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HEARTLAND OF OPPORTUNITY

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HEARTLAND FORWARD
AN INSTITUTE FOR ECONOMIC RENEWAL

ABOUT HEARTLAND FORWARD

HEARTLAND FORWARD'S MISSION IS TO IMPROVE ECONOMIC PERFORMANCE IN THE CENTER OF THE UNITED STATES BY ADVOCATING FOR FACT-BASED SOLUTIONS TO FOSTER JOB CREATION, KNOWLEDGE-BASED AND INCLUSIVE GROWTH AND IMPROVED HEALTH OUTCOMES. WE CONDUCT INDEPENDENT, DATA-DRIVEN RESEARCH TO FACILITATE ACTION-ORIENTED DISCUSSION AND IMPACTFUL POLICY RECOMMENDATIONS.

THE VIEWS EXPRESSED IN THIS REPORT ARE SOLELY THOSE OF HEARTLAND FORWARD.

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AUTHORS

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Julie Trivitt joins Heartland Forward from the University of Arkansas where she was a faculty member in both the Economics and Education Reform departments for the past 8 years. She has several academic publications on the economics of education and education finance. She has lived in the Heartland her entire life and is excited to join the team working to advance economic opportunities for the middle of the nation.

She has a PhD and MS in Economics from the University of Arkansas. Her bachelor's degree is also in Economics and was earned at Missouri State University. She aspires to be an herb gardener, a cruise director, and a librarian.

Joel Kotkin

Described by the New York Times as "America's uber-geographer," Joel Kotkin is an internationally-recognized authority on global, economic, political and social trends. His latest book, *The Coming of Neo Feudalism: A Warning to the Global Middle Class*, deals with the issue of declining upward mobility and growing inequality in almost all middle and high-income countries. Mr. Kotkin is the presidential fellow in urban futures at Chapman University in Orange, California and executive director of the Houston-based Center for Opportunity Urbanism. He is senior fellow for Heartland Forward and Executive Editor of the widely read website NewGeography.com. He is a regular contributor to the National Review, City Journal, Daily Beast, Quillette and American Mind. Kotkin recently completed several studies including on Texas urbanism, the future of localism, the changing role of transit in America, and, most recently, California's lurch towards feudalism. He is co-author of a report published in 2018 on the revival of the American Heartland for the Center for Opportunity Urbanism. As director of the Center for Demographics and Policy at Chapman, he was the lead author of a major study on housing, and recently, with Marshall Toplansky, published a strategic analysis for Orange County, CA.

EXECUTIVE SUMMARY

Can the American dream be saved? The U.S. middle-class, which epitomizes American values such as hard work, commitment to family and the expectation that a relatively secure future is achievable for almost all, is less easily obtained today than in the past 60 years.

Unequal labor productivity gains, where highly educated and high-income workers have seen the largest productivity growth due to technological changes and market forces that have contributed to the income distribution evolving such that income inequality is growing while income mobility is shrinking.

This report looks at opportunity occupations, those that offer middle-class wages but do not require a bachelor's degree, and how readily available those jobs are in the metro and non-metro regions of the U.S. Heartland (the 20 states in the middle of the U.S.). We find that there are opportunity occupations in the Heartland, in relatively large numbers, and those occupations are quite consistent across the Heartland. Jobs as registered nurses, customer service representatives and heavy truck drivers are the three most common routes to a middle-income lifestyle without a bachelor's degree.

Labor markets are still changing rapidly, and these measures bear watching as wages and employment in different occupations adjust to post pandemic conditions.

Key Findings:

- Opportunity occupations make up a significant share of the jobs available in the non-metro as well as the metro regions in the Heartland — more so than the non-Heartland comparison states.
- In general, the Heartland offers more opportunity jobs than low-wage jobs, but it is not true for all states individually.
- Many of the most common opportunity occupations are predicted to have negative job growth over the next five years, which is concerning.
- Other occupations in health care, transportation and logistics may replace the middle-wage jobs with minimal retraining.
- Some occupations earn drastically different wages in different regions within the same state. This may present opportunities for more workers to earn middle-class wages with short relocations.
- Infrastructure dollars applied toward strengthening the middle-class may be most effective if deployed in a way that contributes to opportunity employment for blue-collar workers.

The U.S. middle-class – defined as an aspirational class that is neither rich nor poor – emerged broadly in the 19th century but came to dominate American society and economy in the 20th century.

It emerged as the envy of the world from the twin trials of the Depression and World War II and the clear winner in the evolving industrial economy. Between 1940 and 1950, the incomes of the bottom 40 percent of American workers surged by roughly 40 percent, while the gains in the top quintile were a modest eight percent and the top five percent saw their incomes drop slightly.[1] The "new industrial state" gave workers an escape from "the wretched freedom of the slums," as John Kenneth Galbraith put it.[2]

The American heartland, most particularly the highly unionized industrial Midwest, epitomized these changes. By the 1960s, the American labor movement could boast of "developing a whole new middle-class," said Walter Reuther, president of the United Auto Workers. Industrial laborers could afford to buy homes, send their kids to college and live the kind of life only the affluent had previously enjoyed.[3]

Yet this progress began to reverse in the 1970s. A combination of public policies and continued technological progress has caused the income distribution to diverge, with fewer households in the middle and an evolving economic divide. From 1971 to 2019, the percentage of Americans in the middle-class shrank.[4] Some argue that a shrinking middle-class is not a problem as some middle-class members are moving upward. Yet, most Americans recognize the income distribution is diverging and agree that income inequality is a growing concern.[5] History has given us plenty of reasons to be wary of economies with a working-class and wealth-owning

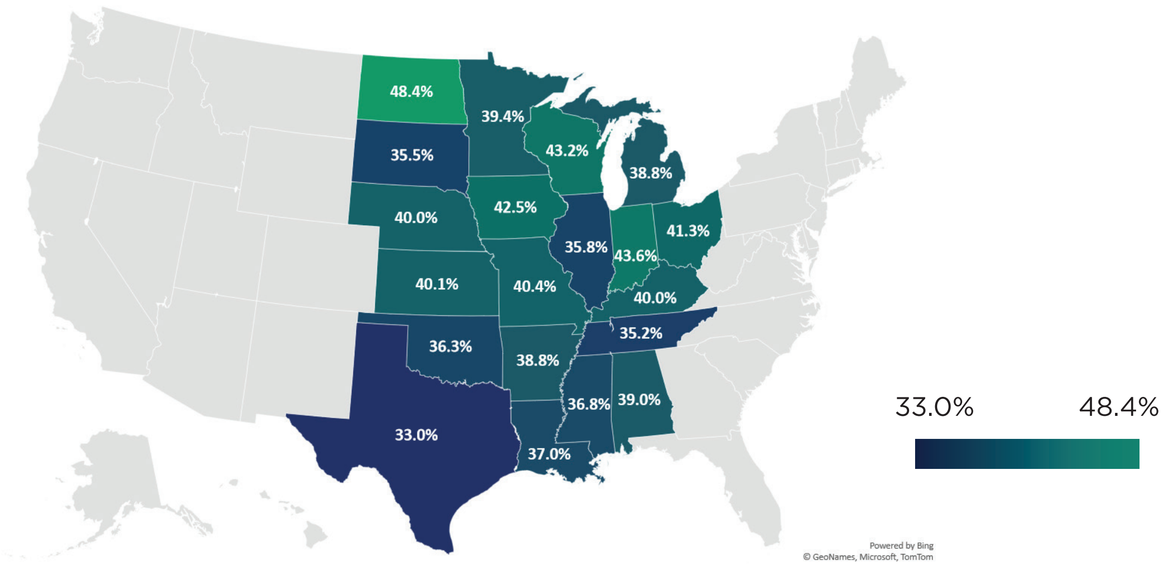
class with few people in between.
There is no escaping the reality that by all measures, income inequality has increased in the U.S. over the past 40 years. The higher wages corresponding to increases in productivity from technological advances have largely gone to the upper and upper-middle-income households. In contrast, lower-middle and working-class households have seen living expenses grow more rapidly than wages.[6] Many upper-middle households, who usually have college degrees, have benefited from these changes, but middle- and working-class households find themselves chasing a dwindling number of stable jobs that offer prospects for financial security. Occupations that provide a middle-income standard of living without requiring a college degree are essential if the American middle class is to survive and thrive.

These patterns are not irreversible, and intentional strategies can maintain and grow the prevalence of opportunities for the non-college-educated to enter the middle-class. This report focuses on how to identify opportunity occupations for working-class people and what locations are well suited to grow and support these occupations. Like the Heartland, the Great Lakes region previously served as the bastion of the old middle-class, we believe the American heartland – which we identify as a 20 state region between the Appalachians and the Rockies[7] – may be the ideal place for restoring blue-collar middle-class opportunity. Surprisingly, we have found that many of the best locales for this restoration are in rural, non-metropolitan areas that have been largely ignored as important growth centers in recent years.

> **“THIS REPORT FOCUSES ON HOW TO IDENTIFY OPPORTUNITY OCCUPATIONS FOR WORKING-CLASS PEOPLE AND WHAT LOCATIONS ARE WELL SUITED TO GROW AND SUPPORT THESE OCCUPATIONS.”**

Opportunity In Heartland Map

Opportunity Occupations



Many observers recognize a stable and growing middle-class as an indicator of a well-developed, modern economy where a sizable portion of the population can accumulate some wealth, educate their children and save for retirement.

It leads to good things for individuals and economic growth on a macro level that generates tax revenue for government operations. Identifying those occupations and measuring their prevalence across the U.S. has been a joint effort by economists at multiple Federal Reserve Banks in the past few years:

- In 2015, four economists from three Federal Reserve Banks published a report identifying opportunities in the 100 largest U.S. cities.[8] They identified occupations frequently referred to as opportunity occupations,[9] which cities have the largest share of opportunity occupations, and the differences that arise from various data sources.
- Since 2015, additional published reports look at the labor markets in Ohio[10] and the Southeastern U.S.[11]
- In 2019, they released another report making the same opportunity determinations, comparing changes over time and comparing metros to the national averages.[12]

All the research on opportunity occupations to date considers the largest metropolitans[13] in the U.S. and explores the metro characteristics associated with larger and smaller shares of opportunity occupations. Unfortunately, this excludes the labor markets in some smaller metropolitans and all the micropolitan and rural areas where 17.5 percent of the U.S. population lives. Recent research from RAND[14] indicates that there are fewer opportunity jobs in non-metro areas.[15] Nationwide, 87 percent of all jobs are in metropolitan areas, but only 83 percent of jobs in Heartland states are in metropolitan areas. Looking at Mississippi and South Dakota in particular, only about half of all jobs are in metropolitan areas.

Rather than being consigned to economic oblivion, our research shows that these non-metropolitan labor markets offer opportunities for blue-collar jobs that are equal to or better than in metropolitan areas. Since much of the labor force in the Heartland (and the rest of rural America) would prefer not to move to larger cities,[16] analysis that focuses exclusively on metropolitan areas may fail to identify pressing challenges facing rural Americans.[17] This report will provide insight into patterns of opportunity in the metro and non-metro regions of the Heartland states and how it compares to other labor markets of the country.

The long period of migration and concentration of people into metropolitan areas may have passed now that many workers have left big cities for smaller towns over the past year.[18] Larger houses with yards are more attractive during a quarantine, but the trend had begun before the pandemic was imminent or in progress.[19] Although many of these workers would be considered highly skilled and employed in high-wage jobs that require college degrees, it is entirely possible middle-skilled workers have the same location preferences and were forced to larger cities by lack of employment options. Other research considering occupational mobility and the wage improvements available to low-wage workers finds that low-wage workers in metropolitan areas are more likely to move into jobs with higher earnings than those in more rural areas.[20] This could suggest rural workers are more likely to be trapped in low-wage jobs for longer portions of their working lives with limited upward mobility, an issue that should be explored as economic policies for rural areas are considered.

Our research shows how living away from the larger, more expensive cities extends middle-class opportunity to non-college-educated populations. In the past, high school graduates could easily find their way into the middle-class American dream characterized by hard work and reasonably comfortable lives where financial obligations can be met each month, saving and investing is possible and time and money is left for occasional vacations. When asked to identify where they belong within our social hierarchy, 89 percent of Americans claim the middle-class[21] even though no measures of the middle-class based on relative income ever includes more than 60 percent of the population.

"...OUR RESEARCH SHOWS THAT THESE NON-METROPOLITAN LABOR MARKETS OFFER OPPORTUNITIES FOR BLUE-COLLAR JOBS THAT ARE EQUAL OR BETTER THAN IN METROPOLITAN AREAS. "

> “OUR RESEARCH SHOWS HOW LIVING AWAY FROM THE LARGER, MORE EXPENSIVE CITIES EXTENDS MIDDLE-CLASS OPPORTUNITY TO NON-COLLEGE-EDUCATED POPULATIONS.”

This suggests over 25 percent of Americans embrace the culture and aspirations of the middle-class, even when it does not match their economic and financial reality. In the same survey, 10 percent identified as lower-income and only one percent identified as belonging to the high-income category.

This extended belief of middle-class membership also represents a shared mindset or expectation of how the U.S. operates. Economists at Brookings Institution[22] show how references to the middle-class vary with the situation and can be based on a measure of relative income, credentials and educational attainment or shared attitudes and expectations about behavior and interactions with the world.

SIDEBAR

RESTORING THE MIDDLE CLASS IN A CHANGED AMERICA

We may be on the precipice of another economic transformation, one that may be a sign of new opportunities for blue-collar America. Even before the pandemic, the demand for blue-collar and other working-class positions was growing; for the first time in decades, wages for working people between 2017 and 2019 rose faster than that of the affluent. This progress was reversed by the pandemic, but now, as we shrug off the last remnants of the pandemic, with high unemployment over six percent, there's a growing shortage of workers and 7.4 million unfilled jobs.

Much of the demand is for precisely the kinds of blue-collar positions most notable in the Heartland, including its non-metropolitan areas. Between September 2019 and September 2020, the biggest job losses occurred in cities, according to the firm American Communities, and based on federal data, at nearly 10 percent, followed by close suburbs, while rural areas suffered job losses of six percent. Today, manufacturing employment is expanding more rapidly than in almost four decades, and job openings for the industrial sector are up 75 percent since last February. Companies like John Deere, that has orders a mile long due to a worldwide surge in commodity prices, are struggling to keep pace due to a persistent lack of workers willing to take jobs in its Iowa factories.

These shortages are likely to continue and could help the Heartland's blue-collar sector, in particular. Arvind Kaushal, leader of the manufacturing practice at Booz & Company, estimates as many as 600,000 new manufacturing jobs cannot be filled. The current shortage of welders is estimated to grow to 400,000 by 2024. Much the same can be said about logistics, which basically kept the country running amidst the pandemic lockdowns. Now there are concerns that a shortage of tanker drivers could restrict gas deliveries this summer. The short fall is now so severe that Amazon has set up its own incubator for new trucking companies.

This phenomenon is likely to continue, given low birthrates and stagnant growth in the labor pool which is likely to persist in the immediate future. It will become even more evident if the Biden Administration, like its predecessor, focuses on expanding American manufacturing, and reshoring production from abroad. This is one of the few issues that most liberals and conservatives agree upon, as shown by the near unanimous support for the trend towards reshoring, as we, Heartland Forward, recently demonstrated in a report.

Our goal is to identify "opportunity occupations" for the non-college educated.

To do this we follow the strategy used by previous researchers[23] to identify the most frequent opportunity occupations. We classify occupations into three categories based on the wages paid and educational credentials needed to obtain employment in the field as follows:

- Low-wage jobs are those that pay less than enough for financial security when adjusted for the cost of living in a region.
- High-wage jobs pay enough for financial stability but require a four-year college degree to be considered for employment.
- Opportunity occupations provide wages high enough for financial stability but do not require four-year college degrees for employment.

This report, however, varies from previous analyses in a couple of important ways. The first is to incorporate non-metro labor markets. Previous work focused exclusively on the metropolitan areas across this country, whereas this report considers the metropolitan and non-metropolitan areas of the Heartland states. Analyzing data from labor markets smaller than metropolitan statistical areas does create additional challenges due to the large number of occupations for which there are too few employees to have reliable measures of wages in a region. These limitations prevent the analysis of individual small towns with any degree of confidence in the findings. To overcome this, each state is aggregated into two regions: metro areas, which are counties identified by the Office of Management and Budget (OMB) in bulletin 18-03 to be in metropolitan statistical areas, and all other counties we call the non-metro areas. Non-metro areas would include micropolitan and more rural areas of a state.

The second way this analysis varies from previous studies is determining the income threshold used to identify opportunity occupations. This analysis uses 300 percent of the federal poverty rate. In 2019, this was $37,470 before adjusting for the regional price parity. Previous studies use the national median income adjusted for local prices. The concern with using a relative income measure is that it guarantees 50 percent of jobs will be classified as low-wage (all those below the median wage), and about 25 percent of jobs (50 percent less the percent of jobs requiring a college degree) will be classified as opportunity occupations regardless of the standard of living provided by the median wage. By setting an objective threshold to determine middle-income, this analysis intends to identify jobs that can provide the financial stability associated with the middle-class and does not restrict (or guarantee) the percentage of the labor force that will achieve (or fail to achieve) any of these designations.

Income calculations are made for each occupation by combining wage and hours worked information from multiple datasets. Occupation Employment Statistics (OES) comes from the Bureau of Labor Statistics (BLS) dataset for 2019.[24] BLS collects wage data for each occupation in all metropolitan areas and each of the non-metropolitan regions of the state.[25] If an occupation is coded as having an annual wage regardless of hours worked, such as for teachers, then the median annual wage reported is used as annual income. For other occupations, annual income is calculated by taking the median hourly wage and multiplying by the number of hours usually worked per week multiplied by 52 weeks per year.

The hours worked per week are estimated from the Current Population Survey (CPS) 5-year sample for 2019. For each occupational code, the average weekly hours worked for the national sample are calculated and applied to all local labor market data. For most occupations (615 out of 718,) the usual hours worked per week is 40. Eighty-six occupations reported fewer than 40 hours per week, and only 17 reported working more than 40 hours in a standard week.

The median income for each metro area in a state is averaged to determine if that occupation provides opportunity wages in the state's metropolitan areas. The median income for an occupation in the non-metropolitan regions of a state is also averaged to determine opportunity wages in the rural parts of the state. This allows us to observe urban/rural differences, but does not allow us to explore variation between different metropolitan areas within a state. Differences across metropolitan areas are documented in other work and are not the focus of this report.

We use the education level needed for entry into each occupation from O*NET Job Zones using national labor market data for all workers employed in the occupation in 2019. Previous studies show educational requirements may vary over time with the business cycle and over place as employers' educational requirements may vary by city. Previous analysis also shows that employers in the center of the country tend to have lower educational requirements for entry level positions,[26] so using national education levels for this analysis may cause the number of opportunity occupations to be understated in the Heartland. Previous studies have also utilized educational requirements posted in recent job postings rather than all people currently employed in an occupation to determine what educational credentials are required. This may more accurately reflect expectations for current job seekers, but it is not a viable option for analyzing more rural areas. It requires many posted openings for each occupation within a relatively short time frame.

The local and regional employment estimates used in this report come from Chmura's JobsEQ data platform.[27] The JobsEQ data classifies all jobs into one of 805 SOC-Codes, although only 718 unique SOC-Codes had sufficient employment to be analyzed. Some regions had far fewer occupations represented – there are few sailing jobs away from major bodies of water, few agriculture specialists, conservation workers, or wind turbine technicians in metropolitan areas, and few transportation security agents or elevator inspectors in non-metro areas. Even when jobs exist in an area, they may not be included in the dataset if there are too few workers in the role to have a reliable estimate of the median wage in that region.

Here's the surprising news: the non-metro regions of the Heartland have a larger percentage of jobs that qualify as opportunity occupations.

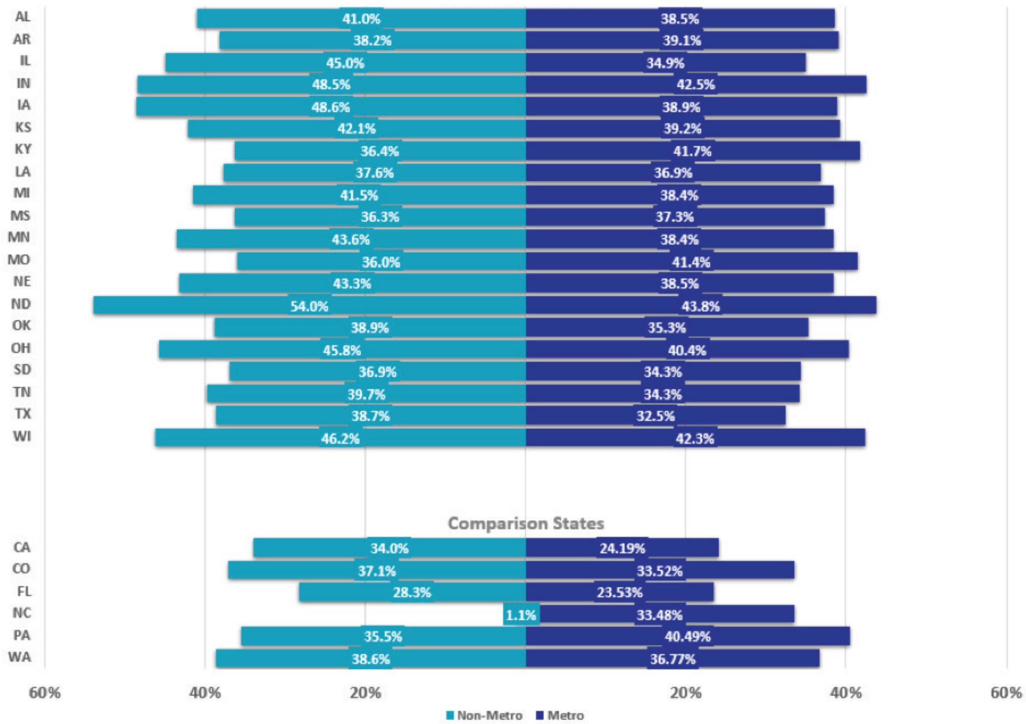
The 20 Heartland states have an average of 38.4 percent of jobs that qualify as opportunity occupations in metro areas and 41.9 percent in non-metro areas.[28] The three states with the highest rate of opportunity jobs in non-metro areas are North Dakota, Iowa and Indiana with rates of 54.0, 48.6 and 48.5 percent respectively. North Dakota's high share of opportunity jobs is likely influenced by the increased wages from the growth of resource extraction in recent years, but less energy-rich Iowa has several occupations where the median wage in non-metro areas is higher than in the metro areas despite the lower cost of living.

Even though opportunity occupations pay a middle-income wage, they typically do not pay as well as jobs that require a four-year degree and the percent of the labor force that has a four-year degree varies from state to state. It could be that states with a high share of opportunity occupations do not have people qualified for higher paying positions requiring college degrees. Since this analysis is less concerned with college graduates and more focused on other opportunities, we consider the ratio of opportunity occupations to low wage occupations (Table 2). This number can be interpreted as the number of jobs that pay middle income for every low wage job available. If this ratio is larger than 1.00, it indicates more opportunity jobs than low-wage jobs exist in the region. The higher the ratio, the more plentiful are good jobs in a given area.

Opportunity Occupations (Percent of All Jobs)

Heartland States

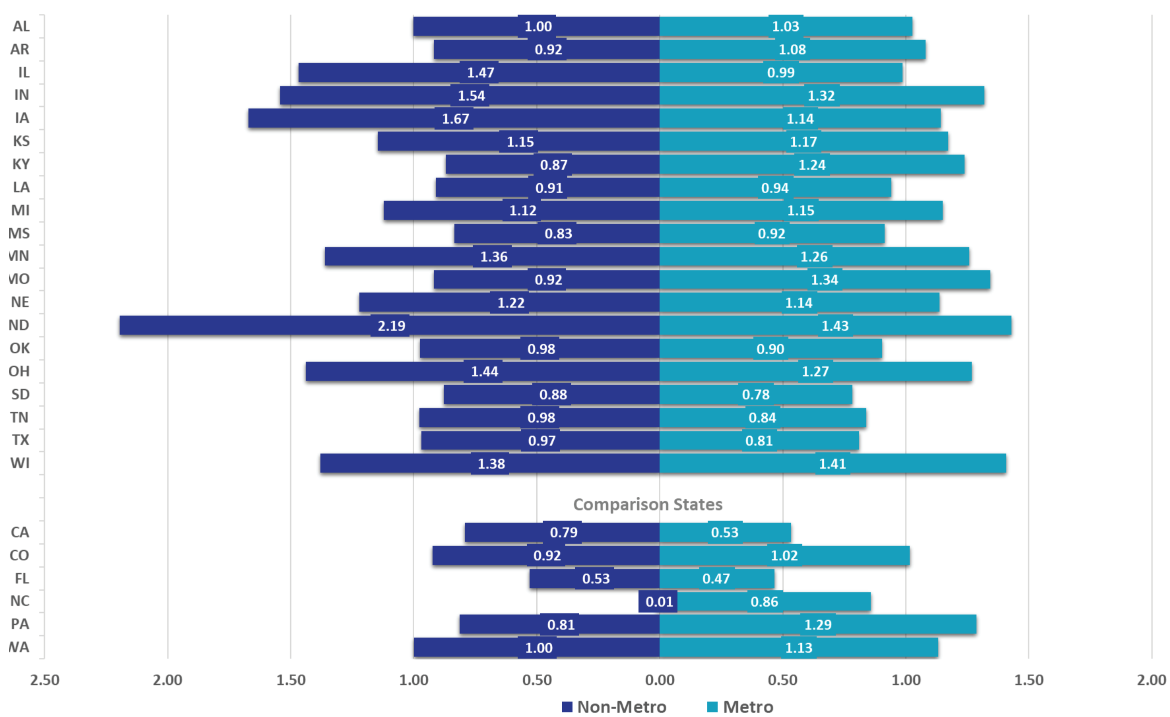
Figure 1



Ratio of Occupation/Low-Wage Jobs

Heartland States

Figure 2



“GENERALLY SPEAKING, OPPORTUNITY OCCUPATIONS ARE AS READILY AVAILABLE IN NON-METRO AREAS OF THE HEARTLAND AS THEY ARE IN METROS.”

Our findings suggest that both metro and non-metro regions of Heartland states generally have higher percentages of good paying “opportunity jobs.” Generally speaking, opportunity occupations are as readily available in non-metro areas of the Heartland as they are in metros. In Missouri and Kentucky, opportunity jobs are much more abundant in metro areas, but in Illinois metros have more low wage jobs available while non-metro areas offer more opportunity jobs. Some state labor markets, such as Louisiana, South Dakota and Mississippi, are dominated by low-wage jobs in all regions of the state, which is a much larger concern than variation between metro and non-metro regions. Other states, which fortunately includes most of the Heartland, have more opportunity than low-wage jobs in both the metro and non-metro regions. North Dakota, Alabama, Iowa, Indiana, Michigan, Minnesota, Nebraska, Ohio and Wisconsin are all included in this category.

WHAT ARE THE OPPORTUNITY OCCUPATIONS?

Much like previous reports on opportunity occupations, we find strong consistency in which occupations provide the largest share of jobs in each state.

These occupations are also consistent across metro and non-metro regions of the states. There are eight occupations that most consistently show up in the list of the top-ten opportunity occupations in the metro and non-metro regions of the Heartland states. These occupations and corresponding unemployment and projected growth rates are listed in Table 1.

The Heartland is fortunate to have a lower unemployment rate than the nation overall and this lower unemployment also holds true for the common top opportunity occupations. This is great news for workers who currently have the necessary skills and are looking for employment opportunities. When looking forward to job growth projected for the next five years, the unfortunate news is that the Heartland is projected to have lower employment growth overall, and the top opportunity occupations are included in the lower projected growth as well. In fact, half of the opportunity occupations are projected to have employment declines rather than growth in the next five years.

"THERE ARE EIGHT OCCUPATIONS THAT MOST CONSISTENTLY SHOW UP IN THE LIST OF THE TOP-TEN OPPORTUNITY OCCUPATIONS IN THE METRO AND NON-METRO REGIONS OF THE HEARTLAND STATES."

Table 1

Top Opportunity Occupations in the Heartland

	Employment	Unemployment Rate		5 Year Projected Growth	
Occupation	HEARTLAND	HEARTLAND	U.S.	HEARTLAND	U.S.
Registered Nurses	1,238,304	2.0%	2.2%	2.5%	3.1%
Heavy & Tractor-Trailer Truck Drivers	951,548	6.3%	6.7%	1.0%	1.3%
Maintenance & Repair Workers, General	560,100	6.5%	7.0%	2.0%	2.3%
First-Line Supervisors of Retail Sales Workers	554,682	4.0%	4.3%	-2.8%	-2.6%
Bookkeeping, Accounting, & Auditing Clerks	621,799	4.6%	5.0%	-2.7%	-2.6%
Construction Laborers	544,150	11.7%	12.4%	3.1%	3.4%
Secretaries & Administrative Assistants, Except Legal, Medical, & Executive	784,430	4.5%	5.0%	-5.1%	-4.9%
Customer Service Representatives	1,137,224	7.9%	8.4%	-0.5%	-0.1%
All Occupations	58,971,554	7.5%	8.1%	1.6%	2.1%

Forward-looking policymakers should consider which occupations are projected for growth and make sure conditions are in place to allow ample opportunities for career paths that include these occupations. Opportunity occupations within the industries that have the highest projected growth rates in the Heartland region are listed in Table 2.

Table 2

Opportunity Occupations Expected to Grow

	Employment	Unemployment Rate		5 Year Projected Growth	
Occupation	HEARTLAND	HEARTLAND	U.S.	HEARTLAND	U.S.
Physical Therapist Assistants	40,758	8.9%	9.7%	14.4%	14.8%
Dental Assistants	119,435	9.2%	9.8%	3.5%	3.6%
Occupational Therapy Assistants	19,788	8.3%	9.0%	14.8%	15.5%
Licensed Practical & Vocational Nurses	311,002	3.2%	3.4%	3.7%	4.1%
Medical Dosimetrists, Medical Records Specialists, & Health Technologists & Technicians, All Other	311,002	3.2%	3.4%	3.7%	4.1%
Secretaries & Administrative Assistants, Except Legal, Medical, & Executive	132,526	3.1%	3.4%	3.2%	4.0%
Radiologic Technologists & Technicians	85,583	2.1%	2.3%	2.3%	2.9%
Dental Hygienists	79,233	8.8%	9.6%	3.0%	3.1%
Occupational Therapists	52,570	2.8%	3.1%	6.8%	7.3%
Surgical Technologists	46,542	3.1%	3.3%	2.3%	3.0%
Diagnostic Medical Sonographers	28,515	1.1%	1.3%	7.0%	7.5%
Computer User Support Specialists	230,127	4.1%	4.5%	4.6%	5.0%
Light Truck Drivers	410,550	6.3%	6.7%	3.2%	3.9%
Industrial Truck & Tractor Operators	303,092	8.6%	9.1%	1.9%	2.2%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	184,364	3.9%	4.2%	2.8%	3.1%
All Occupations	58,971,554	7.5%	6.7%	3.2%	3.9%

Once again, for opportunity occupations within growth industries, we see slightly lower unemployment rates currently but also lower five-year projected growth rates in the Heartland than in the U.S. overall. Despite this lower relative growth, these occupations pay opportunity wages across the Heartland and are projected to grow more rapidly than the overall job growth rate. The Heartland Health Products company (www.heartlandhealthproducts.com), based in Fairfield, Ohio, outside Cincinnati, is developing a personal protective equipment (PPE) strategy that includes small, highly automated plants scattered around the country. Heartland Health already has eight plants, each employing 30 people making masks, gowns, needles, and other products. Current plans are to boost the number of plants to over 30. Amanda Engel, company co-founder and VP of Sales and Marketing, suggests the China challenge can be met by highly automated production – including a machine that makes 500 masks a minute – using the skilled labor that is concentrated in the country's Heartland. "COVID forced us to change. You have to change the supply chain world, and that's a big opportunity we see across the board," she notes. "The key is to reinvent yourself: innovate and use the skills in the labor force."

SIDEBAR

TRAINING IMPERATIVE

The future of blue-collar work rests largely on training. Much of the problem stems from lack of choices, or failure to market opportunities to the new generation. "We have told young people that you essentially have two choices in life," said Diane Auer Jones, now vice president for external and regulatory affairs at the Career Education Corporation, a for-profit, post-secondary education company. "Essentially, they are told to get a four-year degree or face a life 'on Skid Row'." Even among those who manage to finish, more than 40 percent of recent graduates aged 22 to 27 are underemployed, meaning that they're working in jobs that don't require their degree, the Federal Reserve Bank of New York reports.

For many, however, the option of trade school often leaves them better off financially than those who attend, and even graduate, college. Indeed the U.S. Department of Education reports people with career and technical educations are also more likely to be employed than their counterparts with academic credentials. In Virginia, Colorado and Texas, where earnings are tracked, students with certain technically oriented credentials short of bachelor's degrees earn an average of from $2,000 to $11,000 a year more than bachelor's degree-holders, the American Institutes for Research finds.

Companies in the Heartland, including rural areas, also can address the labor shortage by reaching out to minorities, immigrants, and women. Dave Kubacki, corporate director of Human Resources Operations at LT Corporation, which operates Quality Steel out of Sandusky, Ohio, admits regarding finding employees that it's "more difficult to recruit good, qualified employees" in the area, which has of now few immigrants. Yet as its operations have expanded from 75 to 130 employees, the company has turned to women, including in skilled positions. In 1997, he notes, the company employed only three women as welders; today the number is twenty-five.

"They have been critical to our expansion," he suggests. "This is purely subjective, but I would say that females seem more diligent versus the male population which used to dominate these fields. You have to adjust to succeed."

In identifying opportunity occupations in a state, the most frequent scenario is that an occupation falls into the same category (either low-wage, opportunity, or high-wage) in both the metro and non-metro regions of the state.

When an occupation is classified in different categories within the same state, it is usually because the market wage is close to the opportunity threshold wage, and once adjusting for purchasing power, it is just above the threshold in one region and just below the threshold in the other. However, there are some notable deviations to this where performing very similar jobs in different parts of the state leads to significantly different incomes. These deviations are worth exploring.

Because labor is provided by humans and humans have preferences, jobs with unpleasant characteristics or jobs that require workers to bear risk may have to pay higher wages in order to attract enough people willing to take the position. Economists refer to these extra wages as compensating differentials.

Fortunately for employers, people have a wide variety of preferences and are free to self-select into occupations which they may find pleasant even if other people find it highly unpleasant. When jobs requiring the same skills and performing similar tasks pay significantly different wages, it may reflect either a market imperfection or an unobservable difference in the productivity of the positions. There were several instances where an occupation was classified as low wage in one region of a state and an opportunity occupation in the other regions of the same state. Occupations that fall into different categories within the same state and the income is more than 25 percent greater after adjusting for purchasing power appear to defy economic expectations of labor markets. While workers may be willing to forgo additional income to live in a region they prefer, this is less likely to occur when exercising location preferences results in a significantly lower income which may cause the household to struggle with financial security.

There were 44 state/occupation combinations where a job in the non-metro regions of a state paid at least 25 percent more and 50 state/occupation combinations where a job in the metro region of the state paid at least 25 percent more. Those occupation and state combinations are listed in Table 3 and Table 4.

Table 3

Opportunity Occupations That Pay More in Non-Metros

Occupation	State	Difference
Sailors and Marine Oilers	KY	56.6%
Foundry Mold and Coremakers	OK	56.0%
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	MS	47.0%
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	OH	44.5%
Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	MS	43.8%
Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	AR	43.7%
Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	IA	41.2%
Packaging and Filling Machine Operators and Tenders	LA	41.1%
Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	AR	40.3%
Weighers, Measurers, Checkers, and Samplers, Recordkeeping	LA	39.5%
Logging Equipment Operators	TN	39.3%
Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	TX	38.4%
Helpers – Production Workers	LA	37.5%
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	IA	37.2%
Slaughterers and Meat Packers	IL	37.0%
Driver/Sales Workers	LA	36.9%
Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	TX	36.5%
Cooling and Freezing Equipment Operators and Tenders	AR	35.5%
Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	MI	33.9%
Manicurists and Pedicurists	TN	33.6%
Packaging and Filling Machine Operators and Tenders	MI	33.1%
Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	TX	32.8%
Food Cooking Machine Operators and Tenders	MI	31.6%
Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	MO	31.4%
Excavating and Loading Machine and Dragline Operators, Surface Mining	TN	31.2%
Tire Repairers and Changers	WI	30.7%
Counter and Rental Clerks	ND	30.1%
Medical Transcriptionists	WI	29.5%
Meat, Poultry, and Fish Cutters and Trimmers	IL	29.5%
Healthcare Support Workers, All Other	ND	29.1%
Conveyor Operators and Tenders	MI	29.1%
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	IL	29.1%
Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	MS	29.0%
Medical Transcriptionists	IL	28.9%
Cooling and Freezing Equipment Operators and Tenders	MN	28.7%
Security Guards	TN	28.1%
Molders, Shapers, and Casters, Except Metal and Plastic	MN	27.5%
Physical Therapist Aides	ND	27.5%
Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	TN	26.7%
Security Guards	AR	26.3%
Merchandise Displayers and Window Trimmers	KS	26.2%
Molders, Shapers, and Casters, Except Metal and Plastic	TX	25.6%
Painting, Coating, and Decorating Workers	TN	25.6%
Foundry Mold and Coremakers	OH	25.2%

Table 4

Opportunity Occupations That Pay More in Metros

Occupation	State	Difference
Glaziers	KS	77.9%
Pesticide Handlers, Sprayers, & Applicators, Vegetation	LA	67.8%
Bailiffs	KY	66.9%
Helpers – Extraction Workers	OH	63.3%
Paving, Surfacing, & Tamping Equipment Operators	KS	63.1%
Tax Preparers	KY	62.5%
Sheet Metal Workers	MI	59.0%
Gambling Surveillance Officers & Gambling Investigators	WI	58.5%
Production, Planning, & Expediting Clerks	AL	53.0%
Prepress Technicians & Workers	AL	49.8%
Photographers	MI	48.8%
Tax Preparers	OH	46.2%
Lathe and Turning Machine Tool Setters, Operators, & Tenders, Metal & Plastic	MO	44.6%
Tile & Stone Setters	IL	44.6%
Audio & Video Technicians	MS	44.4%
Reservation & Transportation Ticket Agents & Travel Clerks	MO	43.3%
Helpers – Pipelayers, Plumbers, Pipefitters, & Steamfitters	OK	42.4%
Printing Press Operators	MS	40.7%
Forest & Conservation Workers	WI	39.7%
Coin, Vending, & Amusement Machine Servicers & Repairers	ND	39.4%
Exercise Trainers & Group Fitness Instructors	IN	39.1%
Audiovisual Equipment Installers & Repairers	KS	38.9%
Travel Agents	MI	38.2%
Correctional Officers & Jailers	MS	37.2%
Bus Drivers, Transit & Intercity	IL	37.1%
Photographers	IN	35.8%
Home Appliance Repairers	AR	35.6%
Opticians, Dispensing	IN	33.0%
Prepress Technicians & Workers	IA	32.9%
Electrical, Electronic, & Electromechanical Assemblers, Except Coil Winders, Tapers, & Finishers	MS	32.6%
Paralegals & Legal Assistants	KS	32.4%
Bus Drivers, Transit & Intercity	WI	31.9%
Drywall & Ceiling Tile Installers	NE	31.2%
Helpers – Installation, Maintenance, & Repair Workers	MS	31.1%
Medical Equipment Preparers	IN	31.0%
Broadcast Technicians	IA	30.9%
Food Batch makers	MS	30.4%
Prepress Technicians & Workers	KS	30.1%
Food Cooking Machine Operators & Tenders	MS	29.8%
Conveyor Operators & Tenders	MS	29.6%
Carpet Installers	MS	28.3%
Computer, Automated Teller, & Office Machine Repairers	WI	28.0%
Photographers	TX	27.5%
Legal Secretaries & Administrative Assistants	AR	27.3%
Audio & Video Technicians	AL	26.8%
Ophthalmic Medical Technicians	KY	26.4%
Bus Drivers, Transit & Intercity	WI	25.7%
Cabinetmakers & Bench Carpenters	IL	37.1%
Public Safety Telecommunicators	AR	25.2%
Public Safety Telecommunicators	MS	25.1%

“THERE IS NO ONE CLEAR REASON WHY SUCH LARGE PAY DIFFERENTIALS EXIST FOR METRO AND NON-METRO AREAS FOR CERTAIN OCCUPATIONS.”

There is no one clear reason why such large pay differentials exist for metro and non-metro areas for certain occupations. It may reflect the added productivity of photographers and tax preparers, for example, in metro areas who can book appointments more closely together or specialize within their field. It may be pay for the added stress of being an emergency dispatcher in urban areas.

They may reflect compensation for the additional risk of being a security guard in non-metro areas. Or they may efficiently reflect the preferences of workers where the skill needs of employers and geographic locations of workers do not currently match up, and workers have a strong geographic preference for their current location. Another possibility is that workers do not realize the extra pay that is possible for a relatively short geographic move or a daily commute in the opposite direction.

If a strong and vibrant middle class is desired, it requires jobs that pay middle income wages without requiring a four-year college degree and burdensome student loan debt that frequently accompanies it.

Currently these jobs are relatively more plentiful in the Heartland than the coasts, but there is no guarantee this will continue given economic and demographic projections. One hopeful sign is the movement of minorities, and growing interest among millennials to explore rural options, as Gallup notes. WCCO Belting, based in rural Wahpeton, North Dakota, has seen a surge of orders from industrial and agricultural clients, in part due to COVID concerns. It has added jobs to the 200-person plant, where half of the employees are female and 14 languages are spoken. "Innovation is the key, and that's what we can provide better than other countries," notes WCCO Belting President Thomas Shorma.

Clearly, labor markets will continue to evolve, and wages will adapt to these influences as well as post-pandemic transitions. However, there are some things policymakers, particularly those in the Heartland, can do to help promote a large and vibrant middle-class of taxpayers, consumers, and innovators to fuel the next generation of economic growth and stability.

1. Recognize what the current opportunity occupations are, particularly in the non-metro regions, and make sure corresponding training programs are available and accessible so lack of training does not become a barrier in some regions. With many of the current and predicted growth occupations in health care and transportation, policies that affect those industries disproportionately, for good or ill, should be scrutinized with an eye to the income distribution as well.

2. Identify high growth industries and occupations and support training opportunities with an eye toward future needs. It may mean a change in labor regulations to allow certified professionals to supervise more apprentices, additional funding for some community college programs, or on the job training dollars targeting specific occupations. Special attention is needed when providing training opportunities for non-metro residents, since a recent survey revealed rural residents are less eager to train for or relocate for new jobs, and are less likely to complete training programs once started.

3. Identify low-wage occupations that employ large numbers of workers and are close to the opportunity wage threshold. Encourage research and investment options that improve the value added or productivity of those jobs so they will support higher, opportunity wages. Investments could take the form of collaboration on enhanced training or capital investments to complement rather than replace labor.

4. Facilitate information sharing on jobs and wages in all parts of the state to mitigate worker/job inefficiencies based on short distances in geographic location. While it was not necessarily the intent, the recent legislation in Colorado requiring accurate pay ranges to be listed on all job postings may lead to better allocations of workers across the state.

There are reasons to believe that, if left unchecked, the increasing income inequality will continue until it precipitates social and political instability. There are also reasons to expect that the innovating pioneers of the American Heartland will find ways to successfully address these new problems if given access to the right tools and latitude to use them where needed. The federal infrastructure bill being negotiated, if passed and deployed effectively, may contribute to the tools the Heartland needs to ensure a viable middle-class for the next generation.

"SPECIAL ATTENTION IS NEEDED WHEN PROVIDING TRAINING OPPORTUNITIES FOR NON-METRO RESIDENTS, SINCE A RECENT SURVEY REVEALED RURAL RESIDENTS ARE LESS EAGER TO TRAIN FOR OR RELOCATE FOR NEW JOBS, AND ARE LESS LIKELY TO COMPLETE TRAINING PROGRAMS ONCE STARTED."

ENDNOTES

1 Galbraith, J. K. (1958). The affluent society. Mentor.

2 Galbraith, J. K. (2007). The new industrial state. Princeton University Press.

3 Green, M. (1996). Epitaph for American labor: How union leaders lost touch with America. American Enterprise Institute.

4 Horowitz, J. M., Igielnik, R. & Kochhar, R. (2020, January 9). Most Americans say there is too much economic inequality in the U.S., but fewer than half call it a top priority. Pew Research Center's Social & Demographic Trends Project. https://www.pewresearch.org/social-trends/2020/01/09/trends-in-income-and-wealth-inequality/

5 Ibid.

6 Shambaugh, R. N. and J. (2020, January 21). Whose wages are rising and why? Brookings.https://www.brookings.edu/policy2020/votervital/whose-wages-are-rising-and-why/

7 DeVol, R. (2021, May 4). Perspectives on Defining the American Heartland. Heartland Forward. https://heartlandforward.org/case-study/perspectives-on-defining-the-american-heartland/.

8 Wardrip, K., Fee, K., Nelson, L., & Andreason, S. (2015). Identifying opportunity occupations in the nation's largest metropolitan economies. Federal Reserve Bank of Cleveland Special Reports. https://www.clevelandfed.org/newsroom-and-events/publications/special-reports/sr-20150909-identifying-opportunity-occupations

9 Opportunity Occupations are jobs that pay middle-income wages but do not require a 4-year college degree.

10 Fee, K., & Nelson, L. (2016). Opportunity occupations in Ohio: Identification, online postings, and employer education preferences. A Look Behind The Numbers, 7(1). https://www.clevelandfed.org/newsroom-and-events/publications/a-look-behind-the-numbers/albtn-20160122-opportunity-occupations-in-ohio

11 Wardrip, K., Fee, K. & Nelson, L. (2019, September 4). Opportunity occupations in the southeast. Workforce Currents, 2019-04. https://doi.org/10.29338/wc2019-04

12 Fee, K., Wardrip, K., & Nelson, L. (2019, April). Opportunity occupations revisited: Exploring employment for sub-baccalaureate workers. Federal Reserve Bank of Philadelphia. http://www.philadelphiafed.org/community-development/workforce-and-economic-development/opportunity-occupations-revisited

13 Metropolitan is used here to refer to metropolitan statistical areas (MSAs) as defined by the U.S. Office of Management and Budget (OMB) and used by the Census Bureau. Currently it includes any geographical region with a core of over 50,000 residents and any neighboring counties with strong economic interdependencies through commuting and employment. Non-metro refers to any counties outside of MSAs.

14 Zaber, M. A. & Wenger, J. B. (2021). Limited opportunity: Changes in employment and the American middle class. RAND Corporation Perspectives. https://doi.org/10.7249/PEA1141-8

15 The Heartland is the region of 20 states in the U.S. that includes Alabama, Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Texas, and Wisconsin.

16 Ingraham, C. (2018, December 18). Americans say there's not much appeal to big-city living. Why do so many of us live there? Washington Post. https://www.washingtonpost.com/business/2018/12/18/americans-say-theres-not-much-appeal-big-city-living-why-do-so-many-us-live-there/

17 Jokela, M. (2021). Urban–rural residential mobility associated with political party affiliation: The U.S. national longitudinal surveys of youth and young adults. Social Psychological and Personality Science. https://doi.org/10.1177/1948550621994000

18 Marcus, J. (2020, November 16). Small cities are a big draw for remote workers during the pandemic. Morning Edition. https://www.npr.org/2020/11/16/931400786/small-cities-are-a-big-draw-for-remote-workers-during-the-pandemic

19 Eisen, B. (2019, September 7). Workers are fleeing big cities for smaller ones—And taking their jobs with them. Wall Street Journal. https://www.wsj.com/articles/workers-are-fleeing-big-cities-for-small-onesand-taking-their-jobs-with-them-11567848600

20 Gabe, T., Abel, J. R., & Florida, R. (2019). Can workers in low-end occupations climb the job ladder? Economic Development Quarterly, 33(2), 92–106. https://doi.org/10.1177/0891242419838324

21 Wenger, J. B., & Zaber, M. A. (2021). Who Is middle class? RAND Corporation Perspectives. https://www.rand.org/pubs/perspectives/PEA1141-3.html

22 Reeves, R. V., Guyot, K., and Krause, E. (2018, May 7). Defining the middle class: Cash, credentials, or culture? Brookings. https://www.brookings.edu/research/defining-the-middle-class-cash-credentials-or-culture/

23 Wardrip, K., Fee, K., Nelson, L., & Andreason, S. (2015). Identifying opportunity occupations in the nation's largest metropolitan economies. Federal Reserve Bank of Cleveland Special Reports. https://www.clevelandfed.org/newsroom-and-events/publications/special-reports/sr-20150909-identifying-opportunity-occupations

24 The data can be downloaded from https://www.bls.gov/oes/tables.htm.

25 The BLS collects data for non-metropolitan regions of counties with each Heartland state having between 1 and 7 non-metro regions.

26 Fee, K., Wardrip, K., & Nelson, L. (2019, April). Opportunity occupations revisited: Exploring employment for sub-baccalaureate workers. Federal Reserve Bank of Philadelphia. http://www.philadelphiafed.org/community-development/workforce-and-economic-development/opportunity-occupations-revisited

27 http://www.chmuraecon.com/jobseq

28 That difference is statistically significant with a p-value of .0019 when a matched pairs two-sample test is conducted.