



Autumn 2019

Pioneer Valley 2019 Data Package Update

Regional Workforce Skills Planning Initiative

Objectives

- Update contextual regional labor market information
- **Narrow scope of data/discussion to focus on regional priority/critical industries**
- Confirm regional high priority industries and occupations through updated demand star rankings and skill gap analysis
- Evaluate any new demographic, labor pool, and talent pipeline considerations impacting workforce skill gaps
- **Introduce new dynamic data tools**

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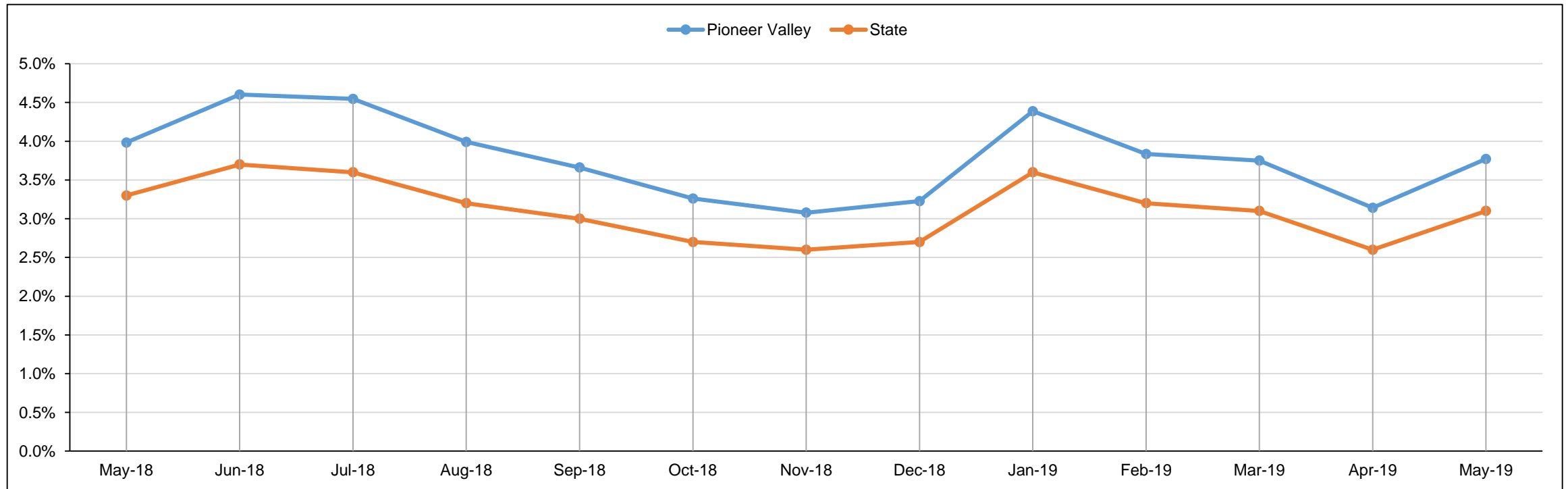
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Glossary

Part I: Regional Context

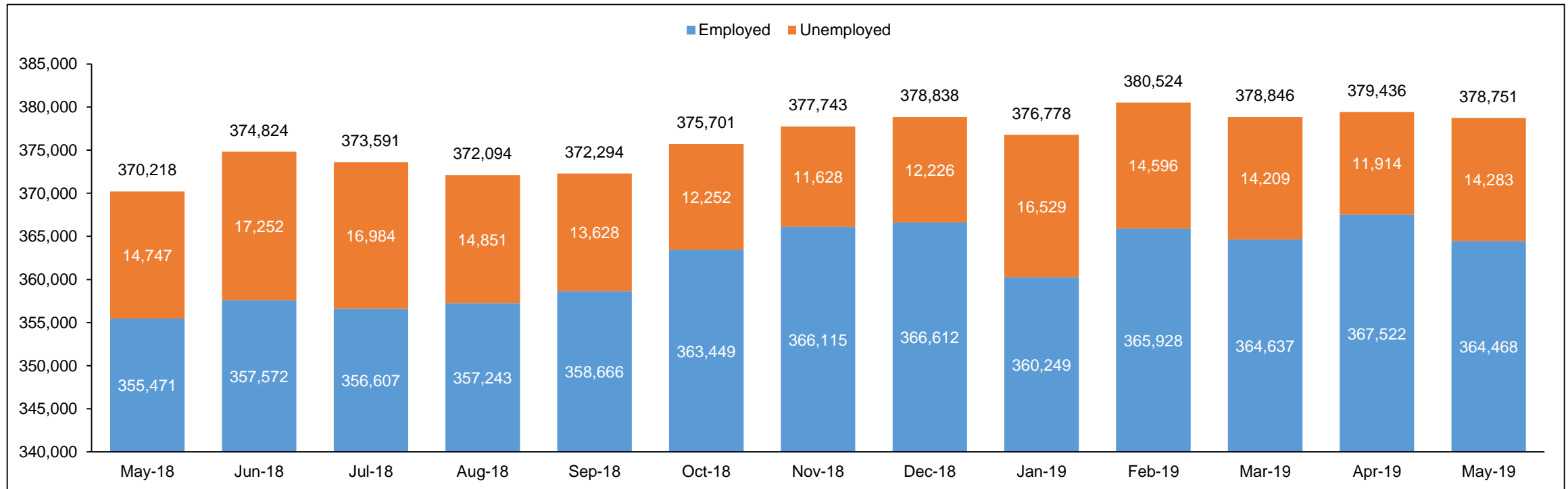
Unemployment Rate

Pioneer Valley's unemployment rate historically tracks with the state average, about a percentage point or so higher.



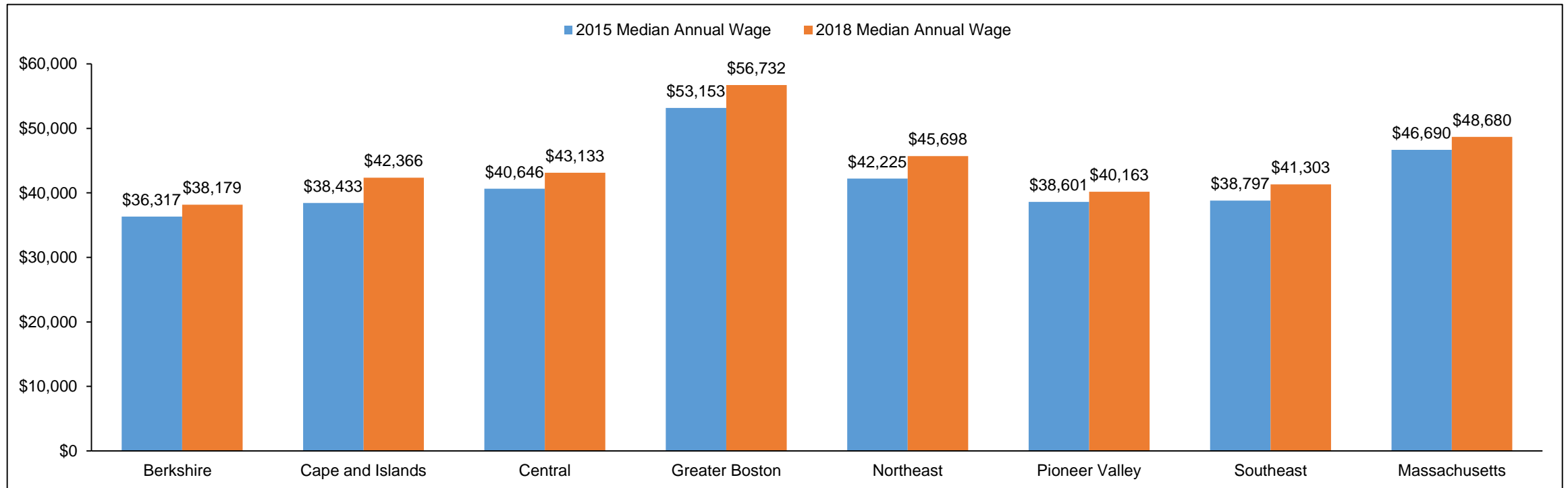
Unemployed v. Employed in Labor Force

There are slightly fewer unemployed workers in the Pioneer Valley as of May 2019 than the prior year. The overall labor force has also increased, as some people who previously were no longer looking for work have returned to the labor market and are having success finding employment.



Median Annual Wage

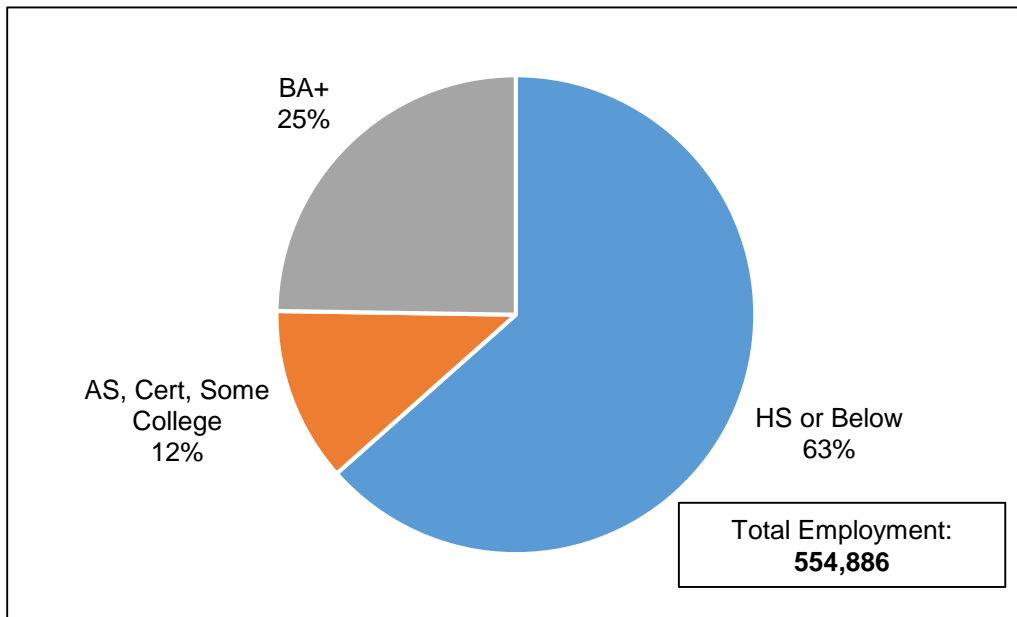
Pioneer Valley's median annual wage has increased since 2015, but is still significantly lower than the state average, and lower than all other regions except for the Berkshires.



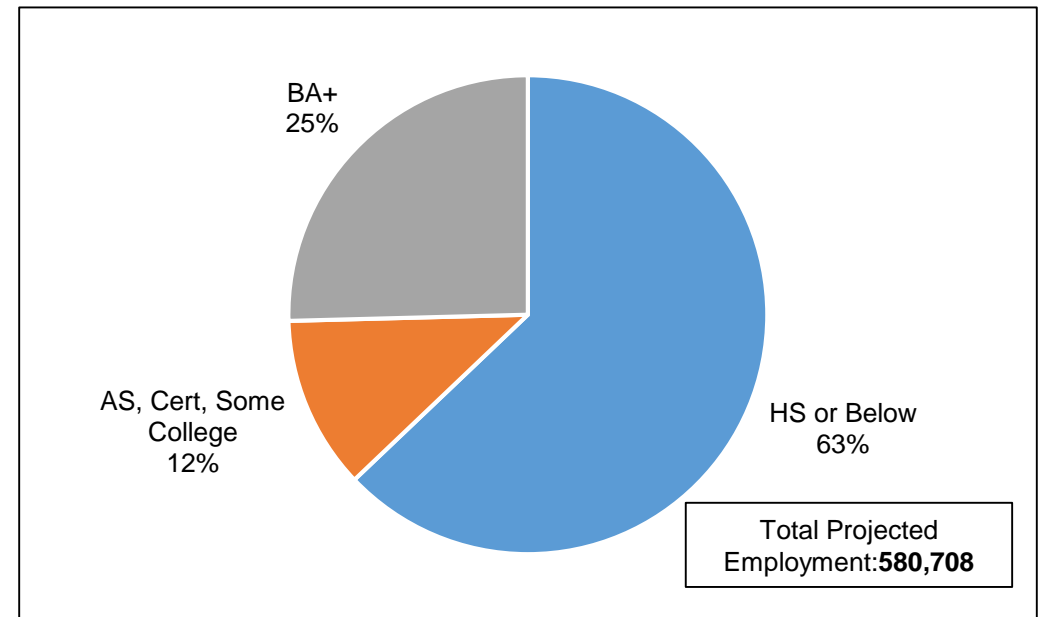
Educational Requirements for Employment

Pioneer Valley is projected to have the same shares of jobs that require BA+; AS, Cert. or Some College, and HS or Below in 2026 as in 2016.

2016 Employment



2026 Projected Employment



Part II: Regional Industry Overview and Profiles

Who are the employers in our region?

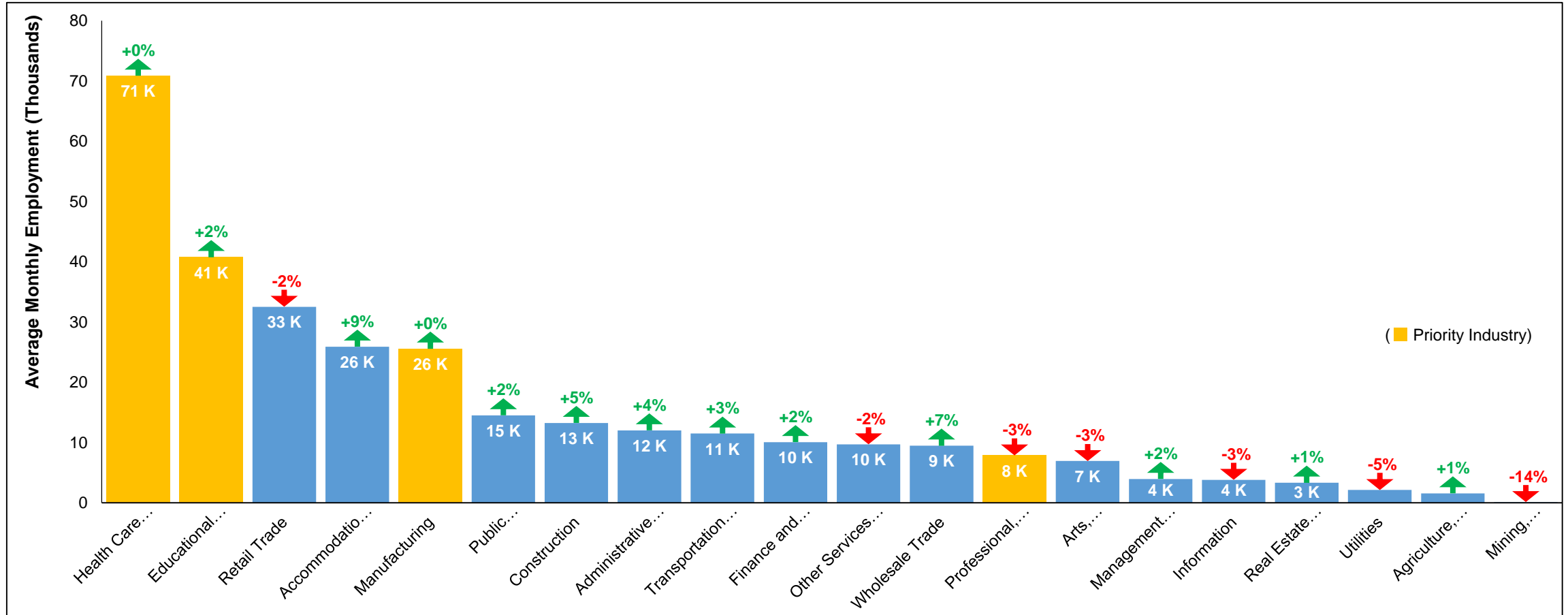
Terminology

Industry Sector	Sectors that represent general categories of economic activities, 2 digit NAICS
Industry Group	More detailed production-oriented combinations of establishments with similar customers and services, 4 digit NAICS

II.A: Regional Industry Overview

Sector Makeup by Total Employment

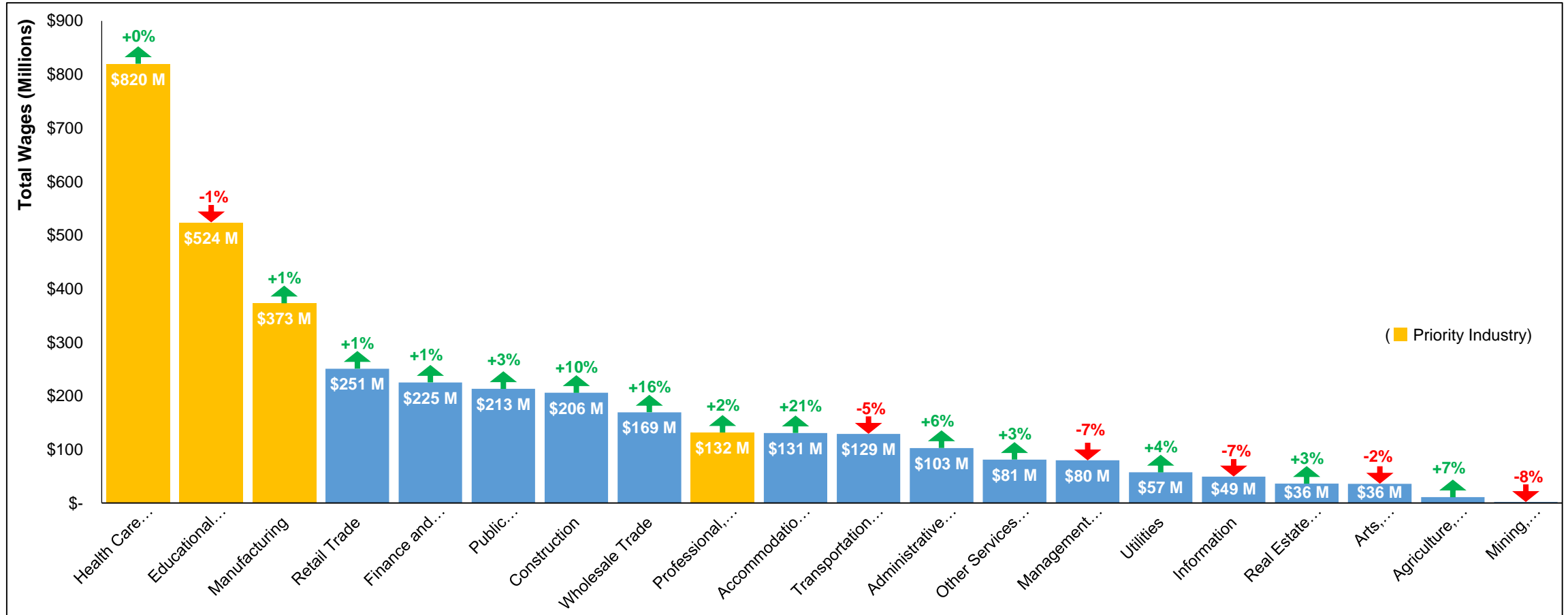
Health Care and Social Assistance is the largest industry in the Pioneer Valley. The next largest sector, Educational Services, employs 30K fewer workers, followed by Retail Trade.



Note: The arrows above the bars indicate the percent change in employment from 2016 to 2018.

Sector Makeup by Total Wages

Health Care and Social Assistance and Educational Services paid the highest total wages in Pioneer Valley, followed by Manufacturing.



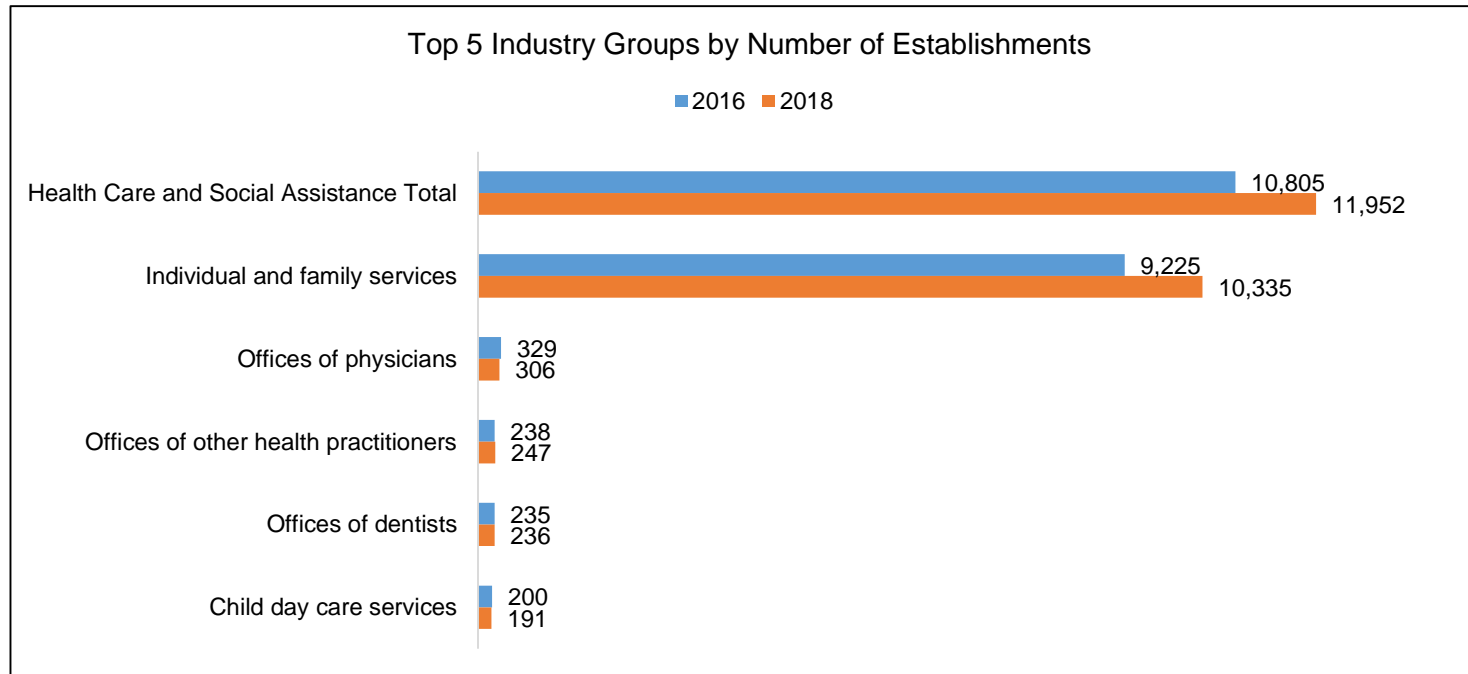
Note: The arrows above the bars indicate the percent change in total wages from 2016 to 2018.

II.B: Priority Industry Profiles

Healthcare and Social Assistance

Healthcare and Social Assistance Groups and Employers

More than 1,000 Health Care and Social Assistance establishments were added in Pioneer Valley between 2016 and 2018, driven primarily by the increase in Individual and Family Services. Over the last 12 months, Baystate Health posted the most jobs in Pioneer Valley, with 2,520.



Largest Employers by 12-Month Regional Job Postings

Employer	Job Postings
Baystate Health	2,520
Trinity Health	490
Cooley Dickinson Health Care	376
Holyoke Medical Center	355
Behavioral Health Network	350
Servicenet	279

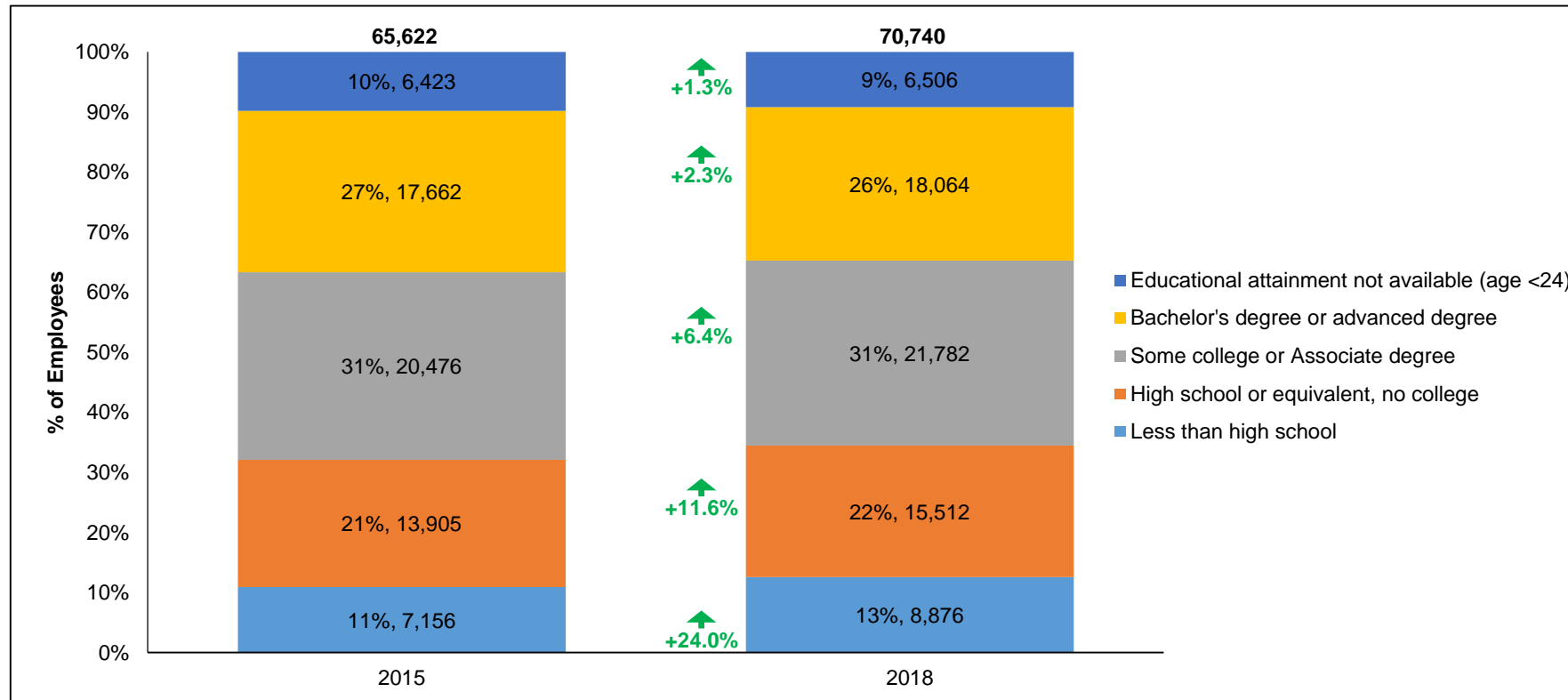
Source: Burning Glass, 2019

Source: DUA/BLS Quarterly Census of Employment and Wages, Q3 2016 – 2018

Healthcare and Social Assistance by Education

57% of workers in Healthcare and Social Assistance have some college or higher level of education in the Pioneer Valley.

Industry Employment by Educational Attainment, Q2 2015 – Q2 2018

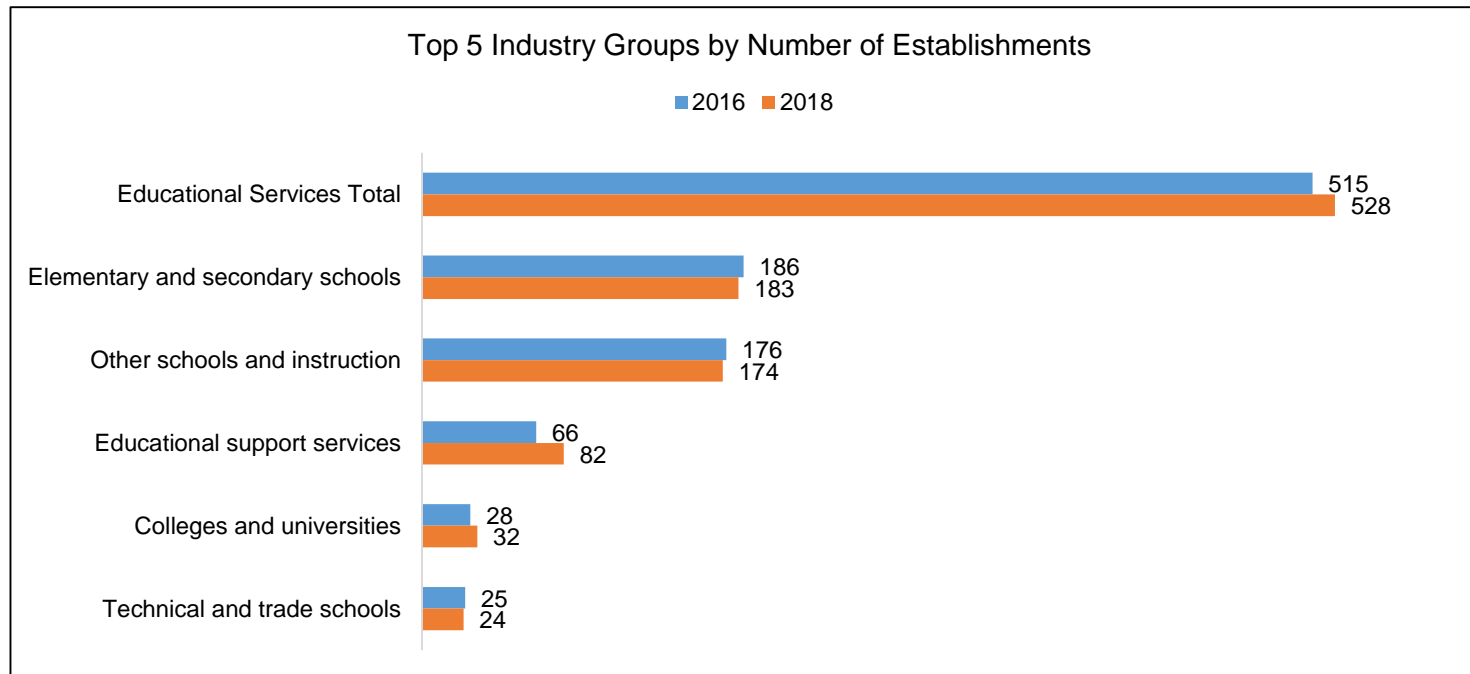


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – 2018

Educational Services

Educational Services Groups and Employers

The number of Educational Services establishments in Pioneer Valley grew slightly between 2016 and 2018, driven primarily by growth in educational support services. Over the last 12 months, the employer with the most job postings in Pioneer Valley was UMass Amherst, with 493.



Source: DUA/BLS Quarterly Census of Employment and Wages, Q3 2016 – 2018

Largest Employers by 12-Month Regional Job Postings

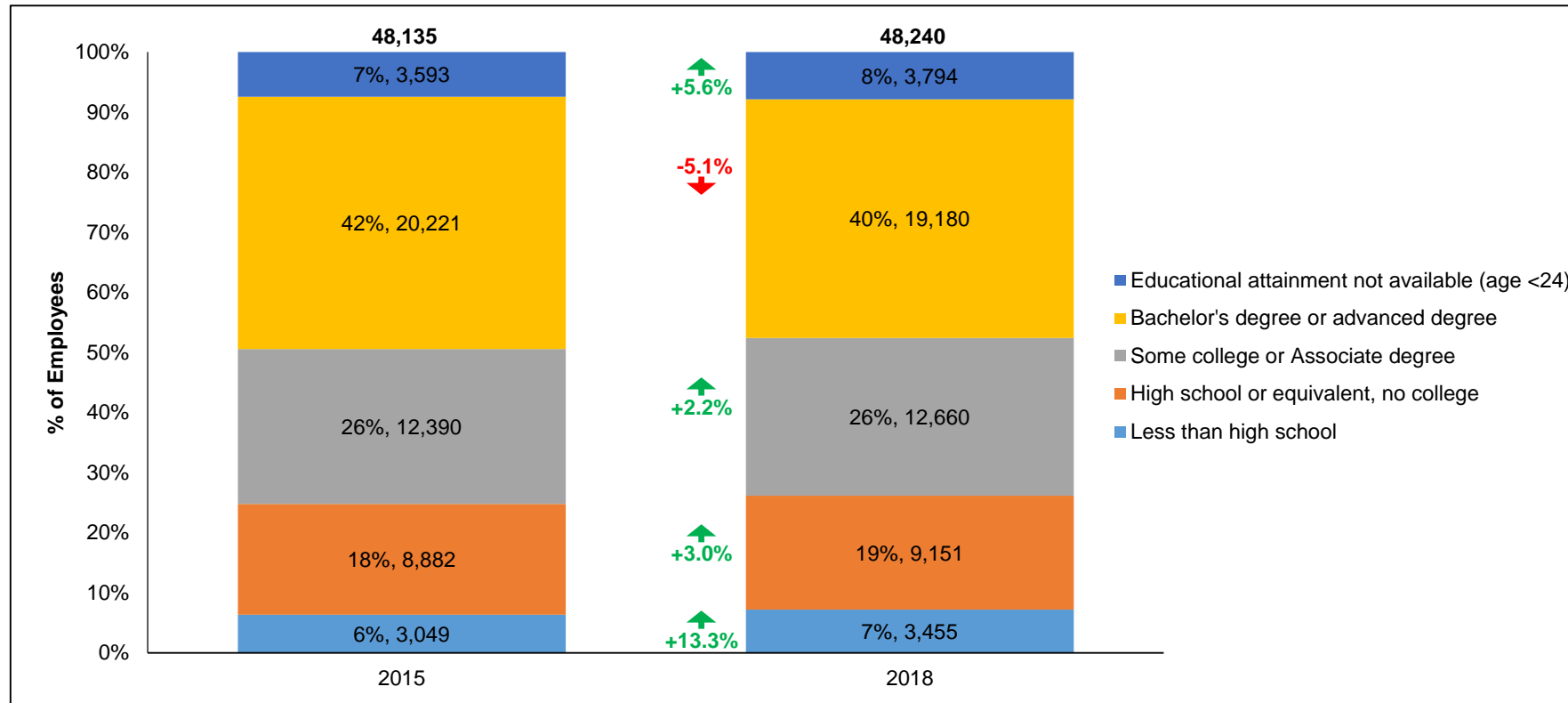
Employer	Job Postings
University of Massachusetts Amherst	493
University of Massachusetts	460
Mount Holyoke College	170
Springfield Technical Community College	164
Amherst College	143
Westfield State University	123

Source: Burning Glass, 2019

Educational Services by Education

40% of workers in Educational Services have a Bachelor's degree or higher in the Pioneer Valley.

Industry Employment by Educational Attainment, Q2 2015 – Q2 2018

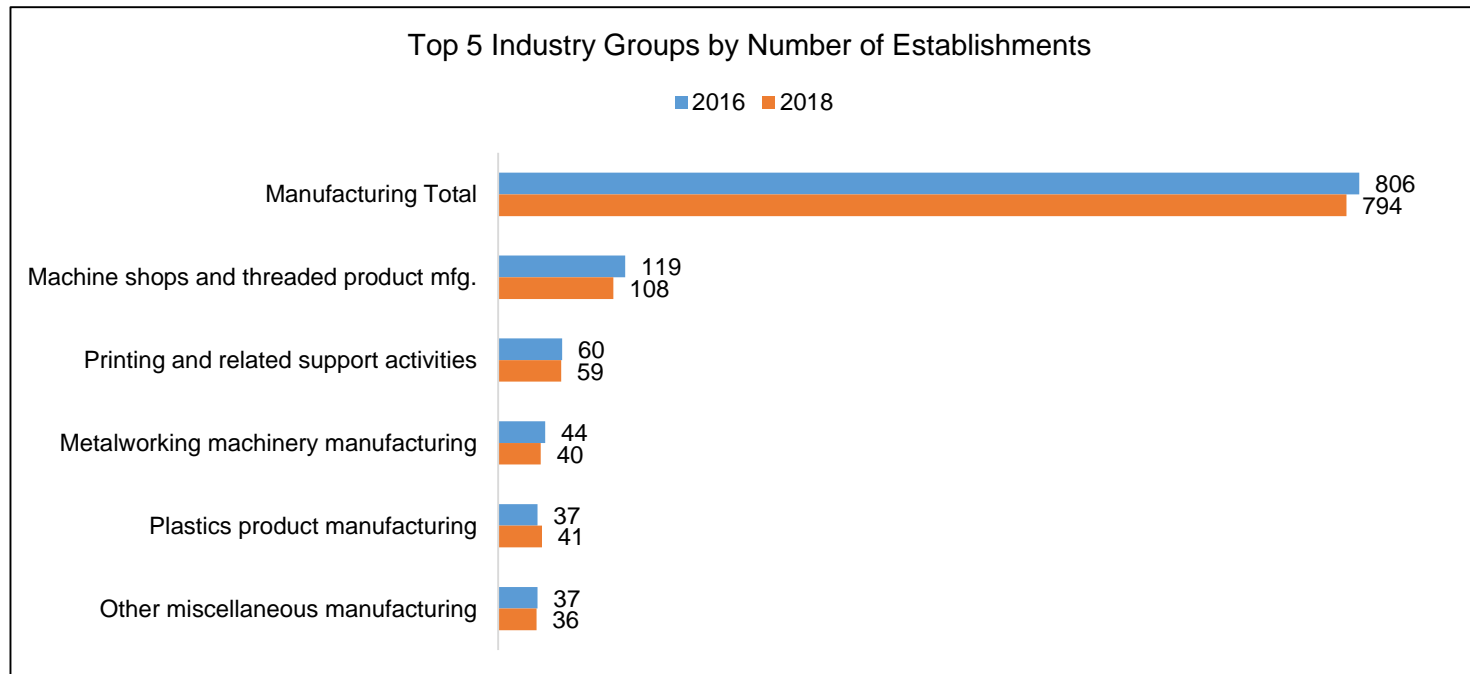


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – 2018

Manufacturing

Manufacturing Groups and Employers

The number of Manufacturing establishments in Pioneer Valley declined slightly between 2016 and 2018. In the last year, Advanced Drainage Systems was the employer with the highest number of job postings in Pioneer Valley (141), followed by Coca-Cola Enterprises Inc. (99), Stanley Black & Decker (67) and The Yankee Candle Company, Inc. (57).



Source: DUA/BLS Quarterly Census of Employment and Wages, Q3 2016 – 2018

Largest Employers by 12-Month Regional Job Postings

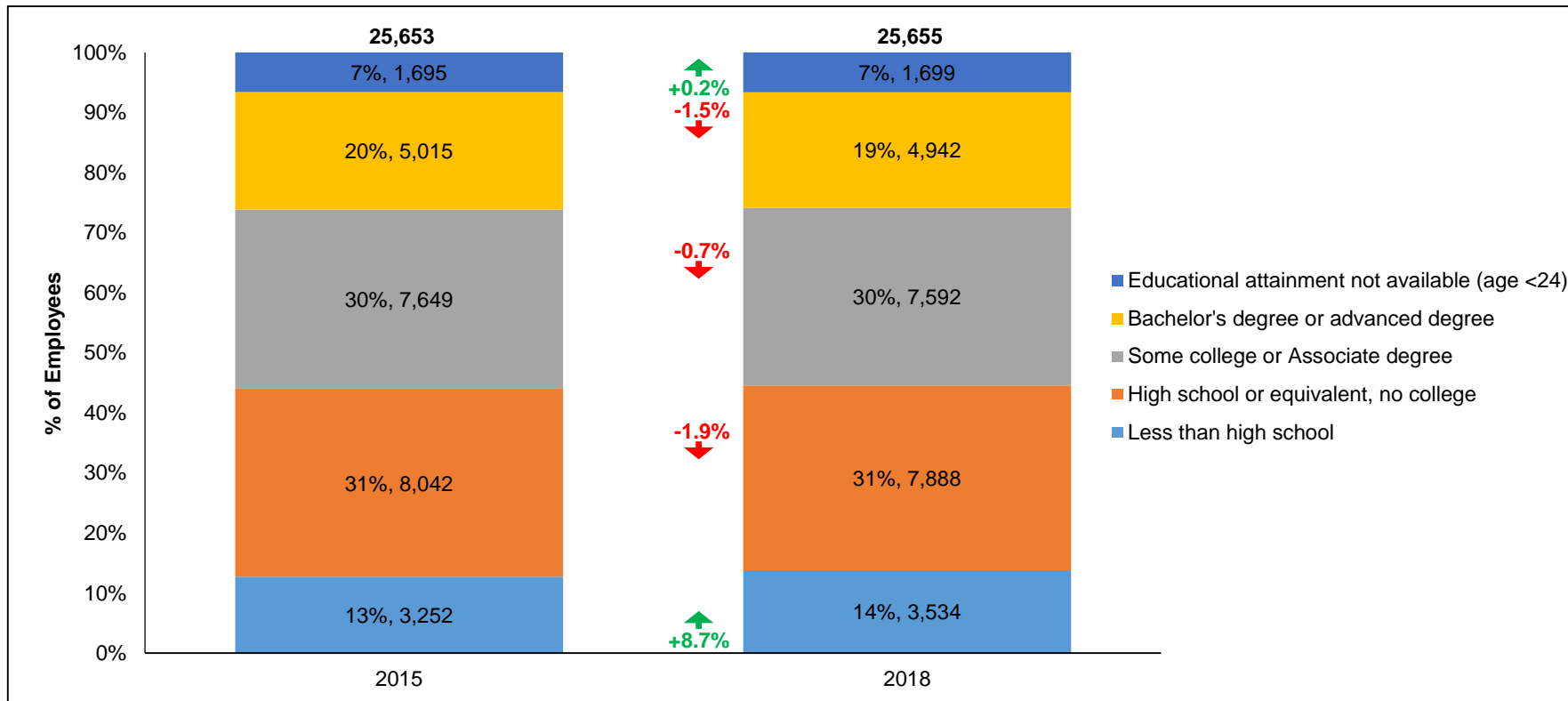
Employer	Job Postings
Advanced Drainage Systems	141
Coca-Cola Enterprises Inc.	99
Stanley Black & Decker	67
The Yankee Candle Company, Inc	57
Dean Foods	52
Pelican Products Incorporated	50

Source: Burning Glass, 2019

Manufacturing by Education

45% of workers in Manufacturing in the Pioneer Valley have a high school diploma or less. 30% of workers in Manufacturing have some college or an Associate Degree and nearly 20% have a Bachelor's degree or higher. This educational attainment mix has been relatively stable since 2015.

Industry Employment by Educational Attainment, Q2 2015 – Q2 2018



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – 2018

Occupations

Terminology

Occupation

A job or profession, not specific to an industry, defined by Standard Occupational Classification (SOC) code

Demand Star Ranking

Ranking of highest-demand, highest-wage jobs in Massachusetts, based on short-term employment projections (2020), long-term employment projections (2026), 12-month job postings from Burning Glass, and median regional occupation wages.

Ranking developed by State of Louisiana's workforce system and implemented with support of Boston Federal Reserve.

Selected Sub-BA Occupations Associated with Priority Industries

Industry	SOC Code	Occupation Title	Industry-Specific, Statewide		All Industries, Regional	
			Educational Requirement	2018 Industry Employment	STAR	Median Annual Wage
Educational Services	49-9021	HVAC Mechanics and Installers	Postsecondary non-degree award	330	4	\$61,914
	29-2061	Licensed Practical and Licensed Vocational Nurses	Postsecondary non-degree award	330	4	\$54,879
	31-9092	Medical Assistants	Postsecondary non-degree award	120	4	\$36,925
	43-3031	Bookkeeping, Accounting, and Auditing Clerks	Some college, no degree	1,670	4	\$40,589
	15-1151	Computer User Support Specialists	Some college, no degree	2,350	4	\$50,889
	25-9041	Teacher Assistants	Some college, no degree	33,670	4	\$34,124
Health Care and Social Assistance	23-2011	Paralegals and Legal Assistants	Associate's degree	60	4	\$49,536
	31-2021	Physical Therapist Assistants	Associate's degree	2,510	4	\$61,056
	29-2034	Radiologic Technologists	Associate's degree	4,100	4	\$65,654
	49-9021	HVAC Mechanics and Installers	Postsecondary non-degree award	210	4	\$61,914
	29-2061	Licensed Practical and Licensed Vocational Nurses	Postsecondary non-degree award	14,000	4	\$54,879
	31-9092	Medical Assistants	Postsecondary non-degree award	13,300	4	\$36,925
	29-2071	Medical Records and Health Information Technicians	Postsecondary non-degree award	4,220	4	\$40,440
	29-2055	Surgical Technologists	Postsecondary non-degree award	2,870	4	\$58,730
	43-3031	Bookkeeping, Accounting, and Auditing Clerks	Some college, no degree	4,110	4	\$40,589
	15-1151	Computer User Support Specialists	Some college, no degree	820	4	\$50,889
	25-9041	Teacher Assistants	Some college, no degree	4,740	4	\$34,124
Manufacturing	23-2011	Paralegals and Legal Assistants	Associate's degree	60	4	\$49,536
	49-9021	HVAC Mechanics and Installers	Postsecondary non-degree award	50	4	\$61,914
	53-3032	Heavy and Tractor-Trailer Truck Drivers	Postsecondary non-degree award	1,560	4	\$46,232
	43-3031	Bookkeeping, Accounting, and Auditing Clerks	Some college, no degree	2,870	4	\$40,589
	15-1151	Computer User Support Specialists	Some college, no degree	1,220	4	\$50,889

All occupations listed are 4- and 5-star occupations requiring a postsecondary non-degree award, some college, or an Associate's degree. Bolded occupations appear across multiple priority industries.

Part III: Supply Gap Analysis

Which occupations are likely to not have enough talent to meet employer demand?

How do we calculate a supply gap ratio?

Supply Gap Ratio = Projected Qualified Individuals Per Opening

- Supply Gap Ratio is a ***proxy measure*** for understanding what occupations are likely to not have enough talent to meet employer demand.
- Supply / Demand = Supply Gap Ratio
 - 100 qualified individuals / 50 potential openings = supply gap ratio of 2
 - 2 qualified individuals per opening (More supply than demand)
 - 6 qualified individuals / 12 potential openings = supply gap ratio of 0.5
 - 0.5 qualified individuals per opening (Less supply than demand)

How do we calculate demand and supply?

Demand

How many potential job openings do we expect for a given occupation?

New Demand Measure, or the average of total number of jobs for each occupation across three data sets...

- 2020 projections from openings and replacement (OES)
- 2026 projections from openings and replacement (OES)
- ***New data source: Burning Glass 12-month job postings (2019)***

NOTE TO DATA USERS: Beginning with this data package, Burning Glass is used to measure advertised online postings, replacing Help Wanted Online as the third component of indexed demand.

Note that this substitution may be responsible for some of the variance between indexed demand as calculated in the original and updated data packages. Direct value comparisons of the occupational demand measures, STAR rankings, and supply gap ratios should be limited.

Supply

How many qualified individuals do we potentially have available to fill a relevant job opening?

Sum of available workers or graduates related to an occupation from multiple data sets...

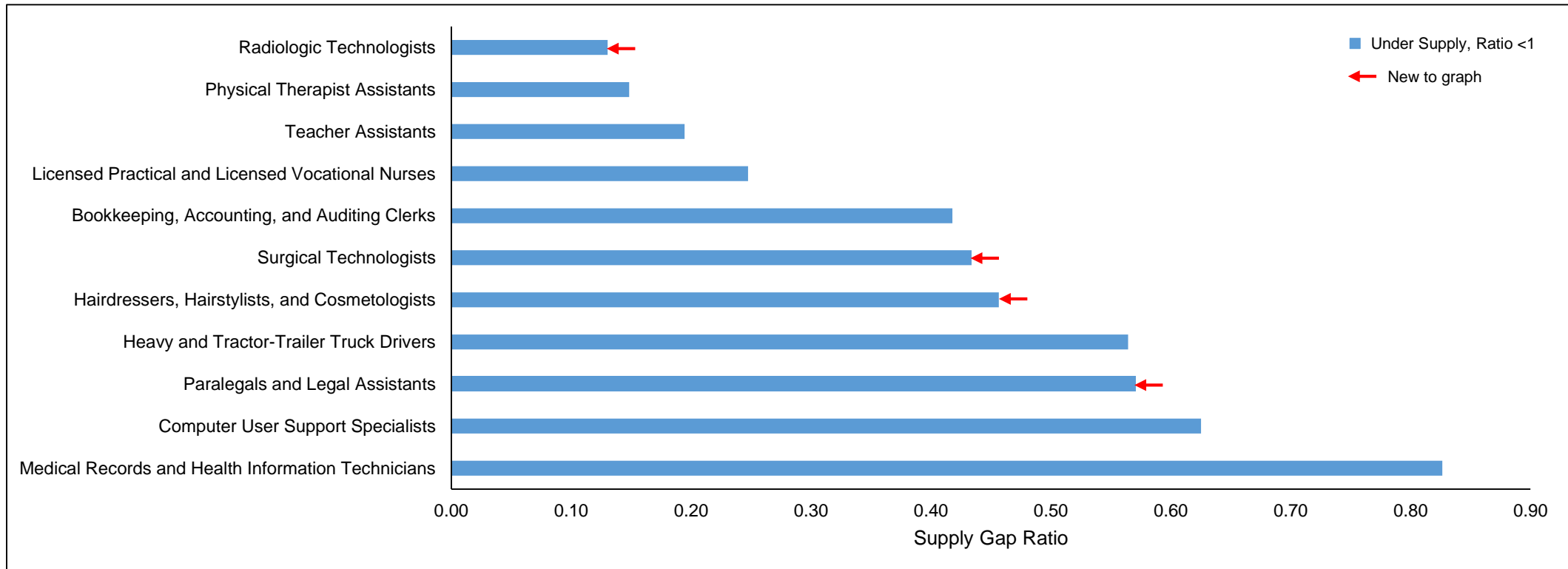
- Unique UI claims, 2018 (DUA)
- Relevant completer data
 - Voc-Tech completers, 2015-2017 average (DESE), 50% available*
 - Community College completers, 2015-2017 average (DHE), 90% available
 - State University completers, 2015-2017 average (DHE), 71% available
 - Private University completers, 2015-2017 average (iPEDS), 55% available

*All retention figures are statewide, studies cited in Data Tool

**Occupations requiring post-secondary education only

More Openings than Qualified: **Regional** Sub-BA Occupations, 4+ Stars

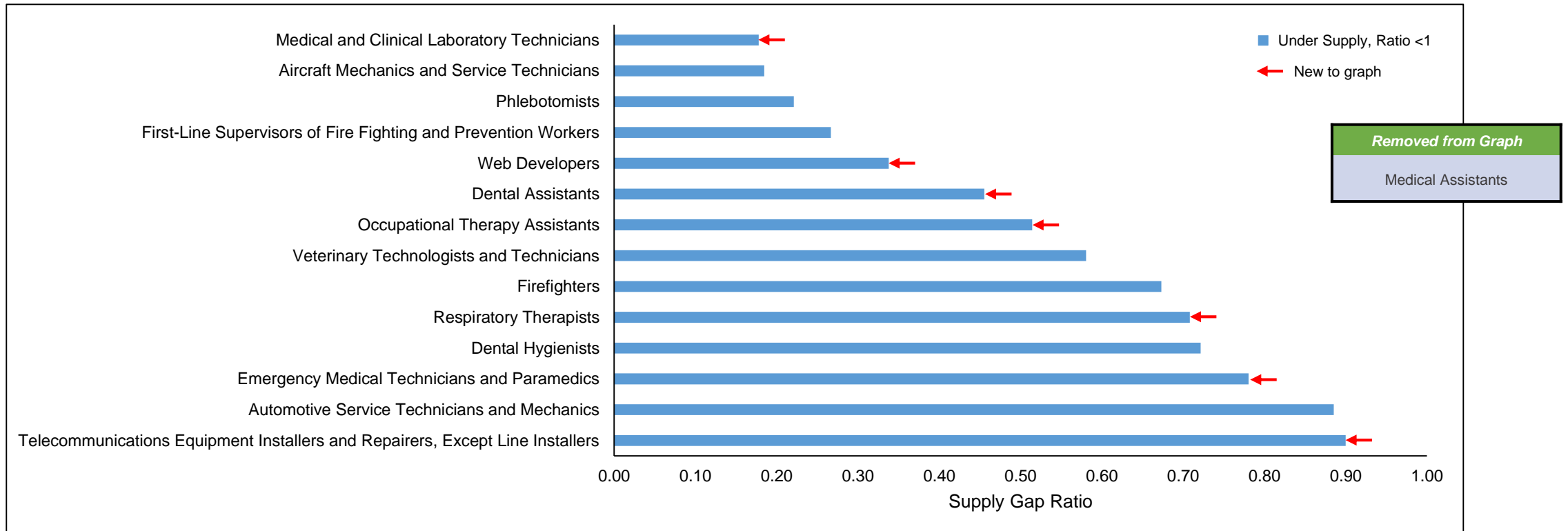
At the sub-BA level, a number of 4- and 5-star occupations do not have enough regional supply to meet employer demand.



4- and 5-star occupations requiring a postsecondary non-degree award, some college, or an Associate's degree. Demand Index 20+ only.

More Openings than Qualified: **Regional** Sub-BA Occupations, 3 Stars

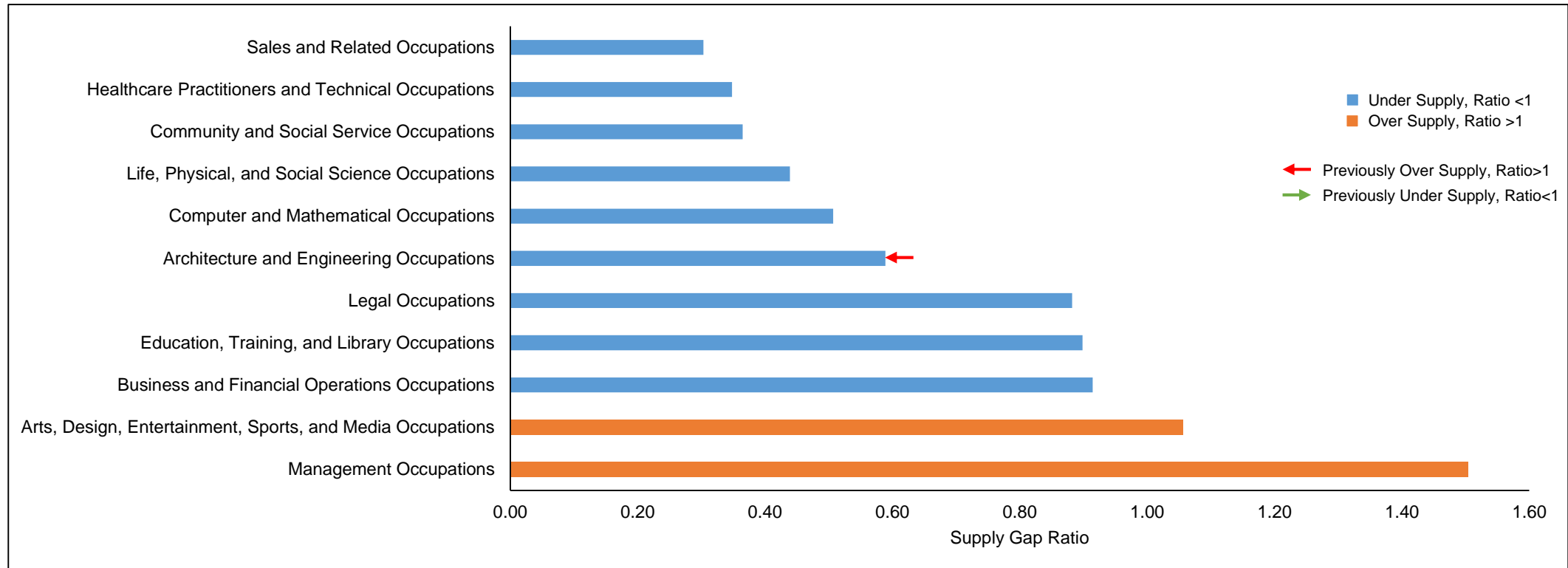
At the sub-BA level, a number of 3-star occupations do not have enough regional supply to meet employer demand.



3-star occupations requiring a postsecondary non-degree award, some college, or an Associate's degree. Demand Index 20+ only.

State Supply Gap Overview: BA+ Clusters

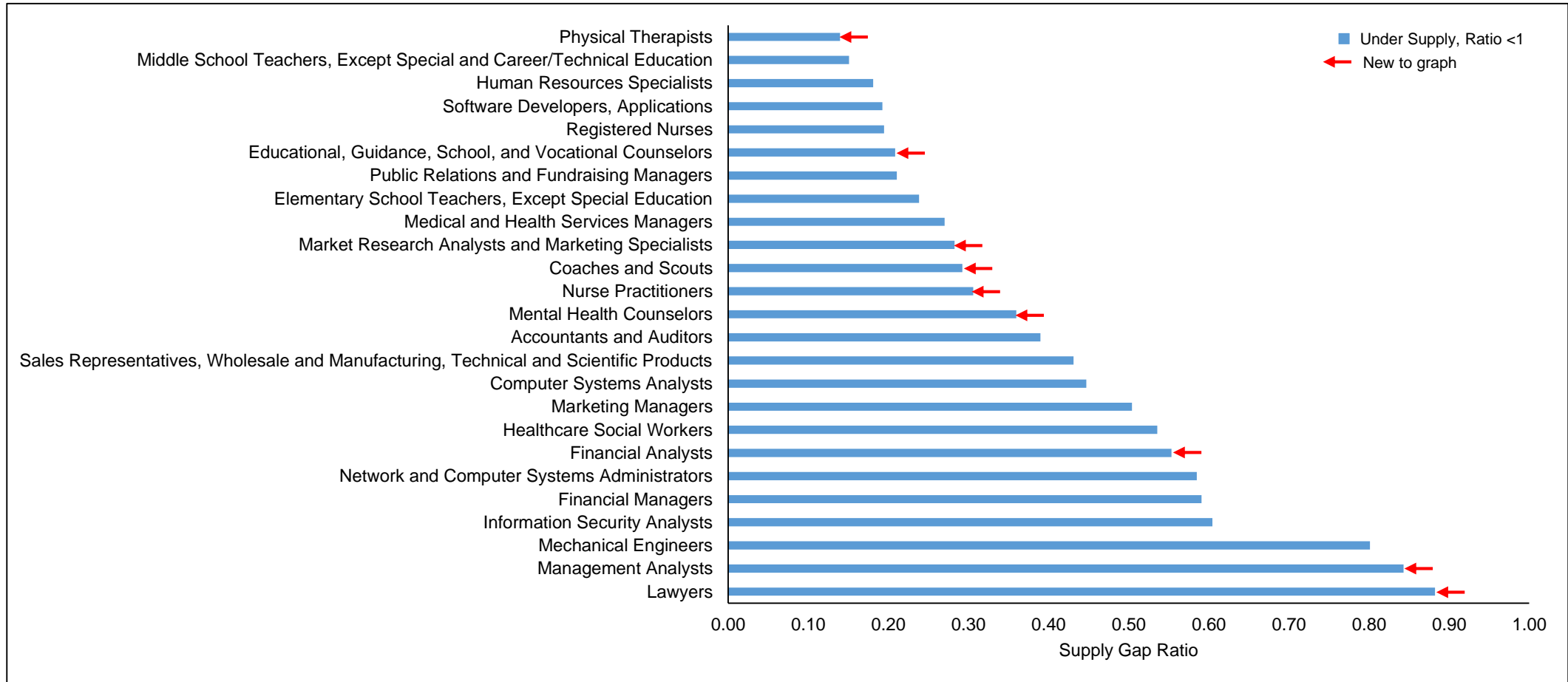
The Computer and Mathematical, Architecture and Engineering, and Legal occupation clusters average the lowest ratios of qualified individuals per opening at the BA+ level.



Occupations requiring a Bachelor's degree or higher, grouped by 2-digit SOC code. Occupation demand Index 100+. (Star rankings not available at the 2-digit SOC level.)

More Openings than Qualified: State BA+ Occupations

At the BA+ level, there are a number of 4- and 5-star occupations for which demand exceeds the supply of qualified individuals statewide.



4- and 5-star occupations requiring a Bachelor's degree or higher. Demand Index 100+ only.

Occupations new to the graph may have previously had a supply gap ratio >1, a star ranking <4, or demand index <100.

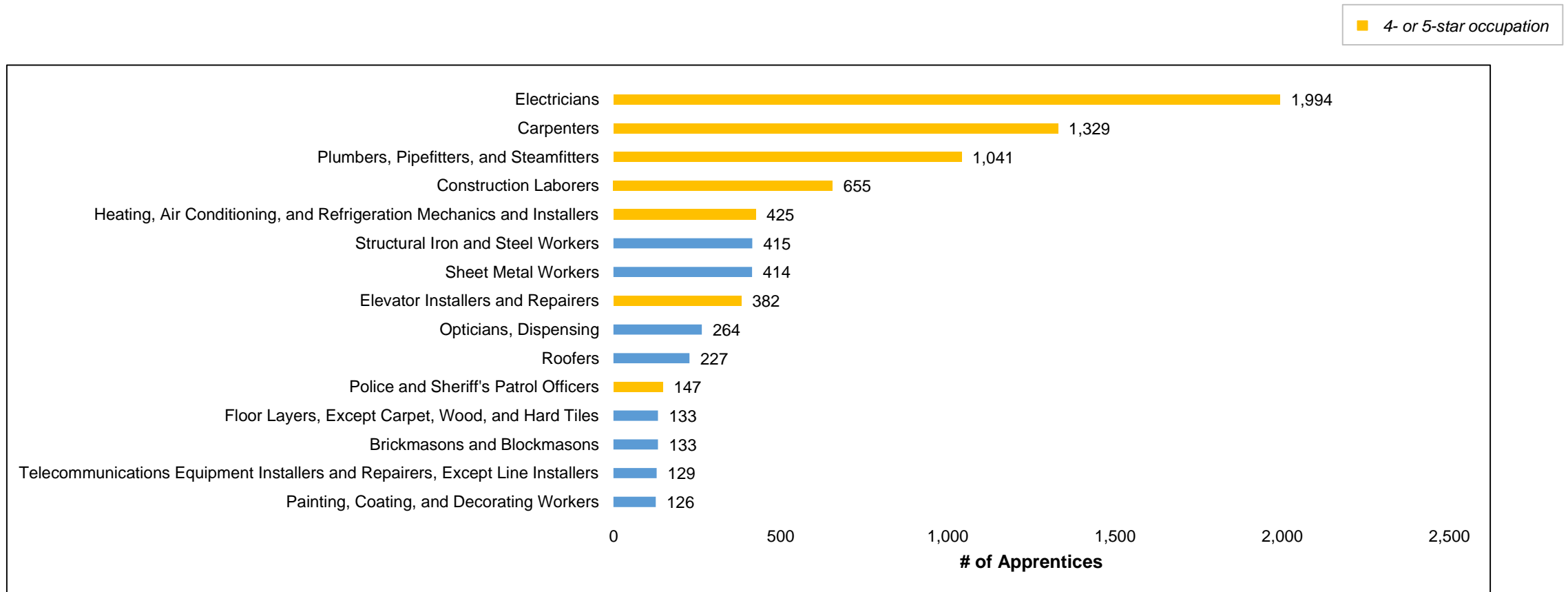
Part IV: Workforce Supply Analysis

How many qualified individuals do we potentially have available to fill a relevant job opening?

IV. A: Apprenticeships

Top 15 State Occupations by Apprenticeships

Electricians, Carpenters, and Plumbers, Pipefitters, and Steamfitters make up more than half of all apprenticeships statewide. All three of these occupations are ranked 4- or 5-stars, as are several other occupations with a large number of apprentices.



Source: Division of Apprentice Standards, 2019

How do we calculate demand and supply?

Demand

How many potential jobs exist for apprentices in a given occupation in our region?

New Demand Measure, or the average of total number of jobs for each occupation across three data sets...

- 2020 projections from openings and replacement (OES)
- 2026 projections from openings and replacement (OES)
- **New data source:** *Burning Glass 12-month job postings (2019)*

NOTE TO DATA USERS: Beginning with this data package, Burning Glass is used to measure advertised online postings, replacing Help Wanted Online as the third component of indexed demand.

Note that this substitution may be responsible for some of the variance between indexed demand as calculated in the original and updated data packages. Direct value comparisons of the occupational demand measures, STAR rankings, and supply gap ratios should be limited.

Supply

How many apprentices are qualified to work in these occupations?

Total currently enrolled apprentices...

- Division of Apprentice Standards, 2019

...minus the fraction of total occupation employment assumed to be made up of apprentices

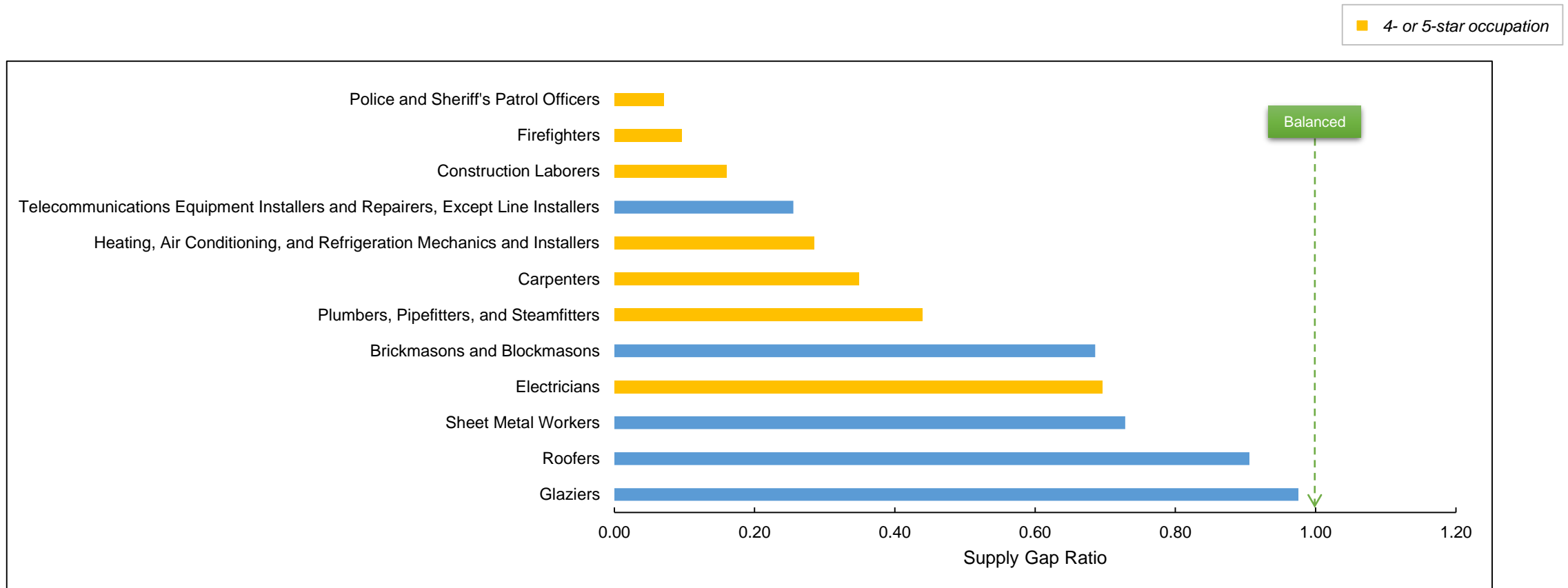
- Bureau of Labor Statistics short-term projections (OES) – 2018 employment base

$$\frac{\text{Total Number of Apprentices}}{\text{Total 2018 Employment in Apprentice Trades}} \times \text{2018 Occupation Employment}$$

*All apprentice employment assumptions are statewide—methodology detailed in apprenticeships data tool.

State Supply Gap Overview: Apprenticeships

Employer demand exceeds the supply of apprentices for a number of 4- and 5-star occupations statewide. Of these, Police and Sheriff's Patrol Officers, Firefighters, and Construction Laborers have the fewest apprentices per opening.



Source: Division of Apprentice Standards, 2019

Regional Occupation Demand and Supply of Apprentices

In Pioneer Valley, the most popular occupations for apprentices (Electricians, Carpenters, Plumbers, Pipefitters, and Steamfitters, and Construction Laborers) are ranked 4 or 5 stars, indicating high wages and strong projected employer demand.

Occupation Title	STAR Ranking	Apprentices	Demand
Electricians	5	178	193
Carpenters	4	92	236
Plumbers, Pipefitters, and Steamfitters	4	64	188
Construction Laborers	4	45	239
Sheet Metal Workers	3	44	36
Opticians, Dispensing	2	30	16
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	4	27	119
Roofers	3	25	31
Police and Sheriff's Patrol Officers	4	12	226
Operating Engineers and Other Construction Equipment Operators	4	12	97
Electrical Power-Line Installers and Repairers	3	12	25
Pharmacy Technicians	2	10	151
Painting, Coating, and Decorating Workers	2	7	31

Source: Division of Apprentice Standards, 2019

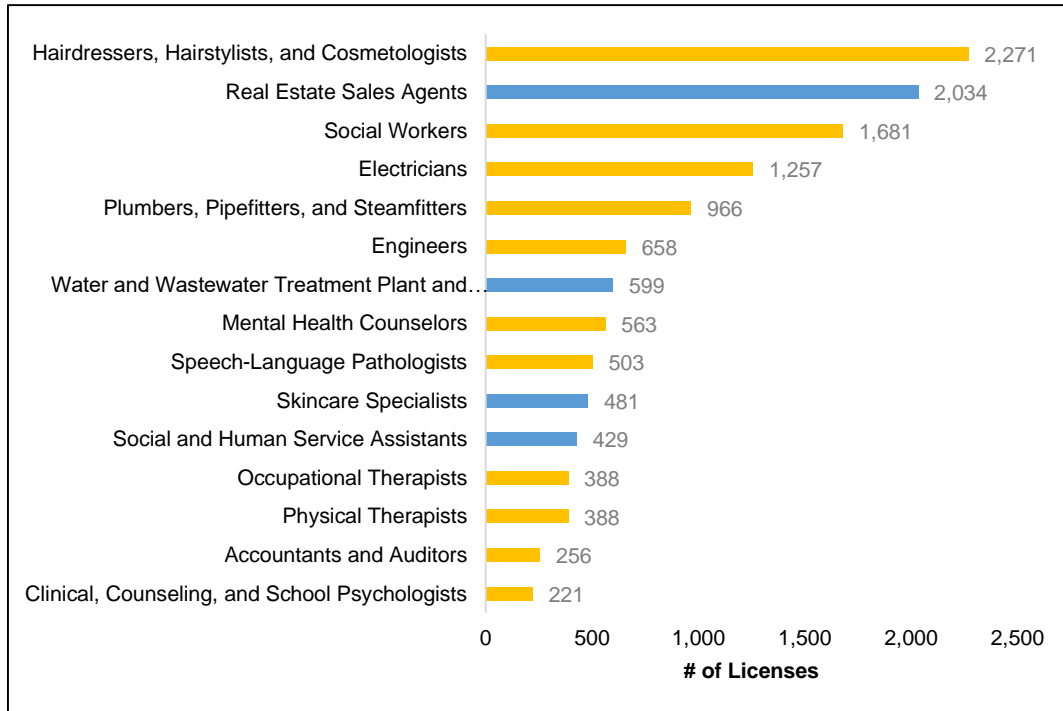
IV. B: Professional Licensing

Top 15 Occupations by DPL Professional Licensing

In Pioneer Valley, a majority of the top occupations by number of associated Division of Professional Licensure licenses are 4- or 5-star occupations.

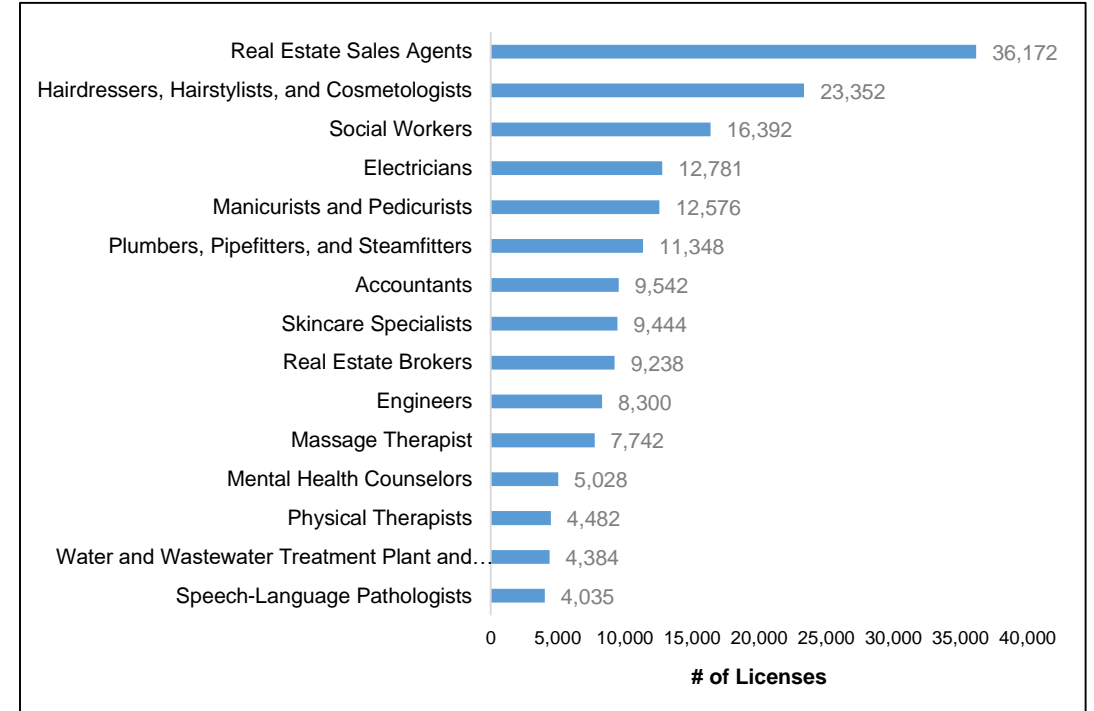
■ 4- or 5-star occupation

Pioneer Valley



Source: Division of Professional Licensure, 2000-2019

State



Source: Division of Professional Licensure, 2000-2019

This analysis is not inclusive of occupations licensed by agencies other than the Division of Professional Licensure. Licenses must have been issued between 2000 and 2019, and not be expired as of 2019.

Regional Occupation Demand and DPL Licensing

Comparing the number of license holders with total occupational employment offers another indicator of skill shortages or surpluses in occupational labor markets. While the number of professional licenses greatly exceeds total employment for some occupations, such as Cosmetologists, for others, such as Mental Health Counselors, the number of jobs (1,090) outstrips the supply of licenses (563).

DPL Board / License Type	STARS	Licenses	2018 Employment
Allied Health			
Occupational Therapy Assistant	3	104	109
Occupational Therapist	5	388	574
Physical Therapist Assistant	4	158	245
Mental Health Counselor	4	563	1,090
Physical Therapist	5	388	760
Applied Behavior Analyst	4	186	367
Educational Psychologist	5	221	765
Cosmetology			
Cosmetologist (Hairdresser)	5	2,271	1,662
Electricians			
Electrician	5	1,257	1,148
Engineers And Land Surveyors			
Engineer	4	658	807
Gas Fitters			
Gas Fitter	4	966	1,219
Public Accountancy			
Certified Public Accountant	5	256	2,160
Social Workers			
Social Worker, Licensed	4	1,681	3,211

Source: Division of Professional Licensure, 2000-2019;
Bureau of Labor Statistics, Occupational Employment Statistics, 2020 Projections

Selected occupations ranked 3+ stars only. Not inclusive of occupations licensed by agencies other than the Division of Professional Licensure. Licenses must have been issued between 2000 and 2019, and not be expired as of 2019. See Appendix for additional detail.

Part V: New Data Tools

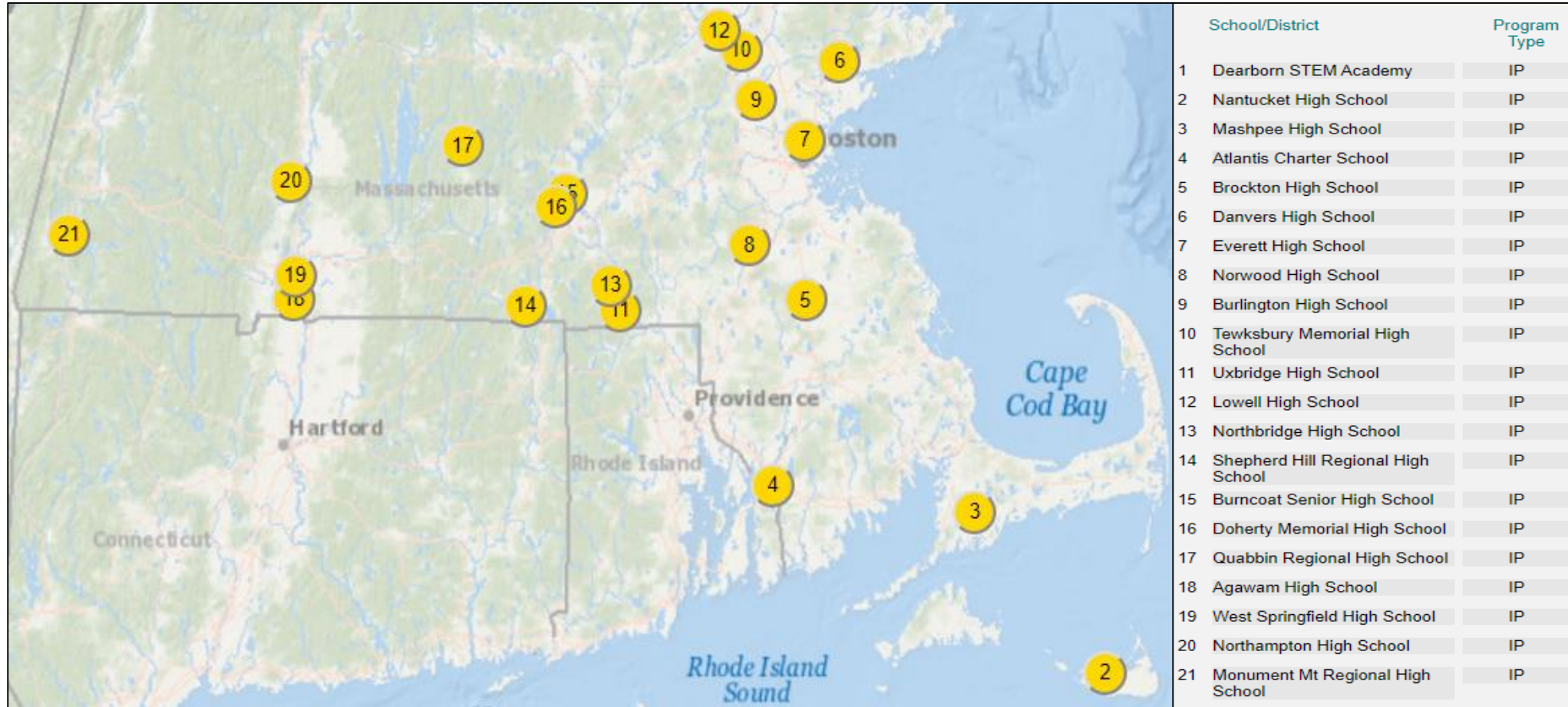
Dynamic Data Tools

As an extension of the data package update, a set of new [dynamic data tools](#) have been developed to support regional planning work.

These tools are intended to act as a resource for your teams to compare data across regions and generate insights beyond the analysis in this data package, with respect to five different areas:

1. Licensure
2. Apprenticeships
3. Regional Sector Makeup
4. Educational Attainment and Employment
5. Worker Characteristics

Education Program Supply



Online Tool: <http://massconnecting.org/pathwaymapping/default.asp#mapping>

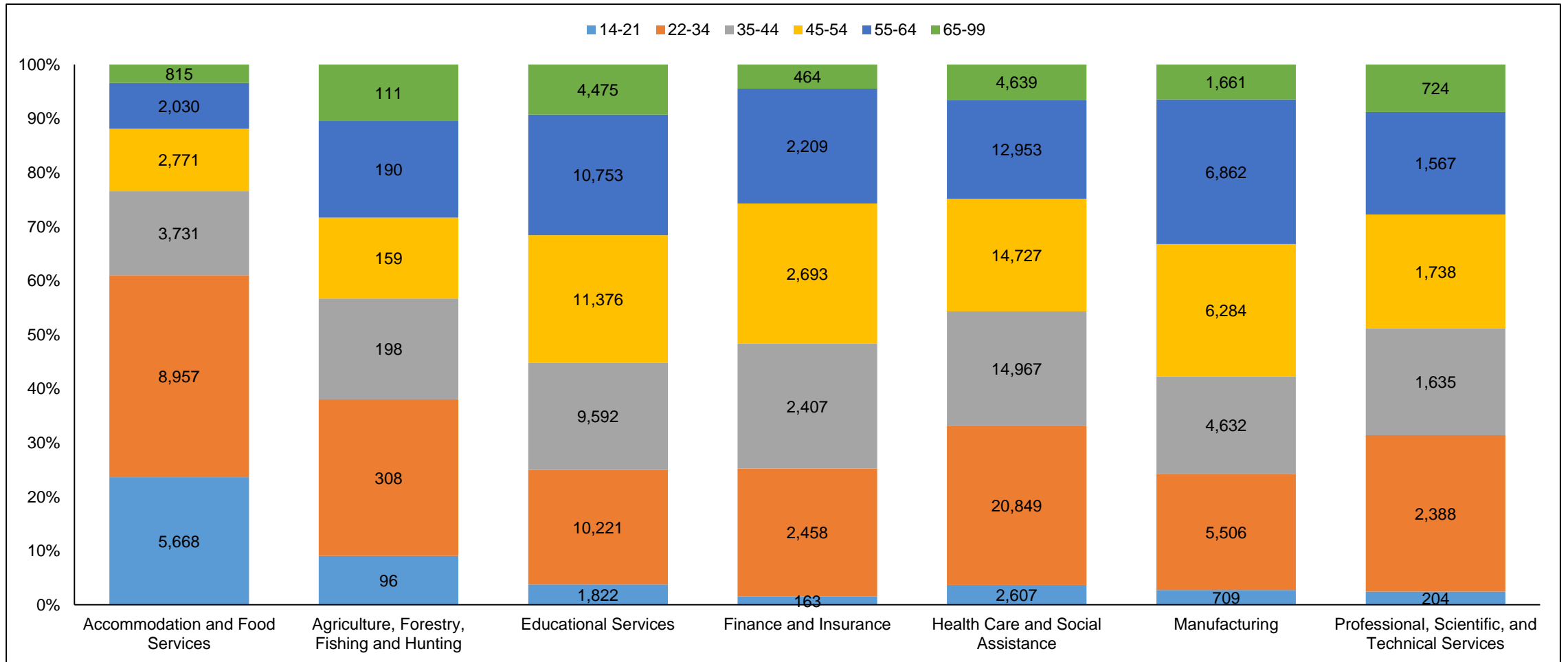
Source: Department of Higher Education, 2019

Discussion Questions

- How does this data inform your ongoing work to support regional priority industry and occupations?
- How can you act on this data to accelerate your blueprint priorities?
- This year, we're asking regional teams to develop an "update" to their blueprints. With this data in mind, what might be important to include in your update?

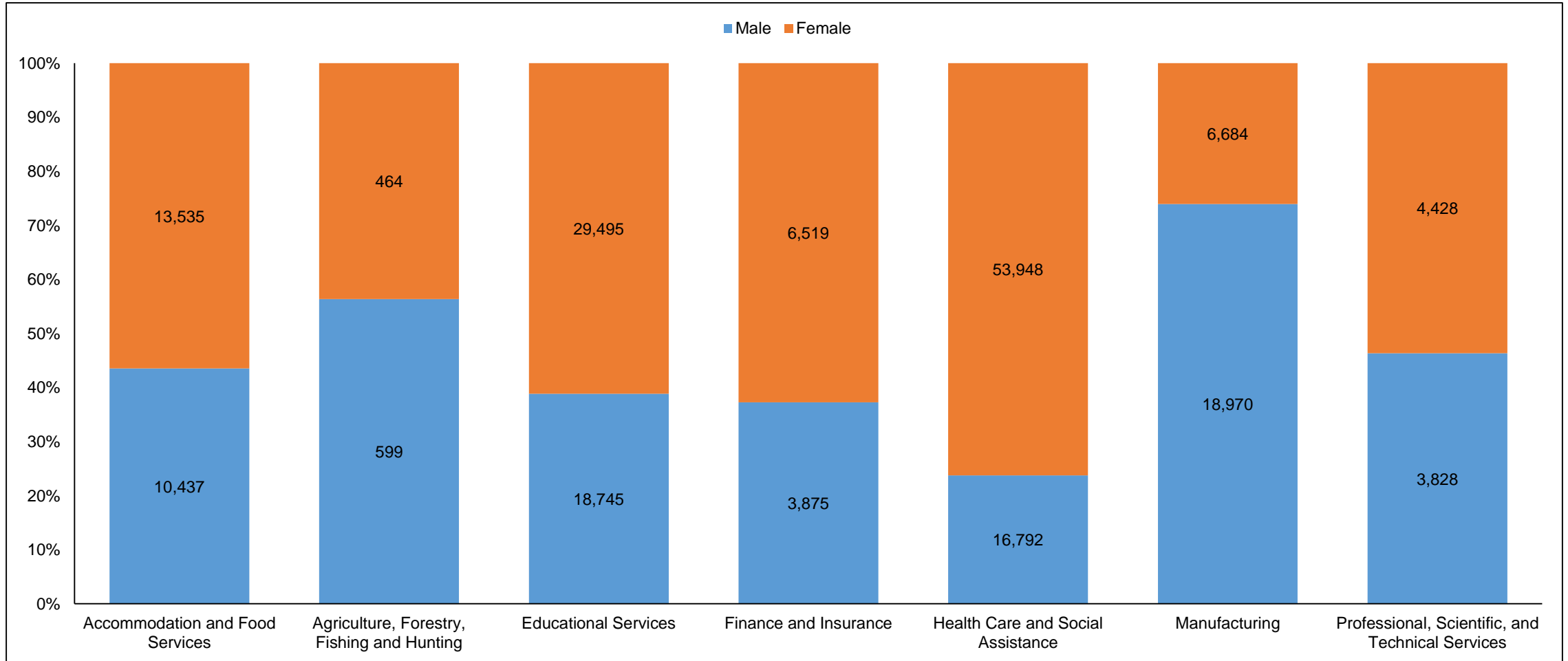
Appendix: Worker Characteristics

Priority and Critical Industries by Age



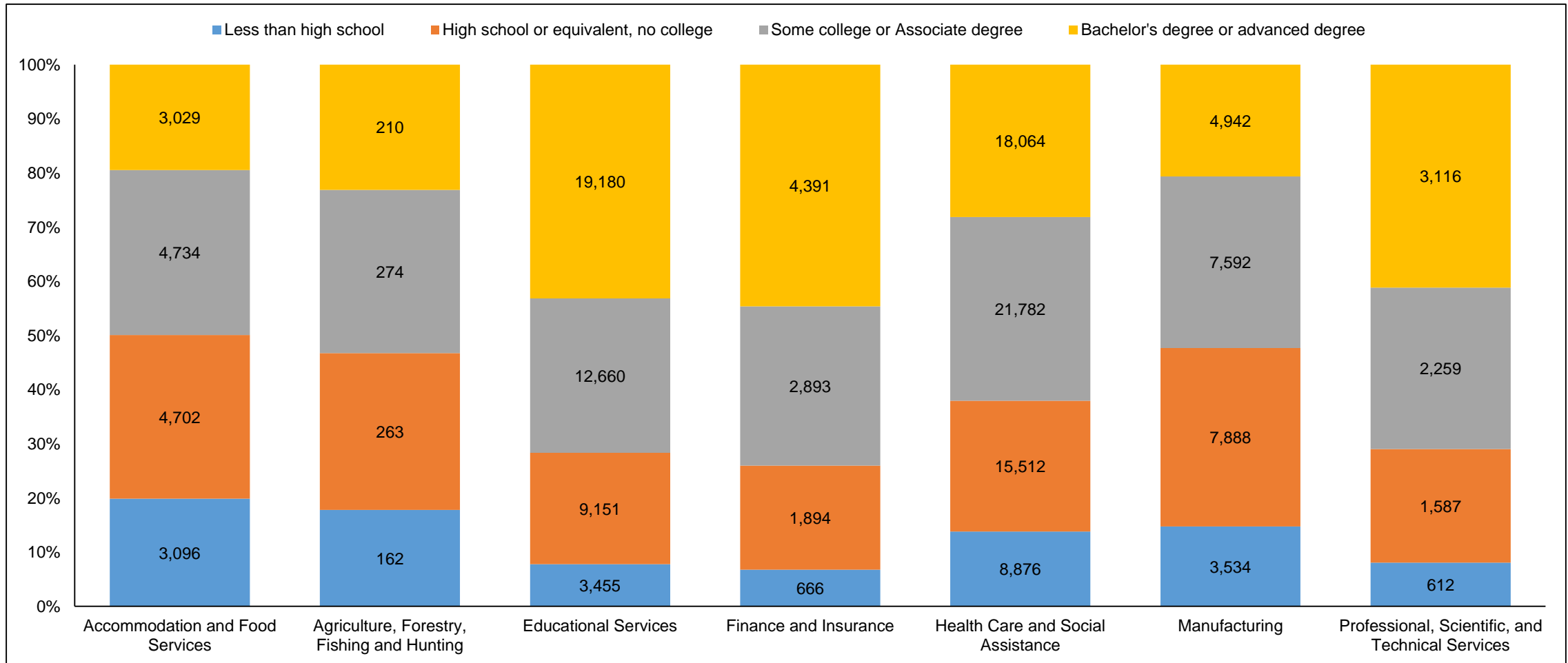
Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Priority and Critical Industries by Gender



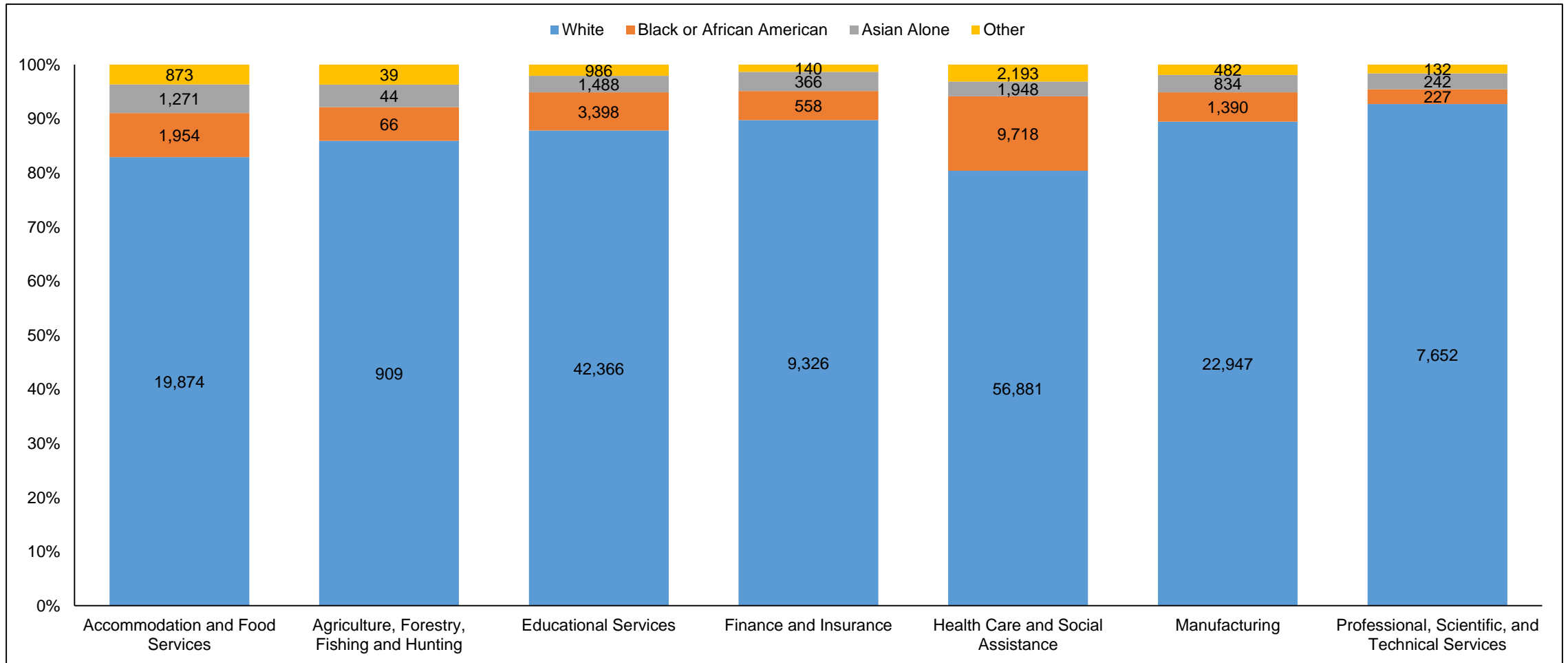
Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Priority and Critical Industries by Educational Attainment



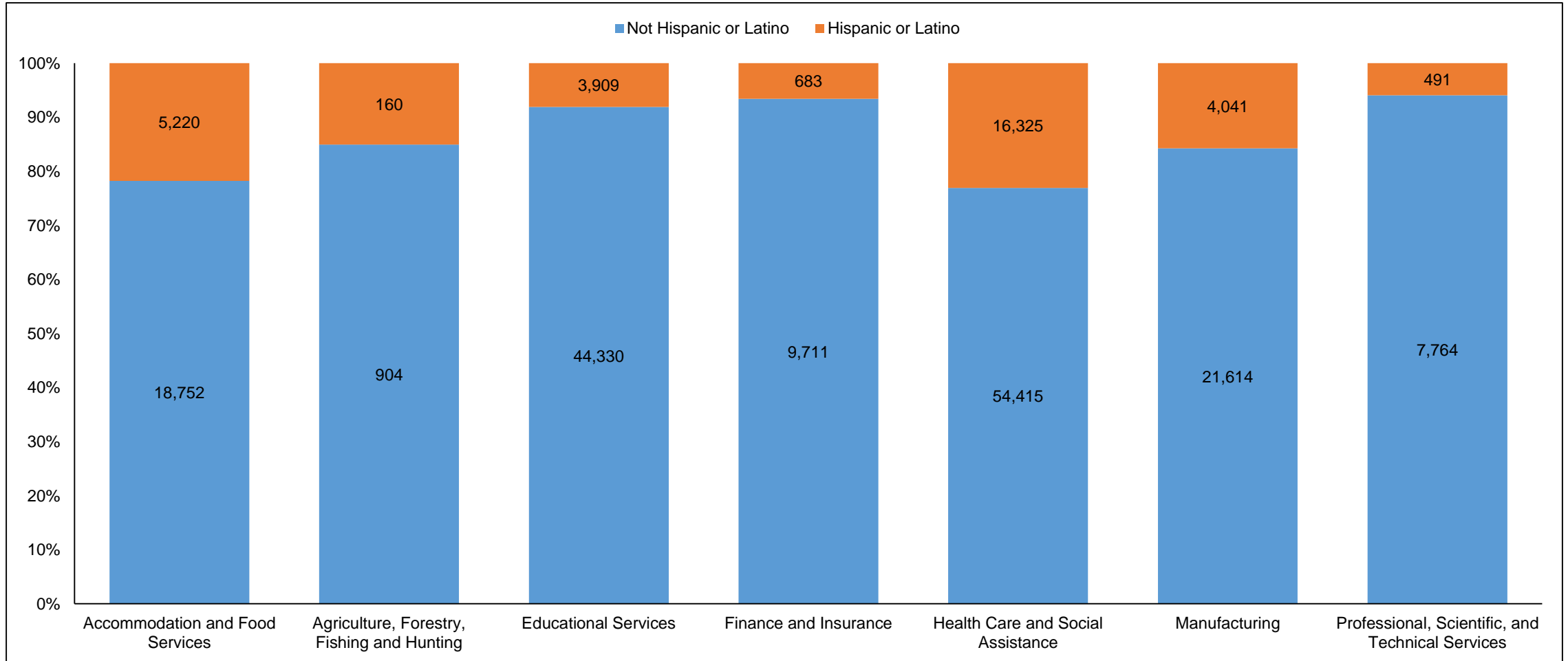
Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Priority and Critical Industries by Race



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Priority and Critical Industries by Ethnicity



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

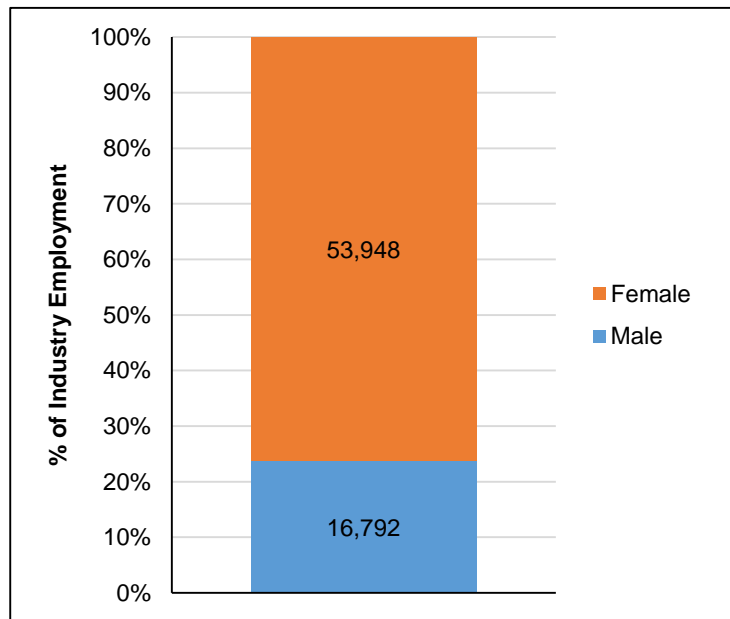
Appendix: Priority Industry Profiles

Healthcare and Social Assistance

Healthcare and Social Assistance by Gender

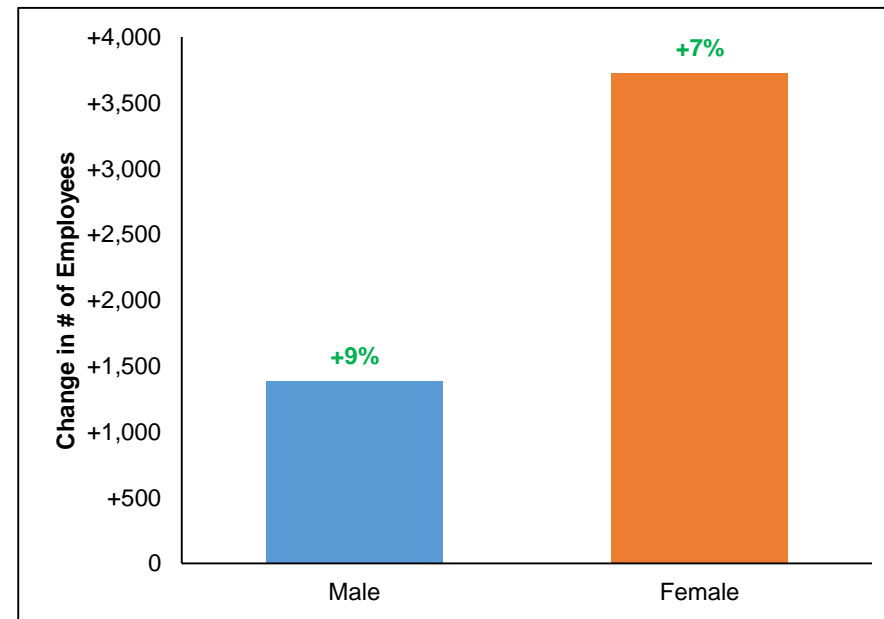
There are far more women than men working in Healthcare and Social Assistance, overall. This reflects the mix of occupations in the sector.

Industry Employment, Q2 2018



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Percent and Absolute Change in Industry Employment, Q2 2015 – Q2 2018

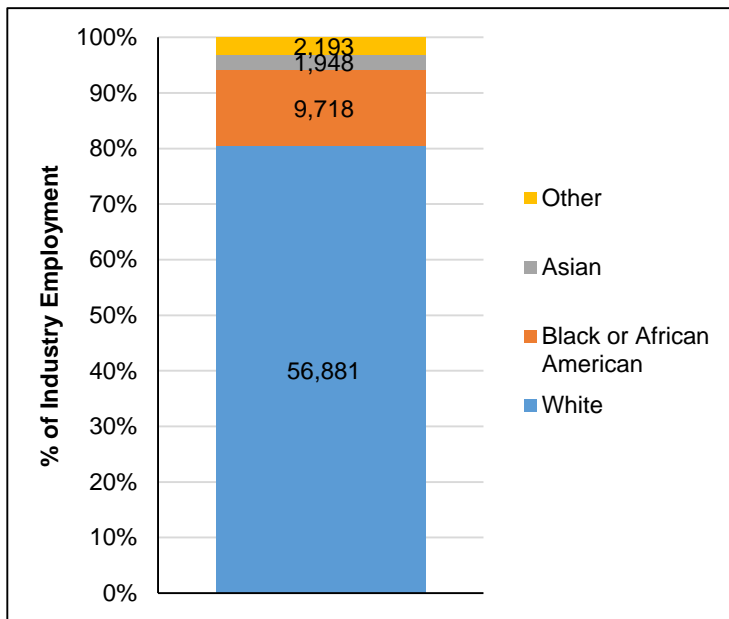


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – Q2 2018

Healthcare and Social Assistance by Race/Ethnicity

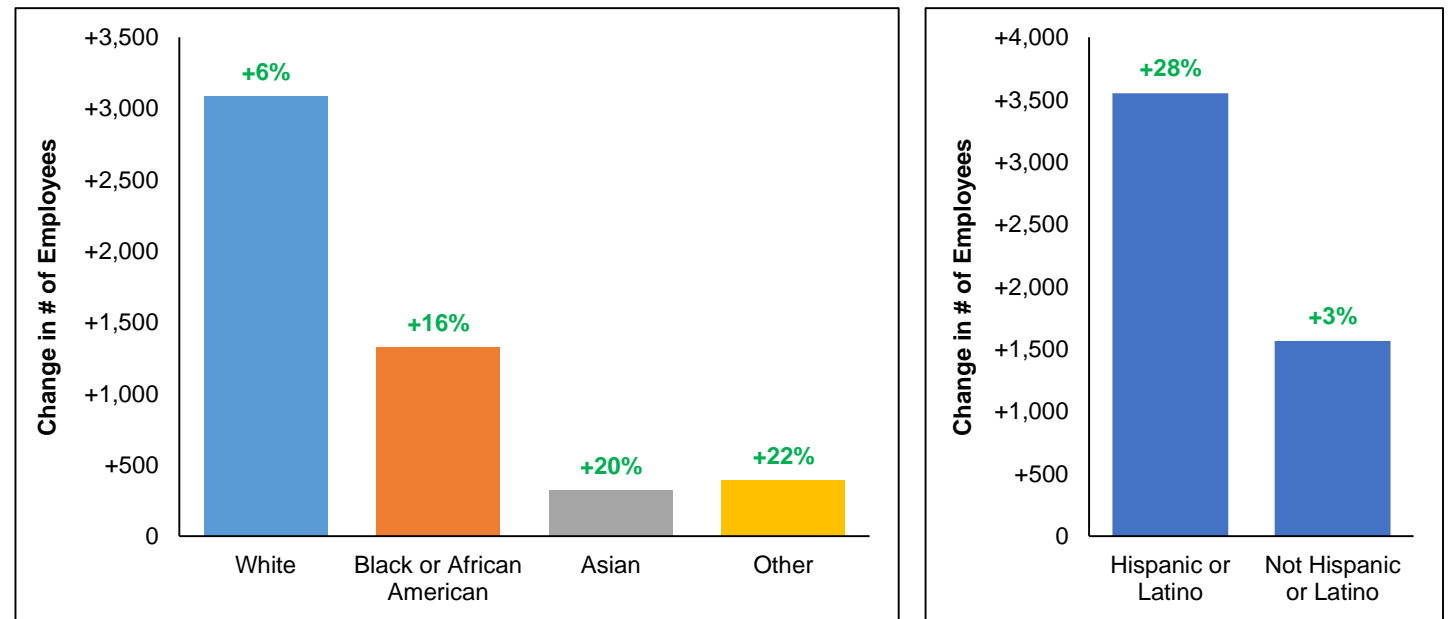
While most workers in the Healthcare and Social Assistance sector are white, since 2015, growth in employment has been increasing for Black or African American, Asian, and Hispanic or Latino populations.

Industry Employment, Q2 2018



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Percent and Absolute Change in Industry Employment, Q2 2015 – Q2 2018



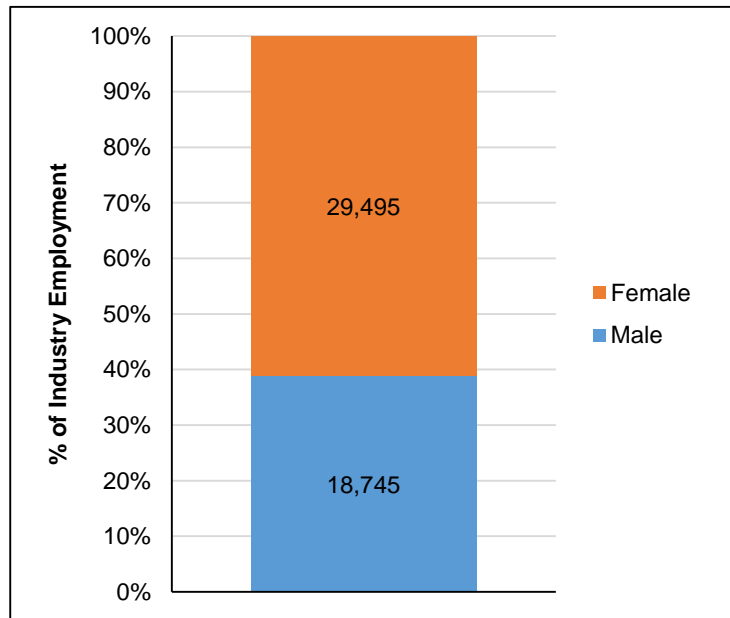
Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – Q2 2018

Educational Services

Educational Services by Gender

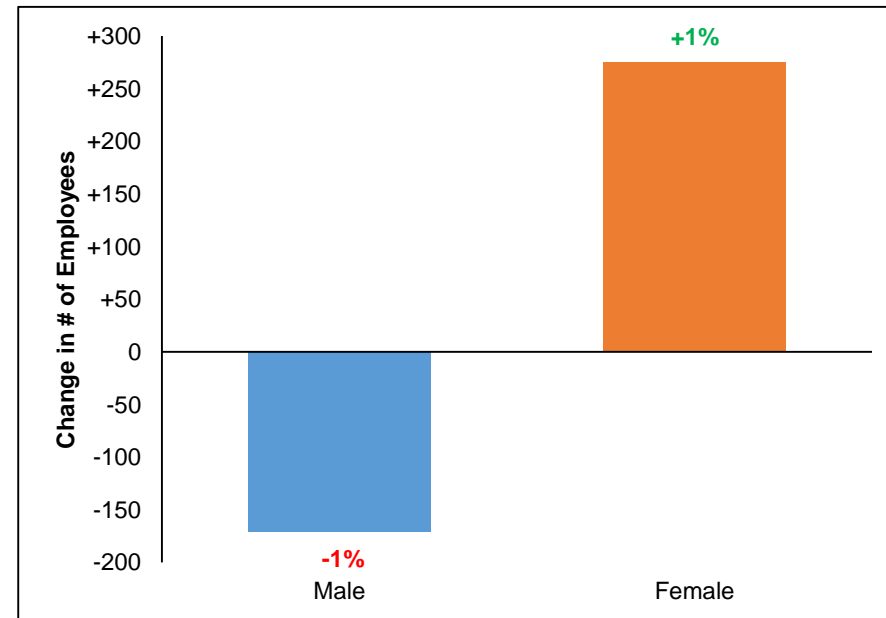
More than half of workers in the Educational Services sector are female.

Industry Employment, Q2 2018



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Percent and Absolute Change in Industry Employment, Q2 2015 – Q2 2018

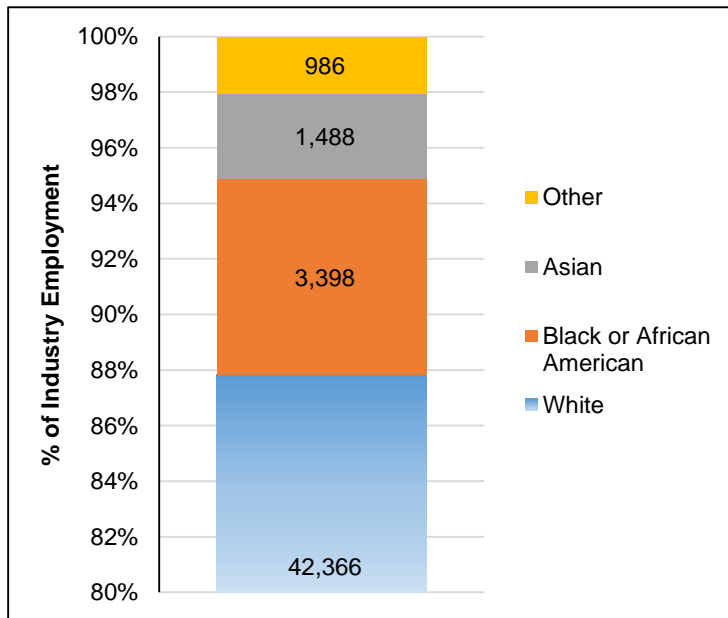


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – Q2 2018

Educational Services by Race/Ethnicity

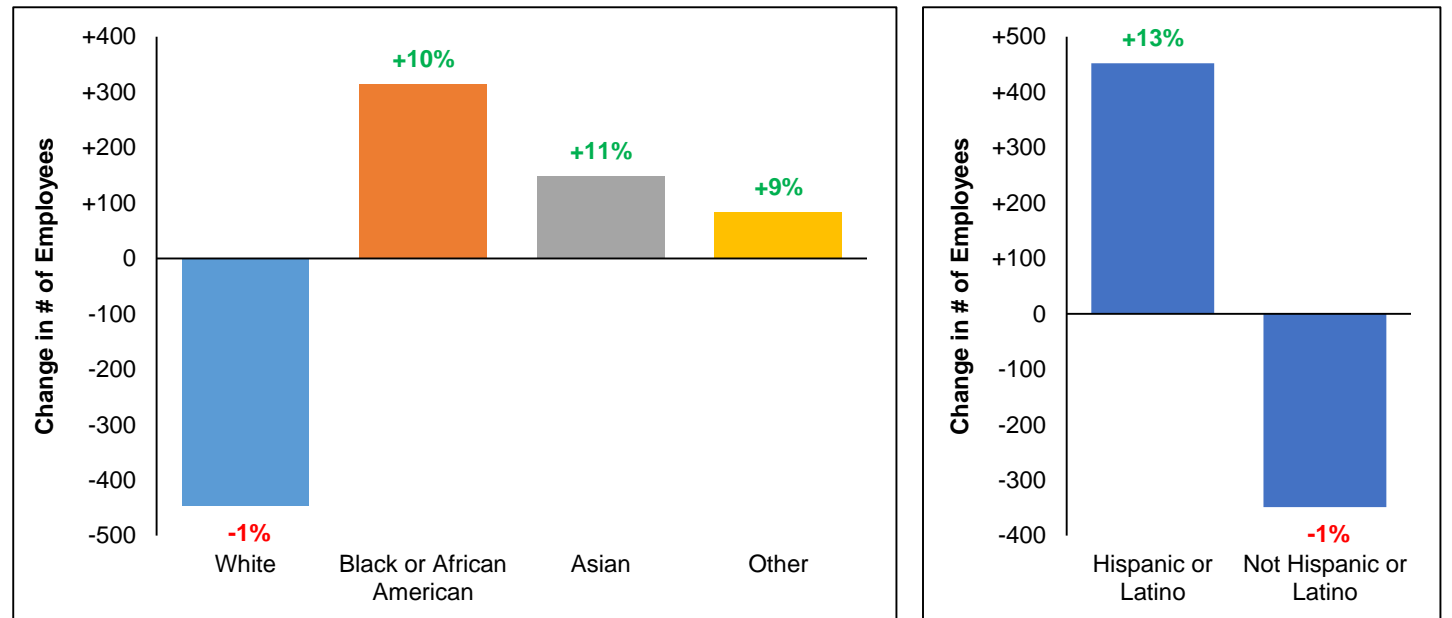
Nearly 88% of workers in the Educational Services sector in the Pioneer Valley are white. Since 2015, there has been some growth in the numbers of people of color working in the sector (Black or African American, Asian, and Hispanic or Latino).

Industry Employment, Q2 2018



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Percent and Absolute Change in Industry Employment, Q2 2015 – Q2 2018



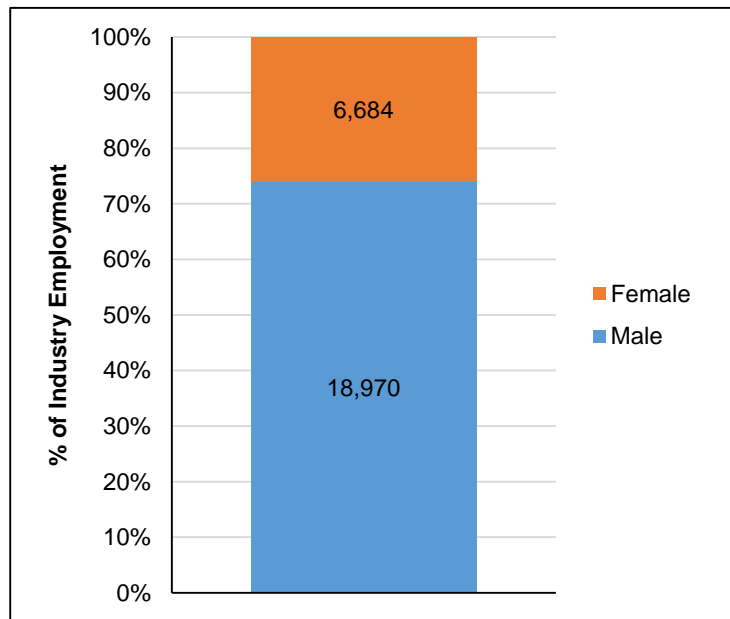
Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – Q2 2018

Manufacturing

Manufacturing by Gender

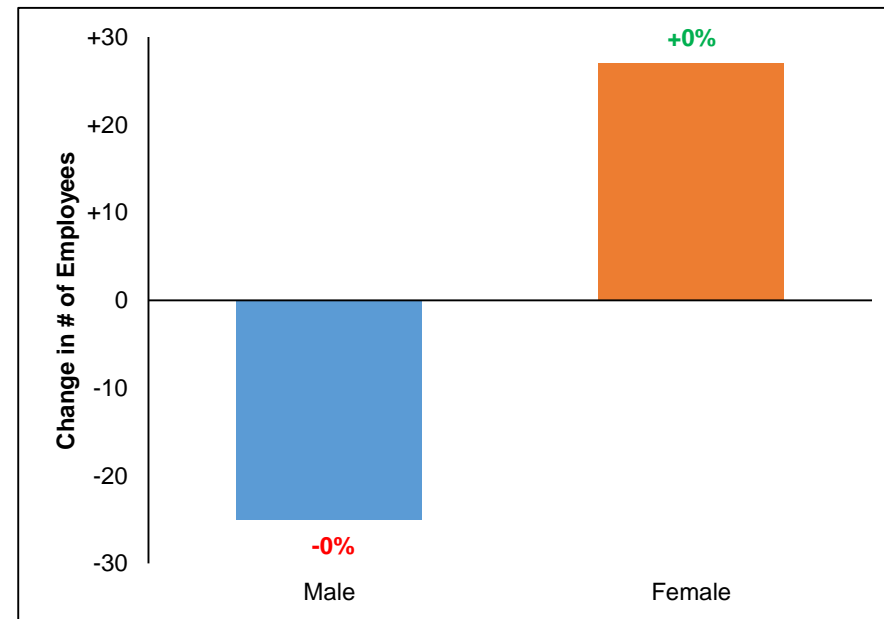
Manufacturing workers in the Pioneer Valley are predominantly male. Female workers make up about 25% of workers in Manufacturing in the region.

Industry Employment, Q2 2018



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Percent and Absolute Change in Industry Employment, Q2 2015 – Q2 2018

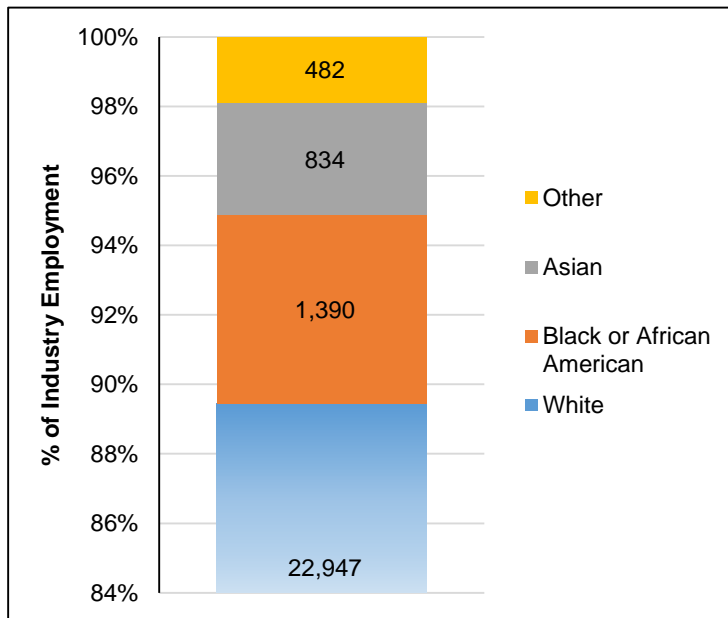


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – Q2 2018

Manufacturing by Race/Ethnicity

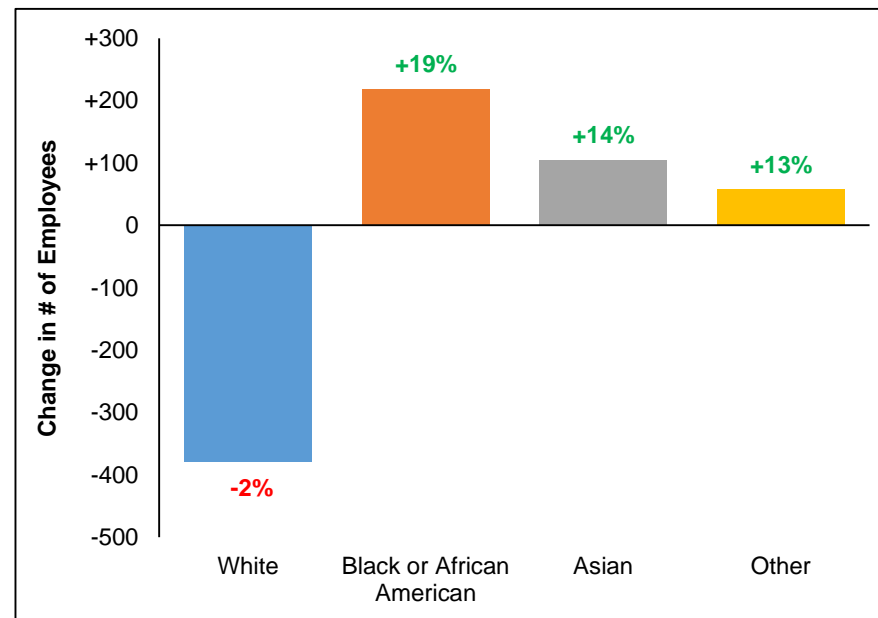
The Manufacturing workforce in the Pioneer Valley has seen some growth in the numbers of people of color since 2015, though nearly 90% of workers are white.

Industry Employment, Q2 2018

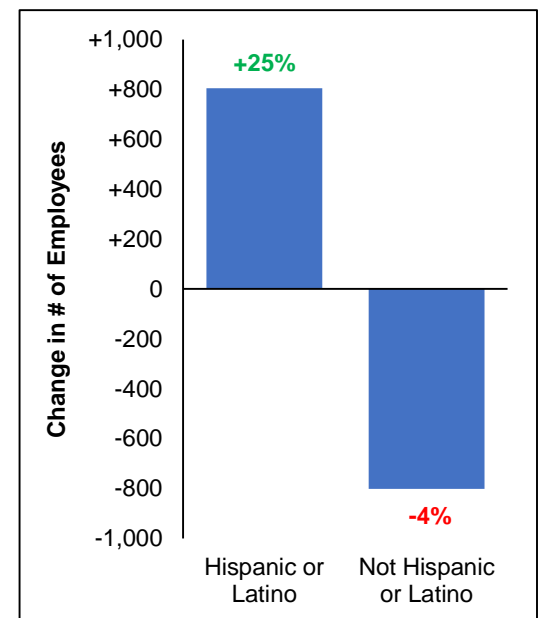


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Percent and Absolute Change in Industry Employment, Q2 2015 – Q2 2018



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – Q2 2018

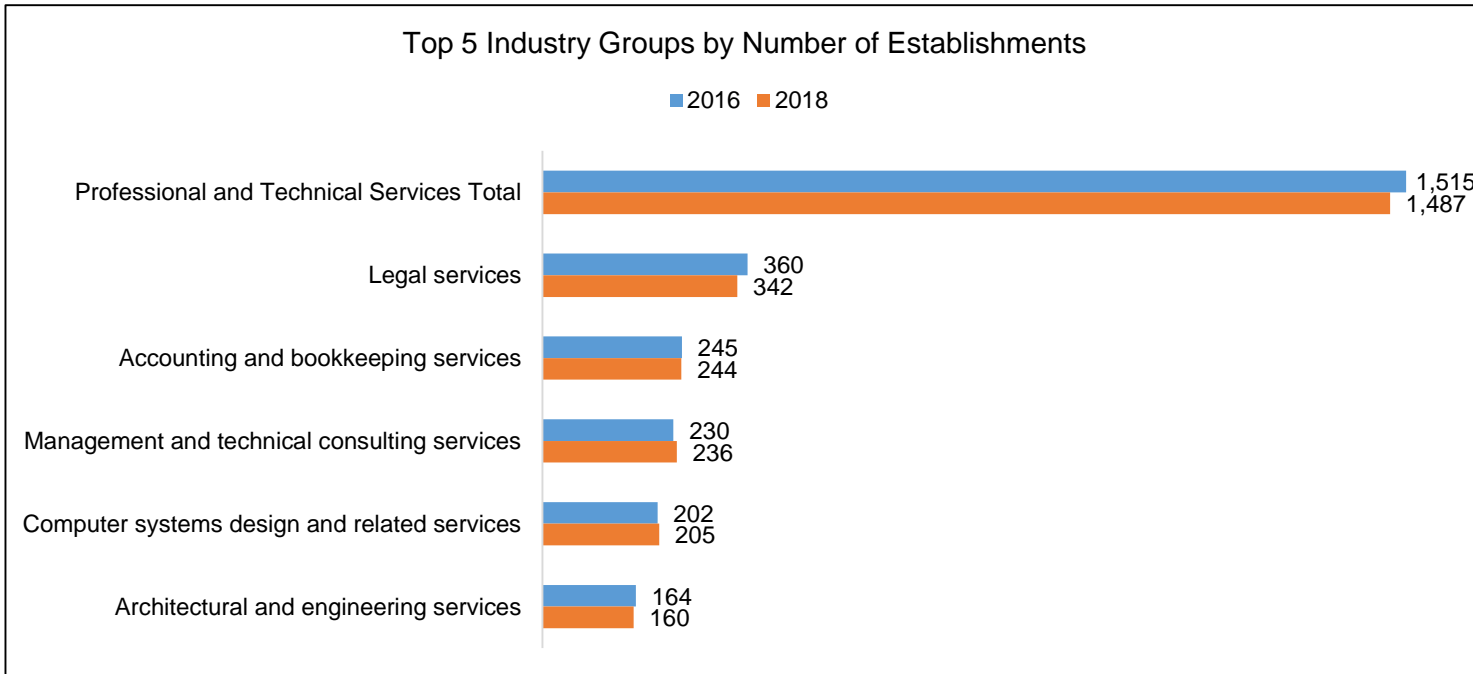


Appendix: Critical Industry Profiles

Professional and Technical Services

Professional and Technical Services Groups and Employers

Pioneer Valley is home to nearly 1,500 establishments in the Professional and Technical Services sector, which includes legal, accounting and bookkeeping, management and technical consulting, and computer systems design and related services. H&R Block was the only employer with more than 100 job postings in Pioneer Valley over the last year (155), followed by Teach for America (53).



Largest Employers by 12-Month Regional Job Postings

Employer	Job Postings
H&R Block	155
Teach For America	53
Advantage Sales & Marketing	43
XPO Logistics	27
Serco	25
Infosys	23

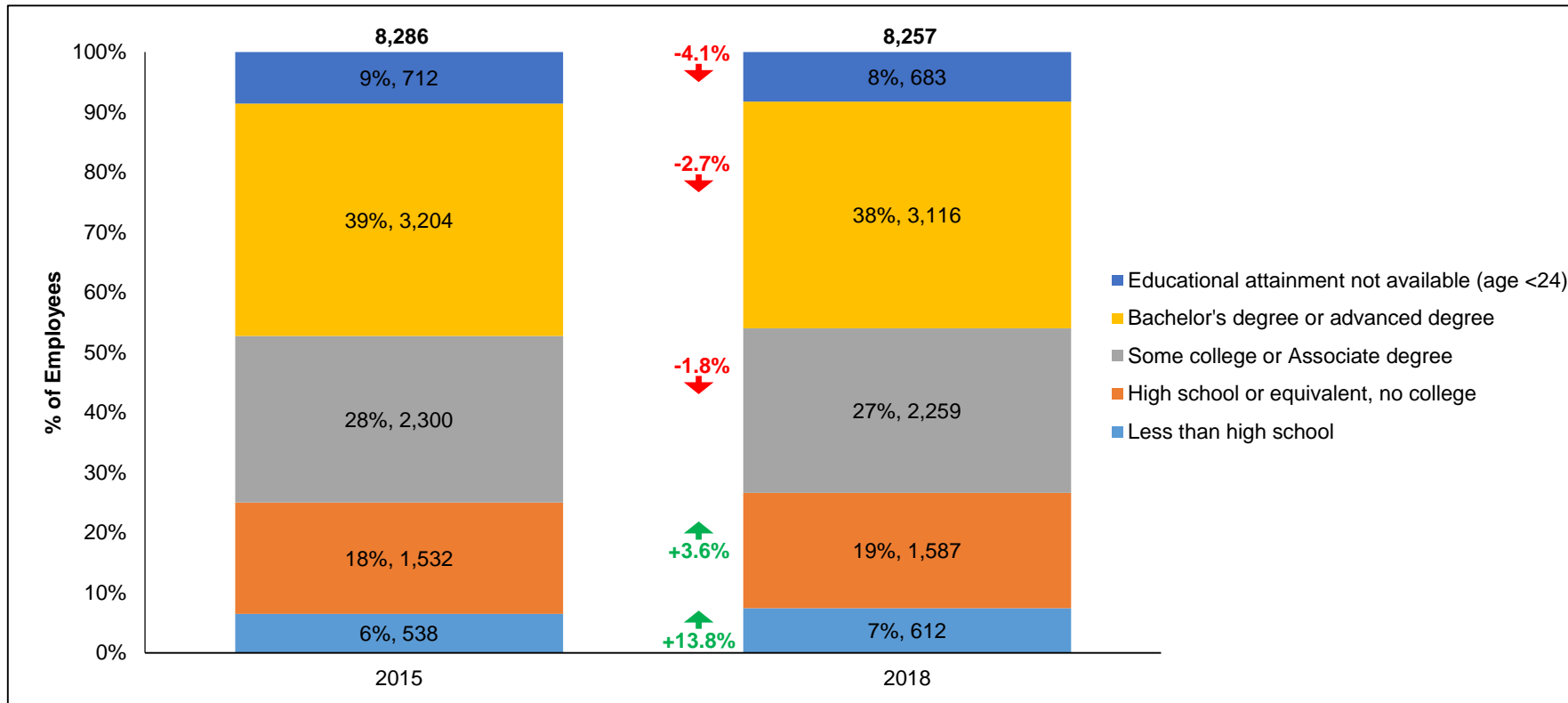
Source: Burning Glass, 2019

Source: DUA/BLS Quarterly Census of Employment and Wages, Q3 2016 – 2018

Professional and Technical Services by Education

Nearly 40% of workers in the Professional and Technical Services sector in the Pioneer Valley have a Bachelor's degree or higher, while more than 25% have some college or an Associate degree.

Industry Employment by Educational Attainment, Q2 2015 – Q2 2018

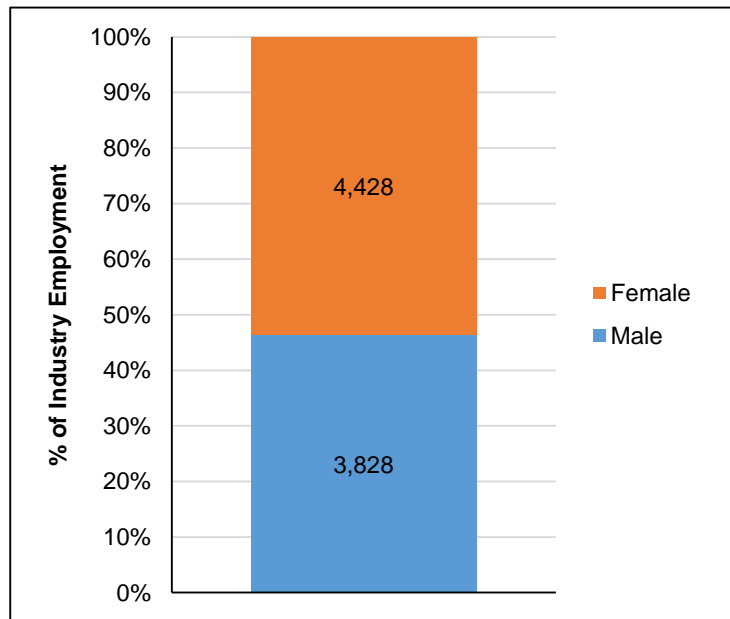


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – 2018

Professional and Technical Services by Gender

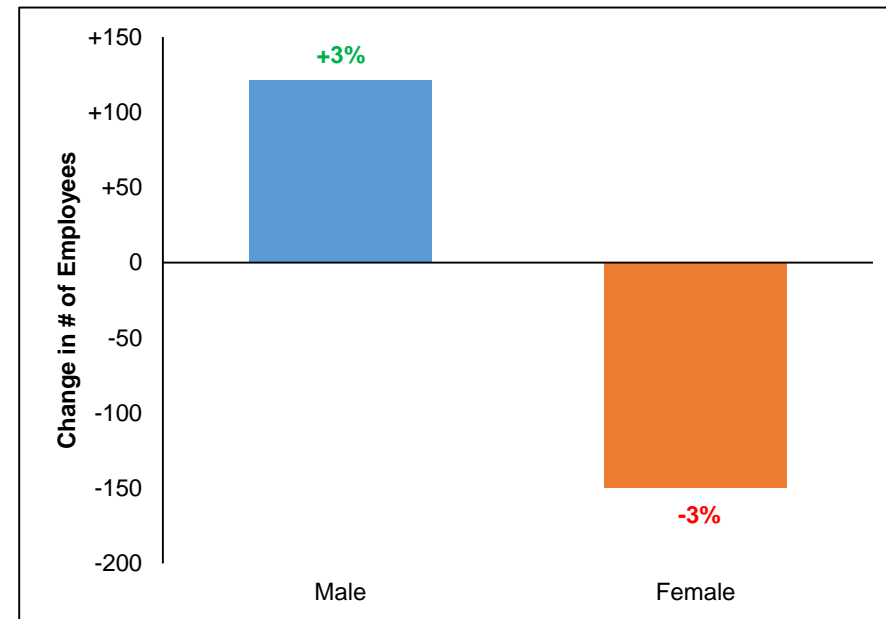
Employment in the Professional and Technical Services sector is fairly evenly split between male and female workers.

Industry Employment, Q2 2018



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Percent and Absolute Change in Industry Employment, Q2 2015 – Q2 2018

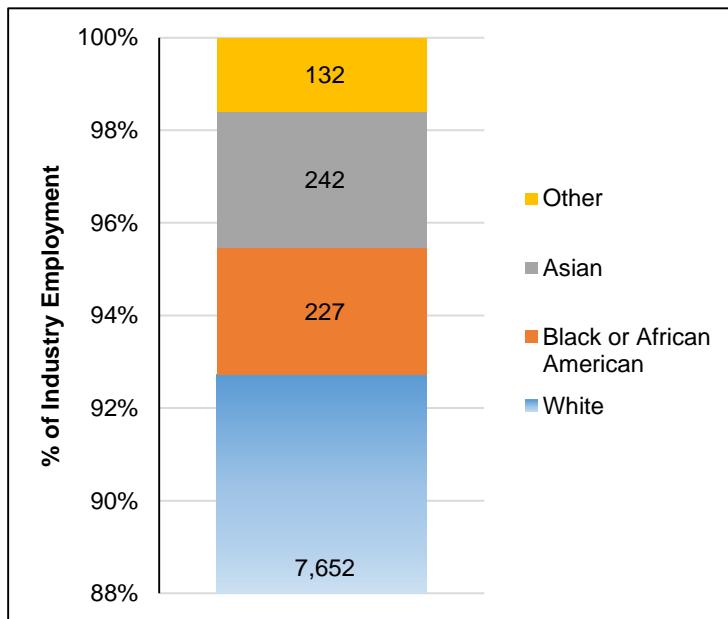


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – Q2 2018

Professional and Technical Services by Race/Ethnicity

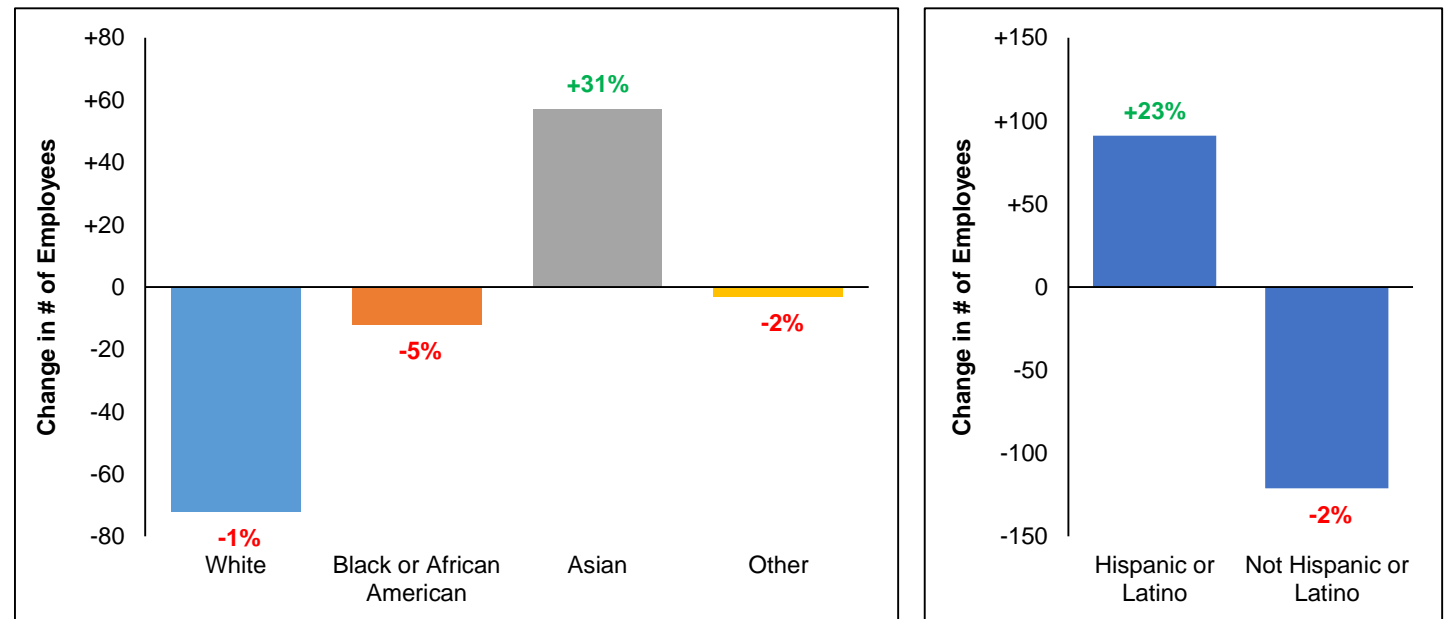
More than 90 percent of workers in the Professional and Technical Services Sector in the Pioneer Valley are white, though the numbers of Asian and Hispanic or Latino workers are growing somewhat.

Industry Employment, Q2 2018



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Percent and Absolute Change in Industry Employment, Q2 2015 – Q2 2018

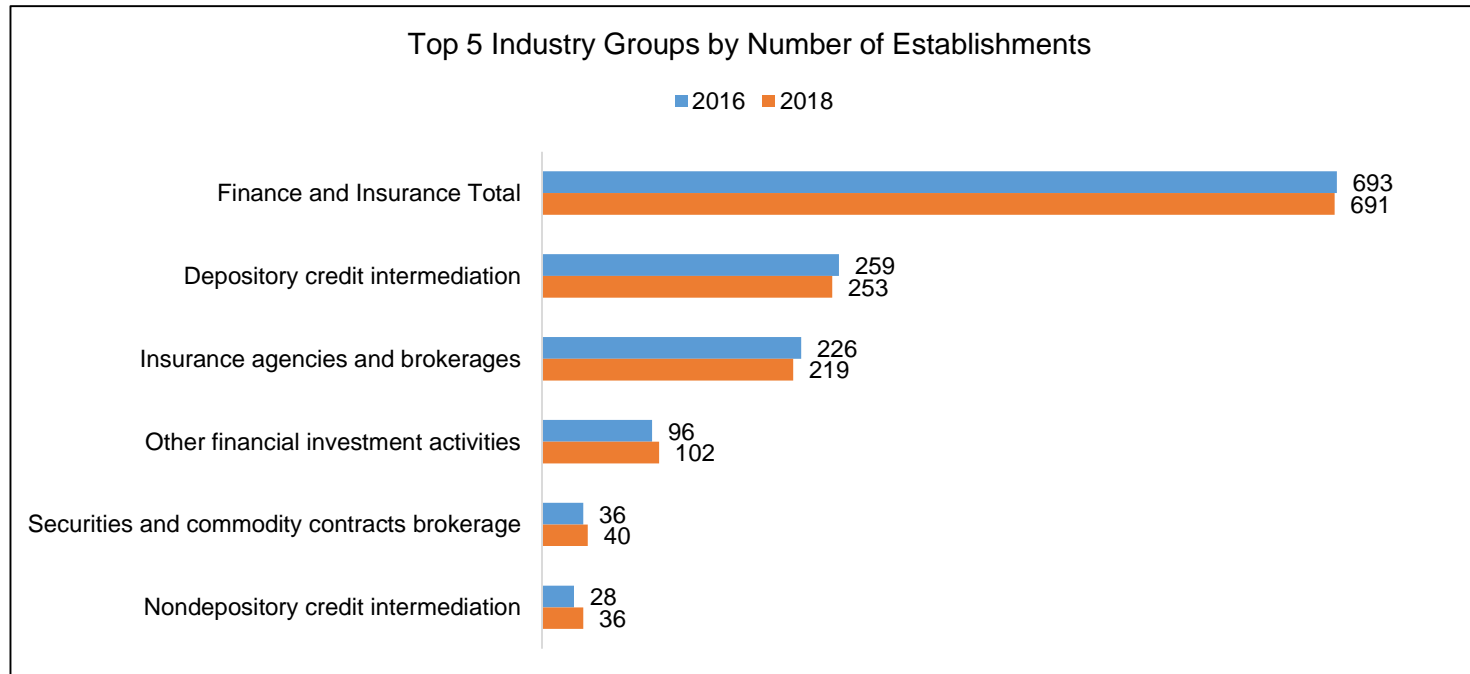


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – Q2 2018

Finance and Insurance

Finance and Insurance Groups and Employers

The number of Finance and Insurance establishments in Pioneer Valley has remained stable since 2016. In the last year, Massachusetts Mutual Life Insurance was responsible for the largest number of job postings in Pioneer Valley (378).



Source: DUA/BLS Quarterly Census of Employment and Wages, Q3 2016 – 2018

Largest Employers by 12-Month Regional Job Postings

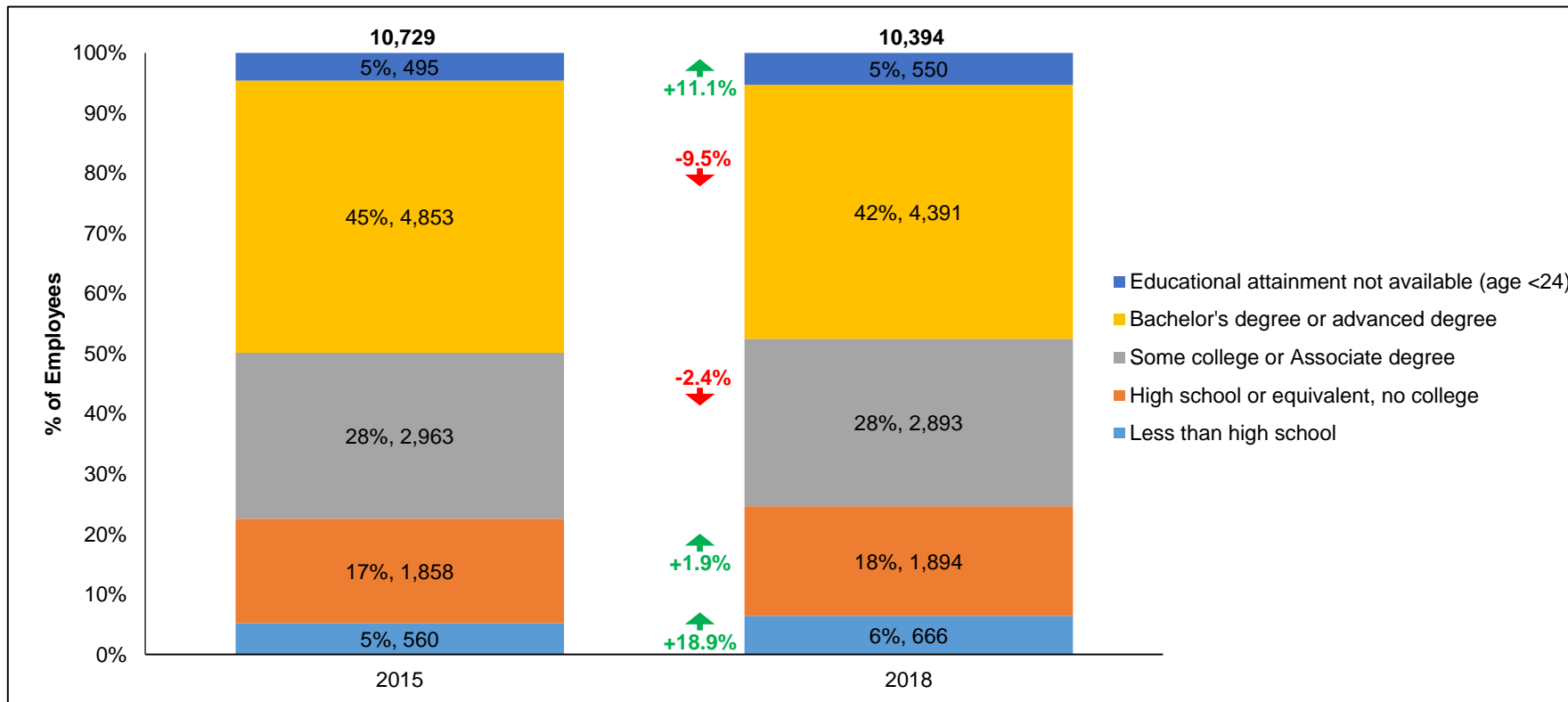
Employer	Job Postings
Massachusetts Mutual Life Insurance	378
Bear State Financial, Inc	147
TD Bank	62
Citizens Financial Group	51
United Financial Bancorp, Inc	50
Bank of America	50

Source: Burning Glass, 2019

Finance and Insurance by Education

Finance and Insurance employment has declined slightly since 2015. More than 40% of workers in the sector in the Pioneer Valley hold a Bachelor's degree or higher.

Industry Employment by Educational Attainment, Q2 2015 – Q2 2018

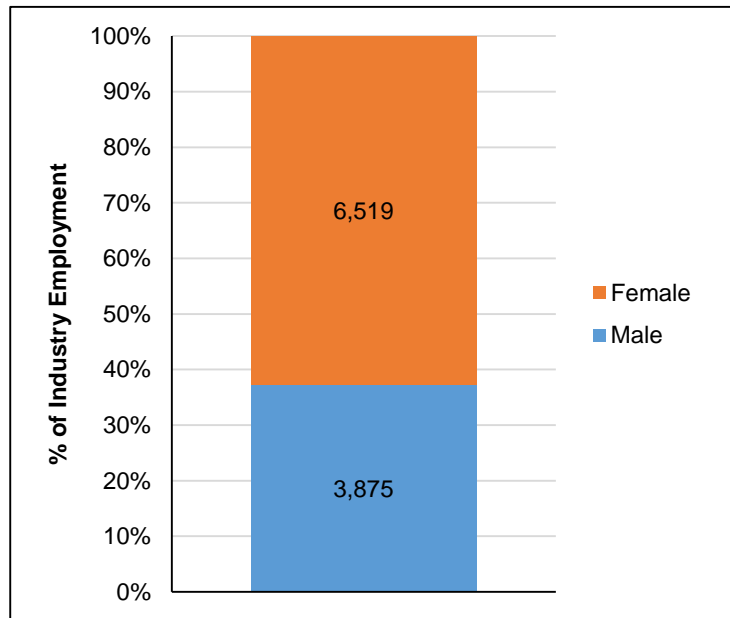


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – 2018

Finance and Insurance by Gender

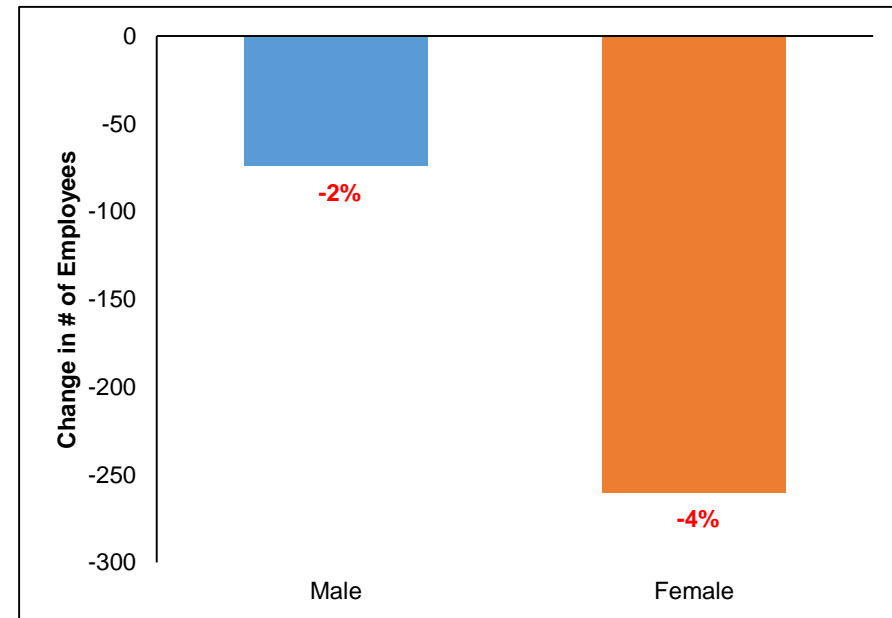
Numbers of workers in the Finance and Insurance sector in the Pioneer Valley are just over 60% female and 40% male.

Industry Employment, Q2 2018



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Percent and Absolute Change in Industry Employment, Q2 2015 – Q2 2018

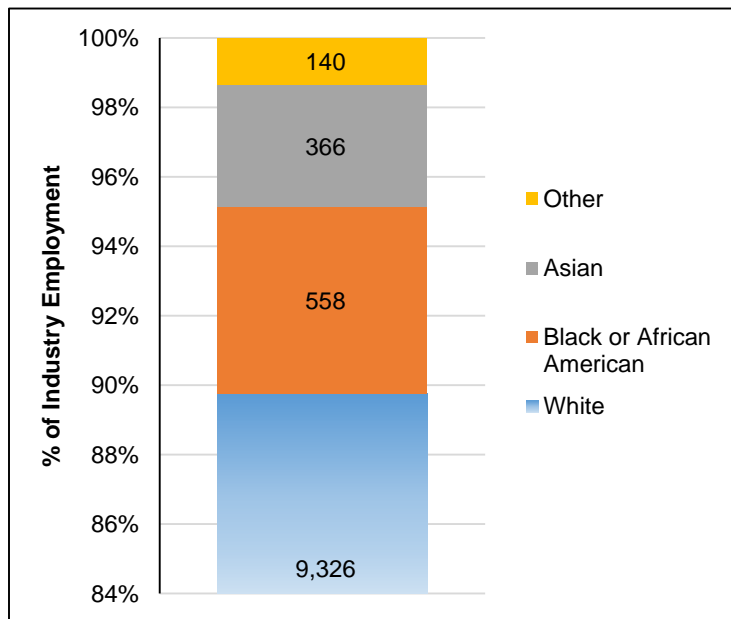


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – Q2 2018

Finance and Insurance by Race/Ethnicity

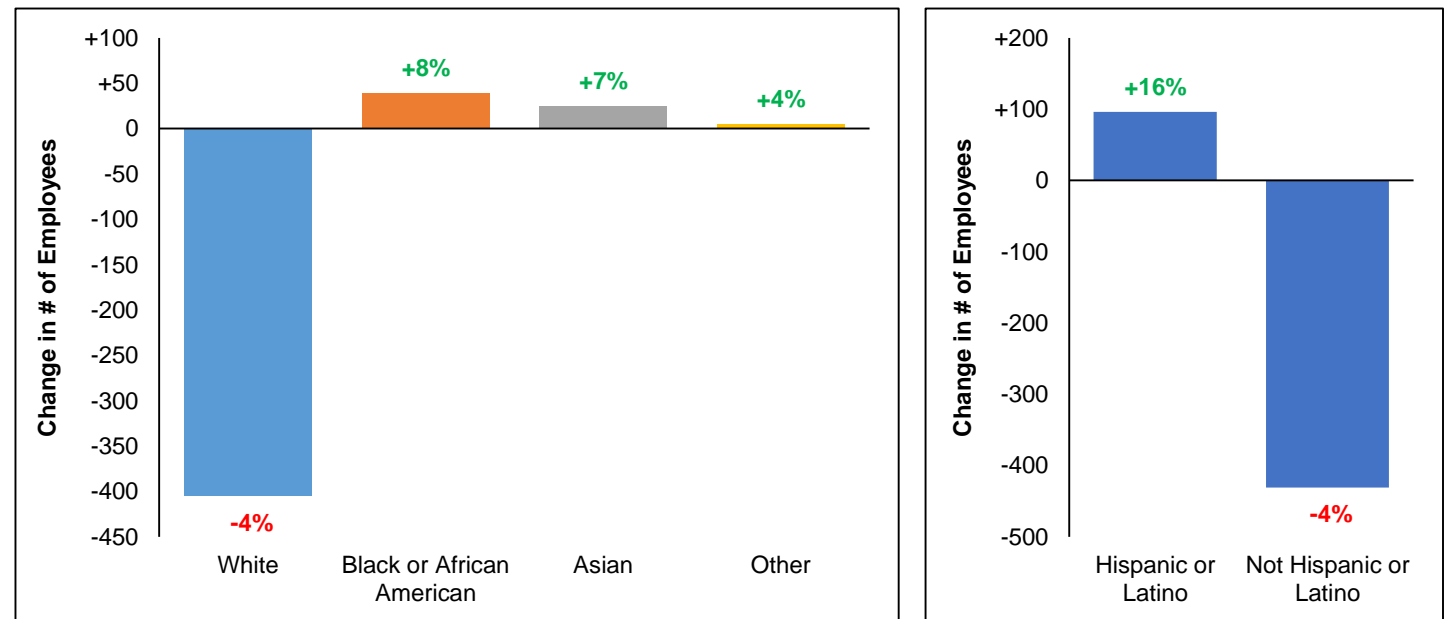
Nearly 90% of all workers in the Finance and Insurance sector in the Pioneer Valley are white.

Industry Employment, Q2 2018



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Percent and Absolute Change in Industry Employment, Q2 2015 – Q2 2018

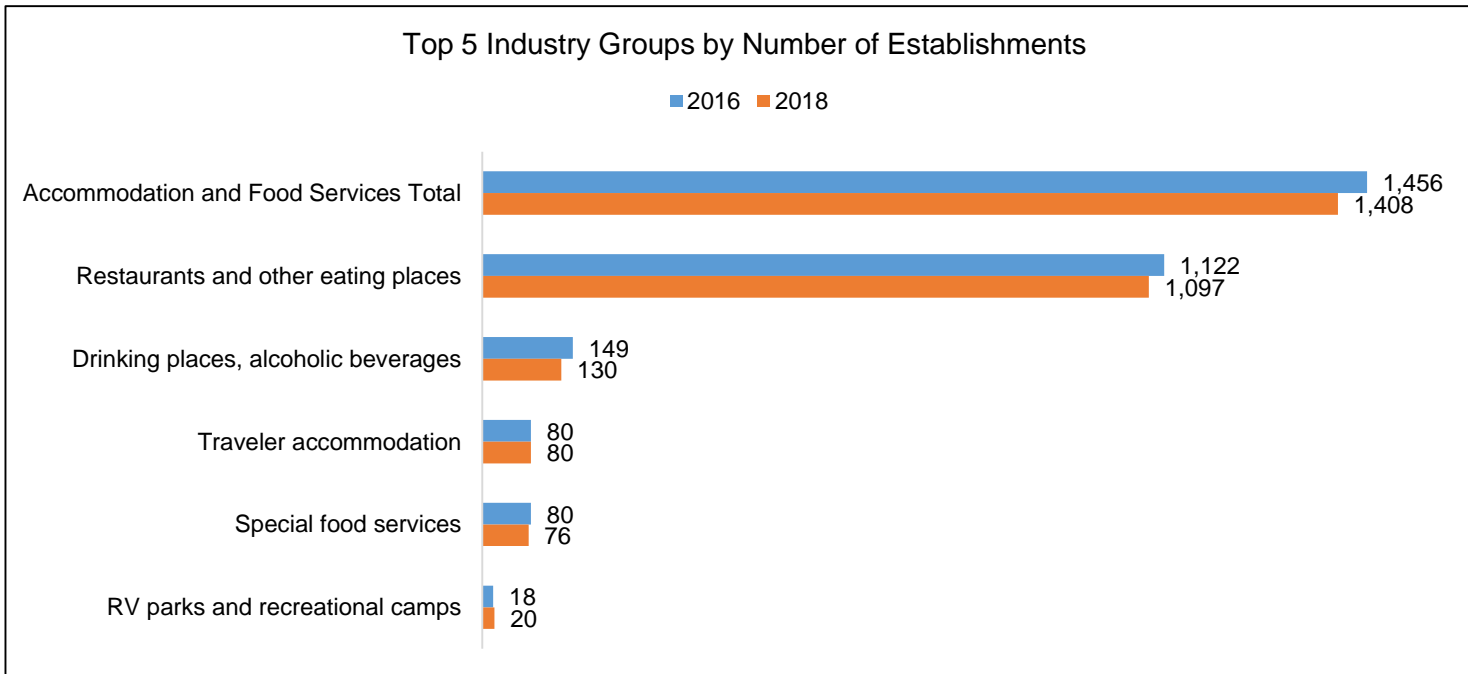


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – Q2 2018

Hospitality

Hospitality Groups and Employers

The number of Hospitality-related establishments in Pioneer Valley declined slightly between 2016 and 2018. In the last year, MGM Resorts International was responsible for the most online job postings Pioneer Valley (286), followed by Aramark (164) and Chipotle Mexican Grill (126).



Source: DUA/BLS Quarterly Census of Employment and Wages, Q3 2016 – 2018

Largest Employers by 12-Month Regional Job Postings

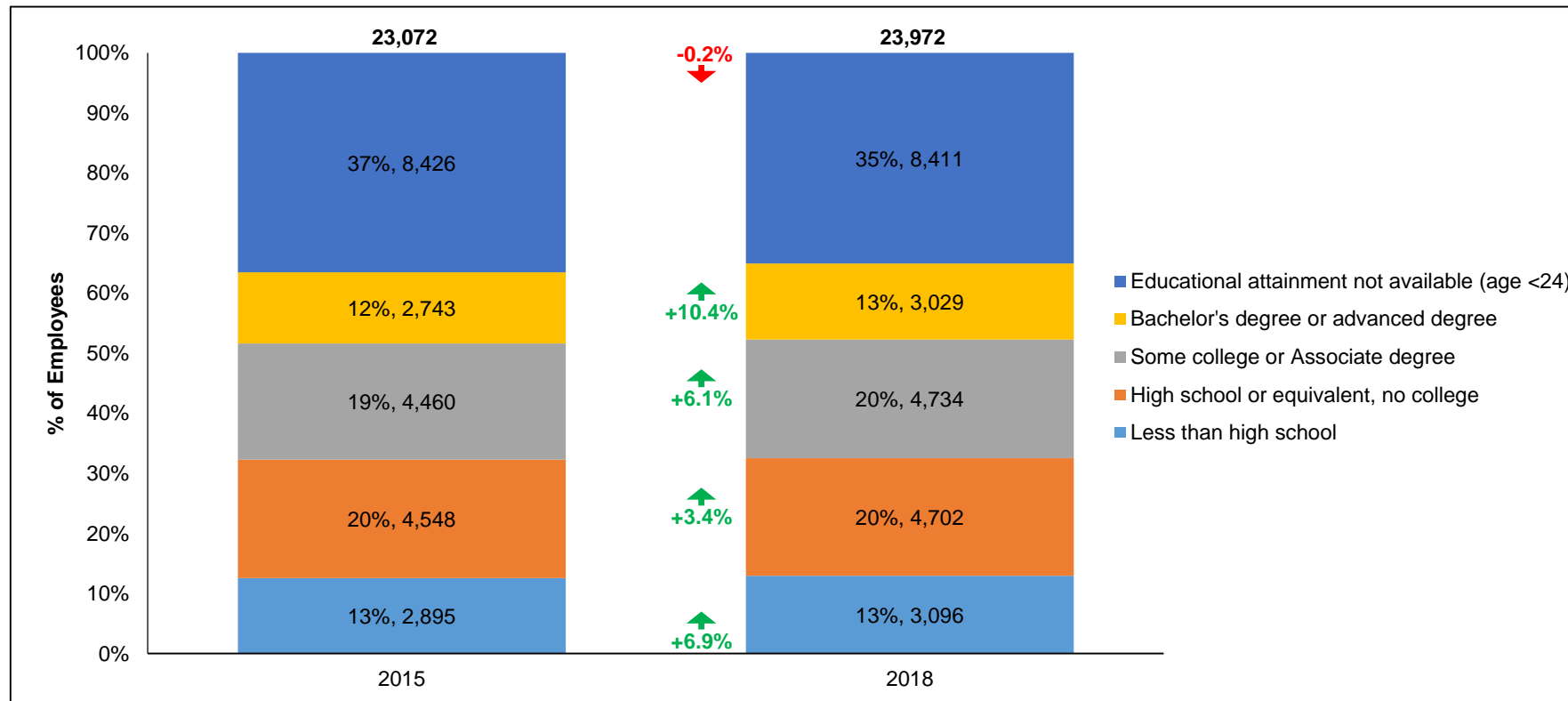
Employer	Job Postings
MGM Resorts International	286
Aramark	164
Chipotle Mexican Grill	126
Six Flags Incorporated	98
Compass Group Plc United States	62
Sodexo	53

Source: Burning Glass, 2019

Hospitality by Education

Hospitality affords opportunities to people with a variety of educational backgrounds and employs significant shares of young people (<24 years). 20% of workers have a high school diploma in Hospitality in the Pioneer Valley, another 20% have some college or an Associate degree, and 13% have a Bachelor's degree or higher.

Industry Employment by Educational Attainment, Q2 2015 – Q2 2018

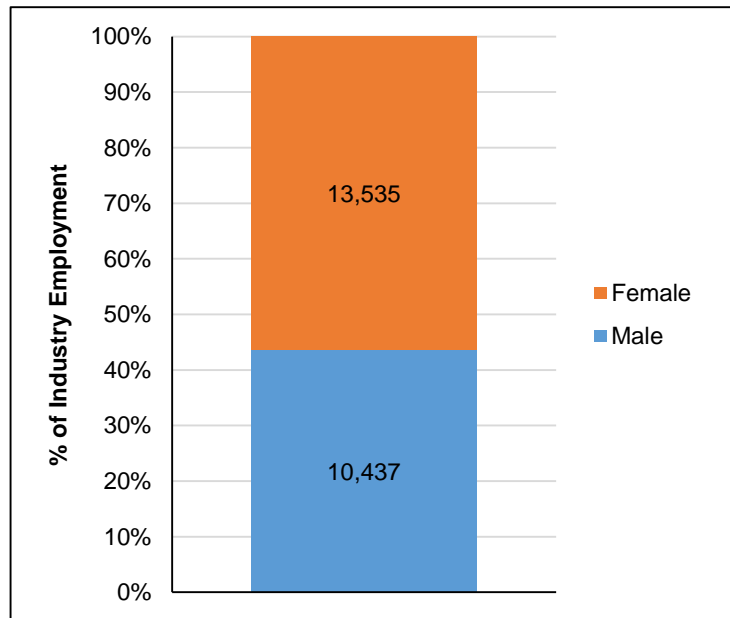


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – 2018

Hospitality by Gender

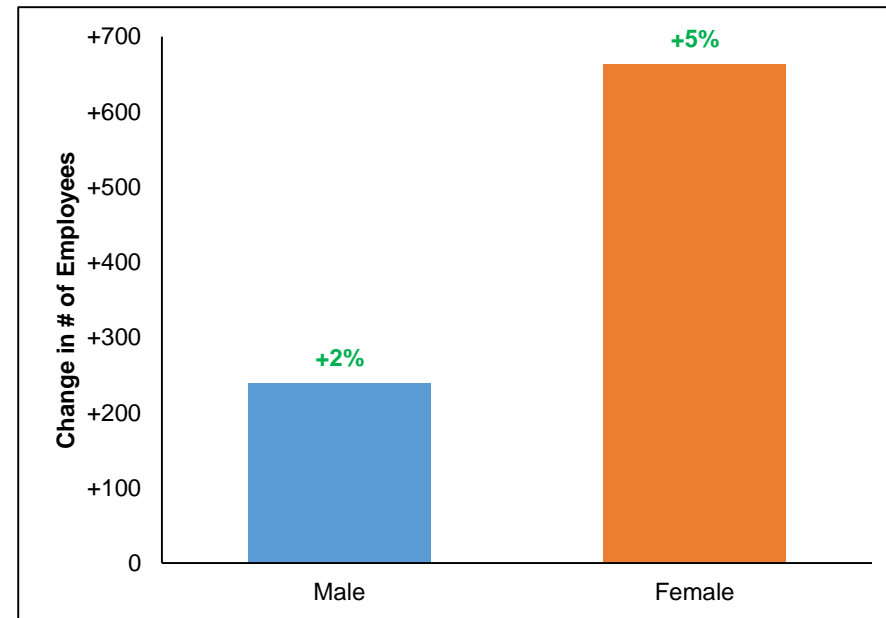
More than half of workers in Hospitality in the Pioneer Valley are female.

Industry Employment, Q2 2018



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Percent and Absolute Change in Industry Employment, Q2 2015 – Q2 2018

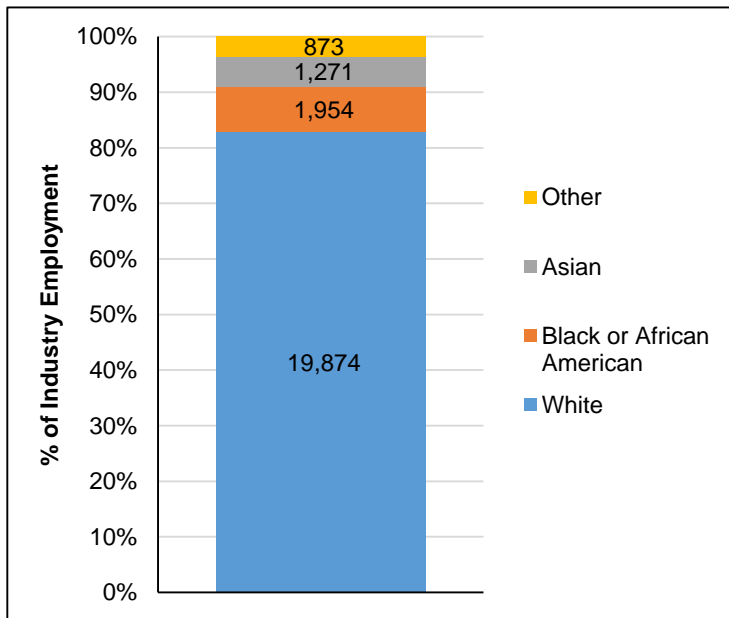


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – Q2 2018

Hospitality by Race/Ethnicity

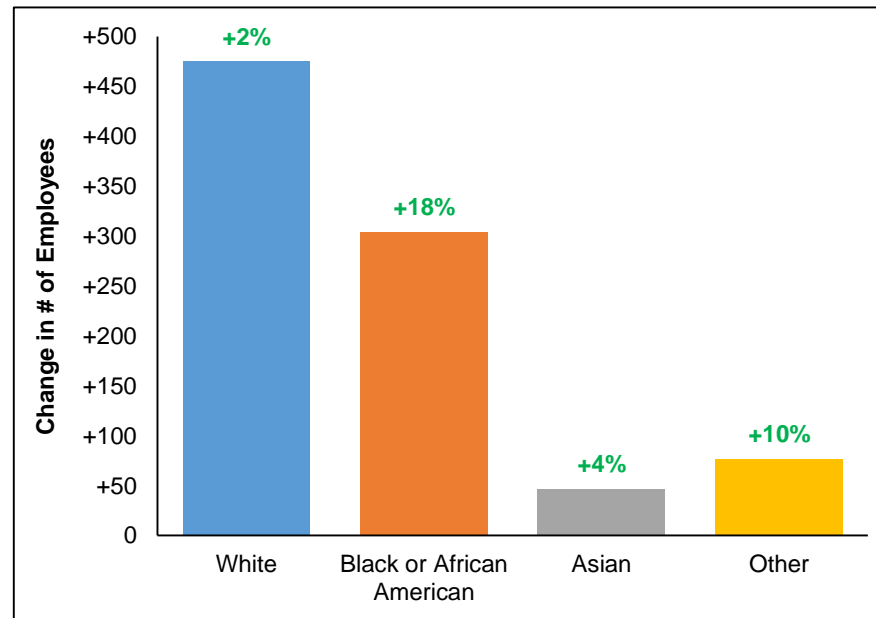
More than 80% of workers in Hospitality in the Pioneer Valley are white. Numbers of Black or African American and Hispanic or Latino workers have grown by sizable amounts in the sector since 2015.

Industry Employment, Q2 2018

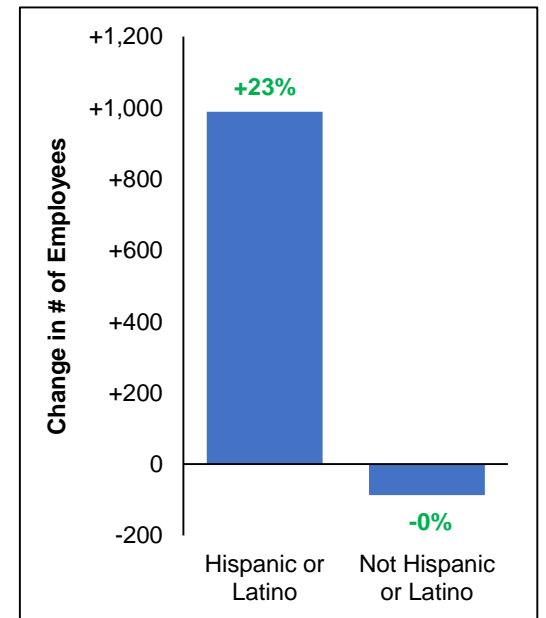


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Percent and Absolute Change in Industry Employment, Q2 2015 – Q2 2018



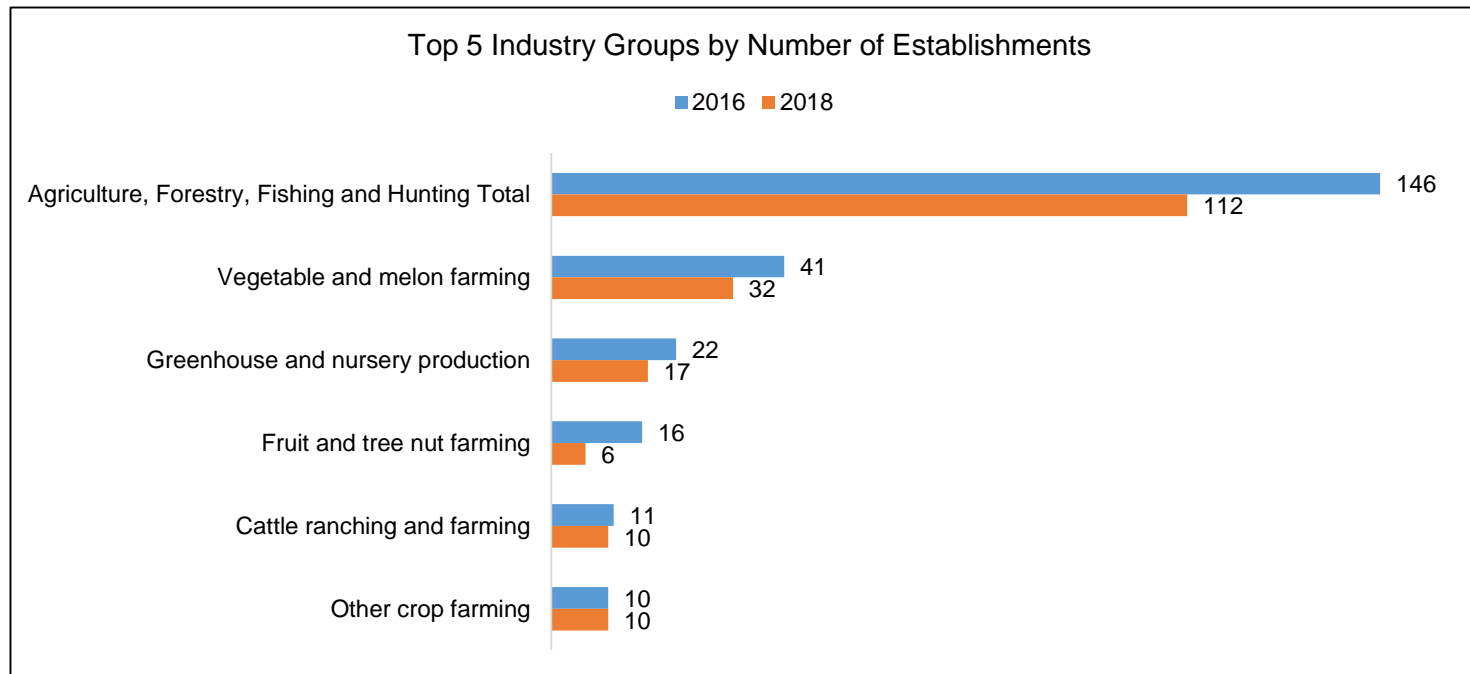
Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – Q2 2018



Agriculture

Agriculture Groups and Employers

The number of Agricultural sector establishments in the Pioneer Valley declined slightly between 2016 and 2018. In the last year, Coca-Cola Enterprises, Inc. was responsible for the greatest number of online job postings related to Agriculture and Sustainable Food Systems in Pioneer Valley.



Source: DUA/BLS Quarterly Census of Employment and Wages, Q3 2016 – 2018

Largest Employers by 12-Month Regional Job Postings

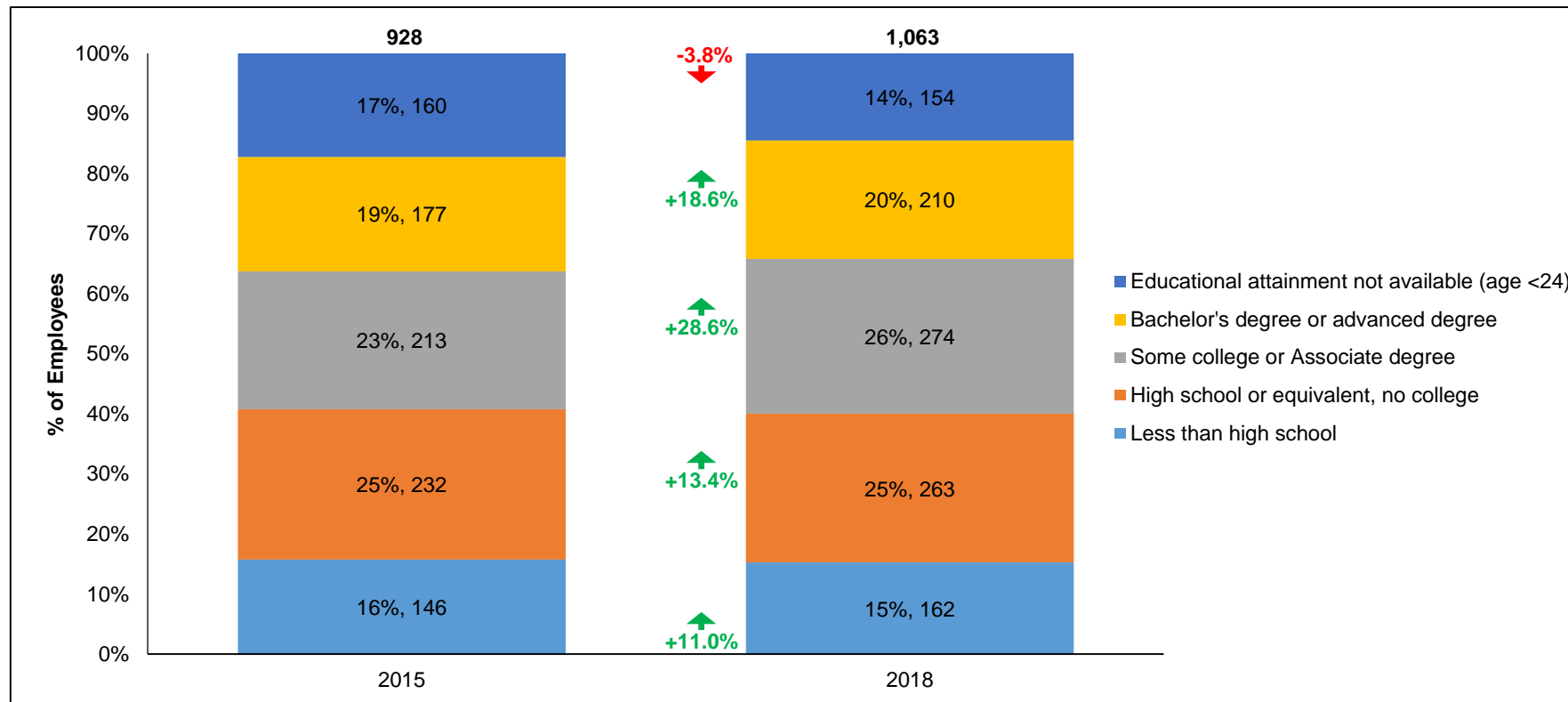
Employer	Job Postings
Coca-Cola Enterprises Inc.	99
Dean Foods	52
Hp Hood Incorporated	26
Smithfield Foods	24
Red Bull North America, Inc.	6
Maines Paper Food Service	6

Source: Burning Glass, 2019

Agriculture by Education

Shares of workers in Agriculture in the Pioneer Valley have a variety of educational backgrounds, with about 25% having a high school diploma or equivalent, 26% having some college or an Associate degree and 20% having a Bachelor's degree or higher.

Industry Employment by Educational Attainment, Q2 2015 – Q2 2018

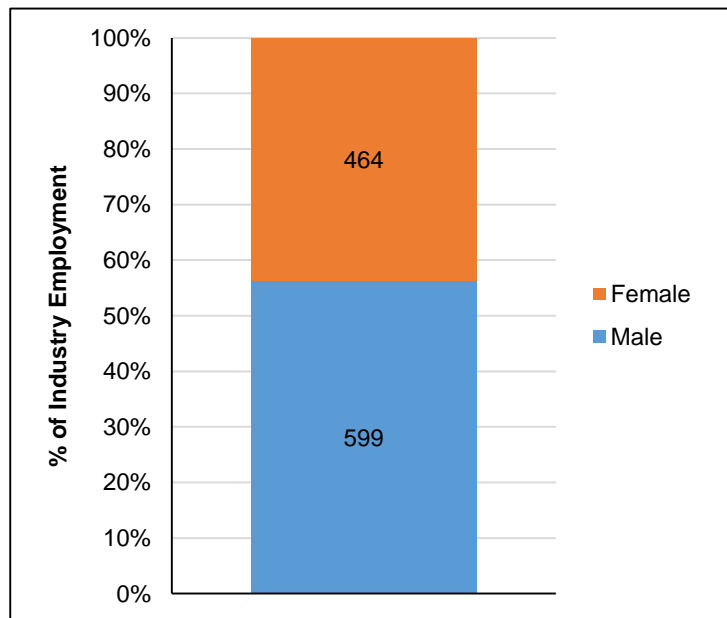


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – 2018

Agriculture by Gender

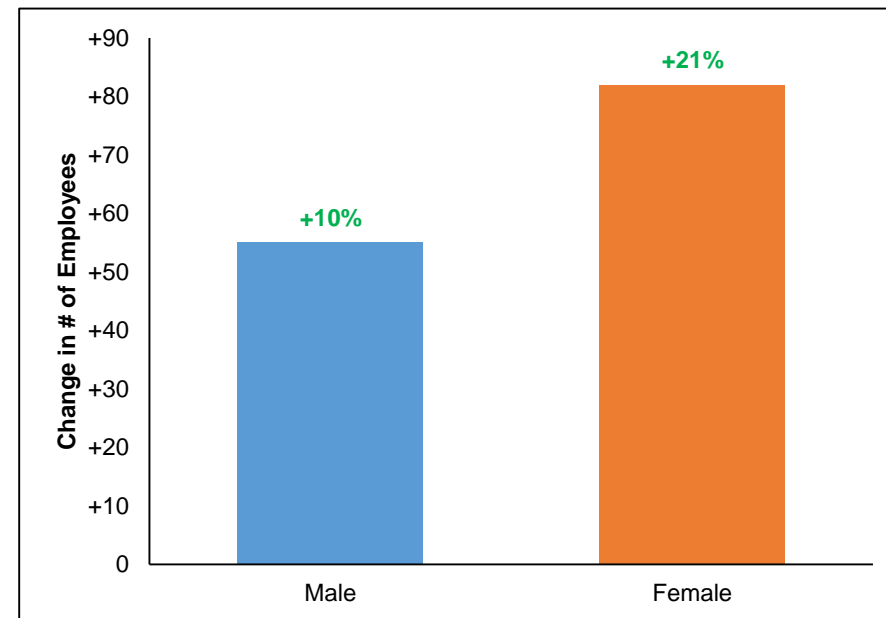
More than 50% of Agricultural workers in the Pioneer Valley are male.

Industry Employment, Q2 2018



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Percent and Absolute Change in Industry Employment, Q2 2015 – Q2 2018

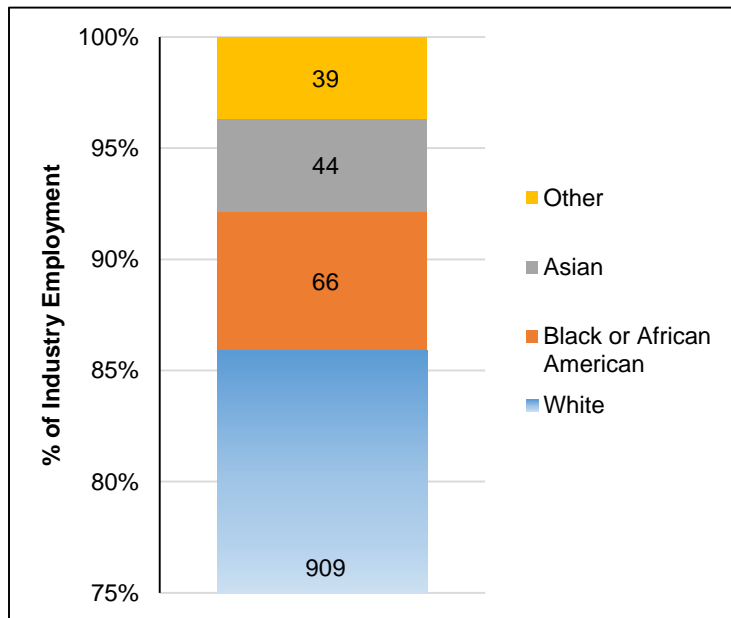


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – Q2 2018

Agriculture by Race/Ethnicity

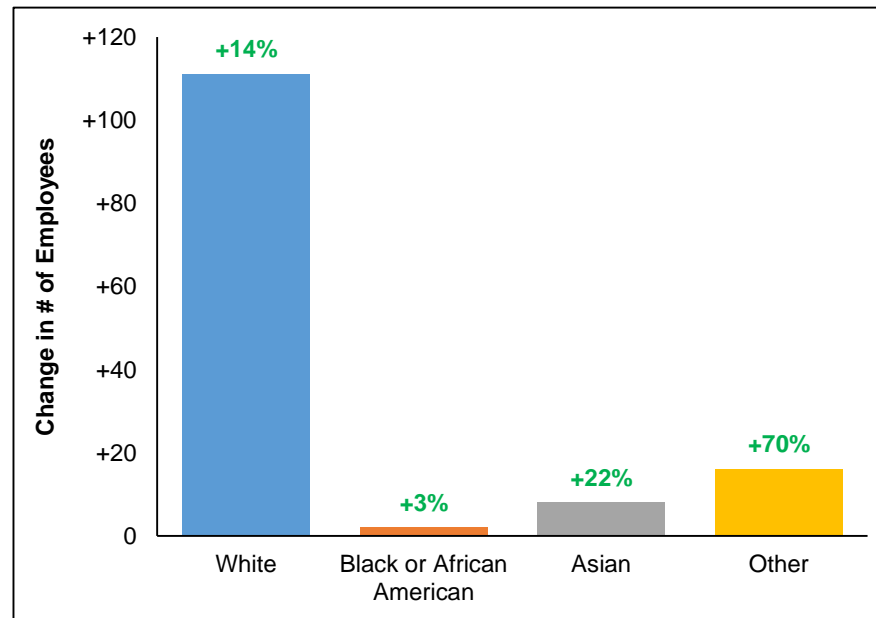
More than 85% of Agricultural workers in the Pioneer Valley are white.

Industry Employment, Q2 2018

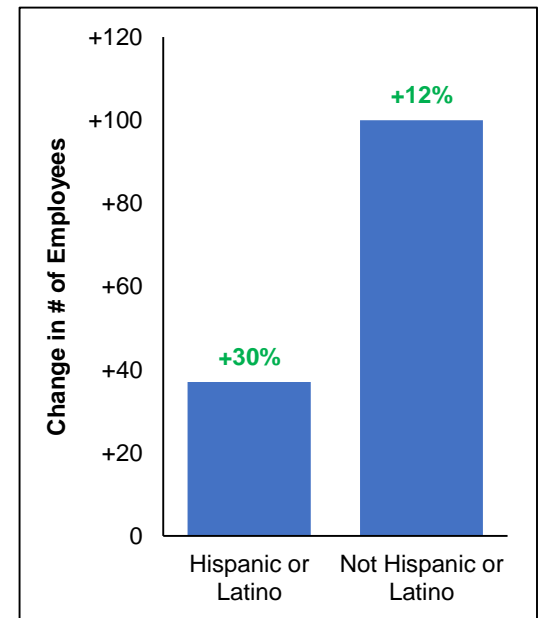


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2018

Percent and Absolute Change in Industry Employment, Q2 2015 – Q2 2018



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators, Q2 2015 – Q2 2018



Appendix: Professional Licensing

Regional Occupation Demand and DPL Licensing: Deep Dive

DPL Board/License Type	STARS	Licenses	2018 Employment
Allied Health			
Occupational Therapy Assistant	3	104	109
Occupational Therapist	5	388	574
Physical Therapist Assistant	4	158	245
Mental Health Counselor	4	563	1,090
Physical Therapist	5	388	760
Applied Behavior Analyst	4	186	367
Educational Psychologist	5	221	765
Rehabilitation Counselor	3	7	820
Cosmetology			
Cosmetologist (Hairdresser)	5	2,271	1,662
Electricians			
Electrician	5	1,257	1,148
Engineers And Land Surveyors			
Engineer*	4	658	807
Gas Fitters			
Gas Fitter	4	966	1,219
Health Officers			
Certified Health Officer	5	5	1,268
Public Accountancy			
Certified Public Accountant	5	256	2,160
Social Workers			
Social Worker, Licensed*	4	1,681	3,211

Closer Look: DPL Licenses Matched to Multiple SOC Occupations

DPL Board / License Type / Occupation Title	STARS	Licenses	2018 Employment
Engineers and Land Surveyors			
ENGINEER	4	1,178	7,480
Industrial Engineers	5		2,198
Mechanical Engineers	5		1,756
Electrical Engineers	5		1,405
Civil Engineers	4		874
Computer Hardware Engineers	3		443
Electronics Engineers, Except Computer	4		370
Environmental Engineers	4		294
Chemical Engineers	4		140
Social Workers			
SOCIAL WORKER, LICENSED	4	1,909	3,938
Healthcare Social Workers	4		1,776
Child, Family, and School Social Workers	4		1,104
Mental Health and Substance Abuse Social Workers	3		1,058

*Matched to multiple SOC occupations. All license-occupation matches available in data tool.

Source: Division of Professional Licensure, 2000-2019;
Bureau of Labor Statistics, Occupational Employment Statistics, 2020 Projections

Source: Division of Professional Licensure, 2000-2019;
Bureau of Labor Statistics, Occupational Employment Statistics, 2020 Projections

Occupations ranked 3+ stars only. Not inclusive of occupations licensed by agencies other than the Division of Professional Licensure. Licenses must have been issued between 2000 and 2019, and not be expired as of 2019.

Glossary

Standard Occupational Classification (SOC)

The 2018 **Standard Occupational Classification (SOC)** system is used by federal statistical agencies to classify workers and jobs into occupational categories for the purpose of collecting, calculating, analyzing, or disseminating data.

To facilitate classification and presentation of data, the SOC is organized into a tiered system with four levels: major group, minor group, broad occupation, and detailed occupation. The 23 major groups (below) are broken into minor groups, which, in turn, are divided into broad occupations. At the highest level of specification, there are 867 detailed occupations with unique SOC codes.

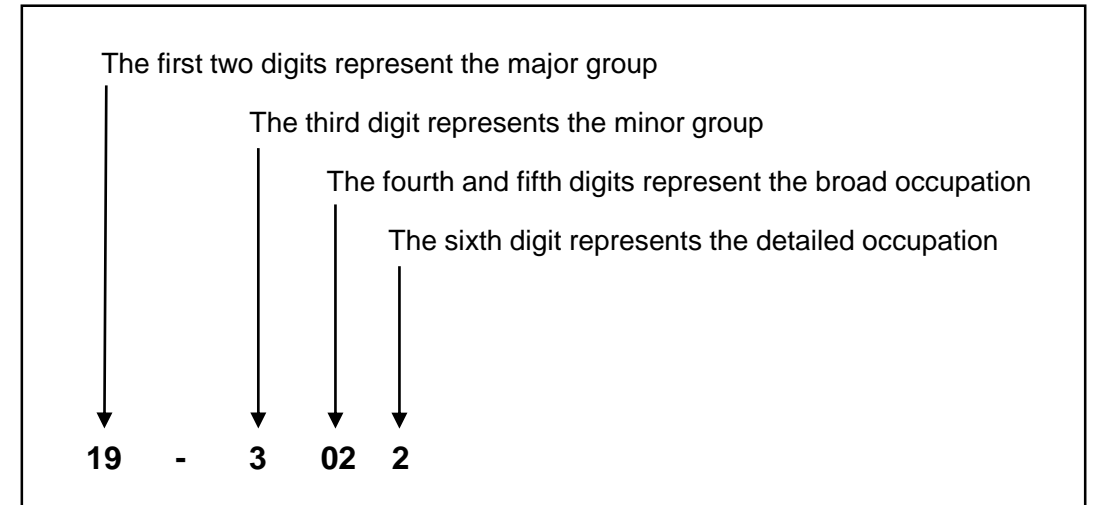
<i>Code</i>	<i>Title</i>	<i>Code</i>	<i>Title</i>
11-0000	Management Occupations	35-0000	Food Preparation and Serving Related Occupations
13-0000	Business and Financial Operations Occupations	37-0000	Building and Grounds Cleaning and Maintenance Occupations
15-0000	Computer and Mathematical Occupations	39-0000	Personal Care and Service Occupations
17-0000	Architecture and Engineering Occupations	41-0000	Sales and Related Occupations
19-0000	Life, Physical, and Social Science Occupations	43-0000	Office and Administrative Support Occupations
21-0000	Community and Social Service Occupations	45-0000	Farming, Fishing, and Forestry Occupations
23-0000	Legal Occupations	47-0000	Construction and Extraction Occupations
25-0000	Educational Instruction and Library Occupations	49-0000	Installation, Maintenance, and Repair Occupations
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	51-0000	Production Occupations
29-0000	Healthcare Practitioners and Technical Occupations	53-0000	Transportation and Material Moving Occupations
31-0000	Healthcare Support Occupations	55-0000	Military Specific Occupations
33-0000	Protective Service Occupations		

A complete description of SOC codes, titles and definitions can be found at www.bls.gov/soc/

Standard Occupational Classification (SOC)

Each item in the 2018 SOC is designated by a six-digit code.

- Major group codes end with 0000 (e.g., 29-0000 Healthcare Practitioners and Technical Occupations).
- Minor groups generally end with 000 (e.g., 29-1000 Health Diagnosing or Treating Practitioners)—the exceptions are minor groups 15-1200 Computer Occupations, 31-1100 Home Health and Personal Care Aides; and Nursing Assistants, Orderlies, and Psychiatric Aides, and 51-5100 Printing Workers, which end with 00.
- Broad occupations end with 0 (e.g., 29-1020 Dentists).
- Detailed occupations end with a number other than 0 (e.g., 29-1022 Oral and Maxillofacial Surgeons).



A complete description of SOC codes, titles and definitions can be found at www.bls.gov/soc/

North American Industry Classification System (NAICS)

The 2017 **North American Industry Classification System (NAICS)** is an industry classification system that groups establishments into industries based on the similarity of their production processes. It is a comprehensive system covering all economic activities. There are 20 sectors and 1,057 industries in 2017 NAICS United States.

NAICS uses a six-digit coding system to identify particular industries and their placement in this hierarchical structure of the classification system. The first two digits of the code designate the sector, the third digit designates the subsector, the fourth digit designates the industry group, the fifth digit designates the NAICS industry, and the sixth digit designates the national industry.

The NAICS sectors and their two-digit codes are:

<i>Code</i>	<i>Industry</i>	<i>Code</i>	<i>Industry</i>
11	Agriculture, Forestry, Fishing and Hunting	53	Real Estate and Rental and Leasing
21	Mining, Quarrying, and Oil and Gas Extraction	54	Professional, Scientific, and Technical Services
22	Utilities	55	Management of Companies and Enterprises
23	Construction	56	Administrative and Support and Waste Management and Remediation Services
31-33	Manufacturing	61	Educational Services
42	Wholesale Trade	62	Health Care and Social Assistance
44-45	Retail Trade	71	Arts, Entertainment, and Recreation
48-49	Transportation and Warehousing	72	Accommodation and Food Services
51	Information	81	Other Services (except Public Administration)
52	Finance and Insurance	92	Public Administration

A complete description of NAICS codes, industries and definitions can be found at <https://www.census.gov/eos/www/naics/>