The State of Rural Northeast Ohio

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The rural economy in Northeast Ohio (NEO) is home to many economic and community treasures such as the Amish country to the South, rolling vineyards to the East, and Lake Erie shores to the North. In this brief, we examined the economies of eight rural counties: Ashland, Ashtabula, Columbiana, Erie, Huron, Richland, Tuscarawas, and Wayne. These counties were necessary contributors to the NEO economy, accounting for 12% ($30 billion) of NEO’s total output and 14% of its employment (300,000 people) in 2018. Although NEO’s economy is mostly concentrated in its urban areas, rural counties have shown promising growth in recent years, due to the boom in development of oil and gas extraction from the Utica shale deposits. This research brief seeks to identify industries that have the potential to foster economic growth and employment in rural counties of Northeast Ohio. It provides an industrial outlook of the rural counties and discerns employment opportunities for the future.

OUTPUT GROWTH
Gross regional product (GRP) identifies the final value of goods and services in the economy and serves as a wealth creation indicator. Wayne, Richland, and Tuscarawas counties were the largest contributors of output in rural NEO with the GRP amounts of $5.6 billion, $4.8 billion, and $4.6 billion, respectively.

From 2012 to 2018, the output growth in rural NEO counties (46%) exceeded the growth in 10 urban NEO counties (35%) and the state of Ohio (41%). Output growth in Tuscarawas county outperformed all other counties in NEO due to its central location in the oil and gas shale play. From 2012 to 2018, Tuscarawas county almost doubled its output and projections for 2019 show strong growth. Huron, Wayne, and Ashland counties were also growing at a faster rate than the NEO region. Columbiana, Richland, Ashland, and Erie counties, on the other hand, were among the slower-growing counties in rural NEO. Erie county produced the fourth largest output in rural NEO ($4.3 billion) but encountered the slowest growth in output among rural counties (34%).

THE ROLE OF THE OIL & GAS INDUSTRY
A closer look at the output trends in rural NEO counties shows that the growth rate is primarily influenced by the emergence of the Oil and Gas Extraction industry. Five rural counties in NEO were identified as the core Ohio

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1 Northeast Ohio is defined as an 18-county area that includes Ashland, Ashtabula, Columbiana, Cuyahoga, Erie, Geauga, Huron, Lake, Lorain, Mahoning, Medina, Portage, Richland, Stark, Summit, Trumbull, Tuscarawas, and Wayne counties. Rural counties are defined as counties that are outside the four Metropolitan Statistical Areas (MSA) in NEO: Cleveland, Akron, Youngstown, and Canton.

2 The Utica shale is a massive formation that lies beneath portions of Ohio, West Virginia, Pennsylvania, Kentucky, Maryland, New York, Tennessee, Virginia, and a part of Canada. The 2012 United States Geological Survey estimated that the Utica has a recoverable potential of 940 million barrels of oil, and approximately 38 trillion cubic feet of natural gas.

3 Our projections are based on the data from Moody’s Analytics - Economy.com and Reference USA.

4 The terms “output” and “GRP” are used interchangeably here.
Utica Shale counties by the Ohio Department of Natural Resources: Ashland, Ashtabula, Columbiana, Tuscarawas, and Wayne. In Tuscarawas County, the Oil and Gas Extraction industry grew its output from $66 million in 2012 to $1 billion in 2018.

Overall, in eight rural counties, the Oil and Gas Extraction industry added over $1.8 billion in output between 2012 and 2018, representing 20% of the output growth across all industries in these counties. The role of oil and gas production in the output and employment in rural NEO counties will continue to rise as a $6 billion ethane cracker will be built near Pittsburgh, where ethane from the Utica shale will be processed to make ethylene for plastic manufacturing boosting production of household items, industrial chemicals, and pharmaceuticals. U.S. Department of Energy reports an exponential increase in unconventional oil and gas developments across the country. Ohio’s natural gas production from the Utica Shale increased by more than 28 times since 2012. The extraction industry is helping to stimulate a manufacturing renaissance, improving the competitive position of the region. Revolution in oil and gas will continue to support jobs, add to the state and local government revenues, spur growth in consumption, and expand net exports. Over the next five years, employment growth is expected to be highest in Tuscarawas and Wayne counties with the highest demand for Drillers, and Machine- and Service Unit-Operators in Oil, Gas and Mining.

2018 RURAL NEO OIL & GAS EXTRACTION OUTPUTS (NAICS 2111)

<table>
<thead>
<tr>
<th>Rural NEO County</th>
<th>Oil &amp; Gas Extraction Industry Output</th>
<th>Share of Total Output</th>
<th>2012-2018 Output Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuscarawas</td>
<td>$1,029 M</td>
<td>22.4%</td>
<td>$963 M</td>
</tr>
<tr>
<td>Huron</td>
<td>$526 M</td>
<td>18.7%</td>
<td>$488 M</td>
</tr>
<tr>
<td>Wayne</td>
<td>$232 M</td>
<td>4.1%</td>
<td>$168 M</td>
</tr>
<tr>
<td>Ashland</td>
<td>$139 M</td>
<td>7.6%</td>
<td>$129 M</td>
</tr>
<tr>
<td>Columbiana</td>
<td>$103 M</td>
<td>3.7%</td>
<td>$94 M</td>
</tr>
<tr>
<td>Richland</td>
<td>$33 M</td>
<td>0.7%</td>
<td>$31 M</td>
</tr>
<tr>
<td>Ashtabula</td>
<td>$12 M</td>
<td>0.4%</td>
<td>$10 M</td>
</tr>
<tr>
<td>Erie</td>
<td>$8 M</td>
<td>0.2%</td>
<td>$7 M</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$2,082 M</strong></td>
<td><strong>57.7%</strong></td>
<td><strong>$1,890 M</strong></td>
</tr>
</tbody>
</table>

Data Source: Moody’s Analytics

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5 [https://www.eia.gov/state/?sid=OH](https://www.eia.gov/state/?sid=OH)

6 For more information on NEO GRIDs see: Lendel, Iryna; Piazza, Merissa; Demko, Iryna; Yun, Jinhee; and Owusu-Agyemang, Samuel, “Northeast Ohio Front Runners: Groups of Regional Industry Drivers (GRIDs)” (2018). Urban Publications. [https://engagedscholarship.csuohio.edu/urban_facpub/1585](https://engagedscholarship.csuohio.edu/urban_facpub/1585)
Groups of Regional Industry Drivers (GRIDs) are industries that have a strong regional specialization, produce goods that rural counties trade with other regions, and utilize a workforce with a set of particular skills and occupations. Of the 33 NEO GRIDs, 10 industries were identified as drivers of the wealth creation in rural NEO counties. For example, a strong NEO regional specialization in the Clay Product and Refractory Manufacturing industry is attributable primarily to large employers, such as CerCo Corporation in Wayne county and Summitville Tiles in Columbiana county. Richland county shows significant output in the Iron and Steel Mills and Ferroalloy Manufacturing industry, due to large employers such as AK Steel Corporation and Shelby Welded Tube. Also, Worthington Industries—a renowned industrial metals manufacturer headquartered in Columbus—has a facility in Ashtabula county that employs about 120 people.

Regionally concentrated industries have established supply chains and create employment opportunities in other industries through business linkages and employee spending. For example, this industry and employees in supply-chain companies. Some other notable companies in this industry include Beda Oxygenotechnik USA Inc—a manufacturer of oxygen burning and injection lancing equipment in Columbiana county; Warren Rupp Inc—a manufacturer of air-operated double diaphragm pumps in Richland county; and 31 Inc—a manufacturer of tire repair materials and supplies in Tuscarawas county.

Worthington Industries was the largest purchaser of steel in the United States behind automakers in 2018. The largest employer in the “manufacturing” group of GRIDs in rural NEO counties—Other General Purpose Machinery Manufacturing, directly supported 2,344 jobs across the eight counties as well as 1,290 jobs in their supply chain companies and 1,861 induced jobs in consumer demand industries due to spending of employees who work in this industry and employees in supply-chain companies. Some other notable companies in this industry include Beda Oxygenotechnik USA Inc—a manufacturer of oxygen burning and injection lancing equipment in Columbiana county; Warren Rupp Inc—a manufacturer of air-operated double diaphragm pumps in Richland county; and 31 Inc—a manufacturer of tire repair materials and supplies in Tuscarawas county.

### RURAL NEO'S GRIDs

<table>
<thead>
<tr>
<th>Industry</th>
<th>Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clay Product and Refractory Manufacturing</td>
<td>51.6%</td>
</tr>
<tr>
<td>Iron and Steel Mills and Ferroalloy Manufacturing</td>
<td>58.1%</td>
</tr>
<tr>
<td>Other General Purpose Machinery Manufacturing</td>
<td>61.1%</td>
</tr>
</tbody>
</table>

Data Source: Moody's Analytics

### MANUFACTURING INDUSTRIES DRIVING WEALTH CREATION IN RURAL NEO COUNTIES

- SOAP, TOILET PREPERATION & CLEANING COMPOUND
- COATING, ENGRAVING, HEAT TREATING, & ALLIED ACTIVITIES
- BOILER, TANK & SHIPPING CONTAINERS
- OTHER FABRICATED METAL PRODUCTS
- OTHER GENERAL-PURPOSE MACHINERY
- IRON AND STEEL MILLS & FERROALLOY
- CLAY PRODUCTS & REFRACTORY
- ALLUMINA & ALLUMINUM
- FORGING & STAMPING
- BASIC CHEMICAL

Data Source: Rural driver industries were selected from NEO GRIDs based on regional specialization and growth in output, employment and productivity.

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7 https://worthingtonindustries.com/Company/About-Worthington-Industries
8 Authors' calculation based upon IMPLAN estimates.
EMPLOYMENT GROWTH

The economies of rural NEO counties are expected to add 2,719 new jobs, a 1% increase from 2018 to 2019. Nationally and in all NEO counties, output is growing at a much faster rate than employment. The Restaurants and Other Eating Places industry is the largest employer in rural NEO – with 21,373 jobs in 2018 and projected growth of 1.4% in 2019. Although jobs such as Food and Beverage Serving Workers and Supervisors are expected to grow in demand in the next five years, employee earnings in these occupations are below the family-sustaining wage. Another large group – the General Medical and Surgical Hospitals and Offices of Physicians industries – employed nearly 16,000 people in all eight rural NEO counties and is expected to add 159 jobs in 2019. TeamNEO estimates an increase in the demand for high-paying occupations of Health Diagnosing and Treating Practitioners in Wayne, Ashland, and Erie counties. Erie county employs over 5,000 people in tourism-related industries (Traveler Accommodation, Amusement Parks and Arcades, and Other Amusement and Recreation) and is expected to grow its employment by providing 133 new jobs. Direct employment of The College of Wooster in Wayne county is expected to grow in 2019. Wayne county is also expected to add 14 jobs in food manufacturing represented by a dairy producer (Daisy Brand LLC) and a processor of fruits spreads, syrups and ice cream toppings (J.M. Smucker Co.)

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SUMMARY

- In 2018, industries in eight rural NEO counties produced $30 billion of output and employed 300,000 people.
- Output growth in rural NEO counties has outperformed urban NEO and Ohio. Much of this growth can be attributed to the Utica Shale Development.
- Real output in the Oil & Gas Extraction Industry increased from $200 million in 2012 to $2 billion in 2018. Although, the growth in these capital-intensive industries does not generate many new jobs.
- Employment growth is expected to be highest in Tuscarawas and Wayne Counties with the highest demand for Drillers, and Machine- and Service Unit-Operators in Oil, Gas and Mining.
- Iron & Steel Mills & Ferroalloy and Clay Products & Refractory are significant manufacturing concentrations in rural NEO counties.

Please share your comments with Dr. Iryna Demko at i.demko@csuohio.edu

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