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Labor Market Studies

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Contents

Summary

The North Central Workforce Development Board (NCWDB) serves the counties of Cameron, Clearfield, Elk, Jefferson, McKean, and Potter in Pennsylvania. Through Workforce Solutions for North Central Pennsylvania ("Workforce Solutions"), the WDB provides workforce development programs and career services to meet the needs of local employers and provides resources for job seekers. Workforce Solutions engaged Chmura Economics & Analytics[1] to prepare three reports covering demographic and economic trends in North Central Pennsylvania, demand forecasts by industry and occupation, and analysis of labor force participation in the region. The three reports are compiled in this document to assist Workforce Solutions in its upcoming strategic planning, and the main findings are summarized below.

The North Central Pennsylvania (North Central PA) region faces a declining population that limits the available number of workers. Between 2010 and 2020, population declined at an average annual rate of 0.5%, or 1,200 people per year. Since 2013, more people are leaving the region than are coming in each year.

As population has fallen in North Central PA over the past decade, the size of the labor force decreased from a high of almost 114,000 at the end of 2008 to 94,661 in August 2022. Between 2010 and 2020, the largest declines in population are among those under 55 years old, White, and female. Population growth in ages 55 and older has partially offset these declines, but retirees who are not working or looking for work lower the labor force participation rate. The size of the labor force in North Central PA dropped less steeply due to the pandemic than in the state and nation; but after partially recovering from the pandemic shock, the labor force has continued to decline.

As of the first quarter of 2022, total employment in the region is 84,170, 3.4% above the first quarter of 2021 (data represent a four-quarter moving average). Employment dropped rapidly in 2020 due to the COVID-19 pandemic, though not as sharply as in the state. As the economy reopened, the region has recovered more than 39% of the lost jobs as of the first quarter of 2022, but still remains below pre-pandemic levels. Unemployment rates in the region have been consistently above the state and national levels since 2012, indicating a greater share of residents looking for work. The unemployment rate spiked in April 2020 to 18.5% in the region due to the pandemic, compared with 15.9% in the state, but has been on a steady decline ever since and fell to 5.4% as of August 2022.

The average annual wage per worker in North Central PA is $44,547, much lower than the state average of $63,909 and the national average of $66,637, partially due to industry mix and cost of living. Additionally, wage growth has trailed both state and national averages. Between 2005 and 2022, the average annual wage per worker in the region grew at a rate of 2.7% per year, compared with 3.1% in the state and 3.2% in the nation.

The largest sectors in North Central PA are manufacturing, health care and social assistance, and retail trade. Including exits and transfers due to retirements and changing jobs, these sectors also have the greatest expected total demand over the next five years, led by manufacturing (7,115 workers over the entire period), then health care and social assistance (6,798), and retail trade (5,573).

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[1] Chmura provides economic software, consulting, and data so clients can make informed decisions that benefit their communities. Our PhD economists, data scientists, and strategic planners guide clients through their local labor market. Over the past 24 years, Chmura has served hundreds of clients nationwide with thoroughness, accuracy, and objectivity

Detailed industries in the region with the greatest expected total demand over the next five years include elementary and secondary schools (2,120), full-service restaurants (1,878), limited-service restaurants (1,768), and powder metallurgy part manufacturing (1,602). These industries have a very high concentration of employment compared to the national industry mix.

The occupation mix in a region follows the mix of industries. The largest occupation groups are production, office and administrative support, and transportation and material moving. All of the top five occupation groups pay average annual wages below the region's average wage. Occupation groups with the greatest expected total demand over the next five years include food preparation and serving related (5,318 jobs), transportation and material moving (5,098), sales and related (4,261), and production (4,216).

The self-sufficiency wage threshold for the North Central Pennsylvania Workforce Development Area for Plan Year 2022 is $34,407.[2] Detailed occupations that pay above a self-sufficiency wage with the greatest expected total demand over the next five years include heavy and tractor-trailer truck drivers (with total demand for 1,001 jobs), general office clerks (737), and general and operations managers (595). Many of the other top occupations paying above a self-sufficiency wage are tied to the manufacturing industry in the region, including maintenance and repair workers (378), industrial truck and tractor operators (321), welders (266), and machinists (261).

The labor force participation rate of the civilian population 16 years and over in the region is 57.0%, well below the 62.8% rate in Pennsylvania and 63.2% in the United States. This translates to nearly 76,800 people ages 16 and over not working or looking for work.
By age, labor force participation in North Central PA is on par with the state or higher between ages 16 and 24, but trails below the state for all older age groups. This is driven by low participation in Clearfield, McKean, and Potter counties, with the lowest participation rates among those between the ages of 30 to 34. By gender, women in North Central PA are participating 2.6 percentage points below the state average, while males in North Central Pennsylvania are participating 7.5 percentage points lower. Increasing male participation by 1 percentage point would add 659 workers in the region.

Participation increases with educational attainment but is lower than the state average for all attainment levels. Increasing the participation among individuals with a high school diploma or equivalent by 1 percentage point would add 515 workers. Workforce Solutions may also pursue strategies to assist formerly incarcerated individuals to participate more in the labor force—nearly 6,000 people are incarcerated at facilities in the region.

Young adults who are not enrolled in school and also not working may lack support networks and have a more difficult transition to adulthood without access to employment, housing, and financial assistance. An estimated 17% of youth and young adults ages 16 to 24 are out of school and out of work in North Central Pennsylvania and surrounding counties, compared with 11% in the state.

Labor force participation in the counties of North Central Pennsylvania varies by as much as 10 percentage points. Participation rates range from a high of 65.0% in Elk County to a low of 54.1% in Potter County. Zip codes in Jefferson, Potter, and Clearfield counties had the highest concentrations of low participation rates and low participating groups. These regions may benefit the most from Workforce Solutions programs designed to assist people in entering and returning to the labor force.

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[2] Self-Sufficiency Wages are determined by the Center for Workforce Information and Analysis (CWIA) and are defined as 200% of the federal poverty level for one adult and one child.

1. Region Definition

The North Central Workforce Development Board (NCWDB) serves the counties of Cameron, Clearfield, Elk, Jefferson, McKean, and Potter in Pennsylvania. This area is referred to as North Central Pennsylvania (North Central PA). The over 5,100-square-mile area sits between the Cleveland-Elyria, Pittsburgh, and Harrisburg-Carlisle metropolitan statistical areas (MSAs). Its lower sections (Jefferson County and Clearfield County) are bisected by Interstate 80, a heavily travelled federal highway.

Through Workforce Solutions for North Central Pennsylvania (Workforce Solutions), the WDB provides a comprehensive list of workforce development programs and career services to fulfill its mission of meeting the needs of local employers and providing resources for job seekers to maximize their career potential. In the current economic environment, as the COVID-19 pandemic eases and a potential recession looms, Workforce Solutions engaged Chmura Economics & Analytics to understand who is not working or unemployed, where they are located, and what occupations are needed to support key regional industries.

Figure 1.1: North Central Pennsylvania Counties
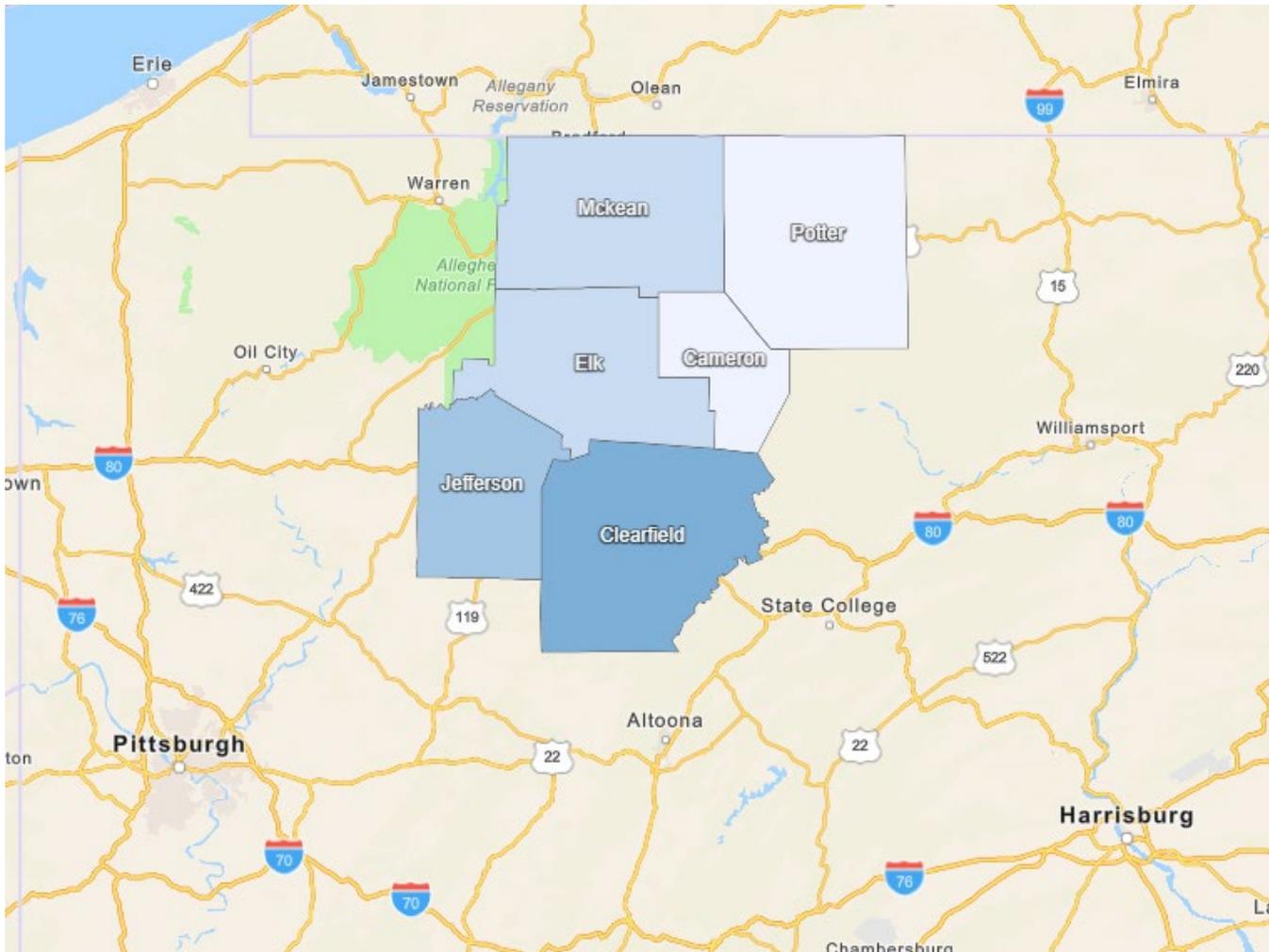
2. Demographic and Economic Trends

2.1 Demographics

This section provides background information for the workforce demand and supply analysis. Key indicators include employment, unemployment, wages, population size, and demographics, with discussion of the local response to national economic events such as the Great Recession of 2007 to 2009 and the COVID-19 pandemic.

The demographics of the North Central PA region depict a region with a declining population that limits the available number of workers. The region faces challenges of relatively lower rates of labor force participation and postsecondary educational attainment, and relatively higher rates of poverty, compared to the state and nation. Lower per capita income and fewer people in the prime working ages of 25-54 suggest opportunities for jobs paying a good wage are not as plentiful, and the region has had more people moving out than into the region every year since 2013.[3]

More than 215,300 people lived in the North Central PA region in 2020 according to the Census Bureau – an annual average decrease of 0.5% (or 1,200 people each year) since 2010. This is slower than national average annual growth rate of 0.6% over this period as well as the 0.1% rate in Pennsylvania. Population growth over this period is similar to other rural areas in the nation that have experienced several years of population decline.[4]

Comparing the population in 2010 with 2020, the region saw declines in all age groups below 55 years except 25 to 34 years. Population ages 55 and older grew, particularly ages 64 to 74, which grew 24% over the decade. This growth of retirees contributes to a declining labor force participation rate as well. North Central PA is over 95% White, and that population decline 6.4% between 2010 and 2020. The Black, other races, two or more races, and Hispanic or Latino (of any race) populations all increased over this period, offsetting some of the population decline. The region has also seen a larger decline in women in the population, down 7.0% over the decade, compared with a 2.9% decline in the male population.

Table 2.1: Declining Population in North Central PA Mostly Under 55 Years Old, White, and Female

	2010	2020	Change	Percent Change
Total Population (ACS)	226,488	215,331	-11,157	-4.9%
Male	113,935	110,622	-3,313	-2.9%
Female	112,553	104,709	-7,844	-7.0%
Under 18 Years	48,600	41,744	-6,856	-14.1%
18 to 24 Years	17,894	16,221	-1,673	-9.3%
25 to 34 Years	24,226	24,359	133	0.5%
35 to 44 Years	30,560	24,219	-6,341	-20.7%
45 to 54 Years	35,934	29,894	-6,040	-16.8%
55 to 64 Years	28,970	33,531	4,561	15.7%
65 to 74 Years	20,226	25,106	4,880	24.1%
75 Years and Over	20,078	20,257	179	0.9%
White	219,837	205,781	-14,056	-6.4%
Black or African American	3,034	3,635	601	19.8%
Some Other Race	1,808	2,145	337	18.6%
Two or More Races	1,809	3,770	1,961	108.4%
Hispanic or Latino (of any race)	3,107	4,236	1,129	36.3%

Source: JobsEQ® by Chmura, ACS 5-year Estimates 2010 and 2020

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[3] Source: JobsEQ® The net domestic migration rate in the region is -3.5 per 1,000 population in 2020, down from 0.5 in 2012.
[4] https://www.ers.usda.gov/publications/pub-details/?pubid=102575

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Looking ahead, projections in JobsEQ anticipate the North Central PA region will decline an annual average 0.6% per year between 2019 and 2034, lowering the population by more than 19,100 people. Population growth in the state of Pennsylvania and the nation are expected to increase an annual average 0.1% and 0.6%, respectively, over the same period.

Population in North Central Pennsylvania is expected to decline slightly faster for women (-0.7% on average per year from 2019 to 2034) than for men (-0.6%), consistent with recent patterns of decline. The population aged 16 to 24 is expected to decline at an average annual rate of 1.3%, compared with -0.8% for ages 25 to 54, and -0.1% for ages 55 and older. [5]

Population growth has varied among the counties in the North Central PA region, as shown in Figure 2.1. Jefferson and Clearfield counties, close to larger metropolitan areas such as Pittsburgh and Harrisburg, had the slowest declines in population growth, with average annual rates of 0.5% and 0.4%, respectively. Elk and McKean County both had average annual declines of 0.7%, while Potter County had an average decline of 0.6%. Cameron County had the fastest decline, at an average annual rate of 1.6%.

Figure 2.1: Population Growth 2010-2020

Source: JobsEQ by Chmura
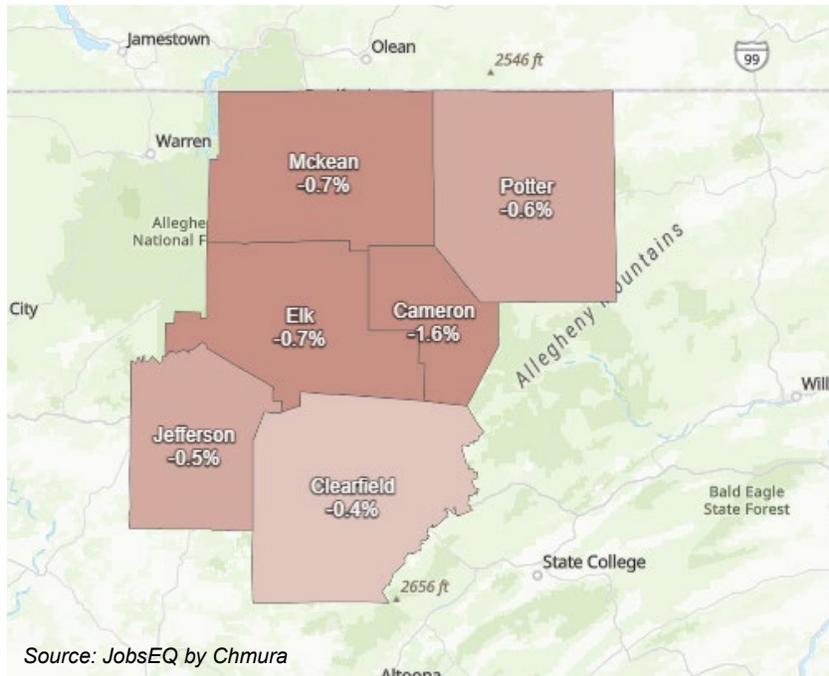
Labor force participation is a measure of the number of people working or looking for work out of the civilian population 16 years and older—it indicates willingness to work and ability of the population to find work. The labor force participation rate in the North Central PA region is low when compared to the state and country. A low participation rate can be due in part because job opportunities are not as plentiful but also because individuals have opted out of the labor force to attend school or care for family members. The labor force participation rate in the North Central PA region is 57.0%, well below the 62.8% rate in Pennsylvania and 63.2% in the United States.

Table 2.2: North Central Pennsylvania Lags Behind PA and U.S.A. in LFPR and Population Growth

	North Central PA	Pennsylvania	USA
Total Population[1]	215,331	12,794,885	326,569,308
Population Annual Average Growth[1]	-0.5%	0.1%	0.6%

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[5] Population projections are computed by Chmura and are consistent at the national level with the national forecast of the U.S. Census Bureau. Historical county-level total population data are per the Census Bureau's Population Estimates, updated through 2019. Age-specific data are imputed by Chmura with the most recent age-specific source data being from the 2010 Census.

	North Central PA	Pennsylvania	USA
Labor Force Size (civilian population 16 years and over)	101,787	6,558,087	164,759,496
Prime-Age Labor Force Participation Rate (civilian population 25-54)	77.8%	83.5%	82.4%
Median Age	45.4	40.9	38.2
Emerging Workforce (population age 0-18)	16,221	2,649,582	73,296,738
Labor Force Participation Rate (civilian population 16 years and over)	57.0%	62.8%	63.2%
Race: White	95.6%	79.4%	70.4%
Hispanic or Latino (of any race)	2.0%	7.6%	18.2%

Source: JobsEQ® by Chmura

1. American Community Survey 2016-2020, unless noted otherwise. Census Population Estimate for 2020, annual average growth rate since 2010.

The North Central PA region also has a low per capita income and higher poverty level relative to other areas in the state. Per capita income is $26,693 in the North Central PA region, compared to $35,518 in Pennsylvania and $35,384 in the United States. An estimated 13.8% of all people in the North Central PA region were below the poverty level compared with 12.0% in the state and 12.8% in the country.[6]

Table 2.3: North Central Pennsylvania Falls Short of PA and U.S.A. in Educational Attainment

	North Central PA	Pennsylvania	USA
Per Capita Income	$26,693	$35,518	$35,384
Poverty Rate	13.8%	12.0%	12.8%
Foreign Born	1.6%	7.0%	13.5%
Speak English Less Than Very Well (population 5 yrs and over)	1.2%	4.4%	8.2%
Educational Attainment (population age 25-64)			
No HS Diploma	8.2%	7.6%	10.5%
HS Diploma or Equivalent	46.0%	31.4%	25.4%
Some College or Associate's	27.3%	26.0%	29.8%
Bachelor's Degree	12.5%	21.7%	21.6%
Postgraduate Degree	6.0%	13.3%	12.7%

Source: JobsEQ® by Chmura

Educational attainment in the North Central PA region falls short of that in the state and country. More than 8% of the population in the North Central PA region does not have a high school diploma, compared with 7.6% in the state of Pennsylvania. Similarly, a high school diploma is the highest educational attainment level for 46.0% of North Central PA region residents compared with 31.4% in the state and 25.4% in the country. The region's attainment of some college or an associate's degree (27.3%) is slightly above Pennsylvania and below the United States, aligned with many of the manufacturing and transportation and warehousing jobs in the region, but relatively fewer residents possess a higher level of education. Only 12.5% of North Central PA residents possess a bachelor's degree and another 6.0% have postgraduate degrees compared with 21.7% and 13.3%, respectively, in the state and 21.6% and 12.7%, respectively, in the country.

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[6] National poverty measures do not take cost of living into account, which may overstate the true poverty rate in the North Central PA region .

2.2. Employment and Wages

Employment is the broadest and timeliest indicator of a region's overall economic health. A growing labor market increases the chances that participants of NCWDB programs and services can find meaningful employment in the region.

In the first quarter of 2022, North Central Pennsylvania had total employment of 84,170, 3.4% above the first quarter of 2021 (data represent a four-quarter moving average). Employment dropped rapidly at the end of the first quarter and over the second quarter of 2020 due to the COVID-19 pandemic and statewide stay-at-home orders. As the economy reopened, the region has recovered more than 39% of the lost jobs as of the first quarter of 2022, but still remains below pre-pandemic levels.

Figure 2.2: North Central PA Employment Leveled Off After Great Recession, Dropped During Pandemic

Source: JobsEQ by Chmura
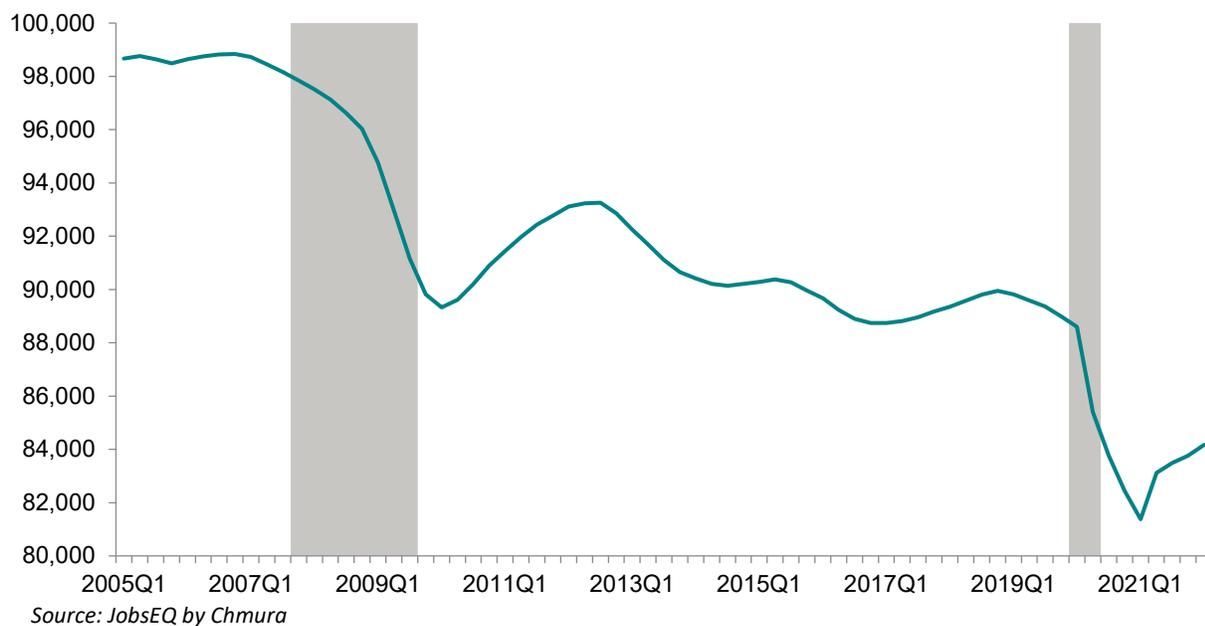
Figure 2.2 depicts trends in total employment in North Central Pennsylvania since 2005. The overall employment trend shows a decline accelerated by two recessions (shown in gray bars in the chart). Employment peaked at 98,841 in the fourth quarter of 2006 before dropping to a trough of 89,328 in the first quarter of 2010 (-9.6%). Regional employment rebounded during 2011 and 2012 following the Great Recession, then declined further and leveled off around 90,000 between 2014 and 2020. Job losses due to the pandemic set employment in the region down to its lowest level recorded in this time frame. As of the first quarter of 2022, the region has recovered an estimated 39% of the jobs lost in early 2020.

In terms of employment growth between 2005 and 2022, North Central Pennsylvania's employment declined at an average rate of 0.9% year-over-year, compared with expansions of 0.2% for Pennsylvania and 0.7% for the nation. As Figure 2.3 shows, North Central Pennsylvania employment fell more sharply and rebounded at a faster pace than the state and the nation during the 2007 to 2009 recession. Job growth from 2010 to 2011 outpaced those two regions, but later lagged state and national averages from 2012 to 2016. Employment growth in the region was steady from 2017 to the fourth quarter of 2018. However, there was a sharp decline in the second quarter of 2020 due to the COVID-19 pandemic, with some recovery over 2021.

Figure 2.3: North Central PA Employment Growth Falls Below State and Nation
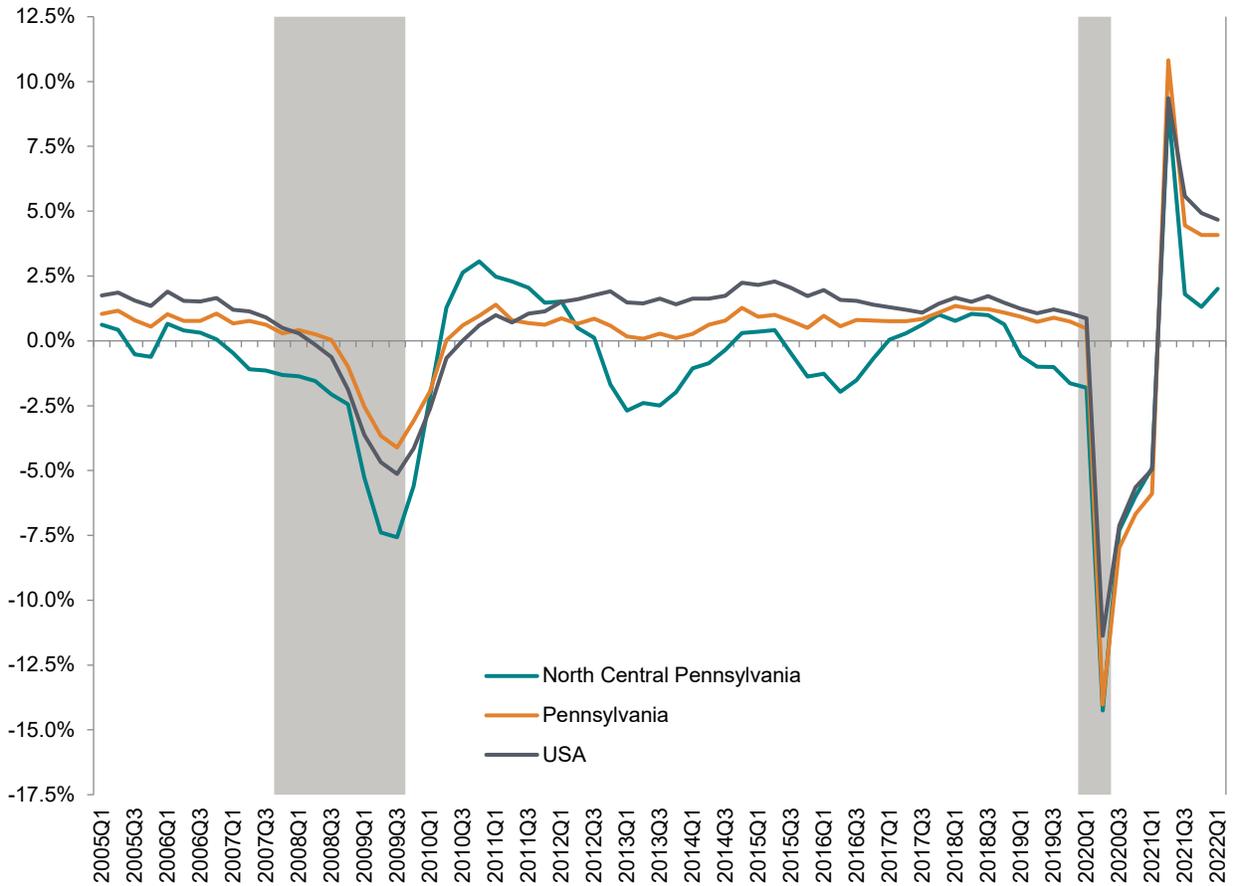
Source: JobsEQ by Chmura

As of the first quarter of 2022, the average annual wage per worker in North Central Pennsylvania is $44,547, significantly lower than the state average of $63,909 and the national average of $66,637 (Figure 2.4). Part of the reason for the lower wages is tied to a lower cost of living in the region, as cost of living is about 8.5% below the national average and almost 13% below the state average.[7] As analyzed later, the lower average wage can also partially be attributed to the industry mix of the region. North Central Pennsylvania has a high concentration of retail trade jobs as well as food services employees, which tend to pay lower salaries. Additionally, wage growth in North Central Pennsylvania has trailed both state and national averages. Between 2005 and 2022, the average annual wage per worker in North Central Pennsylvania grew at 2.7% per year, compared with state and national averages of 3.1% and 3.2%, respectively.

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[7] Source: JobsEQ by Chmura, Cost of Living Data per C2ER COLI, data as of 2022Q1, imputed by Chmura where necessary. North Central PA has a cost-of-living index (base U.S.) of 91.5, compared with 100.0 for the nation and 104.4 for Pennsylvania.

Figure 2.4: North Central PA Average Annual Wages Growing, But Trailing State and Nation

Source: JobsEQ by Chmura
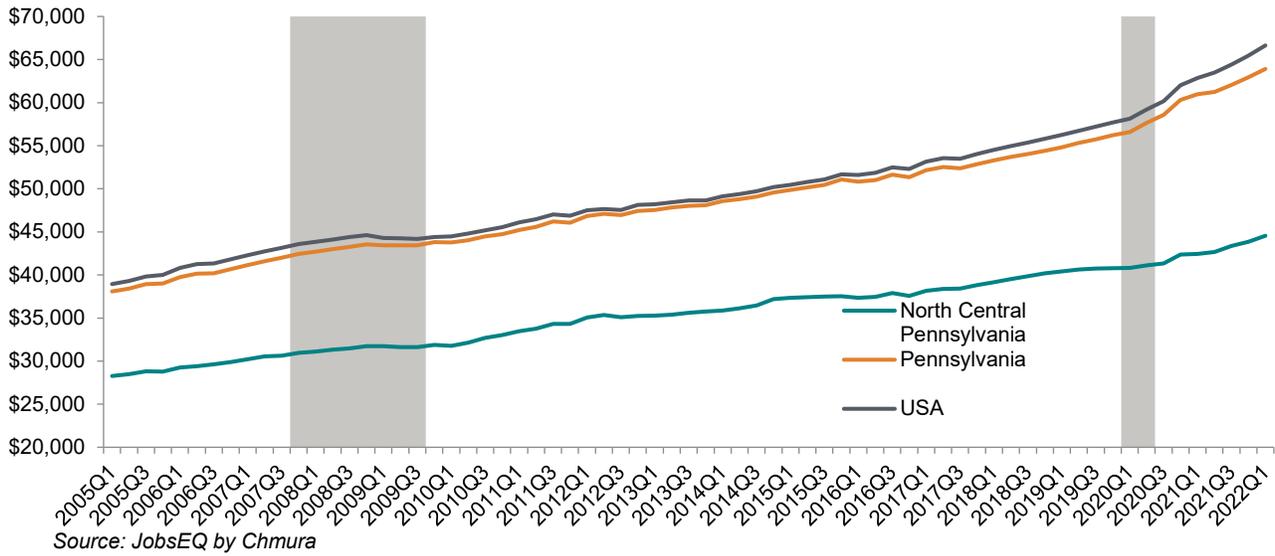
Another broad indicator of the health of a regional economy is the unemployment rate. Figure 2.5 compares unemployment trends in North Central Pennsylvania to those at the state and national levels. The unemployment rate data are monthly from January 2005 through August 2022 (the most recent month for which such data are available).

The unemployment rates of the region, state, and nation steadily declined between 2010 and 2020 as the country recovered from the recession of 2007 to 2009. The unemployment rates in North Central Pennsylvania have been consistently above the Pennsylvania and U.S. levels since 2012, indicating a greater share of residents looking for work. The unemployment rate spiked in April 2020 to 18.5% in the region due to the pandemic, compared with 15.9% in the state, but has been on a steady decline ever since. The regional unemployment rate has fallen to 5.4% as of August 2022, quickly recovering from the pandemic spike and reflecting continuing tightness in the labor market. The recovery bodes well for participants of NCWBD programs and services as they are more likely to find employment in the region.

Figure 2.5: North Central PA Unemployment Rates are Generally Higher than State and Nation

Source: JobsEQ by Chmura
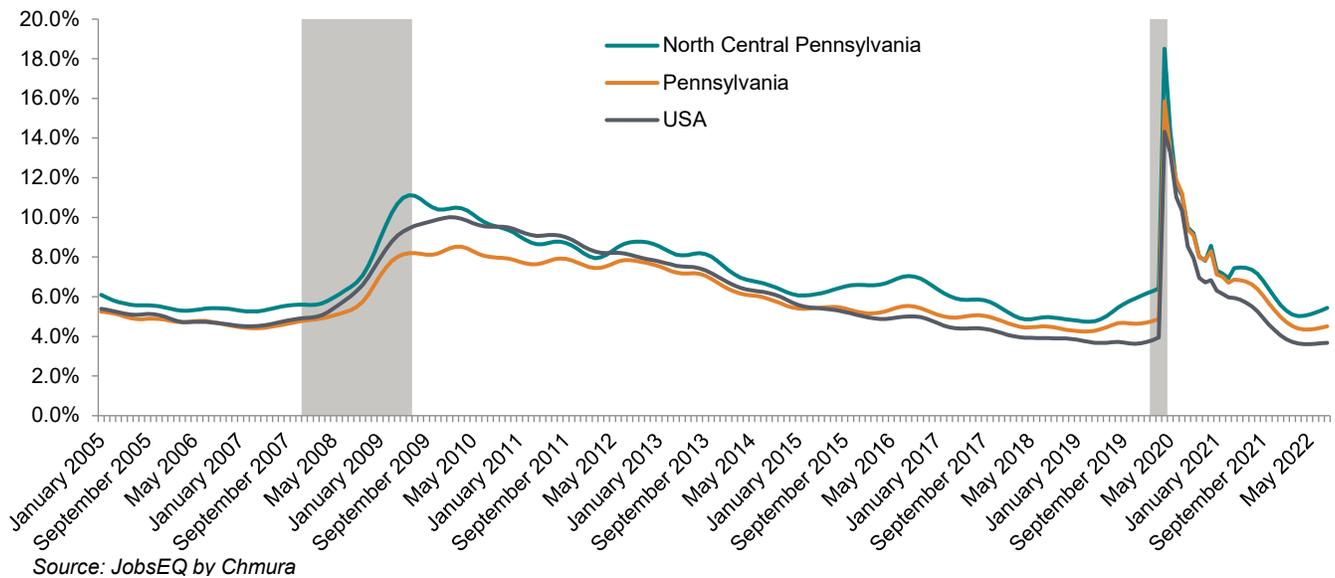
3. Workforce Demand Analysis

3.1. Industry Snapshot

As of the first quarter of 2022, total employment in North Central Pennsylvania is 84,170. The largest sectors (by 2-digit NAICS[8]) in the area are manufacturing (16,472 workers), health care and social assistance (14,067), retail trade (10,592), transportation and warehousing (5,495), and accommodation and food services (5,464). Three of the top five sectors by employment pay average annual wages above the region's industry average.[9]

The North Central Pennsylvania region is highly specialized in mining, quarrying, and oil and gas extraction, with a location quotient (LQ) of 3.66.[10] Other sectors in North Central PA with high LQs are manufacturing (2.42), transportation and warehousing (1.30), and agriculture, forestry, fishing and hunting (1.50).

Table 3.1: North Central PA Has Largest Competitive Advantage in Mining Industry

NAICS	Industries	Four Quarters Ending 2022Q1			Historical 5-yr.		Forecast 5-yr		
		Empl.	Avg. Annual Wages	LQ	Empl. Change	Annual %	Total Demand	Empl. Growth	Annual %
31-33	Manufacturing	16,472	$55,431	2.42	-1,179	-1.4%	7,115	-1,092'	-1.4%
62	Health Care and Social Assistance	14,067	$49,709	1.15	-2,018	-2.6%	6,798	81	0.1%
44-45	Retail Trade	10,592	$29,727	1.22	-121	-0.2%	5,573	-1,138	-2.2%
48-49	Transportation and Warehousing	5,495	$52,810	1.30	1	0.0%	2,834	-144	-0.5%
72	Accommodation and Food Services	5,464	$15,746	0.79	-294	-1.0%	4,941	254	0.9%
61	Educational Services	5,170	$46,011	0.77	-451	-1.7%	2,258	-141	-0.6%
81	Other Services (except Public Administration)	4,457	$23,327	1.23	-130	-0.6%	2,512	30	0.1%
92	Public Administration	4,116	$51,244	1.04	-151	-0.7%	1,590	-275	-1.4%
23	Construction	3,816	$45,253	0.77	-19	-0.1%	1,567	-213	-1.1%
56	Administrative and Support and Waste Management and Remediation Services	2,422	$33,525	0.45	-115	-0.9%	1,291	-85	-0.7%
54	Professional, Scientific, and Technical Services	2,410	$49,497	0.40	23	0.2%	905	-116	-1.0%
42	Wholesale Trade	1,715	$53,400	0.54	-86	-1.0%	763	-111	-1.3%
11	Agriculture, Forestry, Fishing and Hunting	1,702	$29,611	1.50	154	1.9%	892	-109	-1.3%
52	Finance and Insurance	1,527	$57,954	0.44	-124	-1.5%	532	-126	-1.7%
55	Management of Companies and Enterprises	1,133	$79,603	0.90	602	16.3%	416	-75	-1.4%
21	Mining, Quarrying, and Oil and Gas Extraction	1,056	$72,590	3.66	-489	-7.3%	527	-5	-0.1%
51	Information	884	$46,388	0.52	-63	-1.4%	319	-82	-1.9%
22	Utilities	602	$66,997	1.39	-60	-1.9%	212	-53	-1.8%
71	Arts, Entertainment, and Recreation	564	$20,434	0.37	30	1.1%	448	46	1.6%
53	Real Estate and Rental and Leasing	505	$38,559	0.34	-89	-3.2%	212	-30	-1.2%
	Total - All Industries	**84,170**	**$44,547**	**1.00**	**-4,579**	**-1.1%**	**41,659**	**-3,298**	**-0.8%**

Source: JobsEQ® by Chmura

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[8] The North American Industry Classification System (NAICS) is used to classify business establishments according to the type of economic activity. NAICS codes comprise six levels, from 2-digit sectors to 6-digit detailed industries.

[9] Industry wages include bonuses, stock options (if exercised through the company from which they are received)), profit distributions, and tips and other gratuities, among other compensation.

[10] A location quotient (LQ) is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an industry (or occupation) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

Looking ahead, the number of workers needed to fill openings in industries within the region of North Central Pennsylvania includes demand due to growth in the industry as well as demand to replace workers who leave the labor force (including retirement, called "exits") or who change occupations ("transfers"). Total employment in North Central Pennsylvania is expected to decrease at an average annual rate of 0.8% over the next five years, losing 3,298 jobs in total. The fastest-growing sector in terms of employment in North Central Pennsylvania is expected to be arts, entertainment, and recreation, growing 1.6% annually over the next five years from a relatively small employment base of 564 in 2022Q1. Over the same period, manufacturing, the largest sector in the region of North Central Pennsylvania, is expected to decline 1.4% annually, shedding 1,092 jobs. Health care and social assistance is expected to grow at an average annual rate of 0.1% over the next five years and add 81 new jobs. Including exits and transfers, however, the sectors with the greatest expected total demand over the next five years include manufacturing (7,115 workers), health care and social assistance (6,798), and retail trade (5,573).

Figure 3.1: Manufacturing, Health Care, and Retail Trade Have Greatest Replacement Demand From 2022 to 2027
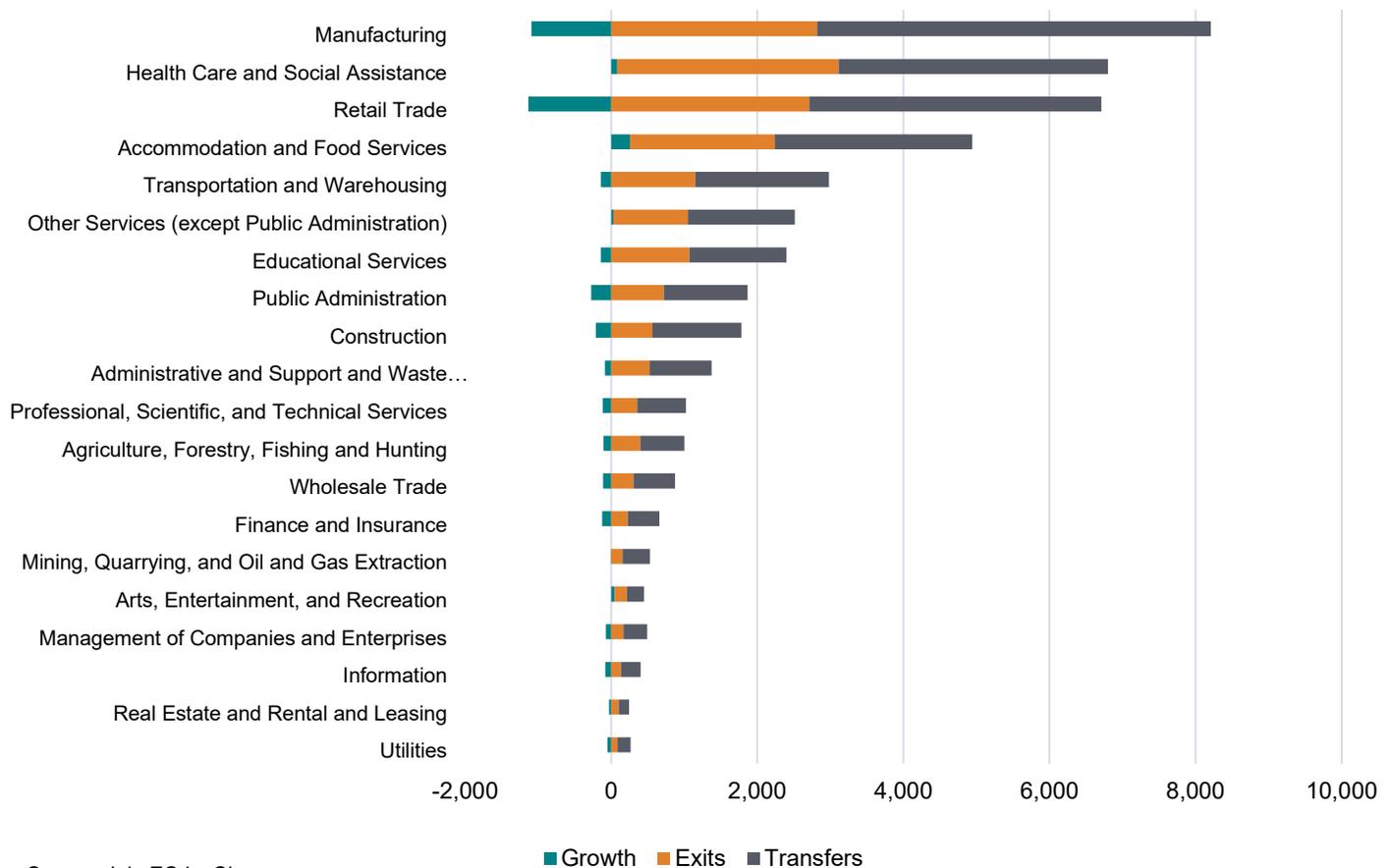
Source: JobsEQ by Chmura

3.2. Historical Industry Trends

The COVID-19 pandemic disrupted all aspects of the global economy, and many industries in North Central Pennsylvania experienced declines in employment. While the disruption in domestic travel and supply chains has continued to weigh on the region's recovery, the region has shown signs of improvement in the past year. Between 2021Q1 and 2022Q1, total employment began to improve in the region of North Central Pennsylvania, up 3.4% (2,793 jobs). Arts, entertainment, and recreation experienced the largest rebound in employment as travel restrictions and social distancing measures were lifted around the globe and domestically, and the industry gained 31.5% of jobs (135) over the year. The accommodation and food services industry also experienced a particularly sharp jump, adding 14.2% of employment (a gain of 679 jobs).

Over the past five years (2017Q1 to 2022Q1), which includes the effect of the COVID-19 pandemic, total employment in North Central Pennsylvania decreased by 4,579 jobs, a 1.1% average annual decrease. Over the same period, health care and social assistance experienced the largest decrease in employment, losing 2,018 jobs for a 2.6% average annual decrease. The management of companies and enterprises sector experienced the largest increase in employment, adding 602 jobs at a 16.3% average annual rate. This industry carries the highest average annual wages ($79,603) among the 2-digit industries in North Central PA. Manufacturing employment grew 6.2% over the year ending 2022Q1 and added 968 jobs, but has lost 1,179 jobs over the past five years.

Table 3.2: Manufacturing Added the Most Jobs Over the Last Year, but Still Down Nearly 1,200 Jobs Over Last Five Years

	Four Quarters Ending 2022Q1	Historical 1-yr.		Historical 5-yr.	
NAICS	Industries	Empl. Change	Annual %	Empl. Change	Annual %
31-33	Manufacturing	968	6.2%	-1,179	-1.4%
72	Accommodation and Food Services	679	14.2%	-294	-1.0%
44-45	Retail Trade	486	4.8%	-121	-0.2%
48-49	Transportation and Warehousing	321	6.2%	1	0.0%
81	Other Services (except Public Administration)	311	7.5%	-130	-0.6%
23	Construction	227	6.3%	-19	-0.1%
71	Arts, Entertainment, and Recreation	135	31.5%	30	1.1%
55	Management of Companies and Enterprises	66	6.2%	602	16.3%
54	Professional, Scientific, and Technical Services	58	2.5%	23	0.2%
11	Agriculture, Forestry, Fishing and Hunting	52	3.2%	154	1.9%
42	Wholesale Trade	42	2.5%	-86	-1.0%
61	Educational Services	38	0.7%	-451	-1.7%
53	Real Estate and Rental and Leasing	16	3.3%	-89	-3.2%
22	Utilities	15	2.6%	-60	-1.9%
52	Finance and Insurance	4	0.3%	-124	-1.5%
51	Information	-29	-3.2%	-63	-1.4%
21	Mining, Quarrying, and Oil and Gas Extraction	-30	-2.7%	-489	-7.3%
92	Public Administration	-62	-1.5%	-151	-0.7%
56	Administrative and Support and Waste Management and Remediation Services	-135	-5.3%	-115	-0.9%
62	Health Care and Social Assistance	-370	-2.6%	-2,018	-2.6%
	Total - All Industries	**2,793**	**3.4%**	**-4,579**	**-1.1%**

Source: JobsEQ® by Chmura

3.3. Top 20 Fastest Growing 6-Digit Industries

The top 20 fastest-growing detailed industries (at the 6-digit NAICS level and with at least 100 employees) are shown in the table below. As of the first quarter of 2022, the largest industries among the top 20 fastest-growing industries by employment are full-service restaurants (1,999) and limited-service restaurants (1,899), general warehousing and storage (1,357), services for the elderly and persons with disabilities (1,015), civic and social organizations (984), and home health care services (861).

Table 3.3: Oil and Gas Operations and Services for Elderly Forecasted to Grow Above 2.0% Rate

Four Quarters Ending 2022Q1		Current Employment	Historical 5-yr.	Forecast 5-yr.	
NAICS	Industries		Annual %	Total Demand	Annual %
213112	Support Activities for Oil and Gas Operations	320	-8.3%	224	2.3%
624120	Services for the Elderly and Persons with Disabilities	1,015	-11.7%	743	2.1%
624190	Other Individual and Family Services	716	-1.7%	463	1.8%
813410	Civic and Social Organizations	984	-1.0%	793	1.7%
621340	Offices of Physical, Occupational and Speech Therapists, and Audiologists	255	-3.1%	131	1.7%
722511	Full-Service Restaurants	1,999	-0.7%	1,878	0.9%
721110	Hotels (except Casino Hotels) and Motels	560	-5.2%	439	0.8%
485410	School and Employee Bus Transportation	552	-4.5%	375	0.8%
622210	Psychiatric and Substance Abuse Hospitals	107	-6.8%	52	0.8%
623312	Assisted Living Facilities for the Elderly	484	-0.1%	311	0.7%
722410	Drinking Places (Alcoholic Beverages)	319	-4.0%	278	0.7%
713910	Golf Courses and Country Clubs	226	1.5%	184	0.7%
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	177	3.2%	94	0.7%
621610	Home Health Care Services	861	0.8%	502	0.6%
485113	Bus and Other Motor Vehicle Transit Systems	146	-0.4%	85	0.6%
623311	Continuing Care Retirement Communities	444	-3.0%	280	0.5%
621498	All Other Outpatient Care Centers	217	-0.7%	95	0.5%
722513	Limited-Service Restaurants	1,899	-0.8%	1,768	0.4%
211130	Natural Gas Extraction	218	2.6%	112	0.4%
493110	General Warehousing and Storage	1,357	2.0%	896	0.3%
	Total – All Industries	**84,170**	**-1.1%**	**41,880**	**-0.8%**

Source: JobsEQ® by Chmura

Over the past five years (2017Q1 to 2022Q1), commercial and industrial machinery and equipment (except automotive and electronic) repair and maintenance accounted for the greatest employment growth in North Central Pennsylvania with a 3.2% average annual increase. Over this period, services for the elderly and persons with disabilities experienced the steepest decline in employment with an 11.7% average annual decrease accelerated by the pandemic.

Looking ahead, support activities for oil and gas operations are forecast to account for the fastest employment growth in North Central Pennsylvania with a 2.3% average annual increase over the next five years, driven by recovery from the pandemic. The next fastest growth is expected for services for the elderly and persons with disabilities (2.1%), followed by other individual and family services (1.8%), civic and social organizations (1.7%), and offices of physical, occupational and speech therapists, and audiologists (1.7%). The top 20 fastest-growing industries with the greatest expected total demand over the next five years include full-service restaurants and limited-service restaurants (3,646), general warehousing and storage (896), and civic and social organizations (793).

3.4. Top 20 Detailed Industries Including Retirements and Transfers

The top 20 detailed industries (at the 6-digit NAICS level) by employment are shown in the table below. As of the first quarter of 2022, the largest industries by employment are elementary and secondary schools (4,750 workers), full-service and limited-service restaurants (3,898), powder metallurgy part manufacturing (3,832), general medical and surgical hospitals (3,483), warehouse clubs and super-centers (1,603), and general warehousing and storage (1,357).

Table 3.4: Elementary/Secondary Schools, Restaurants, and Powder Metallurgy Part Manufacturing Have Highest Replacement Demand

NAICS	Industries	Four Quarters Ending 2022Q1			Historical 5-yr.		Forecast 5-yr		
		Empl.	Avg. Annual Wages	LQ	Empl. Change	Annual %	Total Demand	Empl. Growth	Annual %
611110	Elementary and Secondary Schools	4,750	$45,765	1.12	-302	-1.2%	2,120	-71	-0.3%
722511	Full-Service Restaurants	1,999	$15,229	0.77	-74	-0.7%	1,878	95	0.9%
722513	Limited-Service Restaurants	1,899	$15,270	0.81	-81	-0.8%	1,768	34	0.4%
332117	Powder Metallurgy Part Manufacturing	3,832	$52,561	812.24	-720	-3.4%	1,602	-284	-1.5%
622110	General Medical and Surgical Hospitals	3,483	$61,825	1.09	-435	-2.3%	1,209	-131	-0.8%
452311	Warehouse Clubs and Supercenters	1,603	$30,341	1.85	52	0.7%	956	-164	-2.1%
493110	General Warehousing and Storage	1,357	$47,367	1.56	128	2.0%	896	18	0.3%
921140	Executive and Legislative Offices, Combined	2,050	$34,440	2.23	-198	-1.8%	858	-119	-1.2%
447110	Gasoline Stations with Convenience Stores	1,191	$24,213	2.62	7	0.1%	841	-107	-1.9%
445110	Supermarkets and Other Grocery (except Convenience) Stores	1,344	$23,832	0.98	-33	-0.5%	810	-151	-2.3%
813410	Civic and Social Organizations	984	$11,572	6.17	-49	-1.0%	793	88	1.7%
624120	Services for the Elderly and Persons with Disabilities	1,015	$21,523	0.90	-879	-11.7%	743	109	2.1%
623110	Nursing Care Facilities (Skilled Nursing Facilities)	1,334	$37,135	1.76	-406	-5.2%	580	-109	-1.7%
813110	Religious Organizations	1,062	$13,745	1.16	-78	-1.4%	531	-41	-0.8%
621610	Home Health Care Services	861	$35,383	0.97	35	0.8%	502	28	0.6%
335991	Carbon and Graphite Product Manufacturing	1,057	$68,401	236.94	78	1.5%	487	-29	-0.6%
624190	Other Individual and Family Services	716	$43,390	2.25	-63	-1.7%	463	68	1.8%
551114	Corporate, Subsidiary, and Regional Managing Offices	1,124	$79,437	0.93	597	16.4%	450	-50	-0.9%
721110	Hotels (except Casino Hotels) and Motels	560	$21,924	0.81	-172	-5.2%	439	23	0.8%
621420	Outpatient Mental Health and Substance Abuse Centers	922	$40,197	5.91	323	9.0%	424	4	0.1%
	Total - All Industries	**84,170**	**$44,547**	**1.00**	**-4,579**	**-1.1%**	**41,880**	**-3,421**	**-0.8%**

Source: JobsEQ® by Chmura

With an LQ of 812.24, the region is highly specialized in powder metallurgy part manufacturing. Other high LQ industries with high forecast total demand include carbon and graphite product manufacturing (236.94) and outpatient mental health and substance abuse centers (5.91).

Over the past five years (2017Q1 to 2022Q1), corporate, subsidiary, and regional managing offices accounted for most of the employment growth in the region of North Central Pennsylvania adding 597 jobs (a 16.4% average annual increase). Over this period, food services and drinking places experienced the largest decline in employment losing 1,009 jobs (a 6.1% average annual decrease). A large amount of this decrease can be attributed to the shutdowns and restrictions during the pandemic.

Looking ahead, the number of workers needed to fill openings in industries within the region of North Central Pennsylvania includes demand due to growth in the industry as well as demand to replace workers who leave the labor force (exits, including retirement) or who change occupations (transfers). Industries with the greatest expected total demand over the next five years include elementary and secondary schools (2,120), full-service restaurants (1,878), limited-service restaurants (1,768), and powder metallurgy part manufacturing (1,602).

Figure 3.2: Elementary/Secondary Schools, Restaurants, and Powder Metallurgy Part Manufacturing Have Greatest Replacement Demand From 2022 to 2027

Source: JobsEQ by Chmura

Growth ■ Exits ■ Transfers
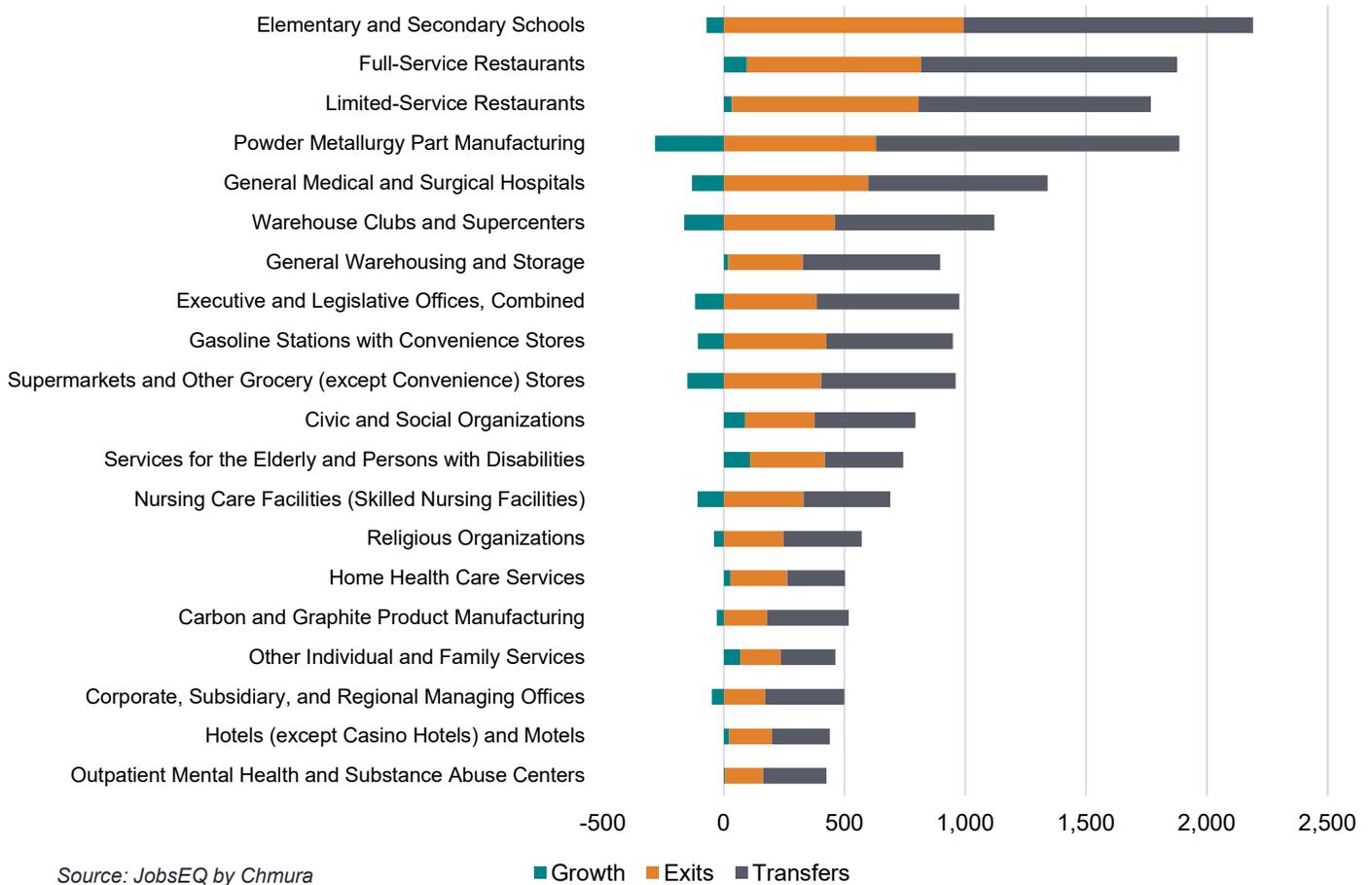
3.5. Occupation Snapshot

The occupation mix in a region follows the mix of industries. As of the first quarter of 2022, total employment in North Central Pennsylvania is 84,170, with an average occupation wage of $46,500.[11] The largest occupation groups are production (9,903 jobs), office and administrative support (9,220), and transportation and material moving (8,809). All of the top five occupation groups pay average annual wages below the region's average occupation wage.

Table 3.5: The Top Five North Central PA Occupation Groups by Employment Pay Below Average Wages

| SOC | Occupation Groups | Four Quarters Ending 2022Q1 | | | | Forecast 5-yr. | | |
		Empl.	Avg. Annual Wages	Location Quotient	Unemployment Rate	Total Demand	Empl. Growth	Annual %
51-0000	Production Occupations	9,903	$39,700	2.08	6.7%	4,216	-764	-1.6%
43-0000	Office and Administrative Support Occupations	9,220	$37,000	0.89	5.4%	3,861	-789	-1.8%
53-0000	Transportation and Material Moving Occupations	8,809	$36,800	1.20	8.7%	5,098	-247	-0.6%
41-0000	Sales and Related Occupations	7,972	$35,700	1.00	7.9%	4,261	-758	-2.0%
35-0000	Food Preparation and Serving Related Occupations	5,698	$24,300	0.87	10.7%	5,318	121	0.4%
29-0000	Healthcare Practitioners and Technical Occupations	5,189	$78,800	1.05	1.9%	1,274	-137	-0.5%
11-0000	Management Occupations	4,915	$93,400	0.86	3.2%	1,772	-162	-0.7%
25-0000	Educational Instruction and Library Occupations	4,127	$53,100	0.92	3.8%	1,676	-26	-0.1%
31-0000	Healthcare Support Occupations	4,043	$29,000	1.08	6.2%	2,657	77	0.4%
47-0000	Construction and Extraction Occupations	3,850	$48,000	1.01	8.8%	1,700	-158	-0.8%
49-0000	Installation, Maintenance, and Repair Occupations	3,706	$46,700	1.14	4.1%	1,535	-146	-0.8%
13-0000	Business and Financial Operations Occupations	3,510	$65,000	0.65	3.6%	1,322	-138	-0.8%
37-0000	Building and Grounds Cleaning and Maintenance Occupations	2,406	$28,500	0.86	7.9%	1,429	-87	-0.7%
21-0000	Community and Social Service Occupations	2,027	$43,100	1.35	2.9%	1,013	20	0.2%
33-0000	Protective Service Occupations	1,769	$53,500	0.98	4.2%	812	-105	-1.2%
39-0000	Personal Care and Service Occupations	1,652	$27,700	0.82	10.3%	1,186	25	0.3%
17-0000	Architecture and Engineering Occupations	1,638	$71,400	1.19	3.4%	496	-64	-0.8%
15-0000	Computer and Mathematical Occupations	1,285	$73,300	0.45	2.5%	385	-49	-0.8%
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	855	$42,400	0.58	8.3%	385	-31	-0.7%
45-0000	Farming, Fishing, and Forestry Occupations	649	$36,700	1.19	11.5%	412	-46	-1.5%
19-0000	Life, Physical, and Social Science Occupations	550	$65,100	0.74	4.5%	216	-21	-0.8%
23-0000	Legal Occupations	398	$84,100	0.55	2.1%	107	-14	-0.7%
	Total - All Occupations	**84,170**	**$46,500**	**1.00**	**6.4%**	**41,204**	**-3,428**	**-0.8%**

Source: JobsEQ® by Chmura

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[11] Occupation wages are as of 2021 and represent the average of all covered employment. See footnote 8 regarding other differences between industry and occupation wages.

The occupation group in which the region of North Central Pennsylvania is most specialized is production, with an LQ of 2.08, which again can be attributed to the large presence of the manufacturing industry. Other occupation groups with high LQs in the region are community and social service (1.35), transportation and material moving (1.20), architecture and engineering (1.19), and farming, fishing, and forestry occupations (1.19).

Looking ahead, demand for occupations will be driven by growth in the underlying industries and the need to replace workers who exit the labor force (retire, take care of a family member full time, etc.) or transfer to another occupation. Overall, employment in North Central Pennsylvania is expected to decrease 0.8% on average each year over the next five years. Healthcare support occupations are expected to experience the fastest growth, increasing 0.4% and adding 77 new jobs annually over the next five years. Food preparation and serving related occupations are also expected to increase 0.4% on average each year and add 121 jobs. Occupations with the greatest expected total demand over the next five years include food preparation and serving related (5,318 jobs), transportation and material moving (5,098), sales and related (4,261), and production (4,216).

Figure 3.3: Food Prep and Serving, Transportation and Material Moving, Sales, and Production Have Greatest Replacement Demand From 2022 to 2027

Source: JobsEQ by Chmura
■ Empl Growth ■ Exits ■ Transfers
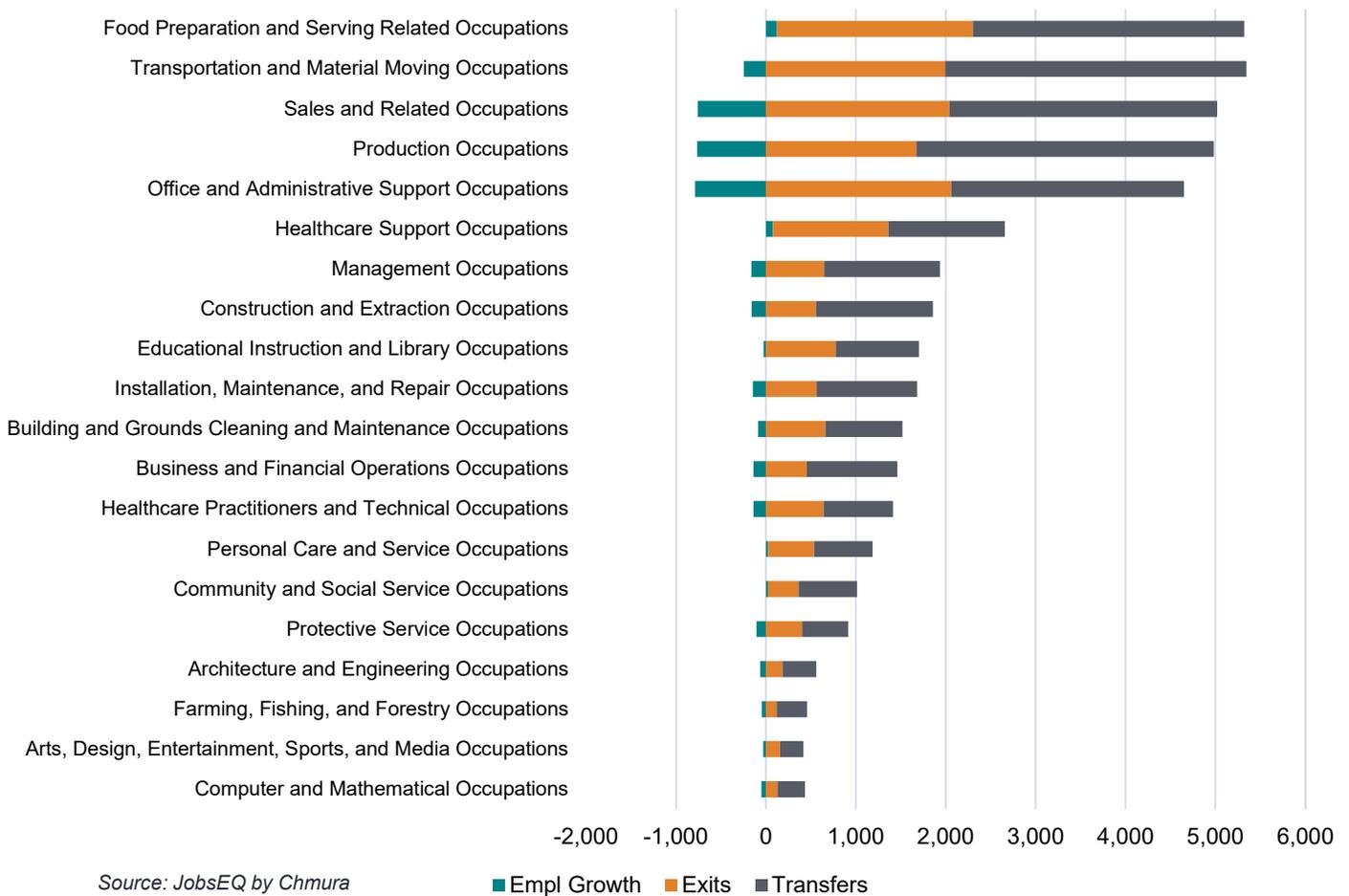
3.6. Historical Occupation Trends

Between 2021Q1 and 2022Q1 healthcare support occupations experienced the largest decline in employment, with more than 9% of the workforce losing their jobs (419 workers). The decline in this group was almost entirely in home health and personal care aides and nursing assistants. On the other hand, food preparation and serving related occupations experienced an 11.0% gain in employment over this period, adding 562 jobs. This growth is attributable to the recovery of the restaurant industry following the lifting of pandemic restrictions.

Over the past five years (2017Q1 to 2022Q1), which captures the effect of the COVID-19 pandemic, total employment in North Central Pennsylvania declined at an average annual rate of 1.1% and decreased by 4,579 jobs. The fastest-growing occupation groups in the region over the past five years are farming, fishing, and forestry; computer and mathematical; business and financial operations; management; and life, physical, and social science occupations.

Table 3.6: Food Preparation, Production, and Transportation Related Occupations Group Added the Most Jobs Over the Last Year

		Historical 1-yr.		Historical 5-yr.	
SOC	**Occupations**	**Empl. Change**	**Annual %**	**Empl. Change**	**Annual %**
35-0000	Food Preparation and Serving Related Occupations	562	11.0%	-357	-1.2%
51-0000	Production Occupations	454	4.8%	-1,109	-2.1%
53-0000	Transportation and Material Moving Occupations	454	5.4%	20	0.0%
41-0000	Sales and Related Occupations	332	4.3%	-354	-0.9%
11-0000	Management Occupations	214	4.6%	64	0.3%
13-0000	Business and Financial Operations Occupations	188	5.7%	460	2.8%
39-0000	Personal Care and Service Occupations	164	11.0%	-110	-1.3%
43-0000	Office and Administrative Support Occupations	153	1.7%	-1,014	-2.1%
47-0000	Construction and Extraction Occupations	140	3.8%	-309	-1.5%
29-0000	Healthcare Practitioners and Technical Occupations	112	2.2%	-171	-0.6%
49-0000	Installation, Maintenance, and Repair Occupations	101	2.8%	-243	-1.3%
37-0000	Building and Grounds Cleaning and Maintenance Occupations	100	4.3%	-105	-0.9%
15-0000	Computer and Mathematical Occupations	83	6.9%	255	4.5%
25-0000	Educational Instruction and Library Occupations	71	1.7%	-446	-2.0%
17-0000	Architecture and Engineering Occupations	66	4.2%	-58	-0.7%
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	34	4.1%	-46	-1.0%
45-0000	Farming, Fishing, and Forestry Occupations	34	5.5%	139	4.9%
23-0000	Legal Occupations	7	1.9%	0	0.0%
19-0000	Life, Physical, and Social Science Occupations	5	0.8%	8	0.3%
21-0000	Community and Social Service Occupations	-29	-1.4%	-54	-0.5%
33-0000	Protective Service Occupations	-32	-1.8%	-132	-1.4%
31-0000	Healthcare Support Occupations	-419	-9.4%	-1,019	-4.4%
	Total - All Occupations	**2,793**	**3.4%**	**-4,579**	**-1.1%**

Source: JobsEQ® by Chmura

3.7. Top 20 Detailed Occupations Including Retirements and Transfers

The top 20 detailed occupation groups by total demand are shown in Table 3.7 below. As of the first quarter of 2022, the largest occupations by employment are cashiers (2,524 workers), retail salespersons (2,094), heavy and tractor-trailer truck drivers (2,020), and registered nurses (1,838).

Over the past five years (2017Q1 to 2022Q1), general and operations managers experienced the largest employment growth among these occupations, adding 143 jobs (a 1.9% average annual increase). These are high-paying jobs, with an average wage of $91,800.

Looking ahead, demand for occupations will be driven by growth in the underlying industries as well as the need to replace workers who exit the labor force (retire, take care of a family member full time, etc.) or transfer to another occupation. Occupations with the greatest expected total demand over the next five years include cashiers (adding 1,775 jobs), fast food and counter workers (1,676), and personal care aides (1,260). The fastest-growing occupation in North Central Pennsylvania is expected to be restaurant cooks, increasing at an average annual rate of 2.4% over the next five years and adding 72 new jobs. In addition to these customer-facing jobs, occupations in the healthcare, manufacturing, and transportation and warehousing industries account for many of the top 20 occupations. These include nursing assistants (536 total demand over the next five years), registered nurses (405), team assemblers (496), and heavy and tractor-trailer truck drivers (1,001).

Table 3.7: Customer-Facing Jobs Have High Forecast Total Demand in North Central PA

SOC	Occupations	Four Quarters Ending 2022Q1				Historical 5-yr.		Forecast 5-yr		
		Empl.	Avg. Annual Wages	LQ	Unem-ployment Rate	Empl. Change	Annual %	Total Demand	Empl. Growth	Annual %
41-2011	Cashiers	2,524	$21,600	1.38	10.0%	-175	-1.3%	1,775	-292	-2.4%
35-3023	Fast Food and Counter Workers	1,583	$21,200	0.91	8.5%	-134	-1.6%	1,676	16	0.2%
31-1122	Personal Care Aides	1,639	$25,600	1.15	6.5%	-183	-2.1%	1,260	86	1.0%
41-2031	Retail Salespersons	2,094	$28,300	1.00	9.9%	-116	-1.1%	1,141	-198	-2.0%
53-7065	Stockers and Order Fillers	1,525	$28,600	1.13	10.5%	91	1.2%	1,077	-67	-0.9%
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	1,677	$33,000	1.09	11.0%	48	0.6%	1,027	-52	-0.6%
53-3032	Heavy and Tractor-Trailer Truck Drivers	2,020	$44,300	1.77	5.4%	-44	-0.4%	1,001	-71	-0.7%
35-3031	Waiters and Waitresses	863	$24,800	0.80	12.0%	-128	-2.7%	876	13	0.3%
43-9061	Office Clerks, General	1,623	$34,800	1.10	5.4%	-163	-1.9%	737	-127	-1.6%
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	1,207	$27,300	0.98	7.7%	-94	-1.5%	732	-44	-0.7%
11-1021	General and Operations Managers	1,617	$91,800	0.96	3.6%	143	1.9%	595	-51	-0.6%
35-2014	Cooks, Restaurant	583	$25,100	0.82	11.6%	39	1.4%	554	72	2.4%
43-4051	Customer Service Representatives	1,124	$34,000	0.73	7.0%	44	0.8%	539	-110	-2.0%
31-1131	Nursing Assistants	1,002	$30,500	1.42	5.9%	-270	-4.7%	536	-42	-0.8%
51-2092	Team Assemblers	1,296	$32,400	2.09	10.0%	-52	-0.8%	496	-176	-2.9%
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1,117	$32,900	1.03	4.2%	-102	-1.7%	437	-110	-2.1%
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	544	$34,000	0.90	8.0%	14	0.5%	435	16	0.6%
35-3011	Bartenders	429	$22,000	1.43	15.6%	-29	-1.3%	407	22	1.0%
29-1141	Registered Nurses	1,838	$68,900	1.10	1.8%	-145	-1.5%	405	-56	-0.6%
43-3031	Bookkeeping, Accounting, and Auditing Clerks	890	$36,500	0.96	4.5%	-143	-2.9%	383	-73	-1.7%
	Total - All Occupations	**84,170**	**$46,500**	**1.00**	**6.4%**	**-4,579**	**-1.1%**	**41,204**	**-3,428**	**-0.8%**

Source: JobsEQ® by Chmura

3.8. Top 20 Detailed Occupations Paying Above Self-Sufficiency Wages

The top 20 detailed occupation by total demand, which pay above a self-sufficiency wage, are shown in Table 3.8 below. [12] As of the first quarter of 2022, the largest occupations by employment in this group are heavy and tractor-trailer truck drivers (2,020 workers), registered nurses (1,838), general office clerks (1,623), and general and operations managers (1,617).

Over the past five years (2017Q1 to 2022Q1), general and operations managers experienced the largest employment growth among these occupations, adding 143 jobs (a 1.9% average annual increase). These are high-paying jobs, with an average wage of $91,800. School bus drivers also grew at an impressive 6.6% annual rate and added 137 jobs, despite a salary on the lower end of the living wage scale ($39,200).

Occupations that pay above a self-sufficiency wage with the greatest expected total demand over the next five years include heavy and tractor-trailer truck drivers (with total demand for 1,001 jobs), general office clerks (737), and general and operations managers (595). Many of these are tied to the manufacturing industry in the region, including maintenance and repair workers (378), industrial truck and tractor operators (321), welders (266), and machinists (261).

Table 3.8: Many North Central PA Occupations Paying Above a Self-Sufficiency Wage Are Forecast to Decline but Have High Total Demand

SOC	Occupations	Four Quarters Ending 2022Q1				Historical 5-yr.		Forecast 5-yr		
		Empl.	Avg. Annual Wages	LQ	Unemployment Rate	Empl. Change	Annual %	Total Demand	Empl. Growth	Annual %
53-3032	Heavy and Tractor-Trailer Truck Drivers	2,020	$44,300	1.77	5.4%	-44	-0.4%	1,001	-71	-0.7%
43-9061	Office Clerks, General	1,623	$34,800	1.10	5.4%	-163	-1.9%	737	-127	-1.6%
11-1021	General and Operations Managers	1,617	$91,800	0.96	3.6%	143	1.9%	595	-51	-0.6%
29-1141	Registered Nurses	1,838	$68,900	1.10	1.8%	-145	-1.5%	405	-56	-0.6%
43-3031	Bookkeeping, Accounting, and Auditing Clerks	890	$36,500	0.96	4.5%	-143	-2.9%	383	-73	-1.7%
49-9071	Maintenance and Repair Workers, General	881	$38,500	1.07	3.5%	-85	-1.8%	378	-24	-0.6%
41-1011	First-Line Supervisors of Retail Sales Workers	1,044	$39,800	1.29	3.2%	-14	-0.3%	369	-121	-2.4%
47-2061	Construction Laborers	786	$39,400	1.08	10.9%	22	0.6%	340	-32	-0.8%
53-7051	Industrial Truck and Tractor Operators	622	$41,800	1.44	8.2%	-4	-0.1%	321	-11	-0.4%
51-1011	First-Line Supervisors of Production and Operating Workers	756	$60,800	2.14	2.5%	-46	-1.2%	311	-39	-1.1%
53-3051	Bus Drivers, School	496	$39,200	2.05	13.6%	137	6.6%	309	14	0.6%
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	698	$64,600	0.98	3.7%	-36	-1.0%	291	-36	-1.1%
43-1011	First-Line Supervisors of Office and Administrative Support Workers	711	$53,000	0.88	3.2%	-50	-1.3%	270	-55	-1.6%
51-4121	Welders, Cutters, Solderers, and Brazers	568	$44,700	2.46	7.0%	-35	-1.2%	266	-23	-0.8%
25-2021	Elementary School Teachers, Except Special Education	774	$65,900	1.08	3.3%	-52	-1.3%	265	-9	-0.2%
51-4041	Machinists	587	$41,800	3.14	5.3%	-126	-3.8%	261	-24	-0.8%
13-2011	Accountants and Auditors	677	$66,000	0.86	3.6%	5	0.1%	258	-26	-0.8%
51-2028	Electrical, Electronic, and Electromechanical Equipment Assemblers,	536	$35,000	3.63	5.7%	2	0.1%	258	-15	-0.6%

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[12] The Self Sufficiency Wage Threshold for the North Central Pennsylvania Workforce Development Area for Plan Year 2022 is $34,407. Self Sufficiency Wages are determined by the Center for Workforce Information and Analysis (CWIA) and are defined as 200% of the federal poverty level for one adult and one child.

Table 3.8: Many North Central PA Occupations Paying Above a Self-Sufficiency Wage Are Forecast to Decline but Have High Total Demand

SOC	Occupations	Four Quarters Ending 2022Q1				Historical 5-yr.		Forecast 5-yr		
		Empl.	Avg. Annual Wages	LQ	Unem-ployment Rate	Empl. Change	Annual %	Total Demand	Empl. Growth	Annual %
	Except Coil Winders, Tapers, and Finishers									
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	772	$68,700	1.41	2.4%	-50	-1.2%	255	-7	-0.2%
11-9013	Farmers, Ranchers, and Other Agricultural Managers	621	$60,400	1.49	1.4%	-155	-4.3%	235	-48	-1.6%
	Total - All Occupations	**84,170**	**$46,500**	**1.00**	**6.4%**	**-4,579**	**-1.1%**	**41,204**	**-3,428**	**-0.8%**

Source: JobsEQ® by Chmura

3.9. Top Detailed Occupations for Long Duration Online Job Ads

Online job postings represent short-term gaps as employers search for workers to fill vacancies. The amount of time an ad stays online (measured by median duration) is indicative of how difficult it is for employers to fill those jobs, and in the first quarter of 2022 the median duration for all ads in the region was 36 days.[13] The table below summarizes ads active in North Central Pennsylvania over the first quarter of 2022 which were up for 36 days or more, indicating they are more difficult than average to fill. The total number of ads is a proxy for short-term demand for workers (though note that some occupations are less likely to be advertised online, and some ads may be for more than one position), and median wage data are pulled from salaries in the text of ads.

The greatest number of ads with a long duration (36 days or more) was for retail salespersons, with over 750 ads from local employers. Other occupations with longer durations include home health aides, social and human service assistants, and general maintenance and repair workers. These occupations align closely with the forecasts for total demand shown in previous sections of this report. Notably, only two occupations, driver/sales workers and maintenance and repair workers, offer median wages above a self-sufficiency wage.

Table 3.9: North Central PA Employers Struggled to Fill Healthcare, Retail, and Manufacturing Positions in 2022Q1

| SOC	Occupation	Median Duration	Median Wage	Total Ads	
41-2031.00	Retail Salespersons	36	$23,296	753	
31-1122.00	Personal Care Aides	50	$24,092	588	
35-3023.00	Fast Food and Counter Workers	48	$22,574	508	
21-1093.00	Social and Human Service Assistants	52	$31,200	474	
37-2011.00	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	36	$25,327	396	
53-3031.00	Driver/Sales Workers	41	$35,371	366	
49-9071.00	Maintenance and Repair Workers, General	51	$35,360	358	
31-1121.00	Home Health Aides	59	$23,442	349	
35-1012.00	First-Line Supervisors of Food Preparation and Serving Workers	50	$27,040	260	
51-9199.00	Production Workers, All Other	45	$30,069	257	

Source: JobsEQ® by Chmura

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[13] For context, the national median duration for ads in 2019 and in the first quarter of 2022 was 30 days.

4. Workforce Supply Analysis

4.1 Labor Force Size and Participation

The labor force participation rate measures an economy's active workforce, where a higher labor force participation rate indicates a greater share of the civilian population aged 16 and older is willing and able to work. As population has declined in North Central Pennsylvania North Central Pennsylvania over the past decade, the size of the labor force has fallen from a high of almost 114,000 at the end of 2008 to 94,661 in August 2022. As the unemployment rate dropped and the labor market tightened between 2015 and 2019, North Central Pennsylvania's labor force leveled off around 100,000, suggesting more of the population was brought into the workforce through a combination of wage growth and better recruitment and matching to jobs. North Central Pennsylvania's labor force participation rate is low at just 57.0% as of 2020, compared with 62.8% in the state and 63.2% in the nation. Before the COVID-19 pandemic, the region's labor force reached a local peak of 99,404 in February 2020 before dropping to 96,719 due to the COVID-19 pandemic. After partially recovering from the pandemic shock, the region's labor force has continued to decline.

Figure 4.1: Labor Force Size in North Central Pennsylvania Has Fallen Steadily Since the Great Recession
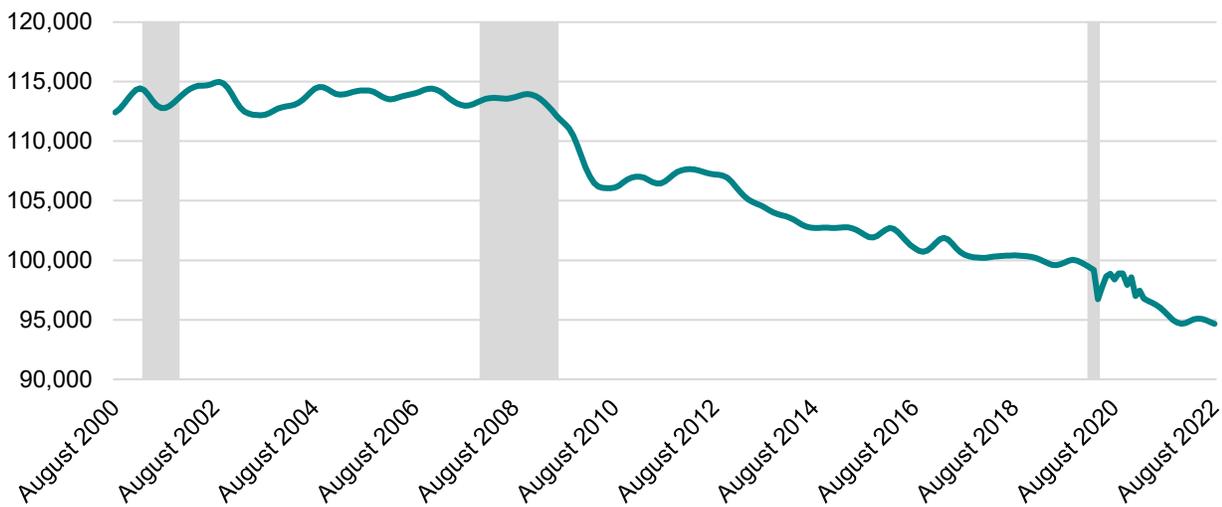
Source: JobsEQ® by Chmura, shaded bars indicate recessions

As with overall population changes between 2010 and 2020, growth in the number of people in the labor force is primarily among age groups with lower overall participation rates. For example, while the number of people in the labor force ages 65 to 74 years old increased by 1,611 over this period, only 20% of people in this age range are employed or actively looking for work. Similarly, 78% of people ages 25 to 44 participate in the labor market, but the number of people participating in this age range fell by more than 5,200 people. The size of the labor force also decreased for ages 16 to 19, and 45 to 54, as well as for those with a high school diploma or less, and with young children. Men are more likely to participate in the labor market (75% compared with 73% for women), but the number of men in the labor market has declined by nearly 4,000 since 2010. Table 4.1 below summarizes these changes for North Central PA, while the Appendix contains a similar table broken out by county.

Table 4.1: Largest Declines in Labor Force Among Men, Ages 25 to 54, With a High School Diploma, and With Children

In Labor Force in North Central PA	2010	2020	Change	LFPR 2020
Total (16 and over)	106,992	101,869	-5,123	57%
Male (20 to 64)	53,111	49,182	-3,928	75%
Female (20 to 64)	44,648	41,942	-2,706	73%
16 to 19 years	5,091	4,562	-529	48%
20 to 24 years	8,854	9,320	466	79%
25 to 44 years	43,006	37,783	-5,223	78%
45 to 54 years	28,680	23,276	-5,403	78%
55 to 64 years	17,202	20,738	3,535	62%
65 to 74 years	3,379	4,990	1,611	20%
75 years and over	730	1,170	440	6%
Less than High School Diploma	5,072	3,906	-1,166	43%
High School or Equivalent	44,428	36,191	-8,236	70%
With Children under 6	6,144	3,106	-3,038	75%

Source: JobsEQ® by Chmura

The size of the labor force in North Central Pennsylvania dropped less steeply due to the pandemic than in the state and nation, due primarily to the industry and occupation mix of the region. This includes a greater share of manufacturing and healthcare workers in the region which were more resilient to the pandemic's impacts, and a smaller share of workers in entertainment and recreation, which was heavily impacted due to the pandemic shutdowns. Accommodation and food services also added employment in the region even as hotels and food service providers shut down due to the pandemic.

Prior to the pandemic, the labor force in North Central Pennsylvania was declining steadily at an average rate of -0.5% year-over-year each month between 2017 and 2019, compared with growth in the state and the nation over this period. The year-over-year decline in the size of the labor force accelerated to 3.0% in April 2020 due to the pandemic and has not grown on a year-over-year basis since the start of the pandemic. As of August 2022, the labor force in North Central Pennsylvania is down 1.1% below the previous year, compared with 0.5% growth in Pennsylvania and 1.3% in the United States.

Figure 4.2: Labor Force Declined around 0.5% Each Month Year-over-Year Before COVID, Accelerated Over Pandemic Even as State Recovered
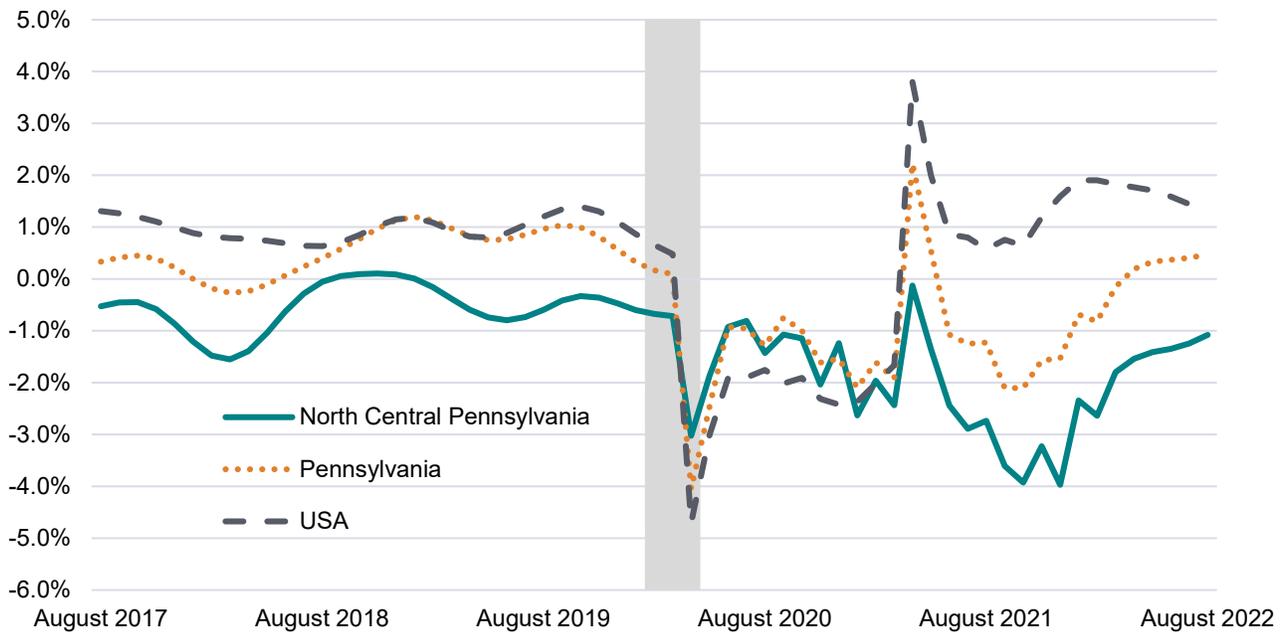
Source: JobsEQ by Chmura

4.2 Populations Not in the Labor Force

By age, labor force participation in North Central Pennsylvania is on par with the state or higher between ages 16 and 24, but trails below the state for all older age groups. Participation is particularly low for ages 25 to 54, typically considered prime participation years, once people have completed education but before retirement. This is driven by low participation in Clearfield, McKean, and Potter counties, with the lowest participation rates among those between the ages of 30 to 34. Increasing participation in the population 30 to 34 by 1 percentage point would add 118 workers in North Central Pennsylvania.

Figure 4.3: North Central Pennsylvania Has High Participation Below Age 25, But Falls Below State for All Older Age Groups
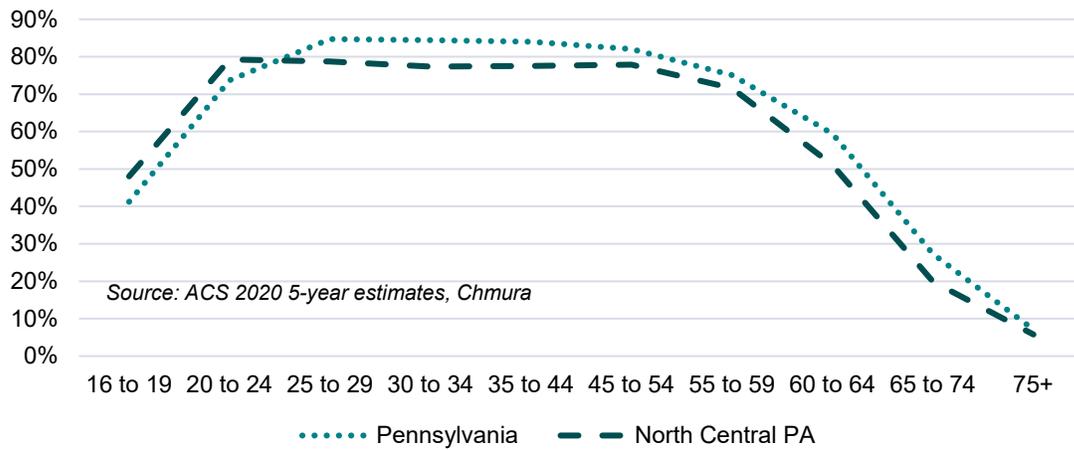

Source: ACS 2020 5-year estimates, Chmura

······· Pennsylvania　　─ ─ North Central PA

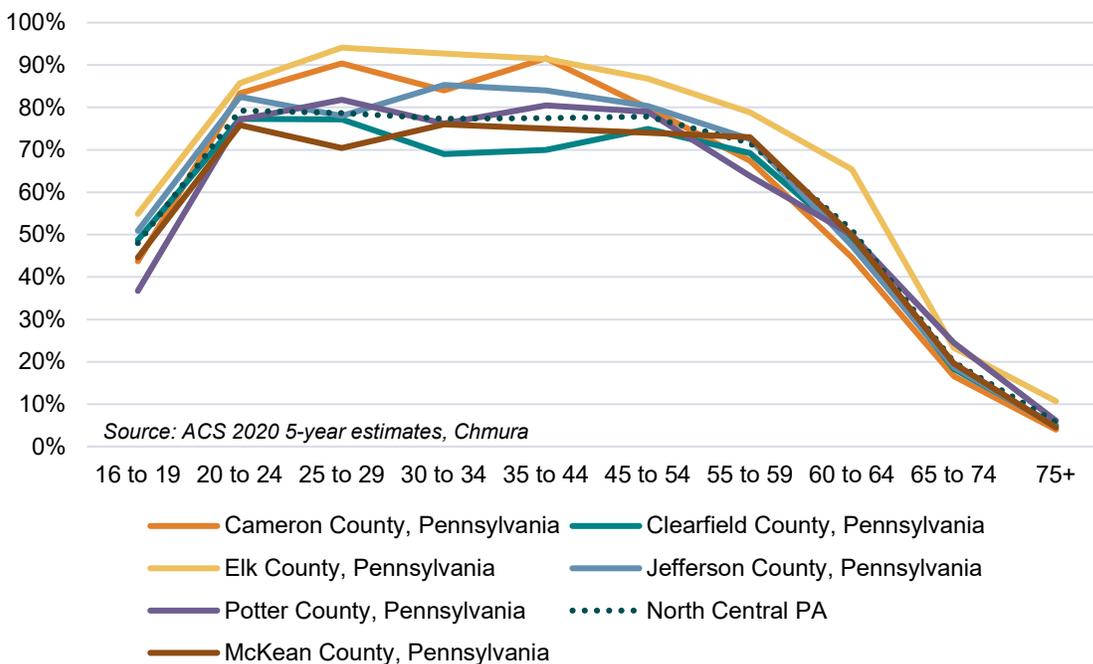**Figure 4.4: Clearfield and Potter Counties Have Low Participation in Prime Working Years and All Counties Have Early Retirees Except Elk**

Source: ACS 2020 5-year estimates, Chmura

─── Cameron County, Pennsylvania　　─── Clearfield County, Pennsylvania
─── Elk County, Pennsylvania　　─── Jefferson County, Pennsylvania
─── Potter County, Pennsylvania　　······· North Central PA
─── McKean County, Pennsylvania

By gender, the male and female labor force participation rates in North Central Pennsylvania have a 2.1 percentage point difference, with males more likely to participate. The male participation rate is 74.6%, compared with the female rate of 72.5% for the population aged 20-64. In the state, the participation rate is 82.1% for men and 75.1% for women. In other words, women in North Central Pennsylvania are participating almost 3 percentage points below the state average, while men in North Central Pennsylvania are participating more than 7 percentage points lower. Increasing male participation by 1 percentage point would add 659 workers in the region.

North Central Pennsylvania residents participate at lower rates across all levels of educational attainment, but the gaps are more pronounced at lower levels of education. Individuals with less than a high school diploma participate in the labor force the least in North Central Pennsylvania, at only 43.6%, significantly lower than in the state (55.6%). Those with a high school diploma or equivalent participate at a rate of 71.2% in North Central Pennsylvania, compared with 73.1% in the state. Those with some college participate at a rate of 77.9%, again below the state's rate of 80.8%. Finally, individuals with a bachelor's degree or higher participate at 86.3%, just over two percentage points below the 88.4% rate in the state. The increasing participation by educational attainment highlights the importance of high school graduation and returns to continued education. Increasing the participation among individuals with a high school diploma or equivalent by 1 percentage point would add 515 workers in North Central Pennsylvania. If 1% of those currently without a high school diploma earned a diploma or equivalent and participated at the current rate for high school graduates, it would add 64 workers in North Central Pennsylvania.

Disabilities that make it more difficult to find work with accommodations are a contributing factor to low participation, and North Central Pennsylvania has a greater percentage of the population with a disability (15.1%) than the state (11.3%) and nation (10.3%). Among those with a disability, labor force participation is also below the state and national averages in North Central Pennsylvania at 41.7% in the region, compared with 43.6% in the state and 43.2% in the nation. An estimated 17,834 residents between the ages of 20 and 64 have a disability in North Central Pennsylvania, with 10,396 not participating in the labor force. Increasing labor force participation in this population by one percentage point would add 178 workers in North Central Pennsylvania. Related to disability, abuse of opioids and other drugs can also make it more difficult to secure and maintain a job, though national studies find conflicting evidence of the extent of an opioid epidemic on labor force participation.[14] These data are summarized in the table below and broken out by county in the appendix.

Table 4.2: Nearly 76,800 People Ages 16 and Over Are Not in the Labor Force in North Central Pennsylvania

	Not in Labor Force	% Participation		1 Percentage Point Increase
		North Central PA	Pennsylvania	North Central PA
Total (16 and over)	76,759	57.0%	62.8%	+1,786
Male (20 to 64)	16,741	74.6%	82.1%	+659
Female (20 to 64)	15,898	72.5%	75.1%	+578
With Children	4,266	76.6%	77.2%	+182
With a Disability	10,396	41.7%	43.7%	+178
25 to 54	17,412	77.8%	83.5%	+785
55+	51,997	34.1%	39.8%	+789
Less than High School Diploma	5,257	42.6%	55.6%	+92
High School or Equivalent	15,358	70.2%	73.1%	+515

The ability to reliably travel to work is another key factor which contributes to labor force participation, particularly in rural areas. Residents of North Central Pennsylvania have a relatively shorter mean commute time of 23.2 minutes compared with 27.1 in the state and 26.9 in the nation, indicating that commuting may be less of a barrier to work, or residents are less willing to travel longer for work. Owning and operating a vehicle is expensive with typical costs including maintenance, fuel, insurance, and financing. Only

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[14] See for example, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6364990/ which finds retirements and trends prior to the Great Recession can account for most of the decline in the labor force participation rate, and https://www.bls.gov/opub/mlr/2019/beyond-bls/does-increased-opioid-use-lead-to-declines-in-labor-market-participation.htm which suggests resolving the opioid epidemic would increase labor force participation for males between 25-64 by more than 4 percentage points in counties with the highest prescription rates.

0.4% of the population commutes via public transportation, much lower than 5.2% in the state, and an estimated 6,819 households do not have a vehicle available.

**Table 4.3: Transportation Availability Can Limit Access to Jobs**

Indicator	North Central Pennsylvania	Pennsylvania	USA
Average Commute Time	23.2 minutes	27.1 minutes	26.9 minutes
Commute Via Public Transportation	0.4%	5.2%	4.6%
Households with no Vehicle Available	7.5% (6,819)	10.7%	8.5%

Young Adults Who Are Out of School and Out of Work (OSOW)

Young adults who are not enrolled in school and also not working may be more likely to have negative experiences transitioning to adulthood and participating in the labor market. The detachment from work or school is associated with a lack of strong social support and networks to assist young adults in making employment connections as well as housing and financial assistance.[15]

Due to limitations on available data on young adults between the ages of 16 and 24 in North Central Pennsylvania, this analysis is summarized for the sum of the two Public Use Microdata Areas (PUMAs), referred to as the North Central Pennsylvania region, as shown in the figure below.

Figure 4.5: Public Use Microdata Areas Covering the North Central Pennsylvania Region (All Counties Shown Are Included)

PUMAs
- 4200300
- 4201300

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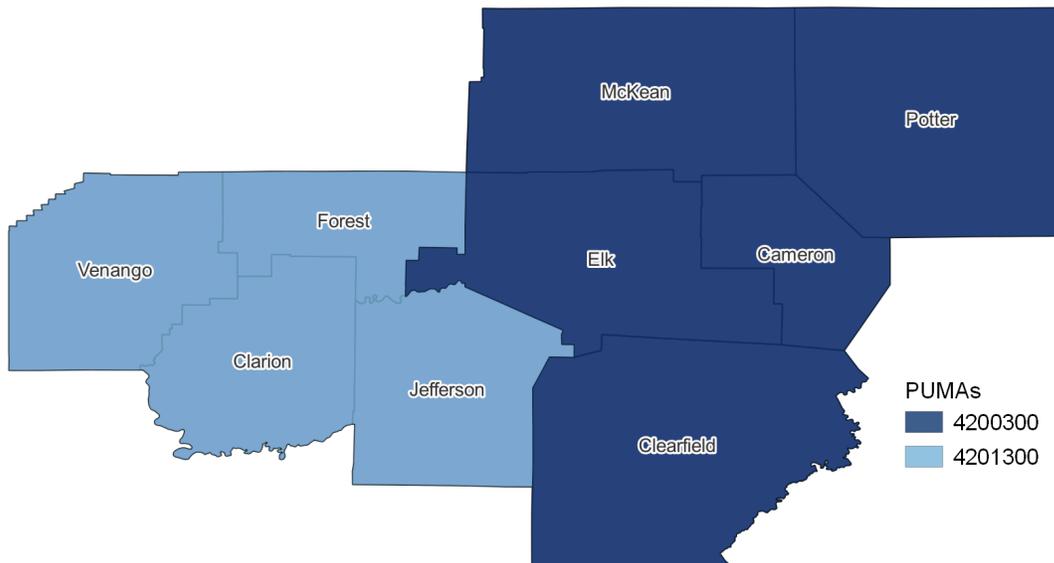
[15] Fernandes-Alcantara, A.L. (2015). *Disconnected Youth: A Look at 16 to 24 Year Olds Who Are Not Working or In School* (CRS Report No. R40535). Available at https://fas.org/sgp/crs/misc/R40535.pdf.

In the five-year data sample from 2016 to 2020, just over 17% of young adults ages 16 to 24 are not in school and also not working in the expanded North Central Pennsylvania region (note that this age group differs from the disconnected youth ages 16 to 19 analyzed in section 4.3).[16] This compares with 11% in the state over the same period. By gender, males account for a larger share of the OSOW group (58%) than females (42%). Nearly 90% of young adults OSOW are White, but Black and Hispanic young adults account for a larger portion of total OSOW than their overall population share.

Table 4.4: More than 17% of Youth and Young Adults 16-24 Are Not in School and Not Working

	Number	Percent of Young Adults 16-24
Total	5,581	17.1%
	Number	**Percent of Total OSOW**
Male	3,247	58%
Female	2,334	42%
White	4,770	85%
Black or African American	410	7%
Hispanic	329	6%

Source: Chmura, U.S. Census Public Use Microdata ACS 2016-2020

Incarcerated Individuals

Policies that restrict hiring formerly incarcerated individuals or bar them from occupational licensing have been shown to negatively affect the labor force participation, and easing these policies may be expected to increase the potential supply of workers and improve labor force participation.[17] North Central Pennsylvania has more than 5,900 adults and nearly 50 juveniles incarcerated within the region, primarily in Clearfield and McKean counties. Workforce development programs aimed at helping formerly incarcerated individuals to find work in the region can expand the available labor pool to help fill in-demand jobs.

Table 4.5: Nearly 6,000 People Are Incarcerated in North Central Pennsylvania

	Correctional facilities for adults	Juvenile facilities	Total
Cameron	0	0	0
Clearfield	4,805	20	4,825
Elk	41	0	41
Jefferson	131	0	131
McKean	890	28	918
Potter	39	0	39
North Central Pennsylvania	**5,906**	**48**	**5,954**

Source: Chmura, U.S. Census Decennial Census 2020, Population in Group Quarters, Table P5

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[16] Note that students who are in school and not looking for work are included in the total number not in the labor force, but not in the out of school and out of work population. By definition, then, the number of youth not in the labor force should be larger than the number who are OSOW.
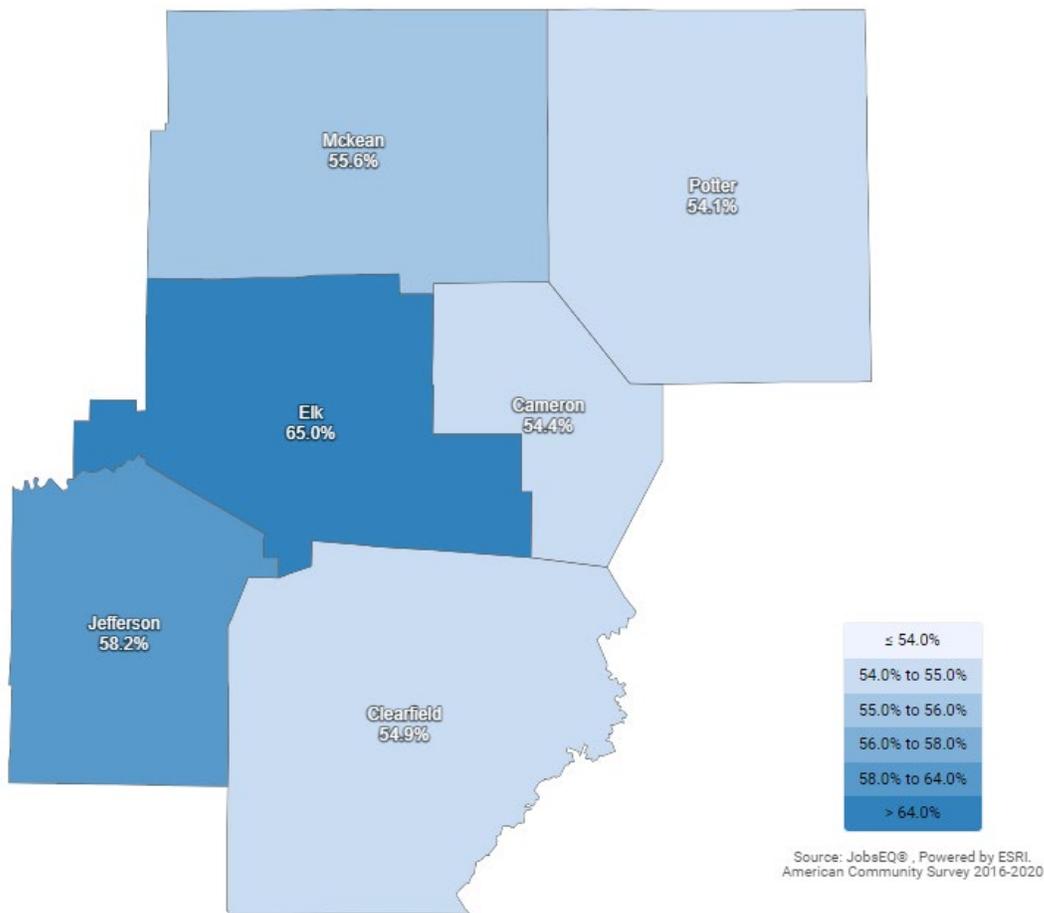
[17] Devah Pager, "The Mark of a Criminal Record," *American Journal of Sociology* 108, no. 5 (2003): 937–975.

4.3 Labor Force Participation Geospatial Analysis

Analyzing labor force participation below the regional level reveals there are substantial differences in labor force participation in North Central Pennsylvania. This section maps the geographic distribution of labor force participation rates and low participation groups at the county and ZCTA[18] levels in the region. Programs to assist these groups in joining the labor force can be adapted to the different reasons people are not participating and targeted to where they are located.

Labor force participation in the counties of North Central Pennsylvania varies by as much as 10 percentage points. Participation rates range from a high of 65.0% in Elk County to a low of 54.1% in Potter County. As discussed above, reasons for the differences in participation may be tied to access to employment opportunities, population ages, and other factors.

Figure 4.6: Labor Force Participation Rate (Civilian Population 16 years and Over) Varies by As Much As 10 Percentage Points Between Counties

Legend
≤ 54.0%
54.0% to 55.0%
55.0% to 56.0%
56.0% to 58.0%
58.0% to 64.0%
> 64.0%

Source: JobsEQ® , Powered by ESRI.
American Community Survey 2016-2020

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[18] Zip code tabulation areas (ZCTAs) are based on ZIP codes with adjustments by the U.S. Census Bureau for statistical analysis, see
https://www.census.gov/programs-surveys/geography/guidance/geo-areas/zctas.html

At the ZCTA level, labor force participation in the civilian population 16 years and over ranges from a high of 92.3% in ZCTA 16860 in Clearfield County to a low of 18.8% in ZCTA 16217 in Jefferson County. Lower participation rates, shown in lighter colors in the map below, are generally concentrated on the edges of the region, particularly in Jefferson, McKean, and Clearfield counties. The top ten ZCTAs are detailed in the table below.

Figure 4.7: Labor Force Participation by ZCTA ranges from 18.8% to 92.3%
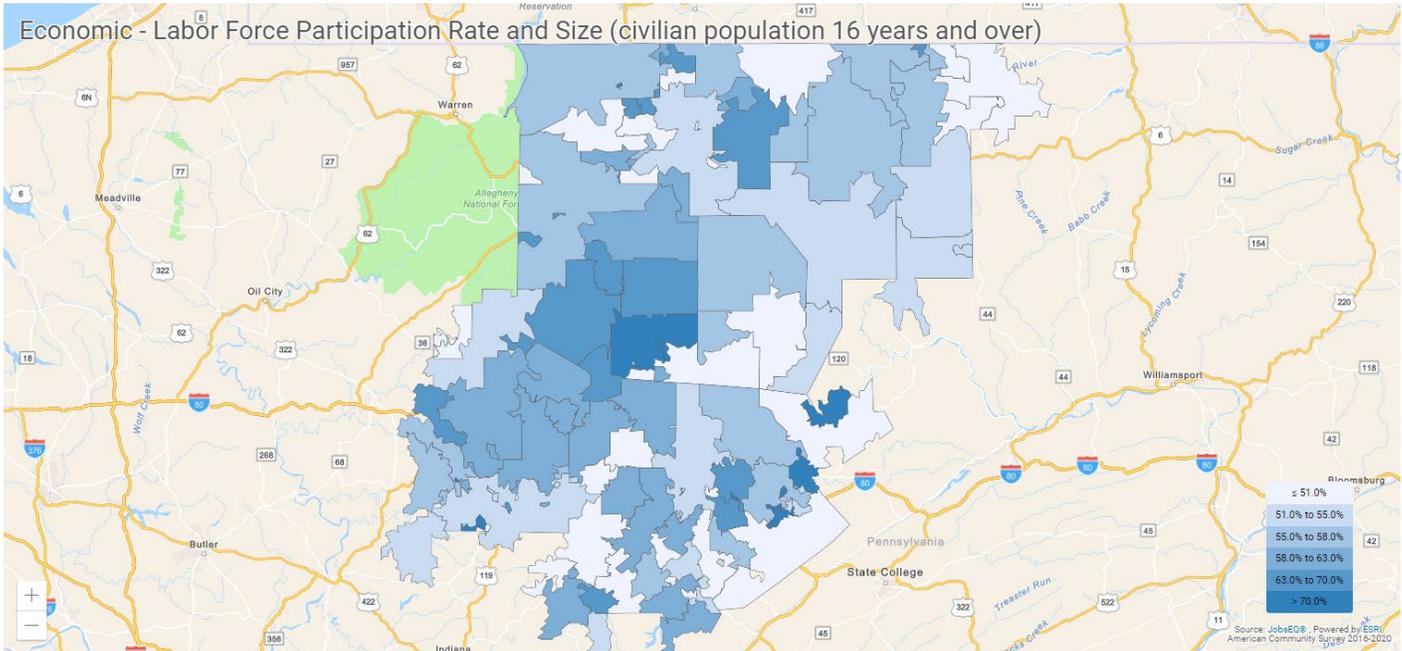
Table 4.6: Top Ten ZCTAs with Lowest Labor Force Participation

Region	Percent	County
ZCTA 16217	18.8%	Jefferson
ZCTA 16733	20.3%	McKean
ZCTA 15733	23.3%	Jefferson
ZCTA 16738	31.9%	McKean
ZCTA 16651	32.8%	Clearfield
ZCTA 15780	37.2%	Jefferson
ZCTA 15832	37.5%	Elk
ZCTA 16855	38.8%	Clearfield
ZCTA 16616	39.2%	Clearfield
ZCTA 15828	41.7%	Jefferson

Source: JobsEQ® by Chmura

Labor force participation in the civilian population between the ages of 25 and 54 (prime-age participation) ranges from a high of 100% in some parts of Clearfield, Potter, and Elk, and McKean counties to a low of 31.9% in ZCTA 16738 in McKean County. Lower participation rates, shown in lighter colors in the map below, are again generally concentrated on the edges of the region, particularly in Jefferson, McKean, and Clearfield counties. The top ten ZCTAs are detailed in the table below.

**Figure 4.8: Labor Force Participation ages 25-54 by ZCTA ranges from 31.9% to 100%**

Economic - Prime-Age Labor Force Participation Rate and Size (civilian population 25-54)
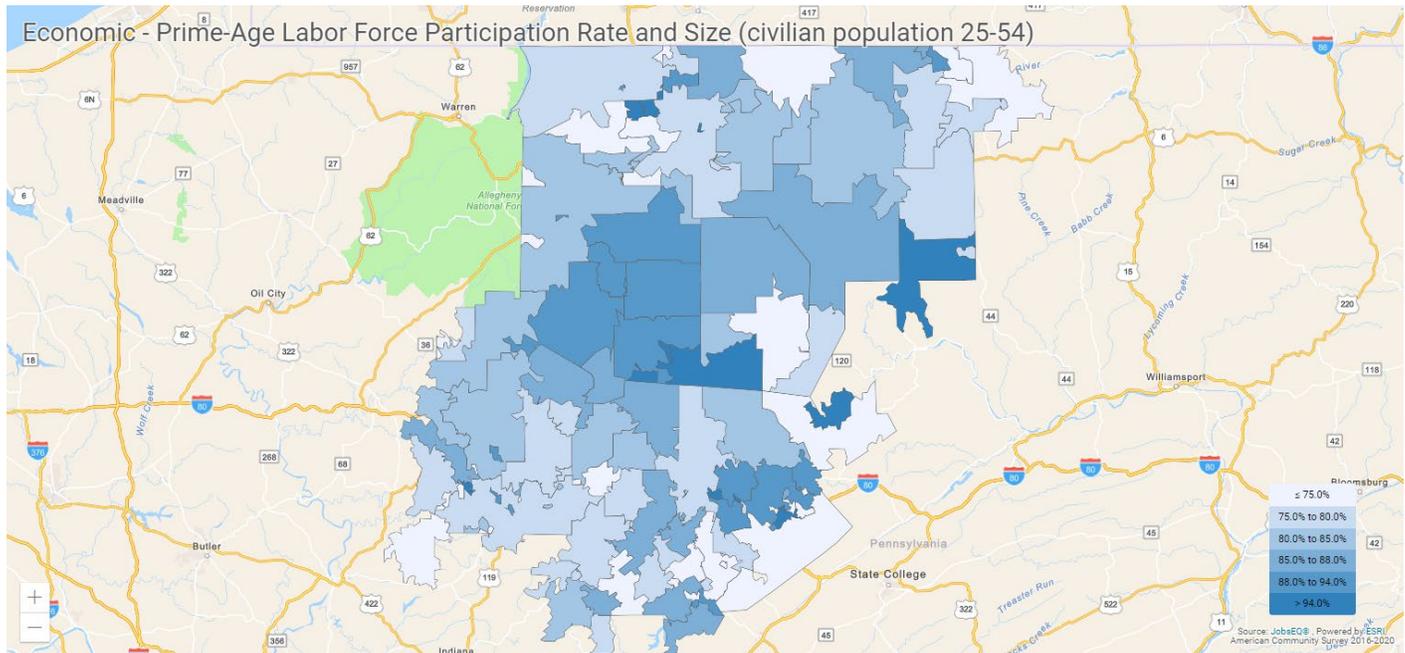
Table 4.7: Top Ten ZCTAs with Lowest Prime-Age Labor Force Participation

Region	Percent	County
ZCTA 16738	28.3%	McKean
ZCTA 16651	34.7%	Clearfield
ZCTA 16845	52.7%	Clearfield
ZCTA 16866	52.8%	Clearfield
ZCTA 16733	53.7%	McKean
ZCTA 15780	56.8%	Jefferson
ZCTA 15778	57.0%	Jefferson
ZCTA 16616	61.5%	Clearfield
ZCTA 16839	63.9%	Clearfield
ZCTA 16727	64.5%	McKean

Source: JobsEQ® by Chmura

Individuals ages 25 to 64 without a high school diploma qualify for limited job opportunities and participate less compared with individuals with higher educational attainment. At the ZCTA level, the percentage of the population with no high school diploma ranges from a low of 0% in parts of all six counties except Cameron to a high of 38.3% in ZCTA 16847 in Clearfield County. Higher percentages, representing a greater share of the population without a high school diploma, are shown in darker colors in the map below and are particularly concentrated at the bottom of the region in Clearfield. The top ten ZCTAs are detailed in the table below.

Figure 4.9: Individuals Ages 25 to 64 with No High School Diploma by ZCTA Ranges from 0% to 38.3%
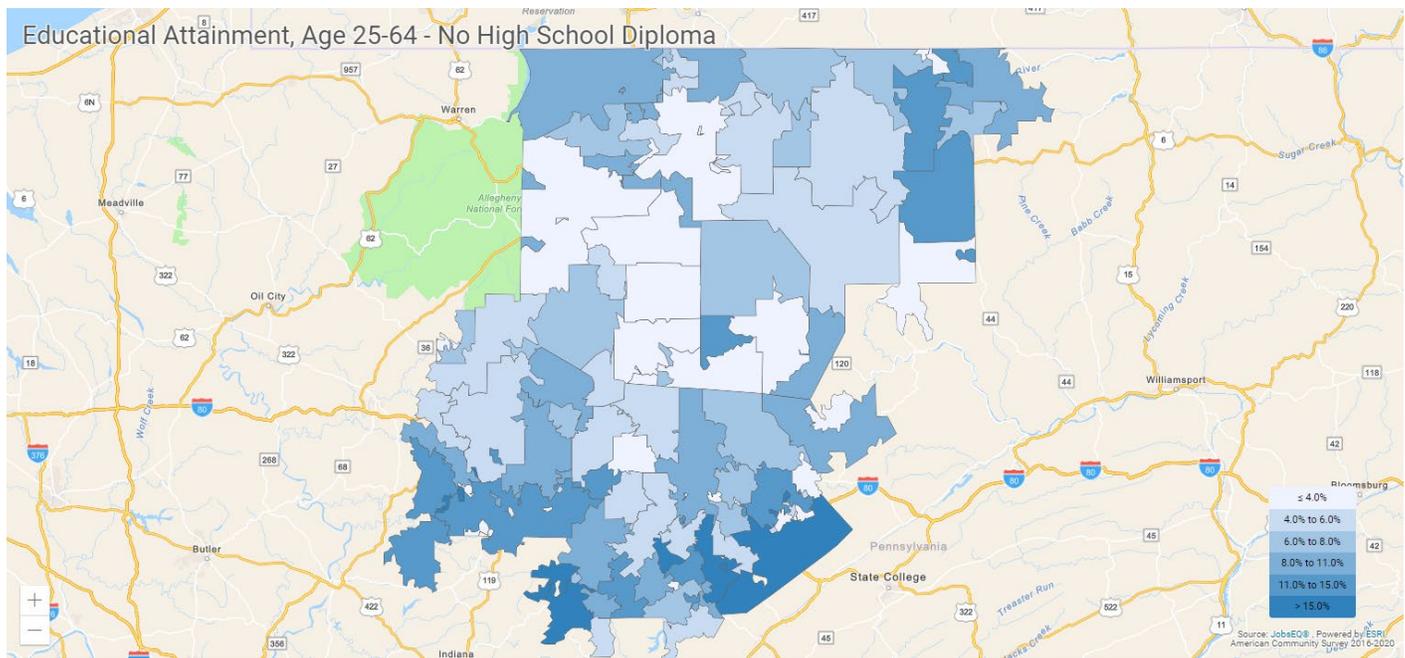
Table 4.8: Top Ten ZCTAs with Highest Percentages of Individuals with No High School Diploma

Region	Percent	County
ZCTA 16847	38.3%	Clearfield
ZCTA 16861	33.8%	Clearfield
ZCTA 16821	31.8%	Clearfield
ZCTA 15770	31.3%	Jefferson
ZCTA 15778	23.3%	Jefferson
ZCTA 15730	23.2%	Jefferson
ZCTA 16866	18.9%	Clearfield
ZCTA 16651	17.0%	Clearfield
ZCTA 15724	16.9%	Clearfield
ZCTA 15742	15.2%	Clearfield

Source: JobsEQ® by Chmura

Disconnected youth are defined here as 16 to 19-year-olds who are 1) not in school, 2) not high school graduates, and 3) either unemployed or not in the labor force (note that the age group differs from the 16 to 24-year-olds analyzed in section 4.2). In North Central Pennsylvania, the percentage of disconnected youth ranges from a high of 40.0% in ZCTA 15856 in Clearfield County to a low of 0% in parts of each of the five counties. Higher percentages of disconnected youth, shown in darker colors in the map below, are largely concentrated in Jefferson and Clearfield counties. The top ten ZCTAs are detailed in the table below.

Figure 4.10: Disconnected Youth Ages 16-19 by ZCTA Ranges from 0% to 40%
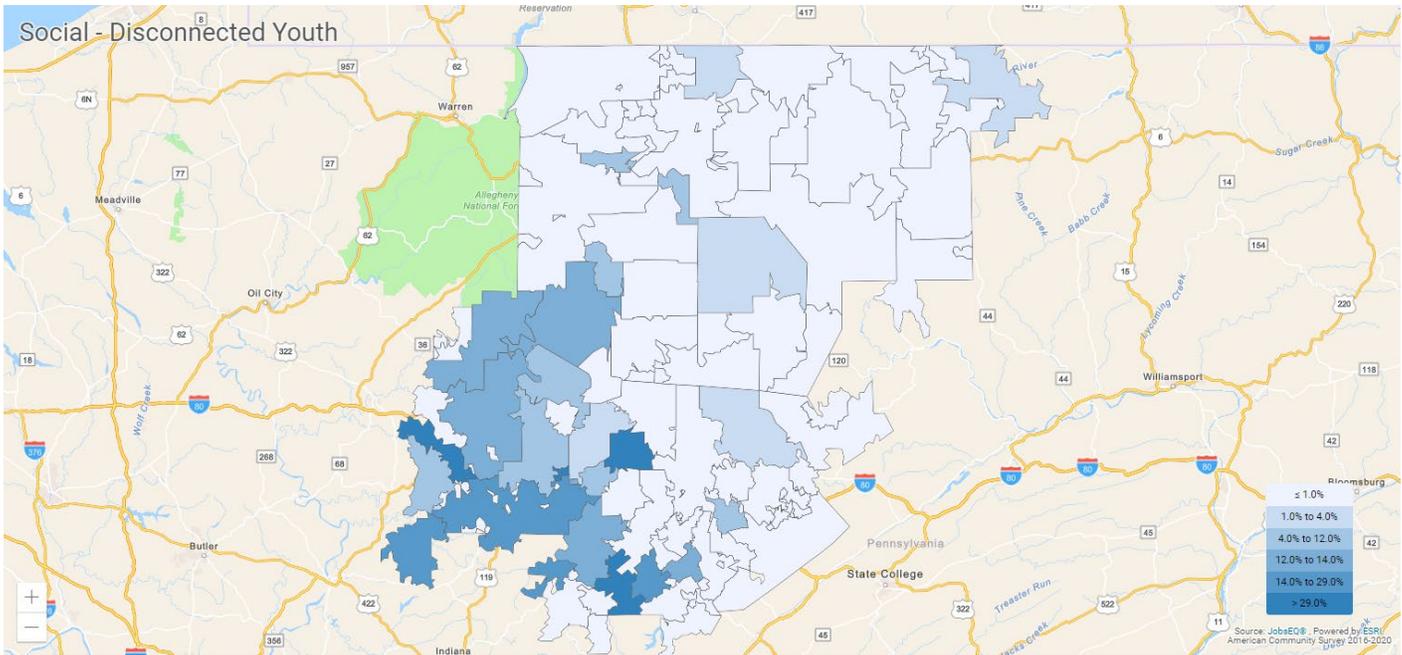
Table 4.9: Top Ten ZCTAs with Highest Percentages of Disconnected Youth

Region	Percent	County
ZCTA 15856	40.0%	Clearfield
ZCTA 15753	31.3%	Clearfield
ZCTA 15864	31.1%	Jefferson
ZCTA 15865	29.0%	Jefferson
ZCTA 16222	22.5%	Jefferson
ZCTA 15767	16.9%	Clearfield
ZCTA 16656	15.9%	Clearfield
ZCTA 15742	14.3%	Clearfield
ZCTA 15860	13.0%	Elk
ZCTA 15825	12.9%	Jefferson

Source: JobsEQ® by Chmura

Individuals with a disability participate in the labor force at lower rates in North Central Pennsylvania than on average across the nation. At the ZCTA level, the percent of people with disabilities ranges from a high of 62.0% in ZCTA 16744 in McKean County to a low of 0% in parts of Jefferson, McKean, and Clearfield counties. Higher concentrations of people with a disability, shown in darker colors in the map below, are scattered in parts of McKean, Jefferson, and Clearfield counties. The top ten ZCTAs are detailed in the table below.

Figure 4.11: Individuals with a Disability by ZCTA Ranges from 0% to 62.0%
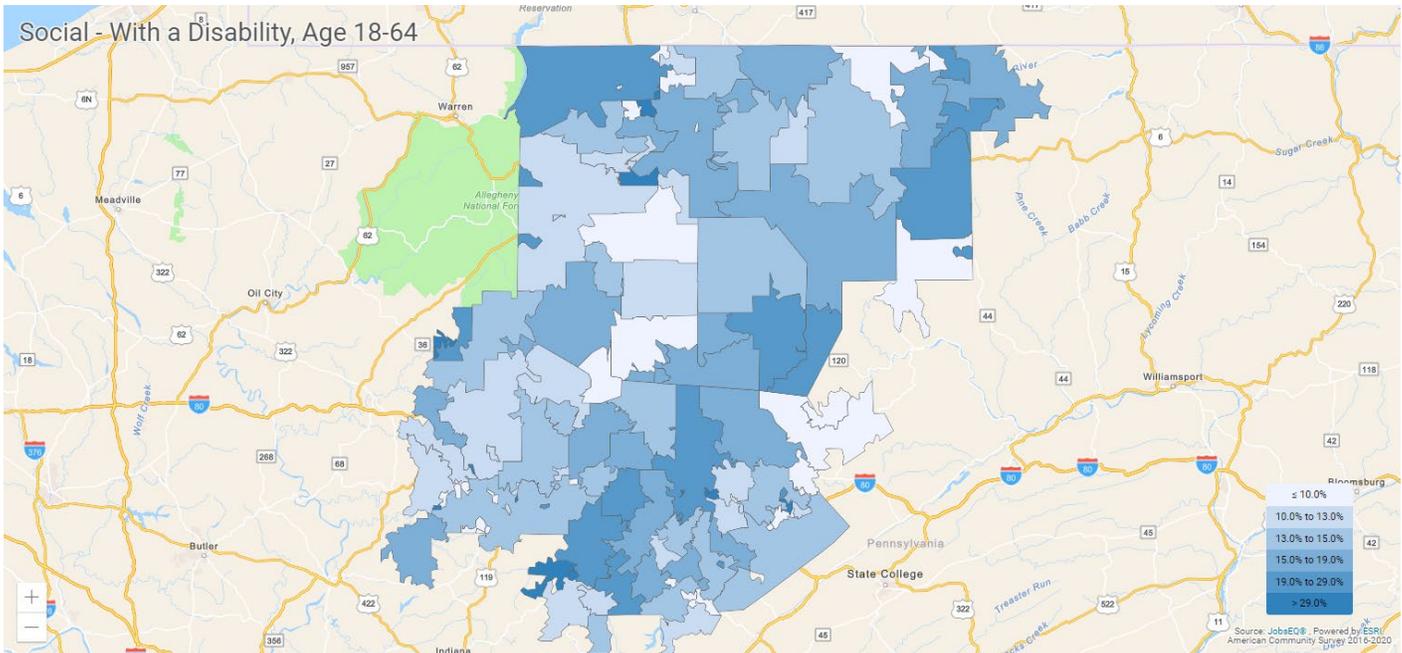
Table 4.10: Top Ten ZCTAs with Highest Percentages of Individuals with a Disability

Region	Percent	County
ZCTA 16744	62.0%	McKean
ZCTA 16217	52.4%	Jefferson
ZCTA 16855	50.0%	Clearfield
ZCTA 15730	41.1%	Jefferson
ZCTA 15778	38.1%	Jefferson
ZCTA 16733	37.0%	McKean
ZCTA 16843	35.7%	Clearfield
ZCTA 16879	33.9%	Clearfield
ZCTA 15721	33.0%	Clearfield
ZCTA 15742	29.2%	Clearfield

Source: JobsEQ® by Chmura

At the ZCTA level, labor force participation for individuals with a disability ranges from a high of 100% in parts of all counties except Potter and Cameron to a low of 0% in parts of all six counties. Lower participation rates, shown in lighter colors in the map below, are most visible in parts of Potter and Cameron counties. The top ten ZCTAs are detailed in the table below.

Figure 4.12: Labor Force Participation with a Disability by ZCTA Ranges from 0% to 100%
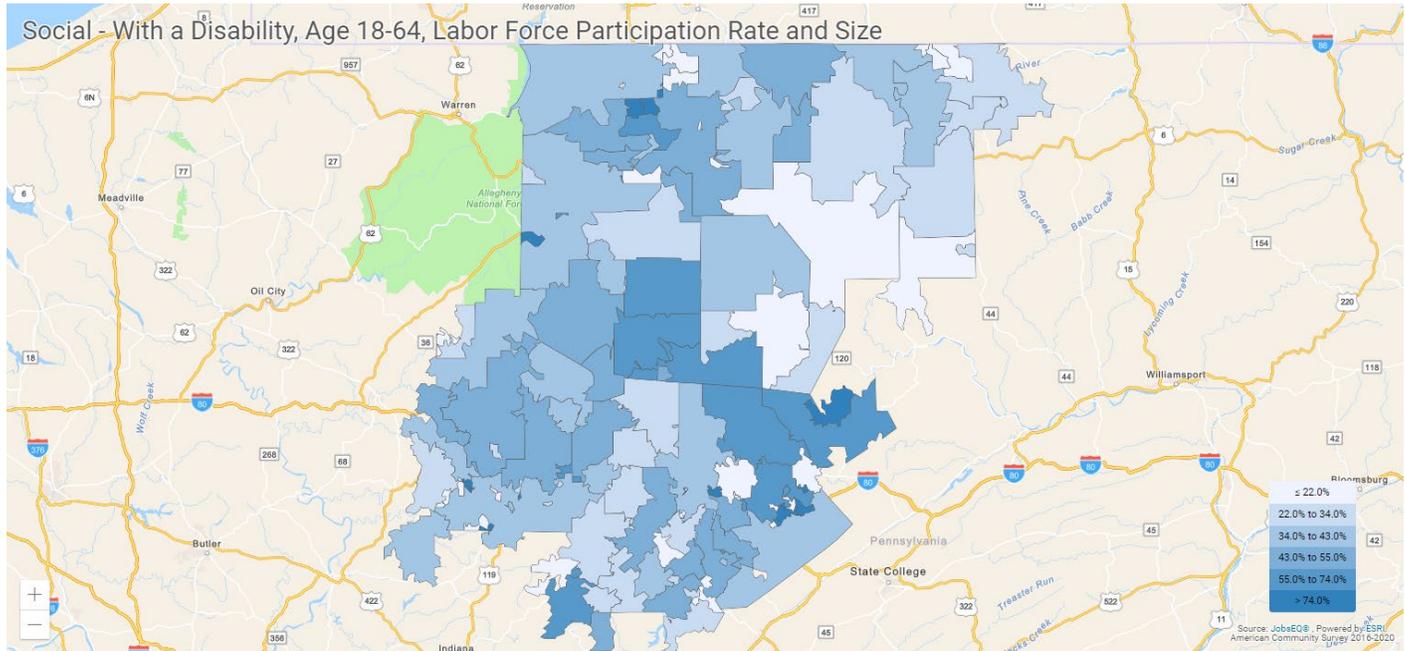
Table 4.11: Top Ten ZCTAs with Lowest Labor Force Participation Rates for Individuals with a Disability

Region	Percent	County
ZCTA 15778	0.0%	Jefferson
ZCTA 16837	0.0%	Clearfield
ZCTA 16941	0.0%	Potter
ZCTA 16724	0.0%	McKean
ZCTA 16821	0.0%	Clearfield
ZCTA 16727	0.0%	McKean
ZCTA 17729	0.0%	Potter
ZCTA 16680	0.0%	Clearfield
ZCTA 15744	0.0%	Jefferson
ZCTA 16840	0.0%	Clearfield

Source: JobsEQ® by Chmura

Several ZCTAs frequently appeared at the top in the groups examined above. To highlight areas of overlapping low participation, Chmura divided the ZCTAs into equal groups of four, or quartiles, for each variable. Counting each instance, a ZCTA ranked in the top quartile and sorting by that count demonstrates areas with the greatest overlap in low participation groups. No ZCTA appeared in the top quartile for all six indicators. Only one ZCTA, 15733 in Jefferson County, was top ranked in five indicators. Another three in Jefferson, Potter, and Clearfield were in the top quartile for four indicators. As shown in the map below, the areas most often ranking at the top are primarily on the edges of the region in Clearfield, Jefferson, and Potter counties.

Figure 4.13: Areas Appearing More Frequently in the Top Quartile Have High Concentrations of Low Participation Groups
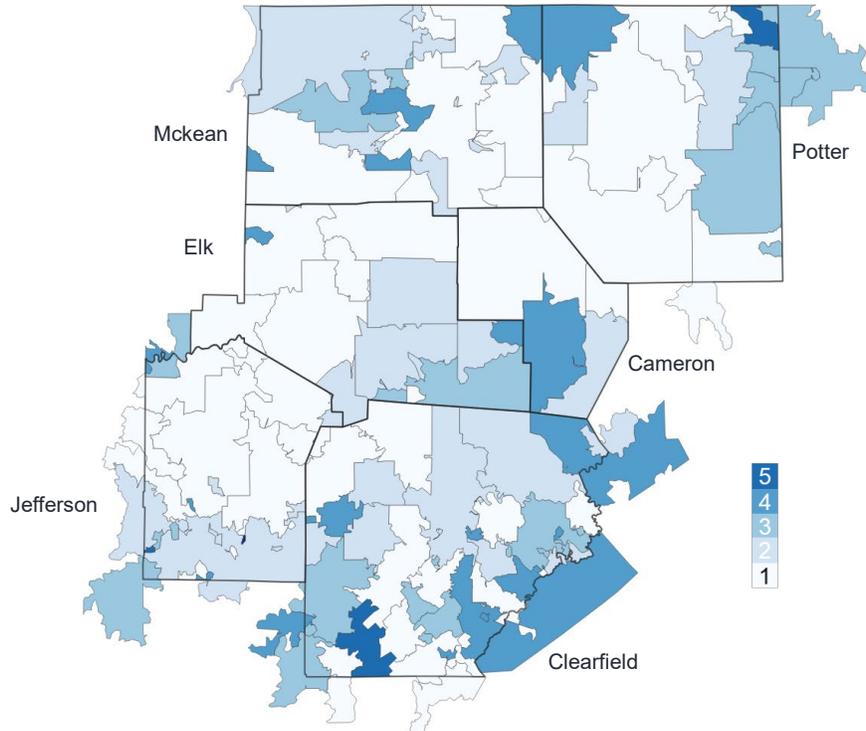
Figure 4.12: Top Ten ZCTAs Most Often in the Top Quartile of Indicators

Region	Count of Top Quartile	County
ZCTA 15733	5	Jefferson
ZCTA 16927	4	Potter
ZCTA 15778	4	Jefferson
ZCTA 15753	4	Clearfield
ZCTA 16217	3	Jefferson
ZCTA 16733	3	McKean
ZCTA 16651	3	Clearfield
ZCTA 15780	3	Jefferson
ZCTA 15832	3	Elk
ZCTA 16855	3	Clearfield

Source: JobsEQ® by Chmura

Appendix

Table A1: Changes in Labor Force Size, 2010 to 2020

County	In Labor Force	Total (16 and over)	Male (20 to 64)	Fe-male (20 to 64)	16 to 19 years	20 to 24 years	25 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 years and over	Less than High School Di-ploma	High School or Equiv-alent	With Chil-dren under 6
Cameron	2010	2,500	1,277	1,030	93	159	927	748	473	79	22	186	1,065	115
	2020	2,111	1,006	904	62	200	801	464	445	117	21	79	784	156
	Change	**-390**	**-271**	**-127**	**-31**	**41**	**-126**	**-284**	**-28**	**38**	**-1**	**-107**	**-281**	**41**
Clearfield	2010	38,166	19,164	15,785	1,832	3,255	15,707	10,054	5,925	1,107	252	2,080	16,013	2,410
	2020	36,639	17,985	15,116	1,506	3,341	13,741	8,765	7,257	1,646	366	1,693	12,810	1,129
	Change	**-1,527**	**-1,179**	**-669**	**-326**	**86**	**-1,966**	**-1,289**	**1,331**	**539**	**113**	**-387**	**-3,203**	**-1,281**
Elk	2010	16,591	8,307	7,164	610	1,053	6,803	4,838	2,771	409	110	601	6,929	814
	2020	16,264	7,617	6,748	696	1,382	5,504	3,818	3,668	860	325	413	5,645	494
	Change	**-327**	**-689**	**-416**	**86**	**329**	**-1,300**	**-1,020**	**897**	**452**	**214**	**-188**	**-1,284**	**-320**
Jefferson	2010	21,186	10,783	8,589	1,018	1,943	8,437	5,741	3,259	663	125	971	9,277	1,058
	2020	20,573	9,975	8,423	1,021	1,883	8,061	4,422	4,029	952	190	946	8,064	560
	Change	**-613**	**-808**	**-166**	**3**	**-60**	**-376**	**-1,319**	**770**	**289**	**65**	**-25**	**-1,214**	**-499**
McKean	2010	20,647	9,700	8,824	1,142	1,843	8,104	5,204	3,364	818	149	810	7,933	1,340
	2020	18,868	9,099	7,763	1,004	1,870	7,012	4,145	3,826	861	161	515	6,320	594
	Change	**-1,779**	**-601**	**-1,061**	**-138**	**27**	**-1,092**	**-1,059**	**462**	**43**	**12**	**-295**	**-1,613**	**-746**
Potter	2010	7,901	3,879	3,256	396	601	3,027	2,095	1,409	303	71	423	3,211	407
	2020	7,414	3,499	2,988	272	644	2,665	1,662	1,513	553	106	260	2,569	173
	Change	**-487**	**-380**	**-268**	**-124**	**43**	**-363**	**-433**	**104**	**251**	**35**	**-163**	**-642**	**-234**
North Central PA	2010	106,992	53,111	44,648	5,091	8,854	43,006	28,680	17,202	3,379	730	5,072	44,428	6,144
	2020	101,869	49,182	41,942	4,562	9,320	37,783	23,276	20,738	4,990	1,170	3,906	36,191	3,106
	Change	**-5,123**	**-3,928**	**-2,706**	**-529**	**466**	**-5,223**	**-5,403**	**3,535**	**1,611**	**440**	**-1,166**	**-8,236**	**-3,038**

Source: Chmura, American Community Survey 5-year Estimates

Table A2: Number Not in the Labor Force and Participation Rates, by County

Not in Labor Force							
	Cameron	Clearfield	Elk	Jefferson	McKean	Potter	North Central PA
Total (16 and over)	1,769	30,098	8,758	14,776	15,067	6,291	76,759
Male (20 to 64)	227	8,271	1,220	2,340	3,609	1,075	16,741
Female (20 to 64)	367	5,966	1,441	3,491	3,233	1,400	15,898
With Children	78	1,612	303	1,044	828	401	4,266
With a Disability	251	3,995	1,007	1,905	2,252	985	10,396
25 to 54	204	8,386	1,035	2,766	3,907	1,114	17,412
55+	1,446	19,162	6,931	10,640	9,304	4,514	51,997
Less than High School Diploma	90	2,751	264	884	885	383	5,257
High School or Equivalent	258	6,629	1,273	2,877	3,198	1,122	15,358

Participation Rate							
	Cameron	Clearfield	Elk	Jefferson	McKean	Potter	North Central PA
Total (16 and over)	54.4%	54.9%	65.0%	58.2%	55.6%	54.1%	57.0%
Male (20 to 64)	81.6%	68.5%	86.2%	81.0%	71.6%	76.5%	74.6%
Female (20 to 64)	71.1%	71.7%	82.4%	70.7%	70.6%	68.1%	72.5%
With Children	80.5%	76.0%	86.3%	74.0%	76.3%	71.0%	76.6%
With a Disability	33.1%	41.7%	54.7%	40.3%	40.7%	29.3%	41.7%
25 to 54	86.1%	72.9%	90.0%	81.9%	74.1%	79.5%	77.8%
55+	28.7%	32.6%	41.2%	32.7%	34.3%	32.5%	34.1%
Less than High School Diploma	46.7%	38.1%	61.0%	51.7%	36.8%	40.4%	42.6%
High School or Equivalent	75.2%	65.9%	81.6%	73.7%	66.4%	69.6%	70.2%

Source: Chmura, American Community Survey 5-year Estimates