

The Institute

Turning information into insight

A collaboration 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 & Wilkes University

Research Context and Methodology

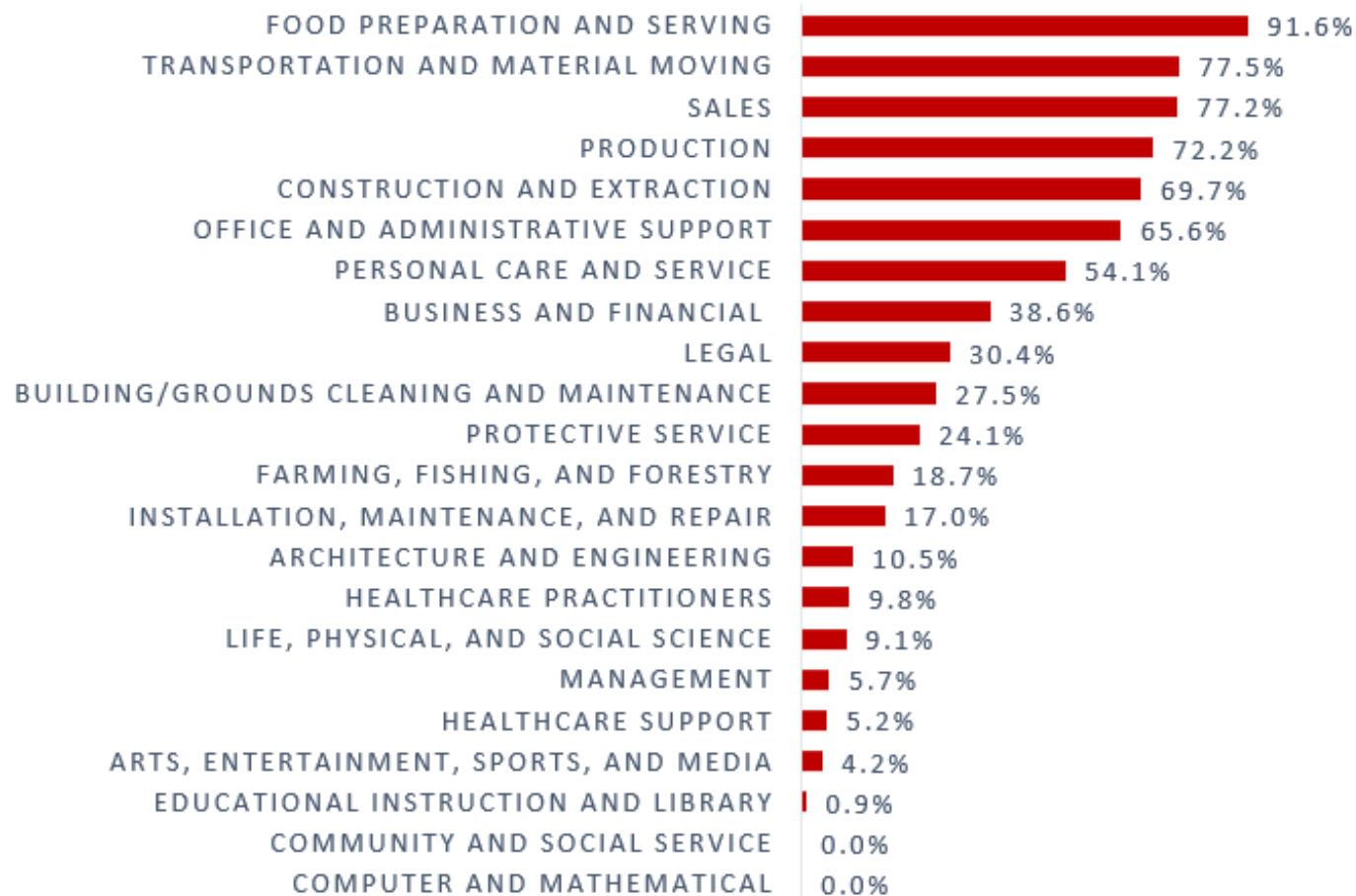
- Previous studies:
 - Frey and Osborne study (2013)
 - NC FutureWork Disruption Index (2018)
 - TN DCED Workforce Disruption Index (2016)
 - *Institute's Workforce Disruption Index (Summer 2019)*
- Methodology:
 - 50%** Share of lost wages from automation-sensitive jobs
 - 25%** Dependency ratio (share of workforce population relative to total populations under the age of 14 and over 65)
 - 25%** Population ages 25-64 with an associate's degree or higher

Automation in Northeastern Pennsylvania

AUTOMATION-SENSITIVE JOBS AS A PERCENTAGE OF ENTIRE WORKFORCE

SCHUYLKILL COUNTY, PA	50.65%
INDIANA	50.45%
WISCONSIN	49.94%
LUZERNE COUNTY, PA	49.93%
COLUMBIA COUNTY, PA	49.74%
WYOMING COUNTY, PA	49.34%
NORTHEASTERN PENNSYLVANIA	49.24%
SUSQUEHANNA COUNTY, PA	48.97%
LACKAWANNA COUNTY, PA	48.86%
MONROE COUNTY, PA	48.61%
BRADFORD COUNTY, PA	48.52%
CARBON COUNTY, PA	48.24%
OHIO	47.56%
MICHIGAN	47.42%
WAYNE COUNTY, PA	47.29%
PENNSYLVANIA	46.22%
PIKE COUNTY, PA	46.16%
DELAWARE	45.70%
NEW JERSEY	43.92%
NEW YORK	42.30%
MARYLAND	41.08%

WORKERS IN AUTOMATION-SENSITIVE JOBS BY OCCUPATION



Approximately 242,478 workers across Northeastern Pennsylvania, or 49 percent of the region's total workforce, is employed in one of the 320 occupations with at least a 70 percent probability of automation in the coming decades.

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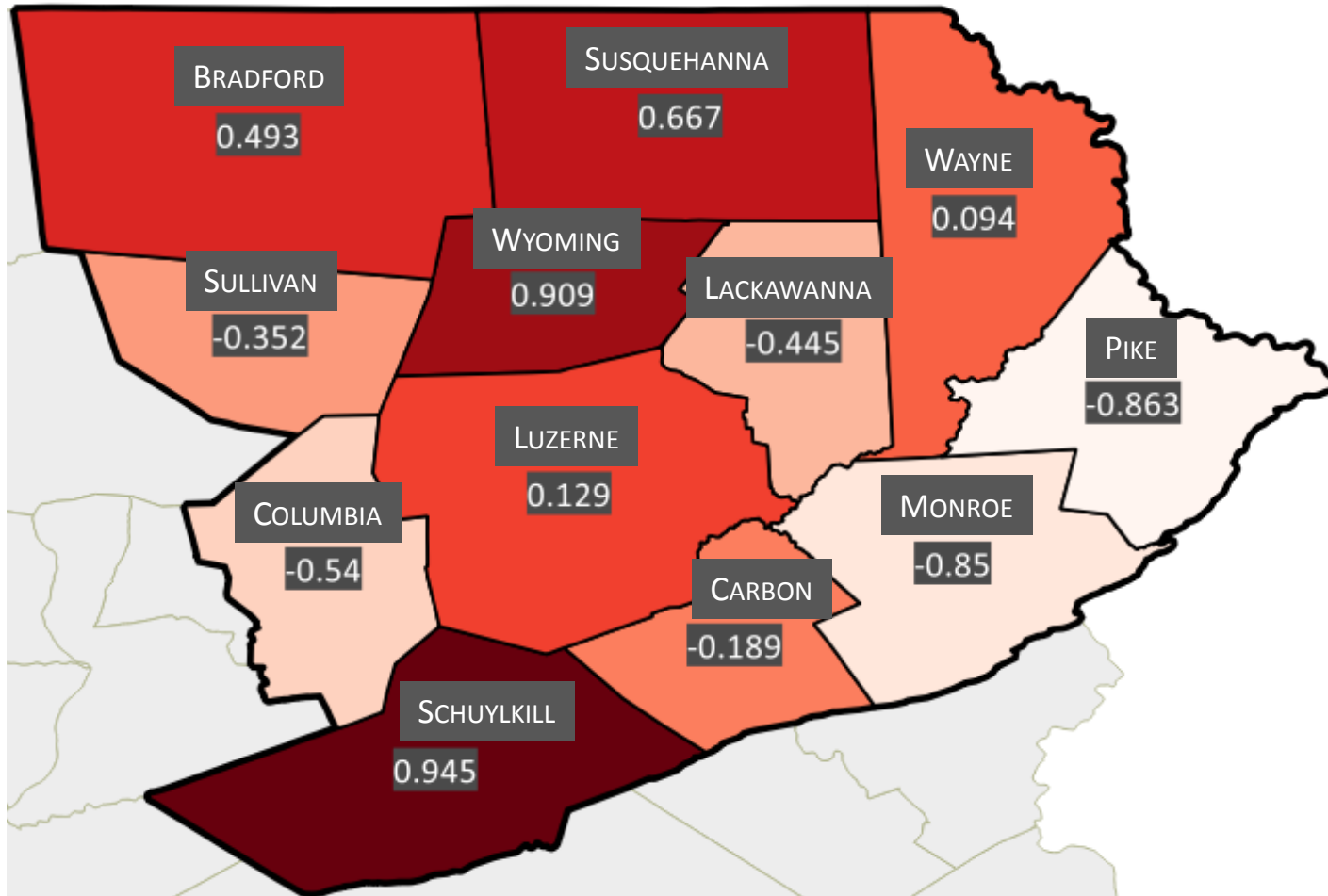
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Workforce Disruption Index: Early Findings

Share of Lost Wages from Automation (25%) + Dependency Ratio (25%) + Educational Attainment (25%)



- Occupations at a greater risk of automation tend to be lower-wage, falling below average wages by 18 to 27 percent across the region.
- More vulnerable occupations: Food Service, Transportation, Sales, Production, Construction
- Less vulnerable occupations: Social Services, Computers and Mathematics, Education, Arts, Healthcare Support, Management
- Less vulnerable regions:
 - Commuter counties (Monroe, Pike)
 - Universities as major employers (State College, Bloomsburg)
 - Urban areas (Philadelphia, Pittsburgh, Harrisburg)
- More vulnerable regions:
 - Rural counties (Bradford, Susquehanna, Wyoming)
 - Heavy-industry oriented (Schuylkill County, Reading MSA, etc.)
- Pennsylvania: Rust Belt or Mid-Atlantic state?
 - Most vulnerable among Mid-Atlantic states
 - Least vulnerable among Rust Belt states

**Counties with a lower score (and lighter color) are deemed less at-risk of workforce disruption from automation, while counties with a higher score (and darker color) are considered more vulnerable.*