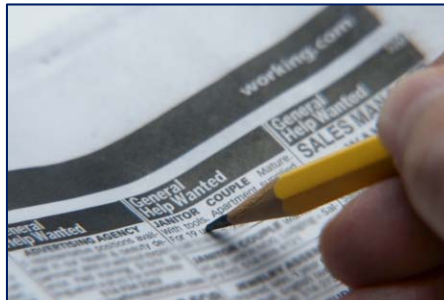


Addendum 9

**Demographic Profile of the Labor
Force in Northeast Ohio, 2011-2013**



Demographic Profile of the Labor Force in Northeast Ohio, 2011-2013

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June, 2016



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Introduction

This report is an update of a previous Community Solutions study, *Cuyahoga County Workforce Indicators, 2014*. That study examined the characteristics of Cuyahoga County's workforce using data from the American Community Survey (ACS) three-year sample from 2009 to 2011. This updated report uses the ACS Public Use Microdata Sample (PUMS) from 2011 to 2013.¹ We also expand the geographic range to the eight-county Northeast Ohio region (Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit). As employment is a lagging indicator of economic growth, the 2011 to 2013 period can be used to approximate workforce conditions as the region was emerging from the Great Recession of 2007 to 2009. It is the goal of this analysis to assist local workforce development to identify the subpopulations most in need of assistance, such as younger workers, those with educational deficits, and racial/ethnic minorities.

Detailed data tables for this report may be found in the appendix. Since the data come from a sample survey, there is a margin of error associated with each estimate. These are denoted by a lower and upper bound in the data tables and by an "I-beam" in the charts, indicating a 90-percent confidence interval for all estimates. Two estimates may be said to be "significantly" different if their margins of error (confidence intervals) do not overlap.

Key Findings

- In 2011-2013, the labor force in Northeast Ohio numbered nearly 1.5 million persons ages 16 and over. The labor force participation rate in the region was 63 percent, lower than the 2008-2010 rate of 66 percent.
- Total employment in the region numbered 1.3 million workers, 58 percent of the population 16 and over, a slight decline from 59 percent in 2008-2010.
- There were 148,000 unemployed persons in Northeast Ohio in 2011-2013, 10.0 percent of the labor force, not significantly different from the 10.4 percent unemployment rate in 2008-2010.
- Unemployment rates were highest among younger workers, 29.2 percent for 16-to-19 year-olds, and 15.1 percent for those 20 to 24.
- Although males had higher labor force participation and percent employed than females, they also had larger unemployment rates (11.1 percent) than females (8.9 percent).
- Compared to other racial/ethnic groups, African Americans had lower labor force participation and percent employed. Their unemployment rate (20.5 percent) was almost three times that for Whites (7.9 percent).
- Hispanics had high labor force participation (69 percent) and percent employed (60 percent), but also a high unemployment rate (13.6 percent).

- Increasing educational attainment was associated with higher labor force participation and percent employed, and decreasing unemployment. The unemployment rate among those with no high school diploma (26.9 percent) was four times as high as that for those with at least an associate’s degree (6.5 percent or lower).
- Almost three-fourths of workers worked full-time in the past year (i.e., 35 or more hours per week), and 61 percent worked full-time and full-year (50 to 52 weeks). A lower proportion of younger (under 25), older (65 or over), female, African American, Hispanic, and less-educated workers were full-time/ full-year.
- More than half of all employed workers were found in these industries: Manufacturing; Health Care and Social Assistance; Retail Trade; Education; and Accommodation and Food Services.
 - Unemployment exceeded 10 percent in the following industries: Administration, Support, and Waste Management; Construction; Arts, Entertainment, and Recreation; and Accommodation and Food Services. These accounted for 30 percent of all unemployed workers.
- Median annual earned income for all workers in the region in 2011-2013 was \$29,980 (in 2013 dollars), lower than the median of \$30,351 in 2008-2010. For those who worked full-time, full-year, the median in 2011-2013 was \$43,028, not significantly different from the 2008-2010 median of \$43,432.
 - Females working full-time, full-year had a median earned income of \$37,255, only 75 percent of the median for males (\$49,708). Full-time, full-year medians for African Americans (\$32,541) and Hispanics (\$31,980) were only 71 and 70 percent, respectively, of the median for Whites (\$45,941).
 - Occupations with the highest overall median earnings were: Architecture and Engineering; Computer and Mathematical; Management; Legal; and Financial Specialists. The lowest medians were found in Food Preparation and Serving; Personal Care and Service; Building and Grounds Cleaning and Maintenance; Healthcare Support; and Transportation and Material Moving.

A. Labor Force Participation

In 2011-2013, the labor force (i.e., those who were employed or actively seeking work) included nearly 1.5 million people in the eight-county Northeast Ohio region, 63 percent of the total population ages 16 and over. This is a slight but statistically significant decline from a rate of 66 percent in 2008-2010.

The labor force participation rate was highest for those ages 25 to 34 (84 percent) and 35 to 59 (81 percent). It was lower for younger and older age groups – 47 percent of those ages 16 to 19, 56 percent of those 60 to 64, and lowest for those 65 and over. Males had a significantly higher rate (69 percent) than females (60 percent). Whites and Asians had significantly higher rates (65

percent and 67 percent, respectively) than did African Americans (59 percent). Sixty-nine percent of Hispanics of any race were in the labor force. Educational attainment was directly proportional to labor force participation – only 37 percent of those without a high school diploma were in the labor force, compared to more than half (59 percent) of those with only a high school diploma and more than three-fourths of those with an associate’s degree or higher.

Figure A-1
Labor Force Participation, by Age Group
Northeast Ohio, 2011-2013

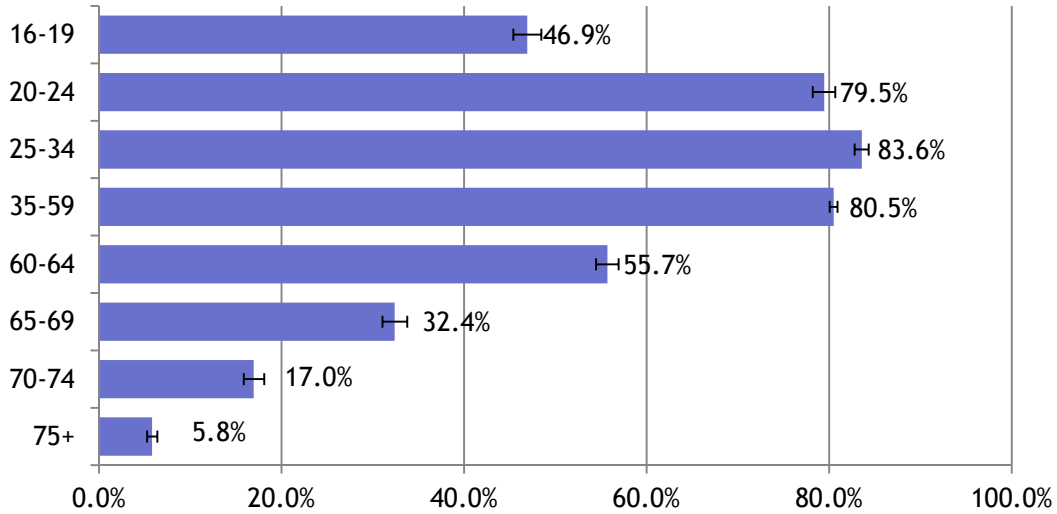


Figure A-2
Labor Force Participation, by Sex
Northeast Ohio, 2011-2013

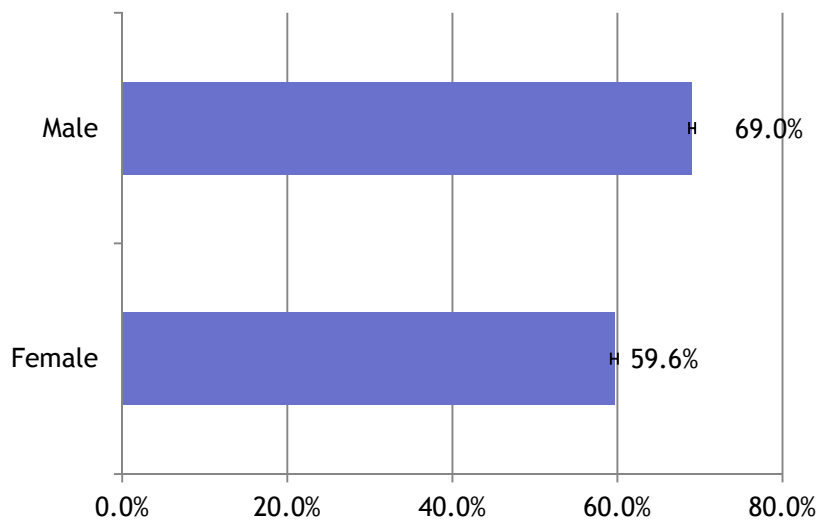


Figure A-3
 Labor Force Participation, by Race and Ethnicity
 Northeast Ohio, 2011-2013

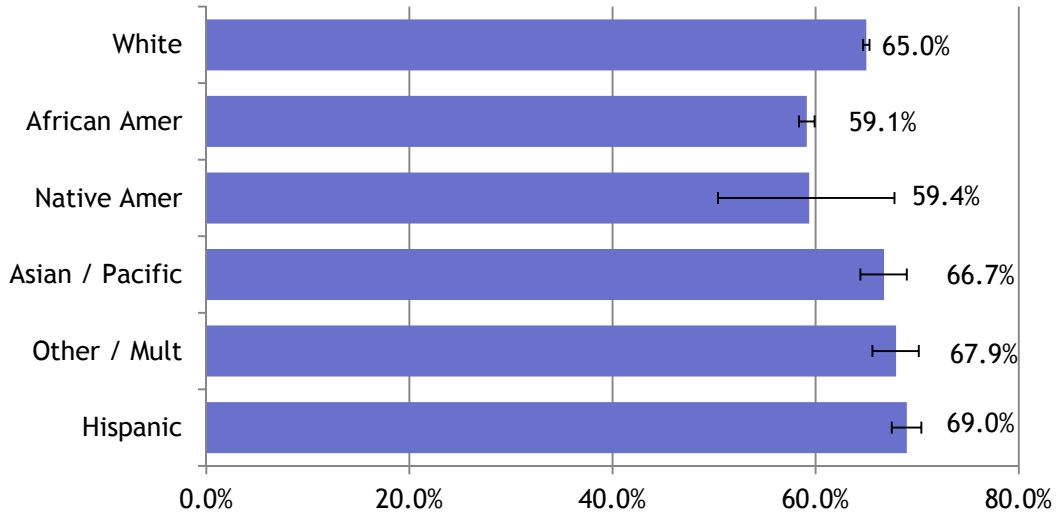
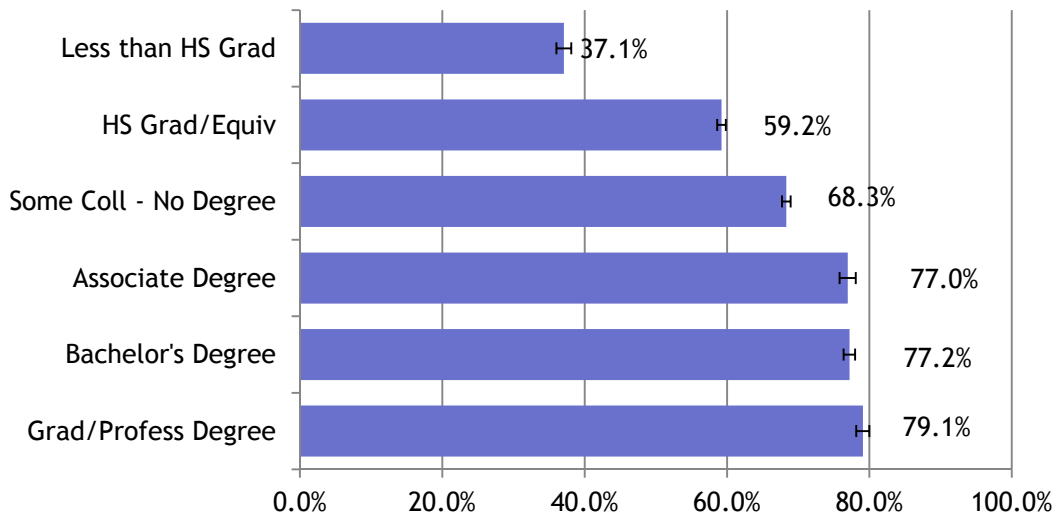


Figure A-4
 Labor Force Participation, by Educational Attainment
 Northeast Ohio, 2011-2013



B. Employment

Total employment in the region was 1.3 million, 58 percent of the population 16 and over, a significant decline from 59 percent in 2008-2010. Three-fourths of those 25 to 59 were employed, compared to one-third of those 16 to 19, just over half of those 60 to 64, and one-third of those 65 to 69. Sixty-one percent of males were employed, compared to 54 percent of females.

Employment was highest among Whites (60 percent) and Asians (63 percent), compared to 47 percent of African Americans; 60 percent of Hispanics were employed. As with labor force participation, educational attainment was directly related to employment. Only one-fourth of those without a high school diploma were employed, compared to half of those with only a diploma and more than 70 percent of those with an associate's degree or higher.

Figure B-1

Percent Employed, Population 16 and Over, by Age Group
Northeast Ohio, 2011-2013

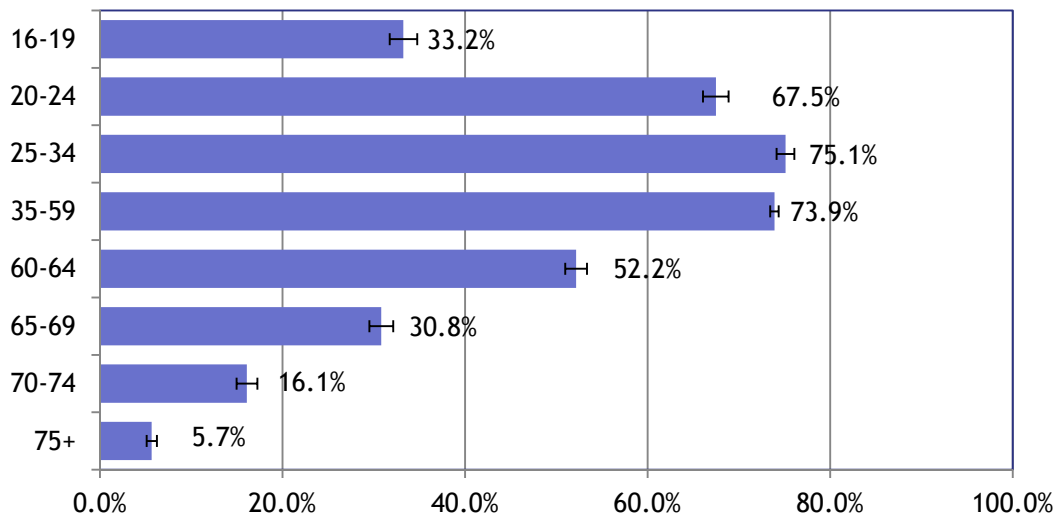


Figure B-2
 Percent Employed, Population 16 and Over, by Sex
 Northeast Ohio, 2011-2013

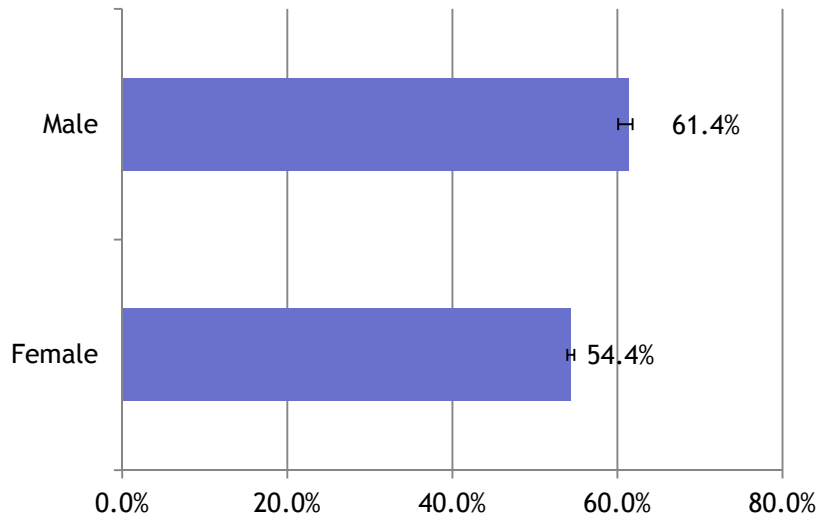


Figure B-3
 Percent Employed, Population 16 and Over, by Race and Ethnicity
 Northeast Ohio, 2011-2013

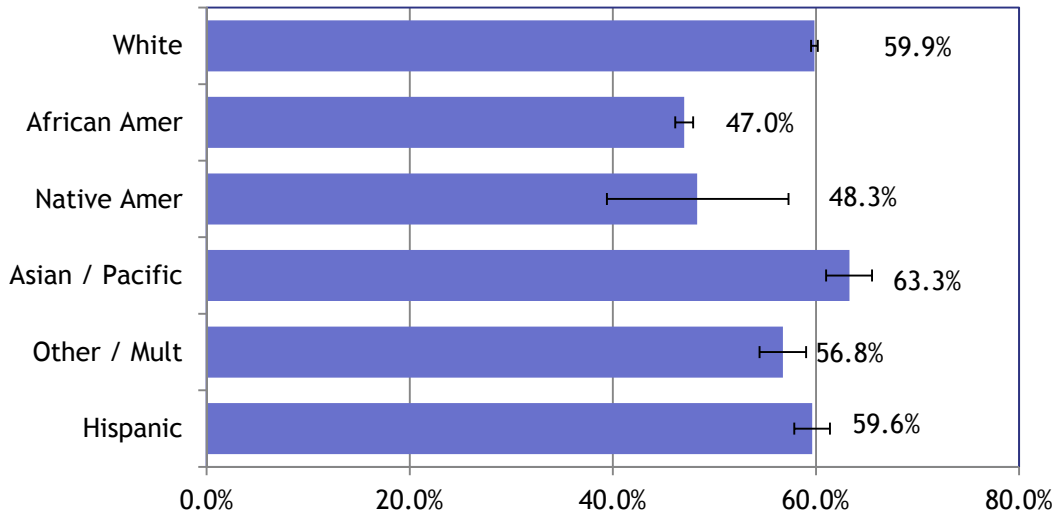
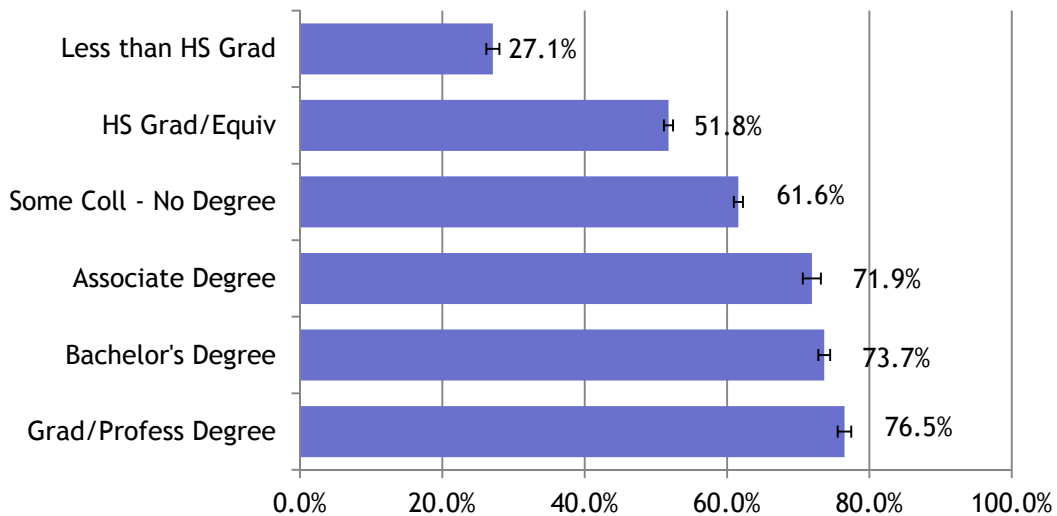


Figure B-4
 Percent Employed, Population 16 and Over, by Educational Attainment
 Northeast Ohio, 2011-2013



C. Unemployment

There were 148,000 unemployed persons in Northeast Ohio in 2011-2013, meaning that they were currently not working but were actively seeking work. The unemployed constituted 10.0 percent of the labor force, not significantly different from the rate of 10.4 percent in 2008-2010. The unemployment rate was highest for younger workers: 29.2 percent for those 16 to 19, and 15.1 percent for those 20 to 24. Unemployment was significantly higher for males (11.1 percent) than for females (8.9 percent), and higher for African Americans (20.5 percent) than for Whites (7.9 percent) and Asians (5.2 percent). Fourteen percent of Hispanics in the labor force were unemployed. Lower educational attainment was correlated with higher unemployment rates: 26.9 percent for those with no high school diploma and 12.6 percent for those with only a high school diploma, compared to 6.5 percent or less for those with at least an associate's degree.

Figure C-1
Unemployment Rate, by Age Group
Northeast Ohio, 2011-2013

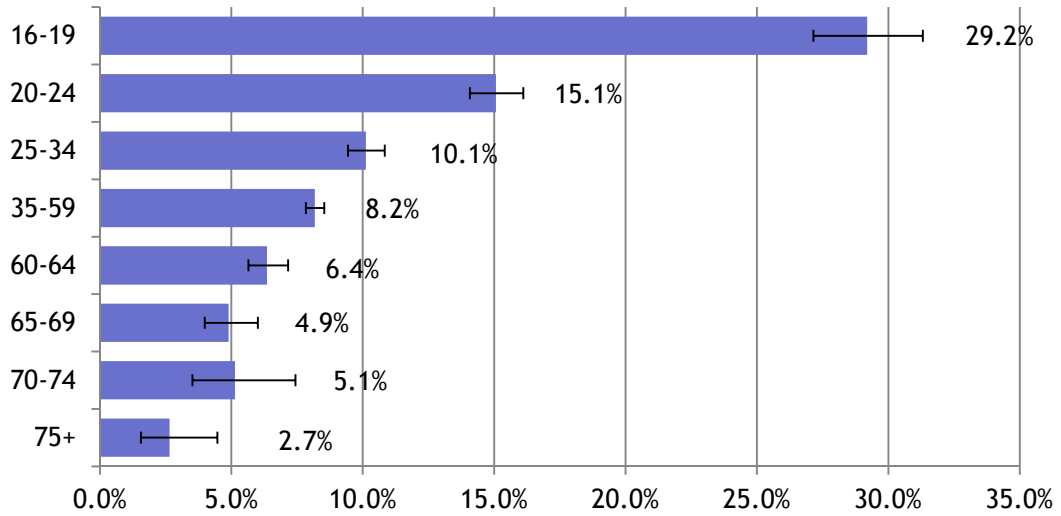


Figure C-2
Unemployment Rate, by Sex
Northeast Ohio, 2011-2013

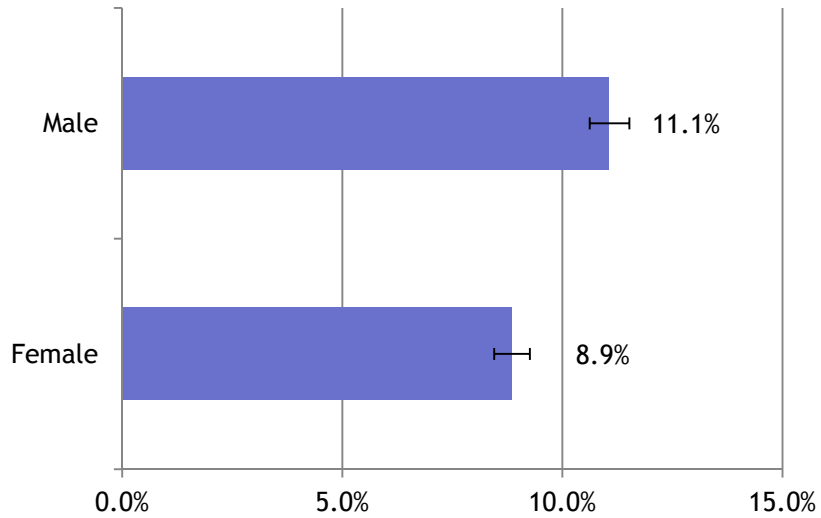


Figure C-3
 Unemployment Rate, by Race and Ethnicity
 Northeast Ohio, 2011-2013

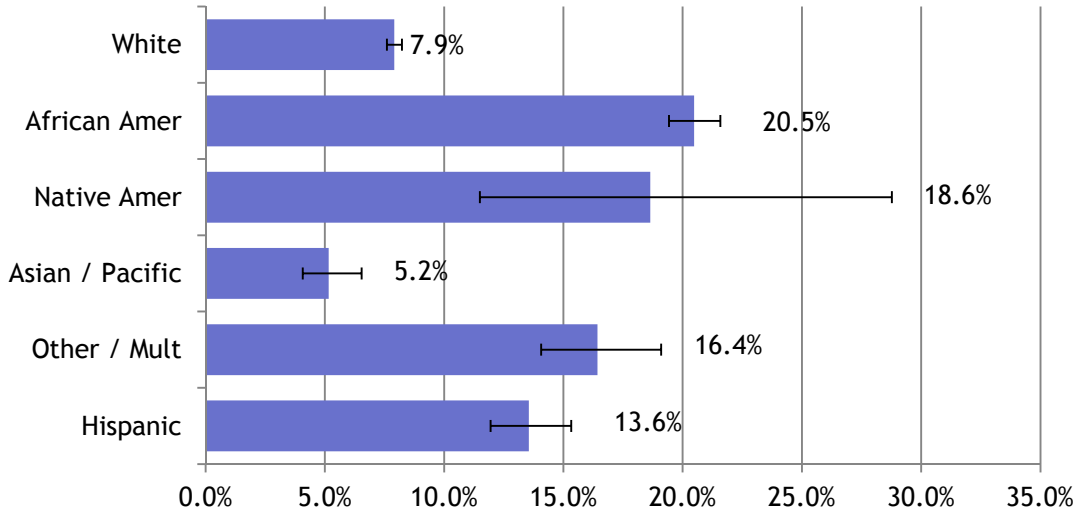
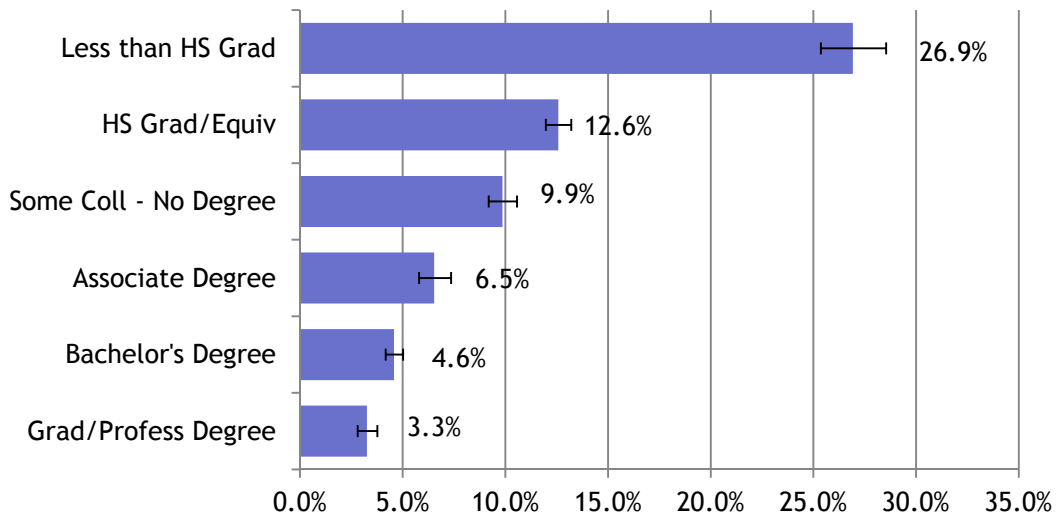


Figure C-4
 Unemployment Rate, by Educational Attainment
 Northeast Ohio, 2011-2013



D. Worked in the Past Year: Full- and Part-Time

Sixty-five percent (1.5 million) of Northeast Ohioans ages 16 and over worked at some time in the past year. Of these, 73 percent (1.1 million) worked full-time, (i.e., 35 or more hours per week) and 27 percent (406,000) worked part-time.

More than 75 percent of workers 25 to 64 worked full-time. Part-time employment predominated among younger (16 to 24) and older (65 and over) workers, although just over half of workers 65 to 69 were full-time. About two-thirds of working women were full-time, compared to more than three-fourths of working men. A significantly lower percentage of African American workers were full-time (70 percent) than Whites (73 percent), Asians (77 percent), and Hispanics (75 percent). Half of all workers without a high school diploma were part-time, although this may include the youngest workers who are still in school. Similarly, one-third of workers with some college but no degree were part-time; many of these people may also be in school. Seventy-three percent of workers with only a high school diploma were full-time, as were 76 percent or more of those with an associate's degree and more than 80 percent of those with a bachelor's degree or higher.

When we combine full- and part-time status with the number of weeks worked in the past year, we find that 61 percent of workers in the region (960,000) were full-time/full-year (FT-FY), with full-year being defined as working 50 to 52 weeks in the year. Another 11 percent (170,000) worked full-time but less than 50 weeks in the year (full-time/part-year, or FT-PY). Thirteen percent of all workers (186,000) worked part-time/full-year (PT-FY), and 15 percent (220,000) worked part-time/part-year (PT-PY).

In the prime-earning ages of 35 to 59, 73 percent of workers were FT-FY, but 47 percent of older workers 65 to 69 were also FT-FY. Sixty-seven percent of male workers and 56 percent of females were FT-FY. Just over half (57 percent) of African American workers and 59 percent of Hispanics were FT-FY, compared to 62 percent of Whites and 65 percent of Asians. Increasing levels of educational attainment were also associated with higher percentages of FT-FY workers, again with a slight dip for those with some college, but no degree.

Figure D-1
Worked Full/Part-Time, Full/Part-Year
By Age
Northeast Ohio, 2011-2013

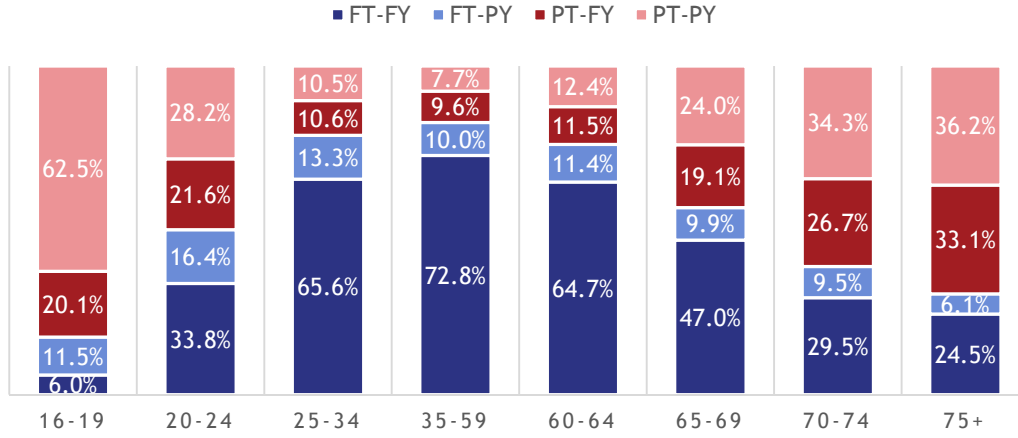


Figure D-2
Worked Full/Part-Time, Full/Part-Year
By Sex
Northeast Ohio, 2011-2013

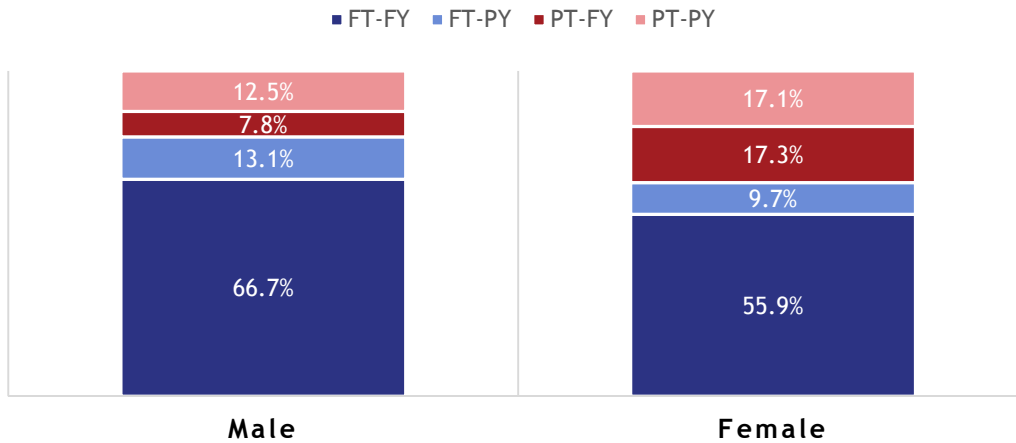


Figure D-3
Worked Full/Part-Time, Full/Part-Year
By Race/Ethnicity
Northeast Ohio, 2011-2013

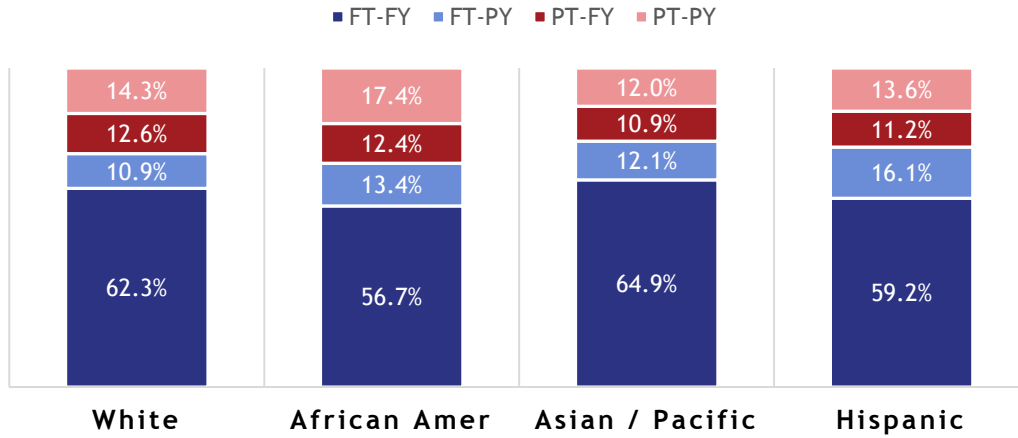
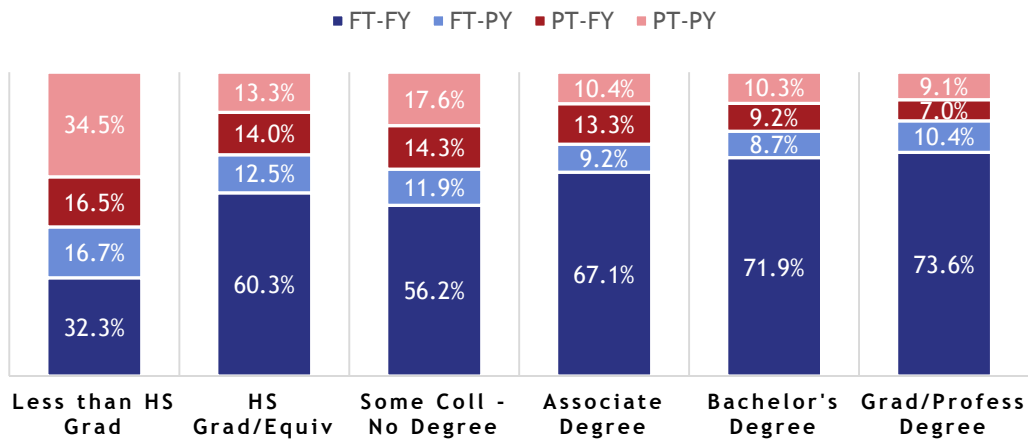


Figure D-4
Worked Full/Part-Time, Full/Part-Year
By Educational Attainment
Northeast Ohio, 2011-2013



E. Occupation

The occupational groups with the largest number of employed workers in the region were:

- Office and Administrative Support (191,000 persons employed)
- Sales, including retail (147,000)
- Management (126,000)
- Production (105,000)
- Healthcare Practitioners and Technical (85,000)

Together, these five categories represented half (50.4 percent) of all employed workers.

Excluding agricultural and military occupations, five occupational groups had unemployment rates of 10 percent or higher:

- Construction and Extraction (19.7 percent)
- Building and Grounds Cleaning and Maintenance (15.4 percent)
- Transportation and Material Moving (13.0 percent)
- Food Preparation and Serving (12.5 percent)
- Production (10.0 percent)

The number of unemployed workers in these five groups accounted for 38 percent of all unemployed workers.

**Table E-1
Employment and Unemployment by Occupation, Northeast Ohio, 2011-2013**

Occupation	Number Employed	Percent of Total Employment	Number Unemployed	Unemployment Rate
Management	126,128	9.5%	5,747	4.4%
Business Operations Specialists	34,411	2.6%	1,659	4.6%
Financial Specialists	30,258	2.3%	1,279	4.1%
Computer and Mathematical	31,701	2.4%	1,048	3.2%
Architecture and Engineering	24,059	1.8%	794	3.2%
Life, Physical, and Social Scientists	10,342	0.8%	496	4.6%
Community and Social Services	22,633	1.7%	920	3.9%
Legal	15,881	1.2%	509	3.1%
Education, Training, and Library	78,053	5.9%	3,702	4.5%
Arts, Design, Entertainment, Sports, Media	22,779	1.7%	1,487	6.1%
Healthcare Practitioners and Technical	85,379	6.4%	1,877	2.2%
Healthcare Support	41,684	3.1%	3,087	6.9%
Protective Services	24,861	1.9%	1,435	5.5%
Food Preparation and Serving	80,279	6.0%	11,476	12.5%
Building and Grounds Cleaning and Maintenance	49,770	3.7%	9,049	15.4%
Personal Care and Service	43,328	3.3%	4,020	8.5%
Sales	146,783	11.0%	15,211	9.4%

Occupation	Number Employed	Percent of Total Employment	Number Unemployed	Unemployment Rate
Office and Administrative Support	191,539	14.4%	13,862	6.8%
Farming, Fishing, and Forestry	2,575	0.2%	795	*23.6%
Construction and Extraction	49,203	3.7%	12,072	19.7%
Installation, Maintenance, and Repair	38,400	2.9%	3,569	8.5%
Production	105,379	7.9%	11,681	10.0%
Transportation and Material Moving	78,026	5.9%	11,686	13.0%
Military Specific	529	< 0.1%	280	*34.6%
Total	1,333,980	100.0%	147,976	10.0%
* Use with caution: Relative Standard Error greater than 20.0%.				

Demographic Characteristics of Employed Persons by Occupation

Age: Workers ages 16 to 24 made up 13 percent of all employed persons in the region, but comprised almost half (47 percent) of those in Food Preparation and Serving occupations, and 22 percent of those in Personal Care and Sales.

Half of all workers in Computer and Mathematical occupations were between 25 and 44, as were 45 to 50 percent of workers in:

- Community and Social Services
- Legal
- Life, Physical, and Social Sciences
- Healthcare Practitioners and Technical
- Construction and Extraction
- Arts, Design, Entertainment, Sports, and Media.

Half of all Management and Production (50.3 percent) jobs were held by those ages 45 to 64, although this age group made up 42 percent of all employed workers.

Those age 65 and over made up 5 percent of all workers, but 9 and 7 percent, respectively, of those in Legal and Financial Specialist occupations.

Table E-2: Employment by Occupation and Age Group

Occupation	16 to 24	25 to 44	45 to 64	65 and Over
Management	3.5%	40.5%	49.9%	6.0%
Business Operations Specialists	4.9%	45.4%	45.4%	4.4%
Financial Specialists	5.4%	44.0%	43.6%	7.0%
Computer and Mathematical	5.1%	51.1%	41.9%	*1.9%
Architecture and Engineering	6.5%	42.9%	45.4%	5.2%
Life, Physical, and Social Scientists	*5.8%	46.7%	41.5%	*6.1%
Community and Social Services	*3.6%	48.2%	42.5%	5.8%
Legal	*1.4%	47.4%	42.3%	8.9%
Education, Training, and Library	9.1%	44.8%	40.3%	5.8%
Arts, Design, Entertainment, Sports, Media	13.6%	45.0%	35.8%	5.6%
Healthcare Practitioners and Technical	5.4%	46.3%	44.1%	4.3%
Healthcare Support	17.9%	41.7%	36.0%	4.4%
Protective Services	12.5%	42.6%	38.9%	6.1%
Food Preparation and Serving	46.9%	32.5%	18.4%	2.2%
Building and Grounds Cleaning and Maintenance	14.7%	33.5%	45.1%	6.7%
Personal Care and Service	21.5%	42.7%	29.8%	5.9%
Sales	21.6%	34.5%	37.2%	6.5%
Office and Administrative Support	12.2%	34.5%	47.1%	6.2%
Farming, Fishing, and Forestry	31.7%	46.5%	*20.3%	*1.4%
Construction and Extraction	9.4%	46.2%	41.8%	2.6%
Installation, Maintenance, and Repair	8.9%	40.1%	47.6%	3.4%
Production	10.1%	37.0%	49.7%	3.1%
Transportation and Material Moving	13.3%	33.8%	46.7%	6.2%

Occupation	16 to 24	25 to 44	45 to 64	65 and Over
Military Specific	*7.4%	78.6%	*14.0%	0.0%
All Occupations	13.3%	39.4%	42.1%	5.2%
*Use with caution: Relative Standard Error Greater than 20.0%				

Sex: Just over half (51 percent) of employed workers were male, and 49 percent were female.

In five occupational groups, employment was almost equally divided between males and females:

- Financial Specialists
- Life, Physical and Social Sciences
- Legal
- Arts, Design, Entertainment, Sports, and Media
- Sales

Males held a much larger proportion of jobs in the following fields:

- Construction and Extraction (97 percent)
- Installation, Maintenance and Repair (96 percent)
- Architecture and Engineering (88 percent)
- Transportation and Material Moving (83 percent)
- Protective Services (77 percent)
- Production (74 percent)
- Computer and Mathematical (72 percent)
- Building and Grounds Cleaning and Maintenance (64 percent)

Females predominated in the following occupations:

- Healthcare Support (88 percent)
- Personal Care and Service (77 percent)
- Healthcare Practitioners and Technical (77 percent)
- Office and Administrative Support (74 percent)
- Education, Training, and Library (71 percent)
- Community and Social Services (65 percent)

Table E-3: Employment by Occupation and Sex

Occupation	Male	Female
Management	60.5%	39.6%
Business Operations Specialists	43.5%	56.5%

Occupation	Male	Female
Financial Specialists	48.8%	51.2%
Computer and Mathematical	72.3%	27.7%
Architecture and Engineering	88.0%	12.0%
Life, Physical, and Social Scientists	53.7%	46.3%
Community and Social Services	34.6%	65.4%
Legal	50.8%	49.2%
Education, Training, and Library	29.0%	71.0%
Arts, Design, Entertainment, Sports, Media	52.7%	47.3%
Healthcare Practitioners and Technical	23.1%	76.9%
Healthcare Support	11.8%	88.6%
Protective Services	76.8%	23.2%
Food Preparation and Serving	40.8%	59.2%
Building and Grounds Cleaning and Maintenance	64.1%	35.9%
Personal Care and Service	22.9%	77.1%
Sales	50.2%	49.8%
Office and Administrative Support	26.1%	73.9%
Farming, Fishing, and Forestry	62.0%	38.0%
Construction and Extraction	96.9%	3.1%
Installation, Maintenance, and Repair	95.6%	4.4%
Production	73.6%	26.4%
Transportation and Material Moving	82.5%	17.5%
Military Specific	96.8%	*3.2%
All Occupations	50.7%	49.3%
*Use with caution: Relative Standard Error greater than 20.0%.		

Race and Ethnicity: Of all employed persons in the region, 82 percent were White, 14 percent were African American, 2 percent were Asian or Pacific Islander, and 2 percent were of other or multiple races. Hispanics of any race made up 3.6 percent of workers.

Whites held 85 percent or more of jobs in the following occupations:

- Installation, Maintenance, and Repair (90 percent)
- Architecture and Engineering (90 percent)
- Legal (89 percent)
- Management (89 percent)
- Financial Specialists (88 percent)
- Arts, Design, Entertainment, Sports, Media (88 percent)
- Construction and Extraction (87 percent)
- Business Operations Specialists (87 percent)
- Sales (85 percent)

The following occupations had the highest proportions of African American workers:

- Healthcare Support (37 percent)
- Building and Grounds Cleaning and Maintenance (23 percent)
- Community and Social Services (22 percent)
- Personal Care and Service (21 percent)
- Protective Services (17 percent).

Among STEM occupations, African Americans made up 11 percent of Computer and Mathematical, 3 percent of Architecture and Engineering, and 3 percent of Life, Physical, and Social Science positions.

Although they represented only 2 percent of total employment, Asians and Pacific Islanders held 14 percent of Life, Physical, and Social Science and 11 percent of Computer and Mathematical jobs.

While only 4 percent of total employment, Hispanics made up 26 percent of Farming, Forestry, and Fishing jobs, but this percentage should be used with caution because of low absolute numbers.

Table E-4: Employment by Occupation and Race/Ethnicity

Occupation	White	African American	Asian/ Pacific Islander	Other or Multiple Race	Hispanic (Any Race)
Management	88.8%	6.8%	2.5%	2.0%	2.2%
Business Operations Specialists	86.5%	10.8%	*1.2%	*1.7%	*1.7%

Occupation	White	African American	Asian/ Pacific Islander	Other or Multiple Race	Hispanic (Any Race)
Financial Specialists	88.3%	8.9%	*1.7%	*1.2%	*1.7%
Computer and Mathematical	76.6%	10.6%	11.1%	*1.7%	*2.4%
Architecture and Engineering	89.6%	*3.2%	5.6%	*1.6%	*2.2%
Life, Physical, and Social Scientists	81.2%	*2.9%	14.1%	*1.8%	*1.7%
Community and Social Services	73.7%	21.9%	*1.2%	*3.2%	*3.6%
Legal	88.5%	7.6%	*3.0%	*0.9%	*0.7%
Education, Training, and Library	84.2%	10.3%	3.1%	*2.4%	2.1%
Arts, Design, Entertainment, Sports, Media	87.8%	*7.4%	*1.9%	*2.9%	*2.9%
Healthcare Practitioners and Technical	83.8%	10.1%	4.5%	1.7%	2.4%
Healthcare Support	59.6%	36.6%	*1.7%	*2.1%	2.9%
Protective Services	81.7%	16.7%	*0.0%	*1.7%	*2.5%
Food Preparation and Serving	80.6%	12.6%	2.1%	4.6%	6.7%
Building and Grounds Cleaning and Maintenance	73.7%	23.0%	*0.5%	*2.9%	7.4%
Personal Care and Service	72.7%	21.2%	3.9%	*2.3%	3.5%
Sales	84.8%	11.6%	1.5%	2.1%	3.0%
Office and Administrative Support	80.6%	16.2%	0.7%	2.5%	3.7%
Farming, Fishing, and Forestry	75.9%	*6.2%	*1.4%	*16.5%	*26.5%
Construction and Extraction	87.3%	10.4%	*0.7%	*1.7%	2.1%
Installation, Maintenance, and Repair	90.4%	7.5%	*0.8%	*1.3%	3.2%
Production	80.7%	13.7%	2.7%	3.0%	6.3%
Transportation and Material Moving	76.8%	19.1%	*1.2%	2.9%	4.5%
Military Specific	85.1%	*6.1%	*0.0%	*8.9%	*8.1%
All Occupations	81.9%	13.5%	2.3%	2.4%	3.6%
*Use with caution: Relative Standard Error Greater than 20.0%					

Educational Attainment: College graduates (those with a bachelor's degree or higher) made up 33 percent of total employment in the region; 9 percent had an associate's degree, and 52 percent had a high-school diploma and/or some college but no degree. Seven percent of workers had no high school diploma.

The following occupations had the largest proportion of college graduates:

- Education, Training, and Library (80 percent)
- Legal (79 percent)
- Life, Physical, and Social Sciences (76 percent)
- Community and Social Services (76 percent)
- Financial Specialists (73 percent).

Jobs with the highest percentages with only an associate's degree include:

- Healthcare Practitioners and Technical (23 percent)
- Computer and Mathematical (14 percent)
- Healthcare Support (13 percent)
- Architecture and Engineering (12 percent)
- Protective Services (12 percent)
- Installation, Maintenance, and Repair (12 percent)

Workers with a high school diploma only or some college with no degree had the highest share of employment in these occupations:

- Production (76 percent)
- Construction and Extraction (76 percent)
- Transportation and Material Moving (75 percent)
- Healthcare Support (73 percent)
- Building and Grounds Cleaning and Maintenance (71 percent)
- Installation, Maintenance, and Repair (71 percent)
- Personal Care and Services (70 percent)

Non-agricultural jobs with the highest proportion of workers without a high school diploma include:

- Food Preparation and Serving (21 percent)
- Building and Grounds Cleaning and Maintenance (19 percent)
- Construction and Extraction (12 percent)
- Production (12 percent)
- Transportation and Material Moving (12 percent).

Table E-5: Employment by Occupation and Educational Attainment

Occupation	Less than High School Graduate	High School Graduate or Some College, but No Degree	Associate's Degree	Bachelor's Degree or Higher
Management	1.8%	35.6%	6.1%	56.4%
Business Operations Specialists	*0.8%	31.3%	9.0%	58.9%
Financial Specialists	*0.2%	18.5%	8.3%	73.0%
Computer and Mathematical	*0.3%	23.2%	14.0%	62.6%
Architecture and Engineering	*1.6%	21.9%	11.6%	65.0%
Life, Physical, and Social Scientists	*0.8%	17.4%	*5.5%	76.2%
Community and Social Services	*0.9%	17.9%	5.3%	75.9%
Legal	*0.1%	12.4%	8.3%	79.2%
Education, Training, and Library	1.3%	14.9%	3.7%	80.1%
Arts, Design, Entertainment, Sports, Media	*2.5%	29.1%	7.6%	60.7%
Healthcare Practitioners and Technical	*0.5%	21.4%	22.7%	55.5%
Healthcare Support	6.2%	72.6%	12.6%	8.6%
Protective Services	6.4%	58.5%	12.4%	22.7%
Food Preparation and Serving	20.7%	64.6%	6.8%	7.9%
Building and Grounds Cleaning and Maintenance	19.3%	70.5%	4.3%	6.0%
Personal Care and Service	6.4%	70.0%	8.7%	14.8%
Sales	7.7%	54.9%	7.0%	30.4%
Office and Administrative Support	3.7%	67.2%	9.9%	19.3%
Farming, Fishing, and Forestry	*35.8%	42.1%	*3.8%	*18.3%
Construction and Extraction	12.3%	75.9%	5.8%	6.0%
Installation, Maintenance, and Repair	9.9%	71.1%	11.8%	7.3%
Production	12.0%	75.9%	5.8%	6.3%

Occupation	Less than High School Graduate	High School Graduate or Some College, but No Degree	Associate's Degree	Bachelor's Degree or Higher
Transportation and Material Moving	11.8%	74.8%	6.3%	7.1%
Military Specific	*0.0%	75.2%	*3.8%	*21.0%
All Occupations	6.7%	52.0%	8.6%	32.6%
*Use with caution: Relative Standard Error Greater than 20.0%				

F. Industry

Employment was highest in these sectors:

- Manufacturing (206,000 persons employed)
- Health Care and Social Assistance (217,000)
- Retail Trade (147,000)
- Education (114,000)
- Accommodation and Food Services (97,000).

These five sectors accounted for 59 percent of total employment.

Excluding Agriculture and Armed Forces, there were four sectors having unemployment rates exceeding 10 percent:

- Administration / Support / Waste Management (20.5 percent)
- Construction (17.9 percent)
- Arts / Entertainment / Recreation (13.8 percent)
- Accommodation and Food Services (12.1 percent)

These four sectors represented 30 percent of all unemployed workers.

**Table F-1
Employment and Unemployment by Industry, Northeast Ohio, 2011-2013**

Industry	Number Employed	Percent of Total Employment	Number Unemployed	Unemployment Rate
Agriculture	4,797	0.4%	765	*13.8%
Mining	1,903	0.1%	144	*7.0%
Construction	61,691	4.6%	13,400	17.9%
Manufacturing	206,448	15.5%	15,580	7.0%
Wholesale Trade	39,288	3.0%	2,920	6.9%
Retail Trade	147,239	11.0%	15,761	9.7%
Transportation / Warehousing	46,414	3.5%	4,049	8.0%

Industry	Number Employed	Percent of Total Employment	Number Unemployed	Unemployment Rate
Utilities	11,727	0.9%	883	7.0%
Information / Communication	22,490	1.7%	1,802	7.4%
Finance / Insurance	71,335	5.4%	2,758	3.7%
Real Estate / Rental	23,343	1.8%	1,550	6.2%
Professional / Scientific / Technical Services	77,181	5.8%	3,612	4.5%
Management of Companies	2,031	0.2%	70	3.3%
Administration / Support/ Waste Management	52,007	3.9%	13,390	20.5%
Education	114,357	8.6%	5,518	4.6%
Health Care / Social Assistance	217,289	16.3%	10,698	4.7%
Arts / Entertainment / Recreation	24,953	1.9%	3,991	13.8%
Accommodation / Food Services	97,487	7.3%	13,411	12.1%
Other Services (exc. Public Admin)	63,703	4.8%	4,879	7.1%
Public Administration	47,304	3.6%	2,215	4.5%
Armed Forces	993	0.1%	345	*25.8%
Not Applicable or Industry Unknown	0	0.0%	30,235	NA
Total	1,333,980	100.0%	147,976	10.0%
* Use with caution: Relative Standard Error greater than 20.0%				

G. Median Earned Income

The median earned income (from wages, salaries, and self-employment) in 2011-2013 for all Northeastern Ohioans who worked in the past year was \$29,980 (in 2013 dollars), slightly but significantly lower than the median of \$30,351 in 2008-2010. For those who worked full-time, full-year (FT-FY), the median was \$43,028, not significantly different from the 2008-2010 median of \$43,432. To correct for differential employment levels, the following demographic comparisons are made only for FT-FY workers.

Median FT-FY earned income by age ranged from \$16,404 for those 16 to 19 to a high of \$48,999 for those 35 to 59 and \$47,709 for those 60 to 64. The median for females (\$37,255) was only 75 percent of that for males (\$49,708). By race/ethnicity, Asians had the highest median (\$50,208), followed by Whites (\$45,941). The medians for African Americans (\$32,541) and Hispanics

(\$31,980) were only 71 percent and 70 percent, respectively, of the median for Whites. Median income increased by educational attainment, from \$27,433 for those without a high school diploma to \$73,660 for those with a graduate or professional degree.

Figure G-1
Median Earned Income (Full-Time, Full-Year), by Age Group
Northeast Ohio, 2011-2013

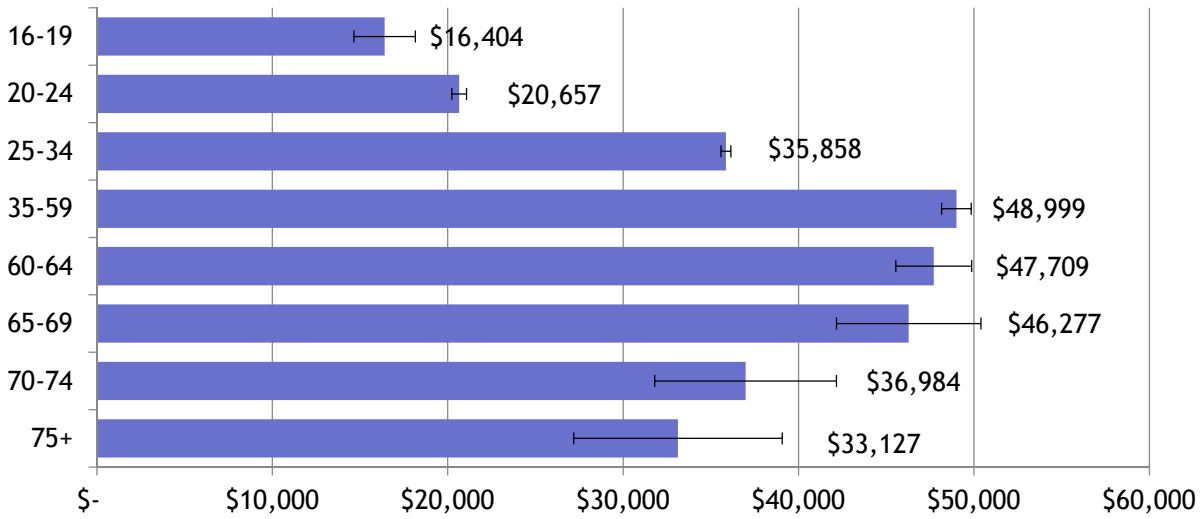


Figure G-2
Median Earned Income (Full-Time, Full-Year), by Sex
Northeast Ohio, 2011-2013

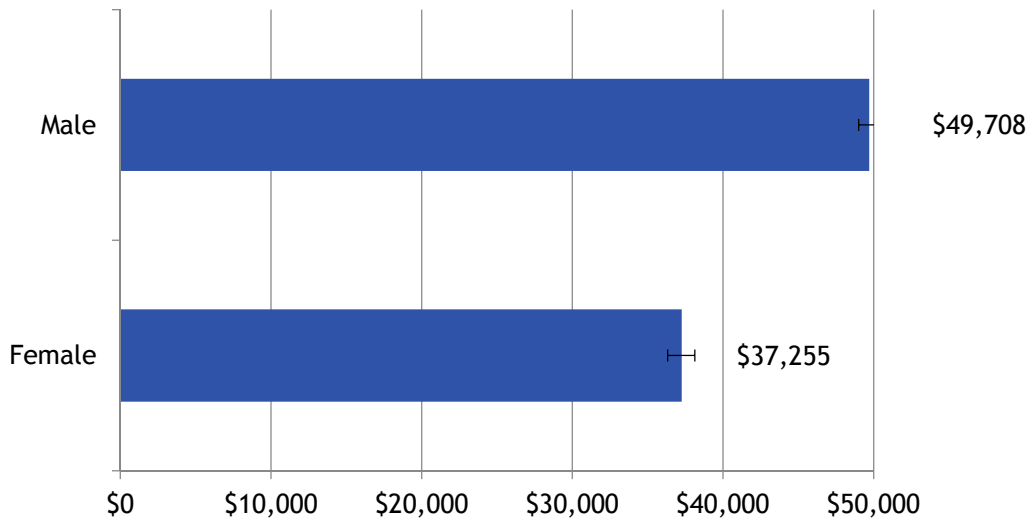


Figure G-3
 Median Earned Income (Full-Time, Full-Year), by Race and Ethnicity
 Northeast Ohio, 2011-2013

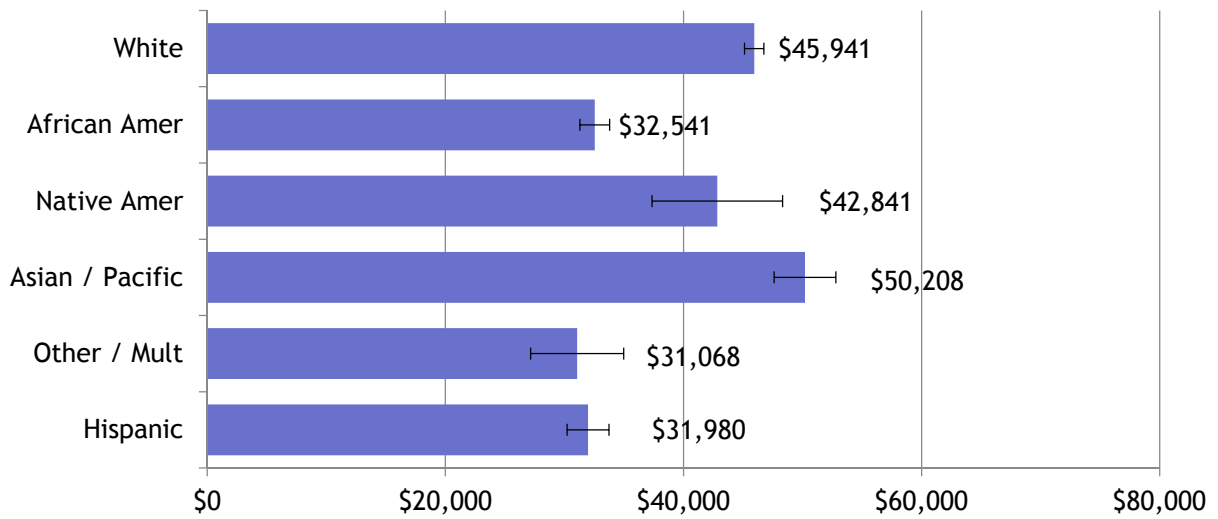
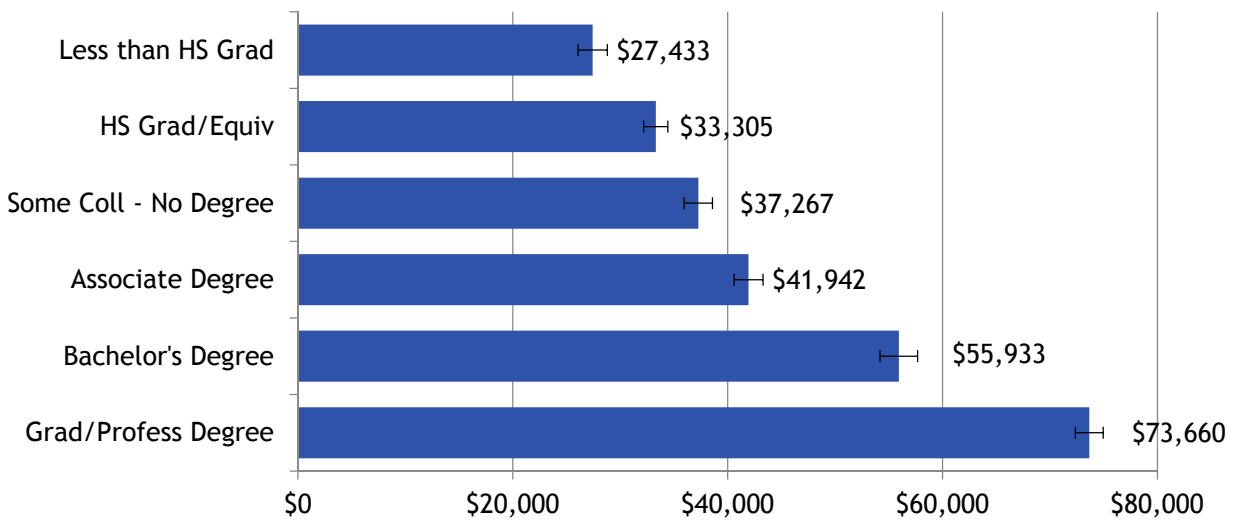


Figure G-4
 Median Earned Income (Full-Time, Full-Year), by Educational Attainment
 Northeast Ohio, 2011-2013



Median earned income by occupation is shown in Table G-1. Unlike the demographic comparisons above, this table includes all workers regardless of FT-PT and FY-PY status, since some occupations are typically part-time or seasonal.

Occupations with the highest median earned income were:

- Architecture and Engineering (\$63,446)
- Computer and Mathematical (\$62,124)
- Management (\$59,905)
- Legal (\$57,246)
- Financial Specialists (\$51,900)

Non-agricultural occupations with the lowest median earned income were:

- Food Preparation and Serving (\$9,015)
- Personal Care and Service (\$12,295)
- Building and Grounds Cleaning and Maintenance (\$14,399)
- Healthcare Support (\$19,906)
- Transportation and Material Moving (\$22,774)

Table G-1: Median Annual Earned Income by Occupation

Occupation	Median Earned Income	Occupation	Median Earned Income
Management	\$59,905	Food Preparation and Serving	\$9,015
Business Operations Specialists	\$47,112	Building and Grounds Cleaning and Maintenance	\$14,399
Financial Specialists	\$51,900	Personal Care and Service	\$12,295
Computer and Mathematical	\$62,124	Sales	\$21,868
Architecture and Engineering	\$63,446	Office and Administrative Support	\$27,497
Life, Physical, and Social Scientists	\$47,636	Farming, Fishing, and Forestry	\$13,544
Community and Social Services	\$37,929	Construction and Extraction	\$30,719
Legal	\$57,246	Installation, Maintenance, and Repair	\$38,407
Education, Training, and Library	\$33,119	Production	\$30,027
Arts, Design, Entertainment, Sports, Media	\$24,728	Transportation and Material Moving	\$22,774
Healthcare Practitioners and Technical	\$49,990	Military Specific*	\$30,011
Healthcare Support	\$19,906	All Occupations	\$29,981
Protective Services	\$39,353	* Use with caution; Relative Standard Error greater than 20%.	

Conclusion

The demographic profile of the workforce in Northeast Ohio reveals differences in unemployment rates, occupation, and earnings between men and women and among racial and ethnic groups. Issues of full-time versus part-time employment, labor force participation, earnings, and occupation are so closely linked that our analysis does not allow them to be fully separated to identify driving factors behind the disparities between different groups of Northeast Ohioans. However, some observations are provided below.

- Compared to their male counterparts, women are less likely to work full time -full year and tend to have lower earnings.
- Employment in the highest-paid occupations (those with median earnings greater than \$50,000) were either evenly split between men and women or the workers were predominantly male.
- With the exception of Food Preparation, all the occupations with low median earnings (less than \$20,000) had the highest proportion of African American full-time workers.
- Most occupations with higher median earnings have concentrations of people with a post-secondary degree. However, the two occupations with the highest median earnings (Computer and Mathematical, Architectural and Engineering) also are among those with the highest percentage of workers possessing only an associate's degree.
- In Northeast Ohio, median earnings in the STEM fields encompassing science, technology, engineering, and mathematics tend to be higher than other groups of occupations. Among those who are employed full-time, workers in the STEM occupations are predominantly White and male.

These observations suggest that encouraging women and African Americans to pursue careers in fields with higher median incomes could reduce disparities in earnings between groups. Other strategies could include working to raise wages in fields where women and African Americans are already working, and helping workers move from part-time to full-time employment.

In Ohio, local Workforce Development Boards (WDB) serve as advisory bodies to the Ohio Means Jobs one-stop centers that assist workers seeking employment and also assist business to meet their hiring and training needs in order to stay competitive. These services are funded through the federal Workforce Innovation and Opportunity Act (WIOA) of 2014. In the eight-county Northeast Ohio region there are five WDBs: Cleveland/Cuyahoga; Medina/Summit; Lake; Lorain; and Ashtabula/Geauga/Portage.

Since the WIOA requires local and regional planning, the five WDBs are developing a Northeast Ohio Workforce (NOW) Regional Plan. On June 1, 2016, the Federal Reserve Bank of Cleveland convened representatives of the WDBs and other workforce development professionals in a forum to discuss strategies for coordination of efforts between educational institutions and businesses and among the WDBs themselves.

Some of the ideas presented at the forum included:

- Building and investing in existing companies and workers in the region, rather than trying to attract from outside;
- Developing the workforce by drawing from those already employed and upgrading their skills;
- Starting career development education in middle schools, leading to paid internships and apprenticeships in high school and after;
- Coordinating with community colleges to provide credit courses in high school followed up by internships;
- Involving unions to help attract and train apprentices;
- Showing youths how their interests relate to needed job skills; involve employers in designing curricula;
- Concentrating on the region's identified centers of excellence: Advanced Manufacturing, IT, and Healthcare;
- Emphasizing development of "soft skills" (i.e., punctuality, conflict management);
- Increasing focus on career advancement, not just entry-level job placement;
- Reducing paperwork burden for participating employers;
- While focusing on higher-level workers, not excluding the hard-to-serve (i.e., high school dropouts and persons with low literacy, ex-offenders, older [age 50+] workers);
- Mainstreaming hard-to-serve with other clients in training programs;
- Reducing gender, racial disparities;
- Emphasizing lifetime value of education; not just economic, but quality of life;
- Making the overall goal "more people working at a living wage for a longer period of time."

Work on the NOW Regional Plan will be completed in August, 2016. After a 30-day comment period, the plan will be submitted to the State of Ohio by September 30, 2016. Individual WDB plans will be attached to the regional plan.

¹ Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. Integrated Public Use Microdata Series: Version 6.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2015. The data from the ACS-PUMS sample differ somewhat from the monthly labor force and unemployment statistics released by the federal Bureau of Labor Statistics and the Ohio Labor Market Information Service of ODJFS. These latter statistics derive from time-series and regression techniques and use data from the Census Current Population Survey and local claims for unemployment insurance.



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