, Columbia, Lackawanna, Luzerne, Lycoming, Monroe, Montour, Pike, Schuylkill, Sullivan, Susquehanna, Tioga, Wayne, and Wyoming.

Job Postings Data (continued from previous page)

Occupation group, the positions in the NEPA region with the largest declines in job posting activity compared to 2019 are related to the serving of food in an in-person setting. These include food preparation workers, servers, and dishwashers. In the Construction and Extraction Occupation group, job postings for construction laborers, carpenters, and operating engineers and equipment operators have declined the most as widespread construction activity has come to a halt. Maintenance and Repair Workers have seen the largest declines in job postings in the Installation, Maintenance, and Repair Occupation group.

The most in-demand occupations in the Transportation and Material Moving Occupation group are truck and delivery service drivers, and laborers and materials movers. There has been an increasing need for the delivery of goods as Pennsylvania residents are under a stay at home order, and e-commerce sales have increased. Within the Healthcare Support Occupation group, there is an increasing need for home health aides and nursing assistants. The occupations with the largest increases within the Healthcare Practitioners and Technical Occupation group are licensed practical and licensed vocational nurses, nursing assistants, physicians, and respiratory therapists.

While the occupation groups with the largest increases in job posting activity compared to last year are likely more in-demand due to the COVID-19 pandemic, the positive growth in hiring activity can also be attributed to the large presence and increasing growth of these industries in our region prior to the coronavirus outbreak. The Educational Services, Health Care and Social Assistance industry group had the highest proportion of jobs in Lackawanna and Luzerne counties in 2018. The aging demographics in the region help drive the demand for these services. There has also been a shift in our region over the last decade toward transportation, distribution, and e-commerce.

The job posting data used in this analysis is derived from JobsEQ® by Chmura, a proprietary Real-Time Intelligence online job ad data set, pulled from over 30,000 websites and updated daily. All ad counts represent de-duplicated figures. Many extraneous factors can affect short-term volume of online job postings. Time series data can be volatile with trends unrelated to actual changes in demand, and should be interpreted with caution.

While the Institute will be monitoring the actual unemployment and hiring activity over time to confirm the impacts, this short-term snapshot of job posting activity can offer an early indication of labor market shifts. This can be valuable in this time of unprecedented economic

disruption in order to address the workforce impacts by identifying the types of workers that are being displaced and the positions that are becoming more in-demand. ♦

"While the occupation groups with the largest increases in job posting activity compared to last year are likely more in-demand due to the COVID-19 pandemic, the positive growth in hiring activity can also be attributed to the large presence and increasing growth of these industries in our region prior to the coronavirus outbreak."

Specific Occupations with the Largest Year-Over-Year Declines in Job Postings within Impacted Occupational Groups March 19 - April 18, 2019 to March 17 - April 16, 2020			
SOC	Occupation	Change in Job Postings	
		Total	Percent
35-0000	Food Preparation and Serving Related Occupations		
35-3021.00	Combined Food Preparation and Serving Workers, Including Fast Food	-194	-66%
35-3031.00	Waiters and Waitresses	-67	-99%
35-9021.00	Dishwashers	-53	-98%
47-0000	Construction and Extraction Occupations		
47-2061.00	Construction Laborers	-45	-60%
47-2031.01	Construction Carpenters	-26	-87%
47-2073.00	Operating Engineers and Other Construction Equipment Operators	-26	-84%
49-0000	Installation, Maintenance, and Repair Occupations		
49-9071.00	Maintenance and Repair Workers, General	-119	-56%

Specific Occupations with the Largest Year-Over-Year Increases in Job Postings within Impacted Occupational Groups March 19 - April 18, 2019 to March 17 - April 16, 2020			
SOC	Occupation	Change in Job Postings	
		Total	Percent
53-0000	Transportation and Material Moving Occupations		
53-3032.00	Heavy and Tractor-Trailer Truck Drivers	779	628%
53-7062.00	Laborers and Freight, Stock, and Material Movers, Hand	170	90%
53-3033.00	Light Truck or Delivery Services Drivers	51	78%
31-0000	Healthcare Support Occupations		
31-1011.00	Home Health Aides	172	210%
31-1014.00	Nursing Assistants	77	70%
29-0000	Healthcare Practitioners and Technical Occupations		
29-2061.00	Licensed Practical and Licensed Vocational Nurses	96	68%
29-1069.00	Physicians and Surgeons, All Other	38	224%
29-1126.00	Respiratory Therapists	35	233%

CARES Act Stimulus Estimated to Bring Over \$500 Million to Lackawanna & Luzerne County Households

By Kara McGrane, Research Assistant

On March 27th, the CARES Act was signed into law, which included a \$2.9 trillion stimulus package. The stimulus for households includes up to \$1,200 for single filers earning up to \$75,000 per year and \$2,400 for couples filing jointly earning up to \$150,000 per year, plus \$500 per dependent child. Individuals who make over \$75,000 but under \$98,990 would obtain a partial payment which decreases as income increases. Those who make over \$98,990 would not receive anything. Similarly, individuals who file jointly and make over \$150,010 but less than \$197,990 would also get a reduced payment and those who earn over that threshold would not collect a check. These reductions also apply to the additional dependent payment. People who file as head of household are able to receive \$1,200 up until \$112,500, with a ceiling of \$136,000 per year for any payment.

The most recent tax return data from the IRS was used to estimate the proportion of stimulus funding that households in Pennsylvania and Lackawanna and Luzerne Counties will be entitled to, based on 2017 tax return data.

Pennsylvania as a whole will receive an estimated 4.1 percent of the total package, or about \$11.8 billion. This averages out to about \$919 for each Pennsylvanian. Both Lackawanna and Luzerne will receive an estimated 4.5 percent of the statewide total.

Lackawanna County residents will collect about \$984 per person or \$207.4 million, and Luzerne County residents will get a little more at \$997

per person or \$316.7 million. The higher share per resident in the region is due to the smaller share of very high-income households in the two counties compared with the Commonwealth as a whole. Thus, a larger share of households qualify for the full stimulus payment. The nearly \$525 million expected to be received by households is likely to be impactful in reinvigorating the region's economy. ♦

CARES Act Stimulus Allocation			
	Pennsylvania	Lackawanna	Luzerne
	Percent of US Total	Percent of Statewide Total	
Estimated Allocation	4.1%	1.8%	2.7%
Estimated Stimulus to Households (millions \$)	\$11,762.0	\$207.4	\$316.7
Estimated Amount per Resident	\$918.40	\$983.87	\$997.12
Estimated Amount per Resident in Labor Force	\$1,808.54	\$1,962.25	\$2,002.26

Source: Institute analysis of Internal Revenue Service and U.S. Census Bureau American Community Survey data

Significant Housing Impacts for Low-Income Households

By Teri Ooms, Executive Director and Andrew Chew, Senior Research & Policy Analyst

The effects of quarantine and stay-at-home orders are becoming more evident by the day, as so much of the population has been out of work for weeks – with worker displacement certain to extend well into May, and perhaps beyond for some. This economic disruption has led to uncertainty in the housing situation of many Pennsylvanians. The CARES Act allows people residing in federally-backed housing 120 days to live without the worry of eviction. This includes all federally designated housing, those under the rural housing voucher program, and housing under the Violence against Women Act of 1994. For homeowners, it includes those with federally backed mortgages. An individual must still meet rent and mortgage

obligations, but they cannot be evicted or foreclosed in the short term.

Northeast Pennsylvania is home to a large number of vulnerable individuals who could be subject to housing insecurity. About one quarter of the region's households still earn less than \$25,000 per year. Furthermore, renter-occupied households with lower incomes (less than \$35,000) are significantly likelier to be cost-burdened than owner-occupied households with comparably low incomes, or renters with higher incomes.

In Lackawanna and Luzerne Counties and Pennsylvania, renter-occupied households are more than twice as

likely as owner-occupied households to have incomes under \$35,000 per year. Throughout the commonwealth, about 20 percent of homeowners have incomes in this range, compared to 44 percent of renters. This trend is reflected in the two counties. Renters also tend to be younger than homeowners, and the industry and occupation fields that are currently experiencing the most widespread unemployment, such as the service sector, also have a younger than average workforce. The housing challenges posed by COVID-19 will be significant for this large segment of lower-income, service sector employees in rental housing. ♦

Data Spotlight

How have COVID-19 cases impacted the region?

The first table below shows new confirmed COVID-19 cases by week for the last four week, and week to week percentage change. Most counties in the Greater Northeastern PA area saw the most significant declines in new cases between the week of April 13 and the week of April 20th. Lackawanna and Luzerne Counties saw drops of 17 and 18 percent, respectively. However, during the week from April 27th to May 3rd, more counties, including Lackawanna, saw increases in the number of new cases compared with the prior week. The second table below shows the number of new cases per 100,000 population in the previous 14 days, which is being used by state officials as one of several criteria in setting policy around reopening. Most counties in the region have seen a declining trend, and within the last two weeks, several have fallen below the 50 new cases per 100,000 threshold being considered by the Commonwealth.

New Cases: Last 4 Weeks							
	Week of April 6 - 12	Week of April 13-19	Week to Week % Change	Week of April 20 - 26	Week to Week % Change	Week of April 27- May 3rd	Week to Week % Change
Bradford	8	6	↓ -25%	3	↓ -50%	7	↑ 133%
Carbon	43	38	↓ -12%	19	↓ -50%	19	↔ 0%
Clinton	5	3	↓ -40%	10	↑ 233%	7	↓ -30%
Columbia	80	89	↑ 11%	61	↓ -31%	14	↓ -77%
Lackawanna	237	177	↓ -25%	147	↓ -17%	166	↑ 13%
Luzerne	562	295	↓ -48%	241	↓ -18%	205	↓ -15%
Lycoming	13	9	↓ -31%	15	↑ 67%	28	↑ 87%
Monroe	223	147	↓ -34%	95	↓ -35%	89	↓ -6%
Montour	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Pike	87	80	↓ -8%	45	↓ -44%	53	↑ 18%
Schuylkill	85	69	↓ -19%	54	↓ -22%	71	↑ 31%
Sullivan	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Susquehanna	19	32	↑ 68%	13	↓ -59%	4	↓ -69%
Tioga	5	0	↓ -100%	0	↔ 0%	2	↑ 100%
Wayne	28	17	↓ -39%	7	↓ -59%	16	↑ 129%
Wyoming	4	5	↑ 25%	0	↓ -100%	7	↑ 100%
Statewide	9,853	8,085	↓ -18%	7,933	↓ -2%	7,217	↓ -9%
Greater NEPA	1,395	976	↓ -30%	709	↓ -27%	690	↓ -3%

New Cases per 100,000: 14 Day Moving Average																	
	17-Apr	18-Apr	19-Apr	20-Apr	21-Apr	22-Apr	23-Apr	24-Apr	25-Apr	26-Apr	27-Apr	28-Apr	29-Apr	30-Apr	1-May	2-May	3-May
Bradford	19.2	24.0	24.0	24.0	33.5	24.0	20.8	20.8	19.2	16.0	16.0	14.4	16.0	19.2	20.8	17.6	16.0
Carbon	141.0	156.3	144.1	144.1	139.5	133.3	121.1	118.0	105.7	99.6	95.0	102.7	102.7	95.0	96.6	70.5	65.9
Clinton	25.5	25.5	25.5	25.5	20.4	25.5	28.0	33.1	30.6	35.7	43.3	53.5	56.1	58.6	56.1	58.6	53.5
Columbia	230.3	251.1	270.5	276.4	295.7	292.7	283.8	277.9	261.5	252.6	254.1	246.7	234.8	203.6	182.8	157.5	132.3
Lackawanna	225.7	233.6	228.5	221.0	222.0	208.5	205.7	197.3	198.7	187.0	189.3	184.2	173.5	165.1	159.5	162.3	169.3
Luzerne	400.1	382.7	340.6	319.7	296.3	269.9	232.5	211.9	198.5	198.2	194.4	196.9	183.2	165.8	157.4	155.5	155.5
Lycoming	21.5	24.1	23.3	26.7	27.6	26.7	25.0	26.7	30.1	30.1	29.3	25.8	27.6	32.7	33.6	38.8	41.3
Monroe	358.0	321.5	282.0	260.2	249.1	238.5	207.8	189.0	177.8	171.3	169.6	165.4	155.4	134.8	128.4	130.7	123.1
Montour	No Data																
Pike	387.0	369.5	355.6	331.2	329.4	315.5	312.0	305.0	273.7	245.8	244.0	245.8	197.0	177.8	162.1	172.6	181.3
Schuylkill	128.1	128.8	124.1	119.4	117.3	110.6	103.9	101.8	99.1	95.8	91.7	93.1	96.4	89.0	88.3	87.7	90.4
Sullivan	15.6	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Susquehanna	126.9	126.9	133.8	138.4	149.9	138.4	133.8	138.4	126.9	129.2	129.2	117.6	113.0	80.7	60.0	57.7	50.7
Tioga	28.6	26.2	26.2	26.2	16.7	11.9	9.5	9.5	7.1	4.8	2.4	0.0	2.4	7.1	4.8	4.8	4.8
Wayne	121.2	115.5	106.0	98.4	96.6	87.1	75.7	73.8	73.8	66.3	56.8	49.2	47.3	43.5	39.8	37.9	47.3
Wyoming	53.0	49.5	42.4	42.4	42.4	42.4	42.4	38.9	38.9	31.8	31.8	21.2	28.3	21.2	17.7	31.8	28.3
Statewide	176.5	178.3	175.3	171.0	169.6	166.3	163.9	160.8	158.0	153.6	151.3	150.1	149.7	141.9	138.0	135.7	133.7
Greater NEPA	224.6	218.7	202.7	192.2	186.8	175.3	160.5	151.9	144.5	139.4	137.9	135.7	127.7	116.1	110.4	109.1	108.7

Data Source: Pennsylvania Department of Health

Vulnerability Index Sheds Light on County Impacts

By Teri Ooms, Executive Director

Presented here is a Vulnerability Index that shows the impact of COVID-19 on employment. The Index, developed by Chmura Economics, is based on the mix of industries in each county and estimated job losses in those industries. A score of 100 is the average job loss in the U.S. Therefore, scores higher than 100 shows increased vulnerability in employment compared to the national average. Conversely, a score of less than 100 shows that a county has less employment loss than the national average. Most counties in the region have better than average scores, with the exception of the Pocono Counties of Carbon, Monroe, Pike, and Wayne. Bradford and Schuylkill Counties have the lowest index scores.

The Vulnerability Index measures each county over two time periods to denote the change in vulnerability. On March 19, Pennsylvania Governor Wolf instituted the first of many orders to slow the spread. March 19 denotes the point where all non-life sustaining businesses were to close. Subsequently, stay-at-home orders were issued on a county-by-county basis. On April 1, the work from home orders became statewide.

The three week change in vulnerability is generally positive for all but Columbia County which noted a slight increase in vulnerability. Pike and Bradford counties demonstrate the most improved vulnerability with decrease of 15.78 and 9.63 points respectively. ♦

"Most counties in the region have better than average scores, with the exception of the Pocono Counties of Carbon, Monroe, Pike, and Wayne."

Vulnerability Index County Summary					
	March 23rd		April 15th		Index Change
	Vulnerability Index	Nat'l Rank	Vulnerability Index	Nat'l Rank	
Bradford	83.17	2,200	73.54	2,218	-9.63
Carbon	136.94	147	130.42	150	-6.52
Columbia	96.30	1,238	96.63	963	0.33
Lackawanna	96.00	1,265	94.14	1,112	-1.86
Luzerne	91.15	1,639	86.80	1,510	-4.35
Monroe	140.41	137	135.49	127	-4.92
Pike	153.49	85	137.71	118	-15.78
Schuylkill	77.36	2,510	72.24	2,288	-5.12
Susquehanna	91.85	1,582	91.66	1,249	-0.19
Wayne	101.95	846	94.57	1,088	-7.38
Wyoming	90.43	1,689	81.48	1,806	-8.95

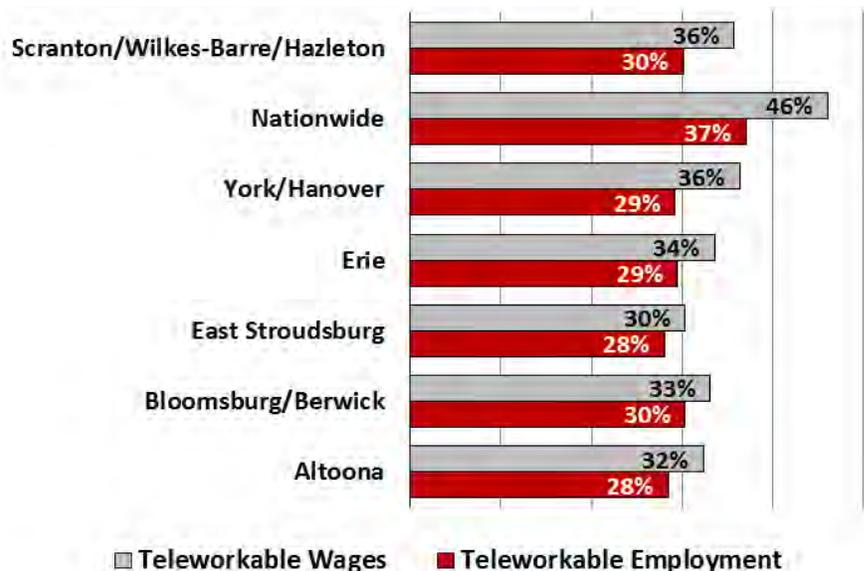
Source: Chmura Economics

How Many Workers Can Telecommute in Northeastern PA?

By Andrew Chew, Senior Research & Policy Analyst

The COVID-19 pandemic has resulted in an unprecedented number of workers doing their jobs remotely. An April 2020 study by the National Bureau of Economic Research analyzed which occupations can feasibly be done at home based on data about those occupations' job duties.

The Scranton/Wilkes-Barre/Hazleton metro area, along with several other comparison regions in Pennsylvania, all have a lower share of teleworkable employment than the nationwide share of 37 percent, though the region is generally in line with or slightly higher than its peers in the percent of jobs that can be done at home. In each region, those jobs account for a disproportionate share of all wages, indicating that lower wage jobs are less likely to be teleworkable than higher wage jobs. ♦



Data Source: Jonathan I. Dingel & Brent Neiman, "How Many Jobs Can Be Done at Home?" National Bureau of Economic Research.

Cartography Corner

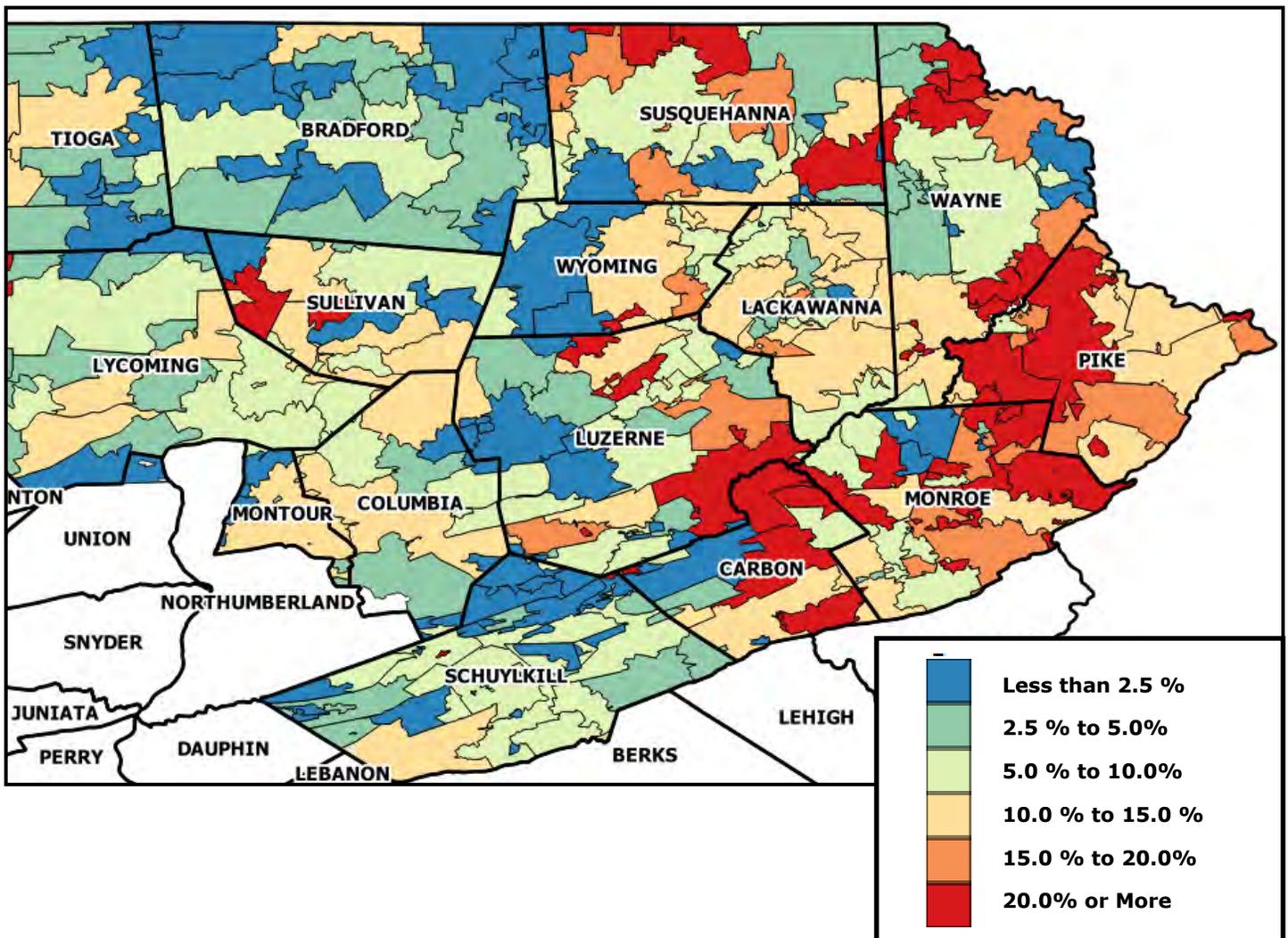
What is the Geographic Distribution of Hardest-Hit Industries?

Data from several sources indicates that the industry groups including arts, entertainment, recreation, accommodation, and food service will suffer from significant disruption as well as experience a lengthy recovery, especially if large gatherings and events and the tourism economy more broadly continue to be affected in the coming months.

The map below shows the percentage of all employment in ZIP codes throughout the region that falls into these industries. Across the region, the average share is 10.6 percent. While most ZIP codes across the region have less exposure in these high-impact sectors, most ZIP codes within Carbon, Monroe, and Pike Counties, and a significant share in Wayne County, have more than 15 percent of their employment in these industries. This finding is in accordance with Vulnerability Index data examined on the previous page.

In Lackawanna County, many ZIP codes have moderate exposure to the selected high-disruption industries, at 10 to 15 percent. In Luzerne County, there is significant variation, from lower risk areas in the western portion of the county to several ZIP codes with more than 20 percent of all employment falling into these industry sectors.

**Percent of Employment in Arts, Entertainment, Recreation, Accommodation & Food Service
By ZIP Code for Counties in Greater Northeastern Pennsylvania**



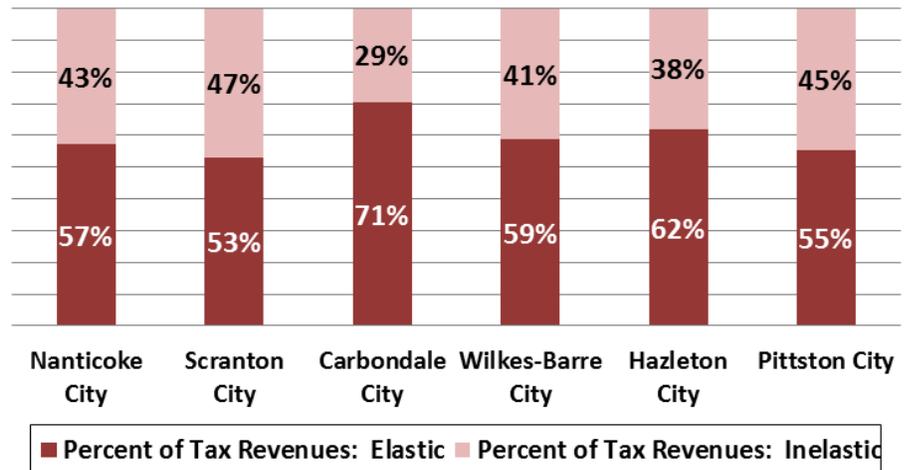
Data Source: Chmura Economics via JobsEQ

COVID-19 Will Affect Local Government Revenues

By Joe Gallo, Research Assistant

The fiscal impact of the coronavirus pandemic will vary between local governments based on a number of factors. One important factor for determining a town or city's level of short-term vulnerability is the extent to which the municipality relies on elastic revenue sources—taxes and fees that are likely to bring in much less revenue during the pandemic. These elastic revenue sources include earned income taxes (EITs), local services taxes, amusement taxes, and business gross receipts taxes, among others. Sales taxes are highly elastic as well, but are collected at the state level only.

Municipalities that rely heavily on these sources of revenue may be more vulnerable to fiscal difficulties in the short term. For example, a city that relies heavily on EIT compared to other taxes is likely to feel an immediate impact as unemployment rates rise. Meanwhile, towns and cities that rely more on tax revenue from inelastic sources (e.g., real estate taxes) are not as likely to experience a severe immediate fiscal impact in the short-term.



Data Source: Most Recent Financial Reports via PA DCED

Of the six cities examined here, all rely on elastic taxes for more than half of their tax revenue as of the most recently available financial reports. Hazleton relies on elastic sources for over 60 percent of tax revenue; this share for Carbondale is over 70 percent. This analysis only considers revenue from taxes rather than non-tax sources such as grants and fees. Both Carbondale and Pittston have a higher share of their revenues from non-tax sources than the other cities shown.

Of the elastic revenue sources, the most prominent for each municipality here is earned income tax. It is important to note that cities with more inelastic or diversified revenue structures may still experience fiscal hardship in the long run; however, they may not feel the effects of the pandemic as immediately as cities that will experience more short-term revenue declines due to their reliance on earned income taxes. ♦

What Will Recovery Look Like?

By Andrew Chew, Senior Research & Policy Analyst

At the time of this publication, significant uncertainty remains around when many economic activities will be able to resume. It does appear certain that in at least some ways, a return to pre-COVID-19 normalcy will be slow.

Resilience

A key part of the regional recovery process will include building resiliency towards similar crises, such as a potential second wave of COVID-19 cases, or other future pandemics or public health crises. The Institute will be conducting research on regional resilience and emergency management, as well as research on the structure of and policy around Pennsylvania's Public Health infrastructure.

Health Care Preparedness

The Institute will also be examining the preparedness and capabilities of the regional health care system in addressing both this pandemic and future spikes in demand for health care. This includes availability of supplies and equipment, staffing challenges, and systemic factors affecting our health providers' ability to respond.

Sector-Specific Recovery

As part of The Institute's survey of regional economic leaders, the experts responding were asked to rate both the relative disruption and potential to recovery quickly of major industry sectors. While many of the most disrupted industries (such as

Accommodation and Food Service, and Arts, Entertainment, and Recreation) were also rated to have lower than average recovery potential, the Construction industry was indicated as being both highly disrupted but relatively quick to recover. Most of the industries that were perceived as less disrupted were also rated as having a quicker recovery potential.

While many questions remain around what a "new normal" will look like or what lessons our region can learn for future emergencies, high quality data and information should guide community stakeholders in our collective response. ♦

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