

# Berkshire Regional Planning Session II

Tuesday, July 18



# Objectives

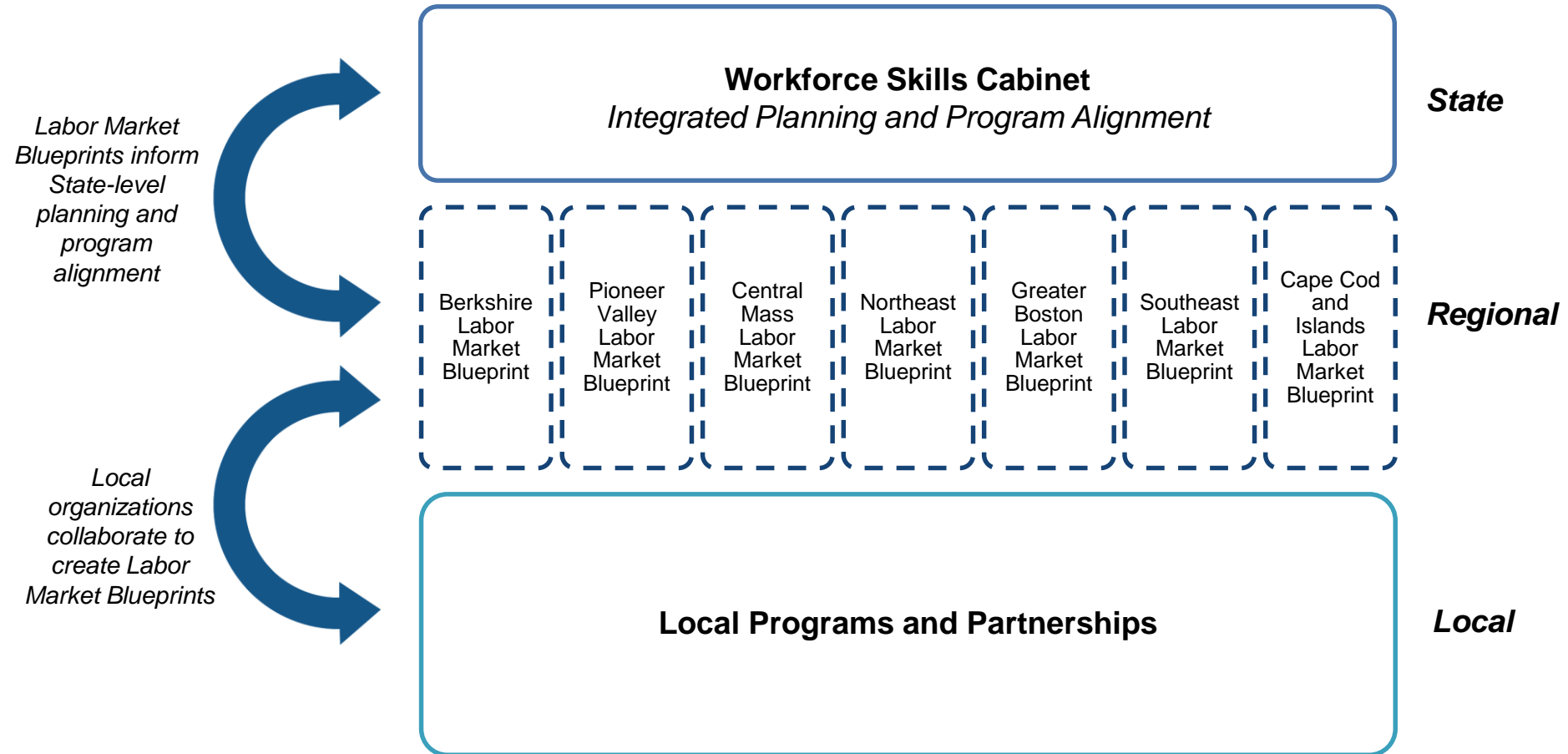
- Confirm **regional criteria** to select high priority industries and occupations
- Confirm regional **high priority industries and occupations**
- Confirm top demographic, labor pool, and talent pipeline considerations impacting workforce skills gaps

# Agenda

- Regional Planning Context
  - Regional planning timeline
  - Blueprint structure
- Regional Demographic Context
  - State and Regional Demographics on the Workforce
- Framing the Data Process to Identify Priority Industries/Occupations
  - Region's Preliminary Criteria
  - Confirming Industry Priorities
  - Review Occupational Gap Priorities
  - Data Tool

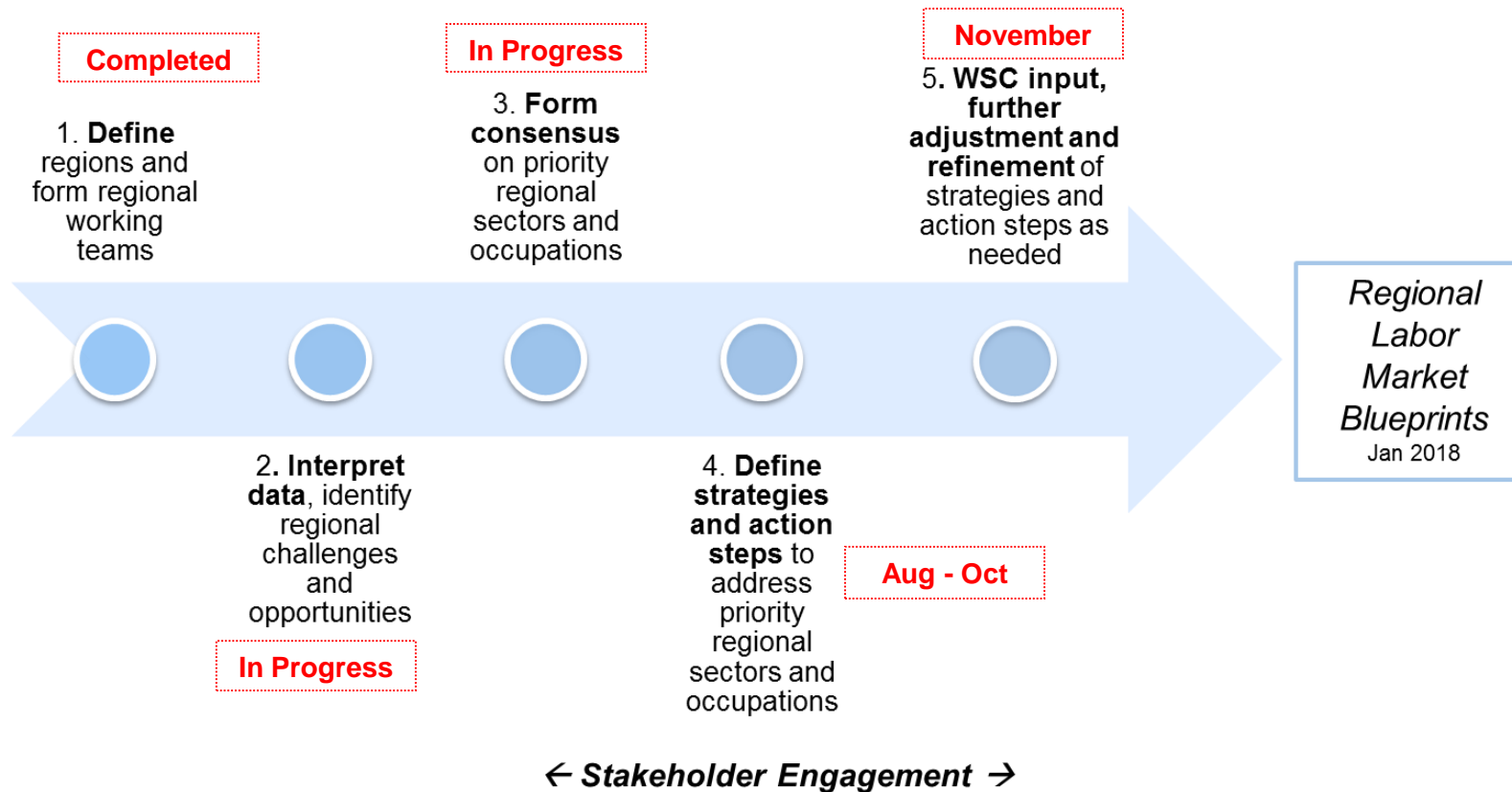
# I. Regional Planning Context

# Why is this important?



# Regional Planning Timeline

## *The Path to Regional Labor Market Blueprints: Core Regional Working Groups*

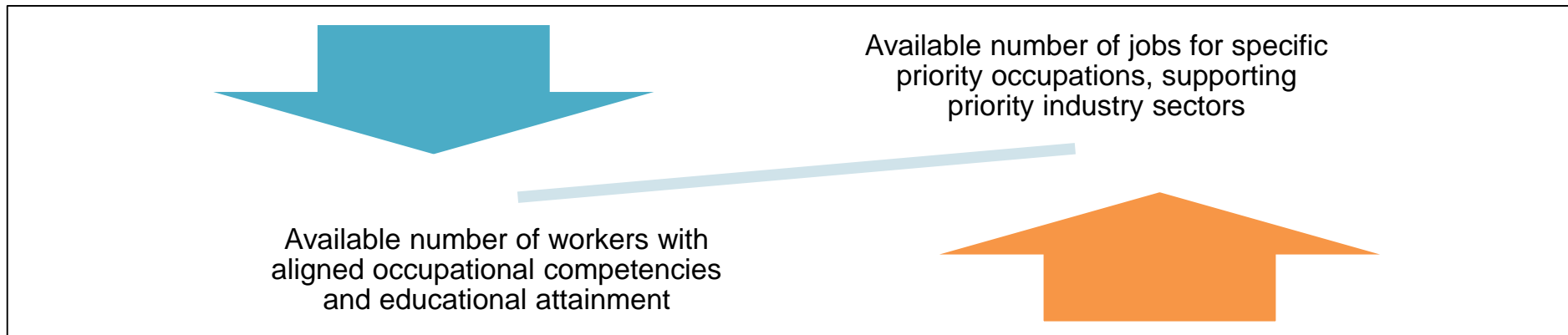
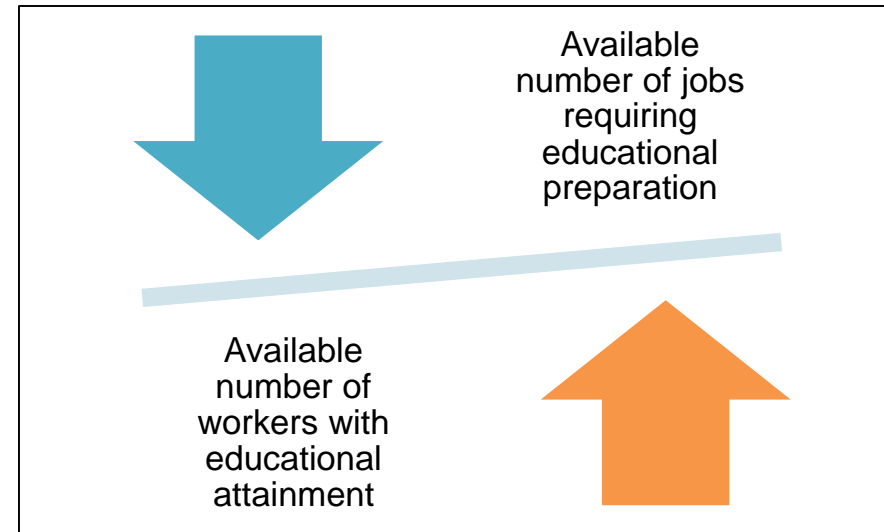
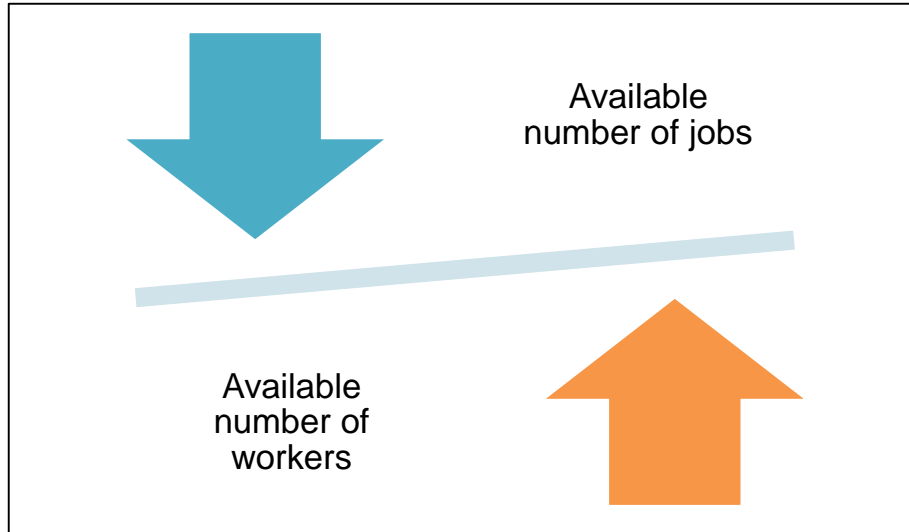


# Blueprint Review – Identify Strategies for Skill Gaps

Introduction	Describe the process of creating a regional plan.
Where are we now?	<p>Describe the current state of your region, including an analysis of industries, occupations, demographic shifts, and gaps between employer demand and employee supply.</p> <ul style="list-style-type: none"> <li>I. Industry Demand Analysis</li> <li>II. Occupational Demand Analysis</li> <li>III. Regional Context: Demographic and Industry Trends</li> <li>IV. Workforce Supply</li> </ul> <p style="text-align: right;">← Session I ← Session II</p>
Where do we want to go?	<p>Describe the collectively developed criteria, industry and occupational priorities, vision, mission, and goals for your region.</p> <ul style="list-style-type: none"> <li>I. Criteria for Priority Industries and Occupations</li> <li>II. High Priority Industries</li> <li>III. High Priority Occupations</li> <li>IV. Assets</li> <li>V. Vision, Mission, Goals</li> </ul> <p style="text-align: right;">← Sessions I-II ← Sessions III-IV</p>
How do we get there?	<p>Describe the strategies you will jointly employ to align the work of multiple systems around your shared vision, mission, and goals.</p> <ul style="list-style-type: none"> <li>I. Shared Strategies</li> <li>II. Mutually Reinforcing Activities</li> </ul> <p style="text-align: right;">← Sessions III-IV</p>

# Framing the conversation: What is a skills gap?

Changes in *demand (jobs)* or *supply (people)* can impact the skills gap.

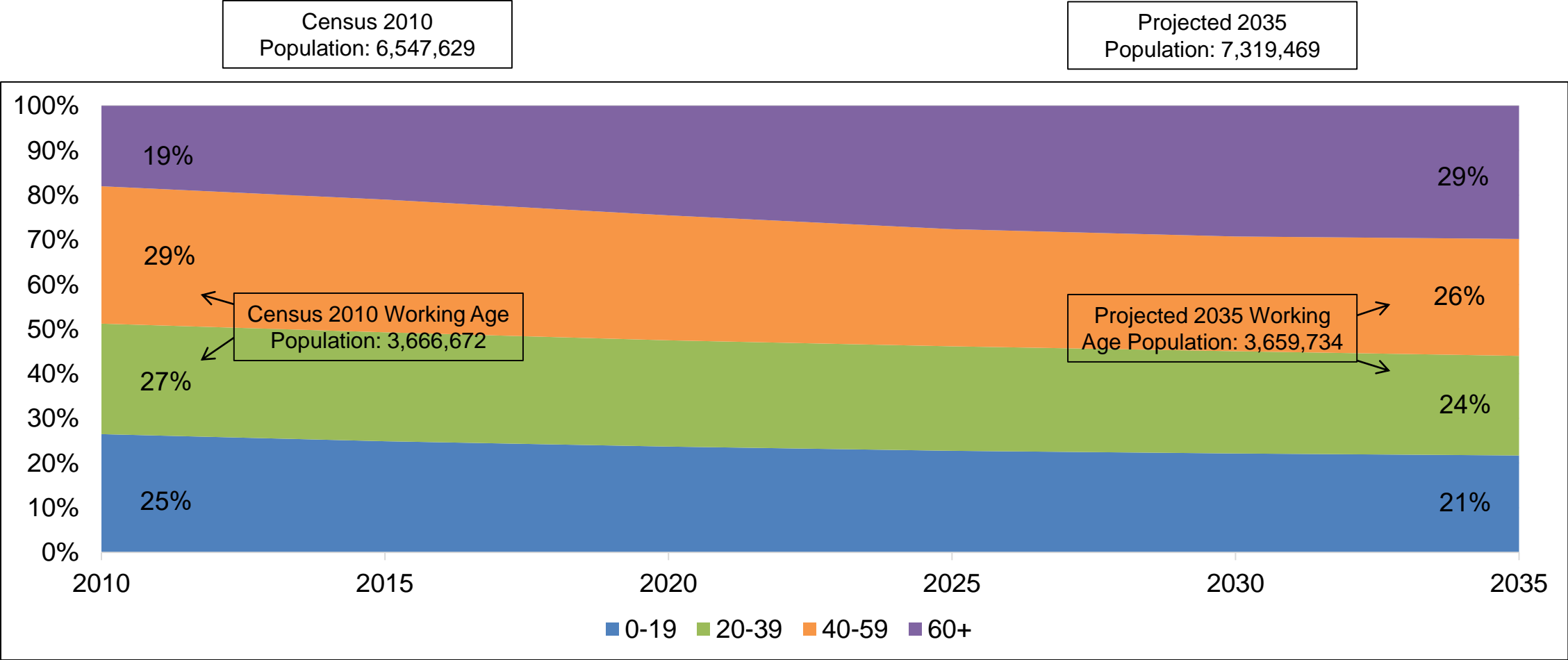




# I. Regional Demographic Context

# Projected **State** Population Growth by Age, 2010-2035

The share of older residents is increasing, while the share and number of the working age population is declining.



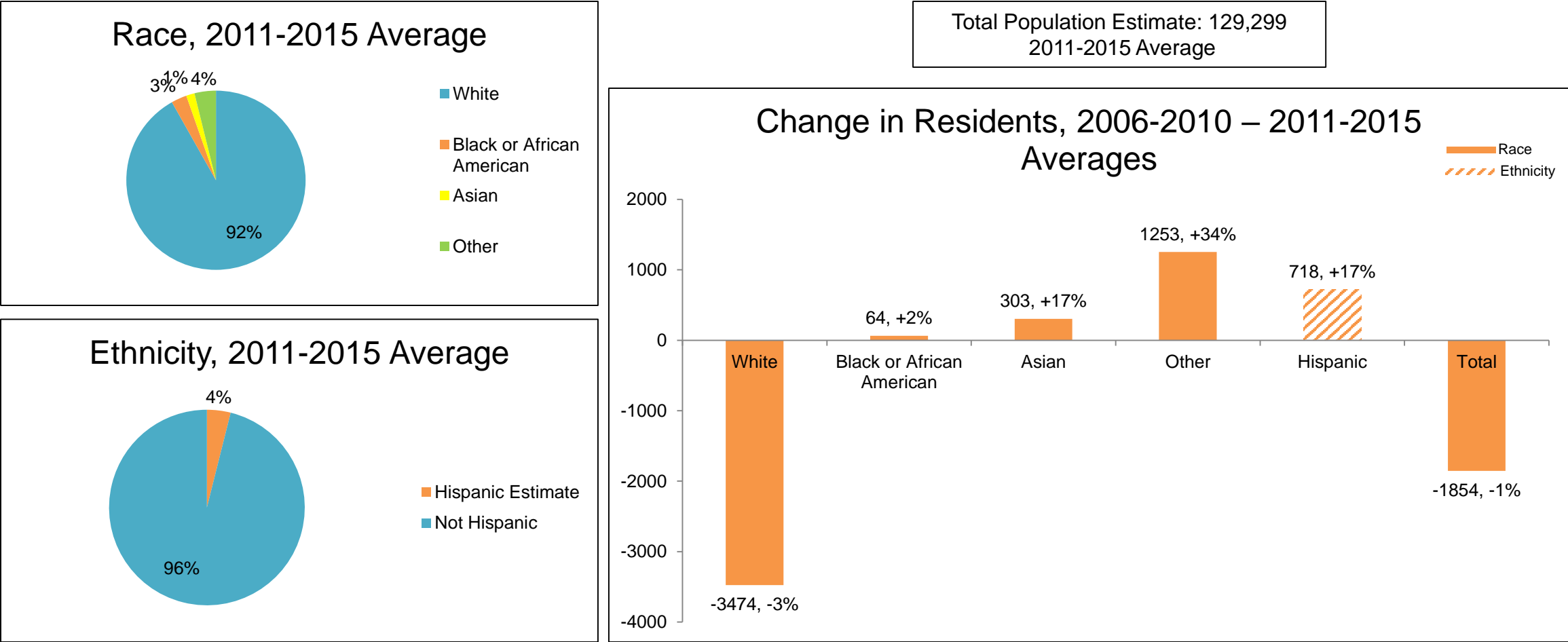
# State Trends, Race/Ethnicity and Place of Origin

Massachusetts population growth is driven by immigration and growth in diverse populations.

Massachusetts	2000	2012-2014	Share of Total Population 2012-2014	<b>Absolute Change</b>	Percent Change	Average Annual Growth Rate
Total Population*	6,131,752	6,447,295	100%	<b>315,543</b>	5.1%	0.4%
Nativity						
Native Born	5,279,860	5,326,213	83%	<b>46,353</b>	0.9%	0.1%
Foreign Born**	851,892	1,121,082	17%	<b>269,190</b>	31.6%	2.1%
Race/Ethnicity						
White, non-Hispanic	5,026,398	4,817,401	75%	<b>-208,997</b>	-4.2%	-0.3%
Black, non-Hispanic	300,758	407,723	6%	<b>106,965</b>	35.6%	2.4%
Asian, non-Hispanic	224,242	375,130	6%	<b>150,888</b>	67.3%	4.0%
Hispanic	412,496	678,193	11%	<b>265,697</b>	64.4%	3.9%
Other race, non-Hispanic	167,858	168,848	3%	<b>990</b>	0.6%	0.0%
*Civilian non-institutional population						
**Foreign born is defined here as those born outside of the 50 states and the District of Columbia, who was not born to American parents abroad, and people born in Puerto Rico and other U.S. territories.						

# Regional Trends, Race/Ethnicity

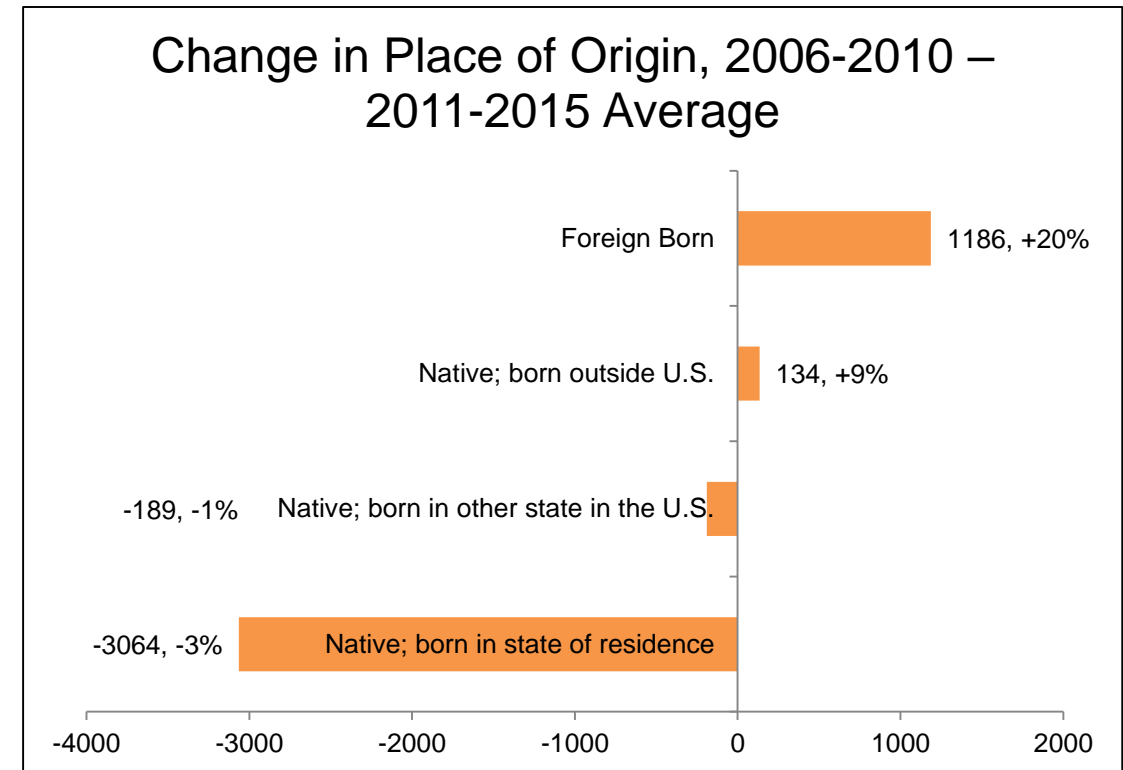
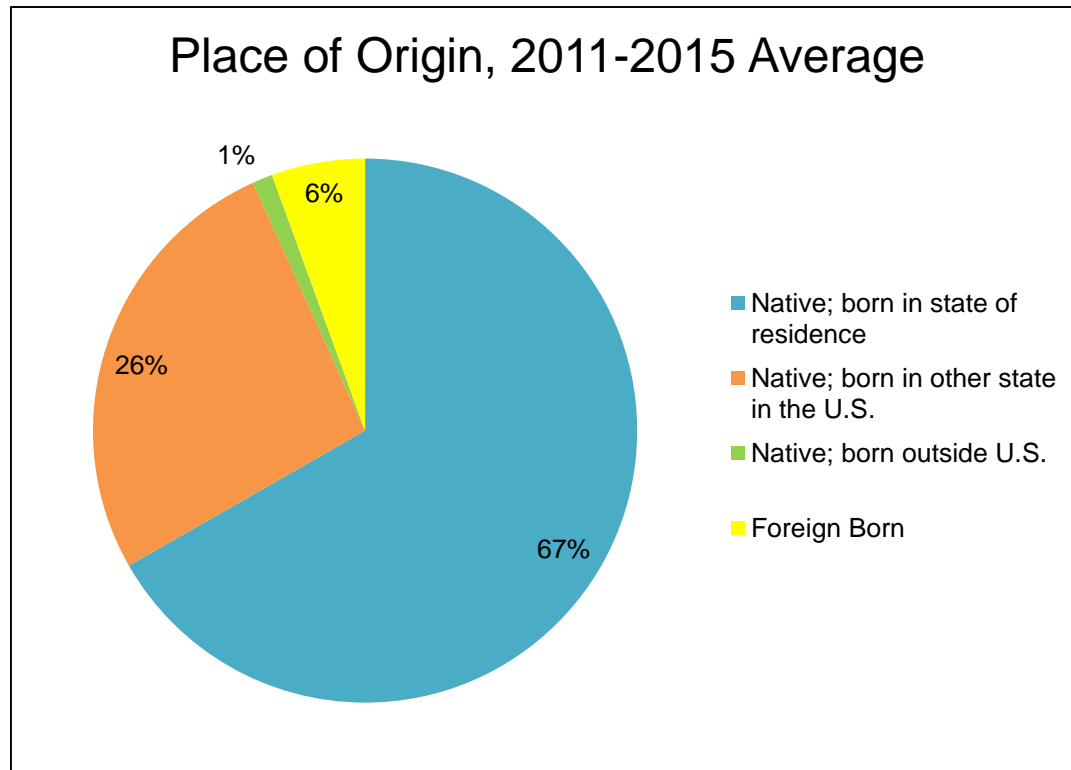
Although total population in Berkshire County has decreased slightly over the past ten years, increases in minority populations almost balance out decrease in the white population.



Source: American Community Survey, Selected Characteristics of the Total and Native Populations of the United States, 5 Year Averages 2011-2015

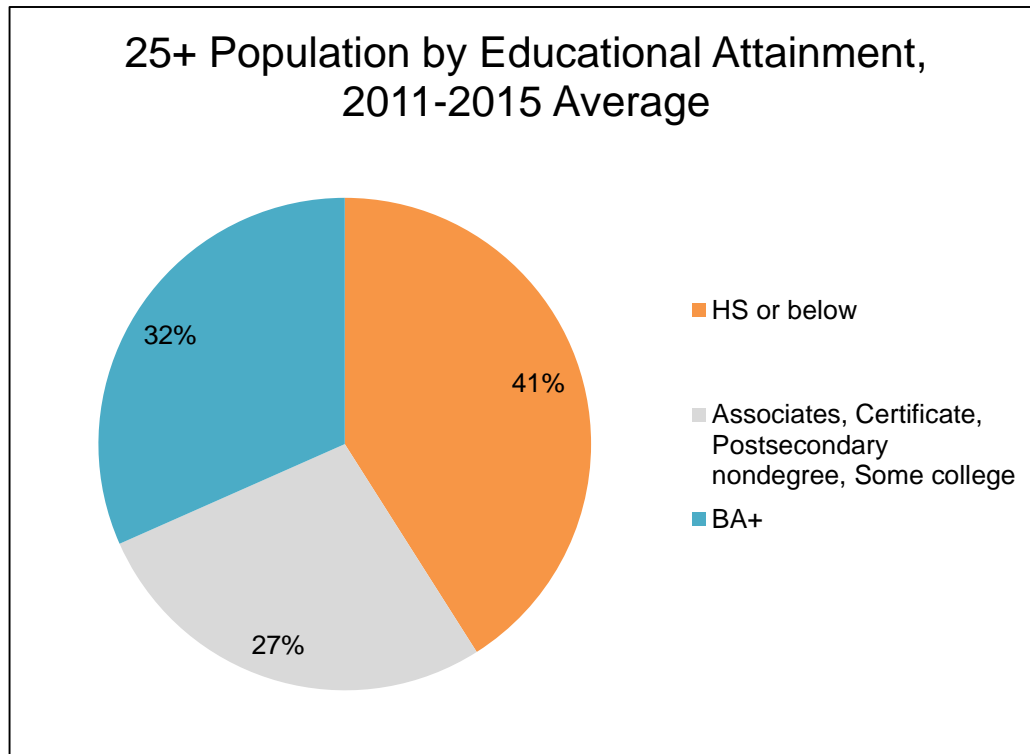
## Regional Trends, Place of Origin

Although the native, born in-state population has declined, the foreign-born population has increased.

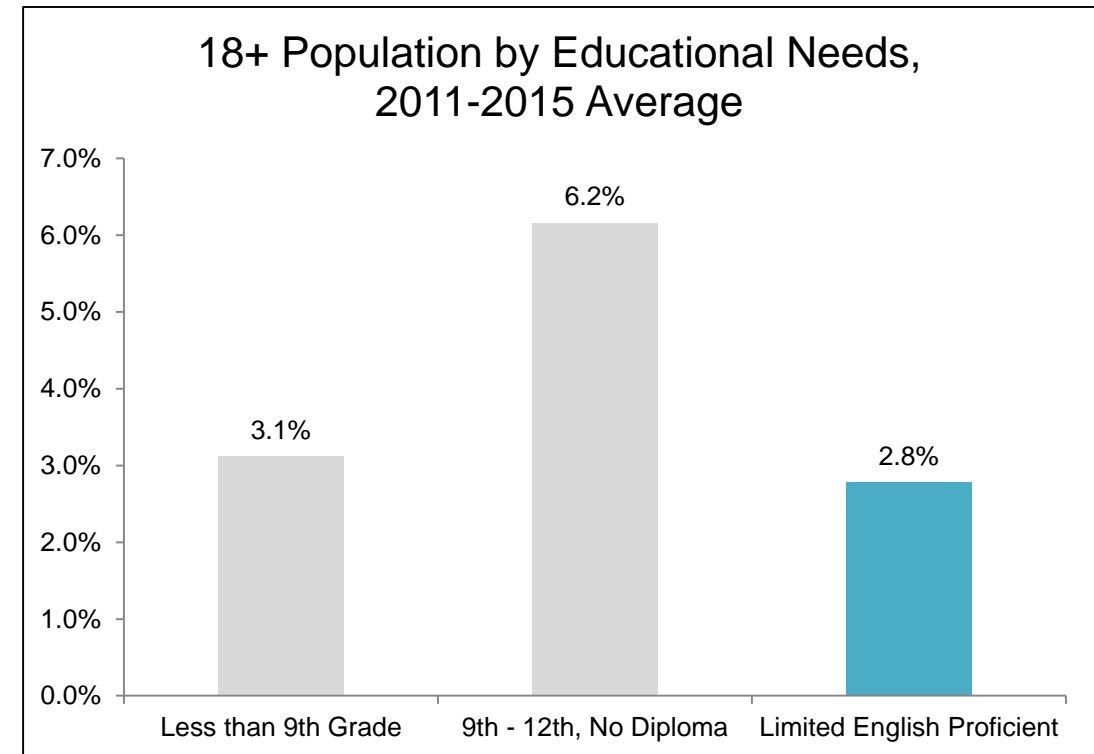


## Regional Trends, Education

Although much of the Berkshire Region is highly educated, a notable portion of residents require basic education or English language supports.



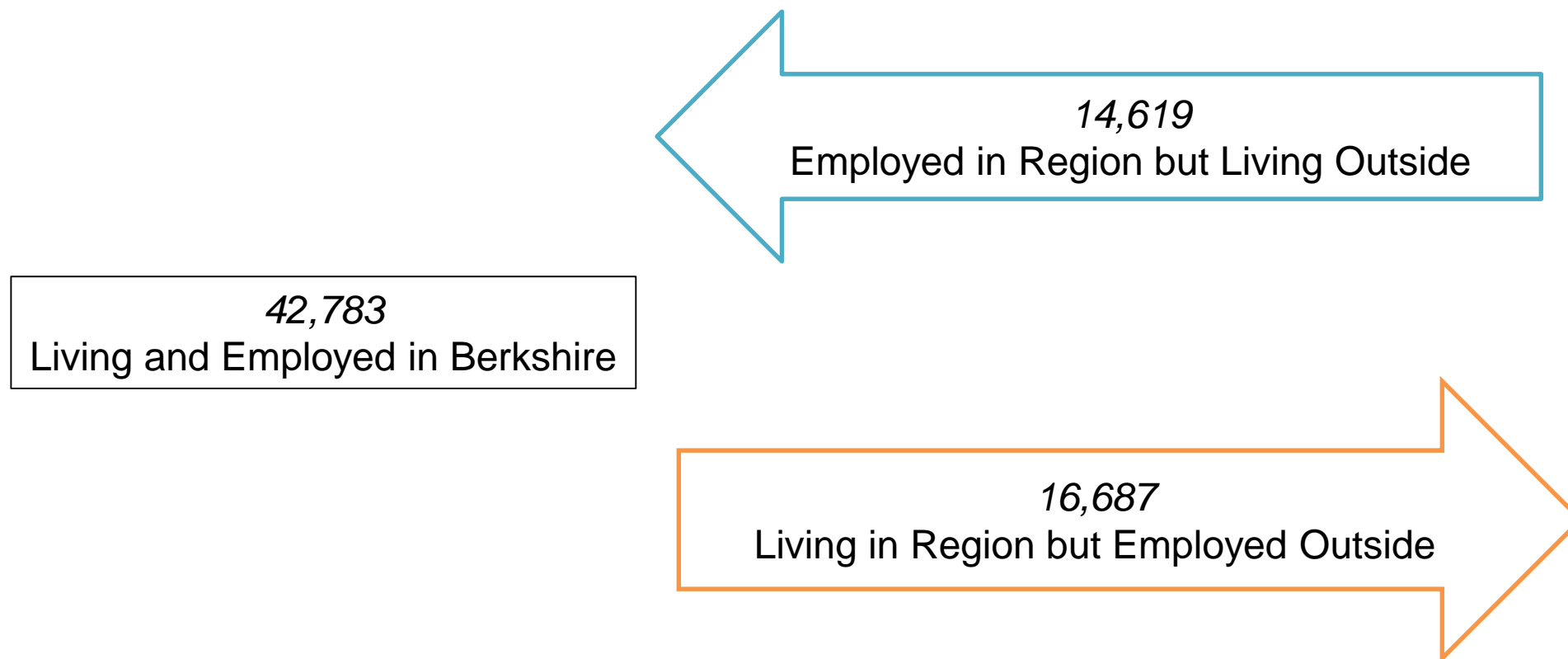
Total Population Estimate, 25+: 93,114



Total Population Estimate, 18+: 105,651

## Regional Commuter Patterns

Berkshire County's employers lose approximately 2,000 workers to outside the region.



## Takeaways

- As our State's population ages, the share of working-age and young people is declining.
- Although Berkshire's total population has declined slightly over the past decade, the number of minority and foreign-born residents has increased.
- Berkshire County's employers lose approximately 2,000 workers to outside the region.



## II. Framing the Data Process to Identify Priority Industries/Occupations

# Preliminary Criteria

- Supply gap
- High growth, high wage Occupations (4 and 5 Stars)
  - Good pay
  - Career pathways with entry-level points and growth potential
- Supportive employers
  - Good benefits
- Aligned with economic development strategies
  - Fit with 7 year vision
  - Leverage existing assets
- Career pathways
  - Pathways with entry-level points and growth potential
- Support industry resilience
  - Emerging industries
  - Stable industries
  - Attract workforce from outside of region
  - Ripple criteria – secondary industries
  - Supporting small business
  - Support entrepreneurship

# Preliminary Priorities

## **Industries**

- Accommodation and Food Services
- Arts, Entertainment, and Recreation
  - Creative economy
- Construction
- Education Services
- Healthcare and Social Services
- Manufacturing
  - Advanced (general)
- Professional and Technical Services
  - Software engineering

## **Occupations**

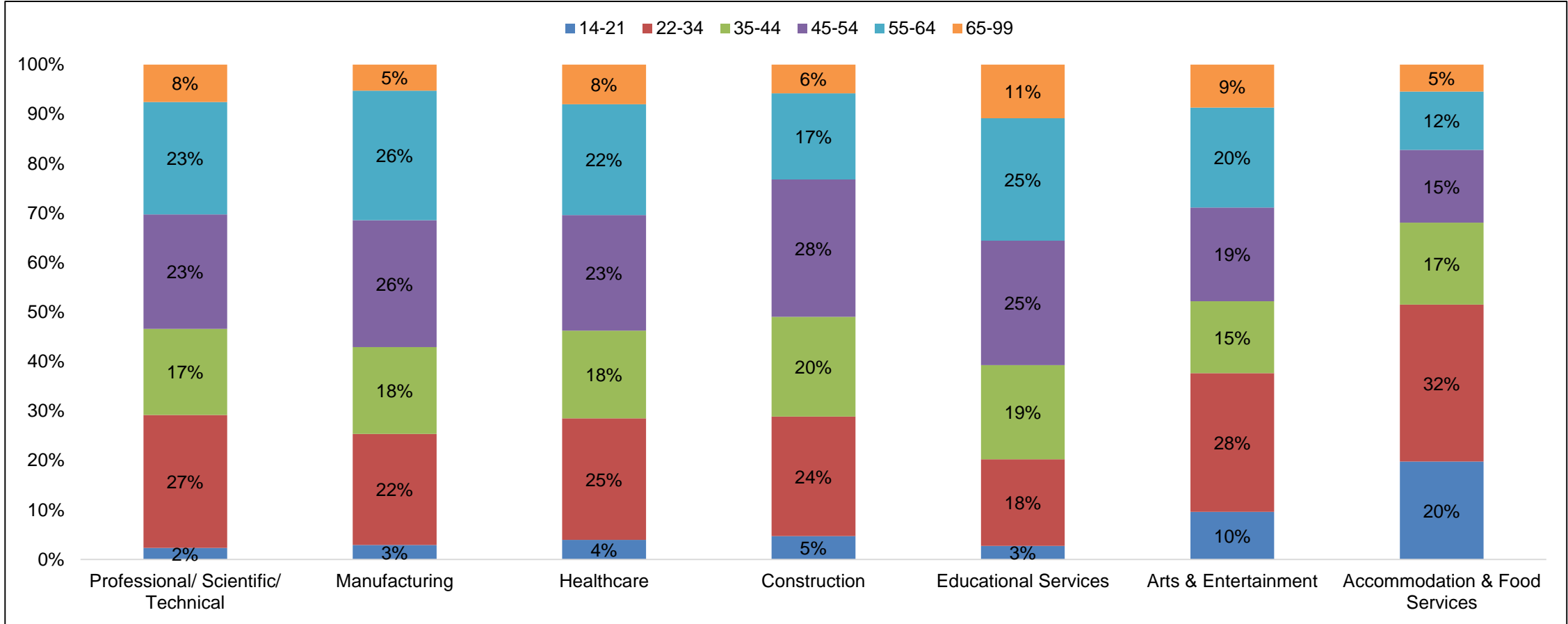
- Teachers
- Nurses
- Allied health professions
- Software engineering

# Regional Industry Priorities— Establishments, Employment, Wages

	ESTABLISHMENTS			EMPLOYMENT			WAGES		
	Count	Share	Change	Count	Share	Change	Total Wages	Avg Weekly Wages	Change
Accommodation and Food Services	499	9.7%	▼ -1.8%	7,927	12.6%	▼ -0.7%	\$45,171,682	\$438	▲ 19.67%
Arts, Entertainment, and Recreation	124	2.4%	▲ 11.7%	2,482	3.9%	▲ 7.6%	\$16,147,250	\$500	▲ 3.31%
Construction	553	10.8%	▲ 0.2%	3,384	5.4%	▲ 11.0%	\$47,567,402	\$1,081	▲ 14.88%
Educational Services	102	2.0%	▲ 5.2%	6,547	10.4%	▼ -4.0%	\$86,630,507	\$1,018	▲ 12.11%
Health Care and Social Assistance	1,217	23.7%	▲ 22.4%	12,825	20.4%	▲ 4.0%	\$154,304,438	\$926	▲ 11.03%
Manufacturing	161	3.1%	▼ -1.8%	4,673	7.4%	▲ 1.8%	\$88,861,926	\$1,463	▲ 21.92%
Professional and Technical Services	368	7.2%	▲ 4.8%	2,757	4.4%	▲ 2.8%	\$46,731,316	\$1,304	▲ 1.72%

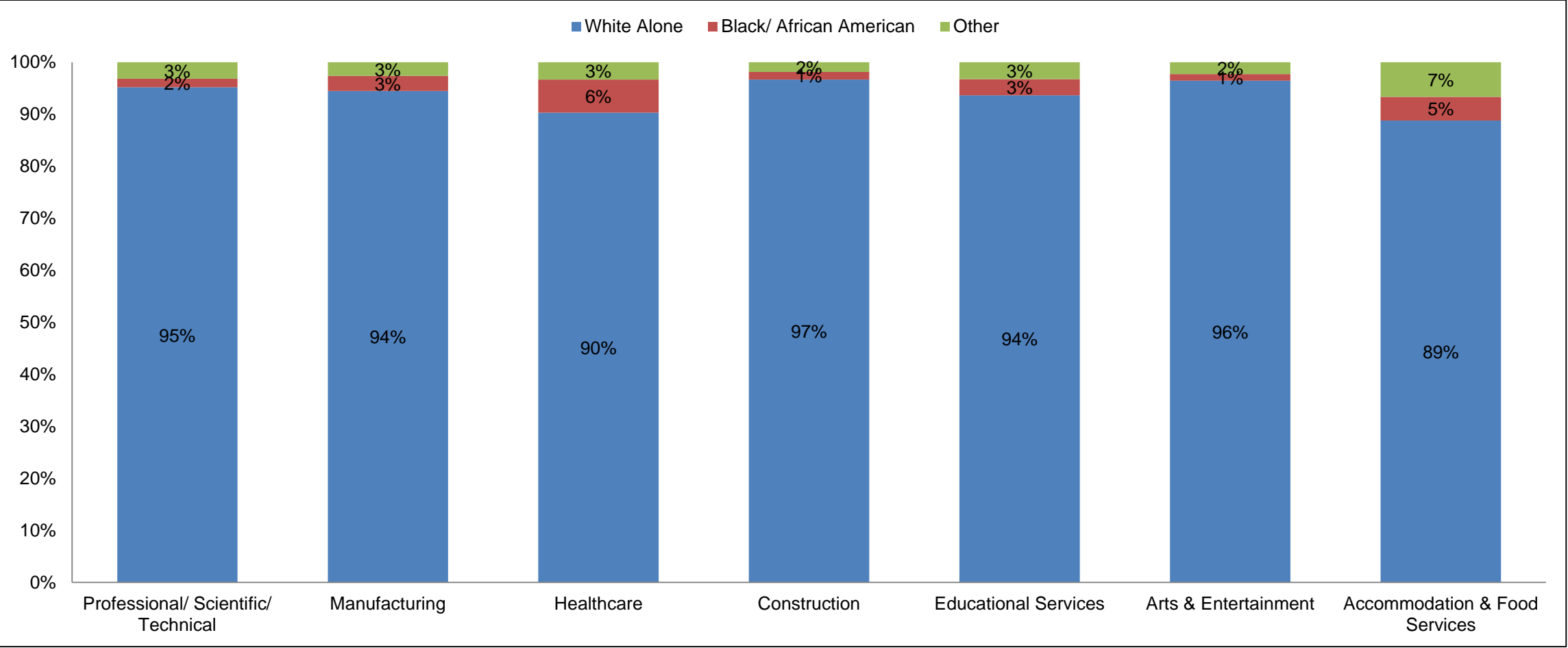
# Priority Regional Industries by Age

Among key industries, Educational Services is likely to be under the most demographic pressure as the Berkshire’s workforce ages, followed by Manufacturing.



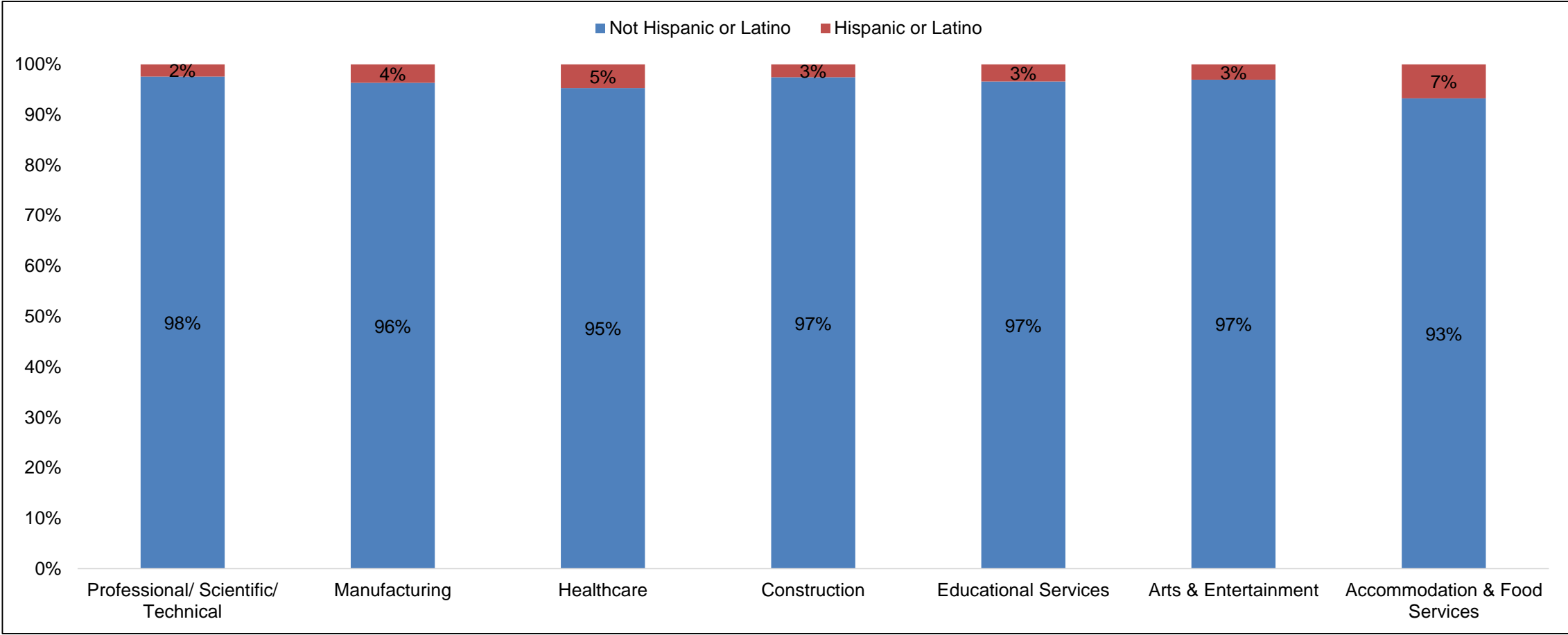
# Priority Regional Industries by Race

Healthcare is the most racially diverse industry with 10% non-white employees, while construction is the least, with 3% non-white employees.



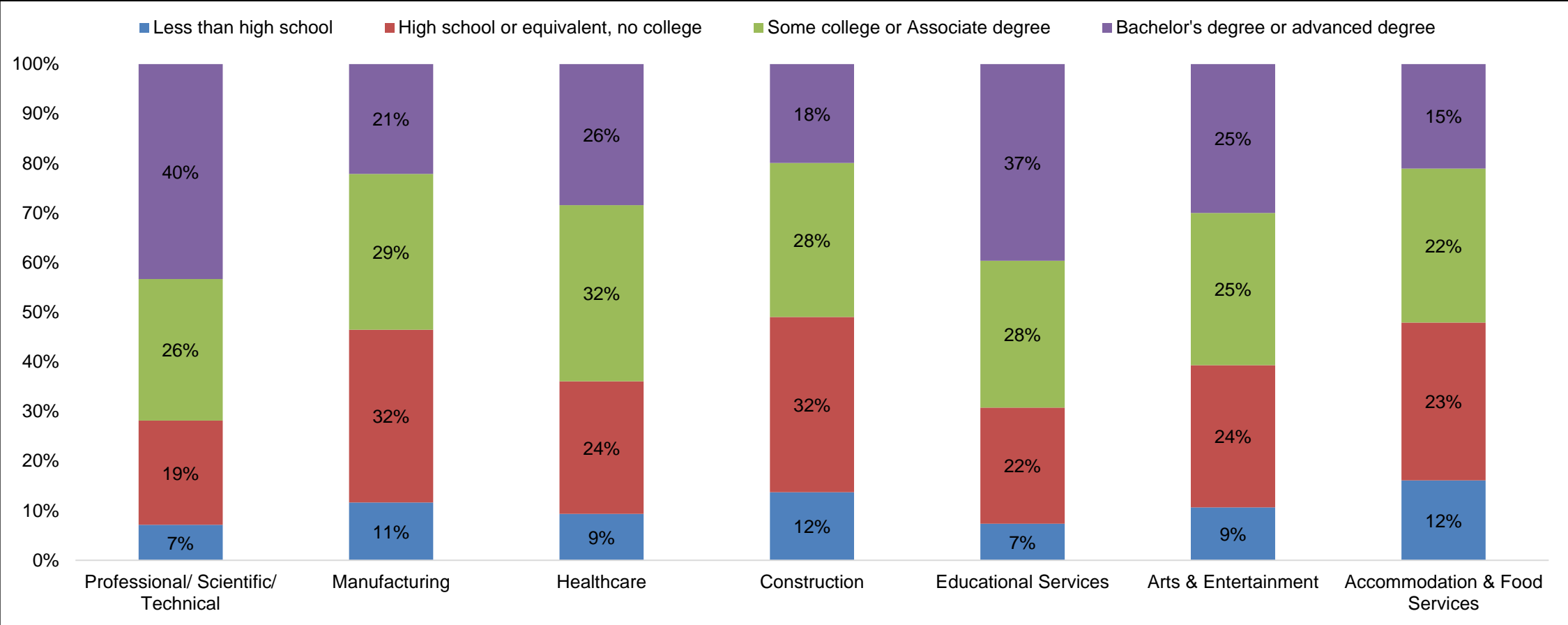
# Priority Regional Industries by Ethnicity

Professional, Scientific, and Technical services has the lowest representation of Hispanics and Latinos – 2.43% - while healthcare has the highest representation, 4.69%.



# Priority **Regional** Industries by Educational Attainment

Professional, scientific, and technical services is the most educated sector, with 40% of the workforce possessing a Bachelor's or advanced degree. Construction and manufacturing offer the most opportunity for individuals without any postsecondary education.





# Takeaways

- Among key industries, Educational Services is likely to be under the most demographic pressure as the Berkshire's workforce ages, followed by Manufacturing.
- Healthcare is the most racially diverse industry with 10% non-white employees, while construction is the least, with 3% non-white employees. Professional, Scientific, and Technical services has the lowest representation of Hispanics and Latinos – 2.4% - while healthcare has the highest representation, 4.7%.
- Professional, scientific, and technical services is the most educated sector, with 40% of the workforce possessing a Bachelor's or advanced degree. Construction and manufacturing offer the most opportunity for individuals without any postsecondary education.

## Discussion

- Does this information support your priority industry selections so far? What other questions do you have?

# III. Confirming Supply Gaps and Occupational Priorities

# 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?

*Average of total number of jobs for each occupation across three data sets...*

- 2017 projections from openings and replacement (OES)
- 2024 projections from openings and replacement (OES)
- Help Wanted Online annualized 2016 job postings

## 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...*

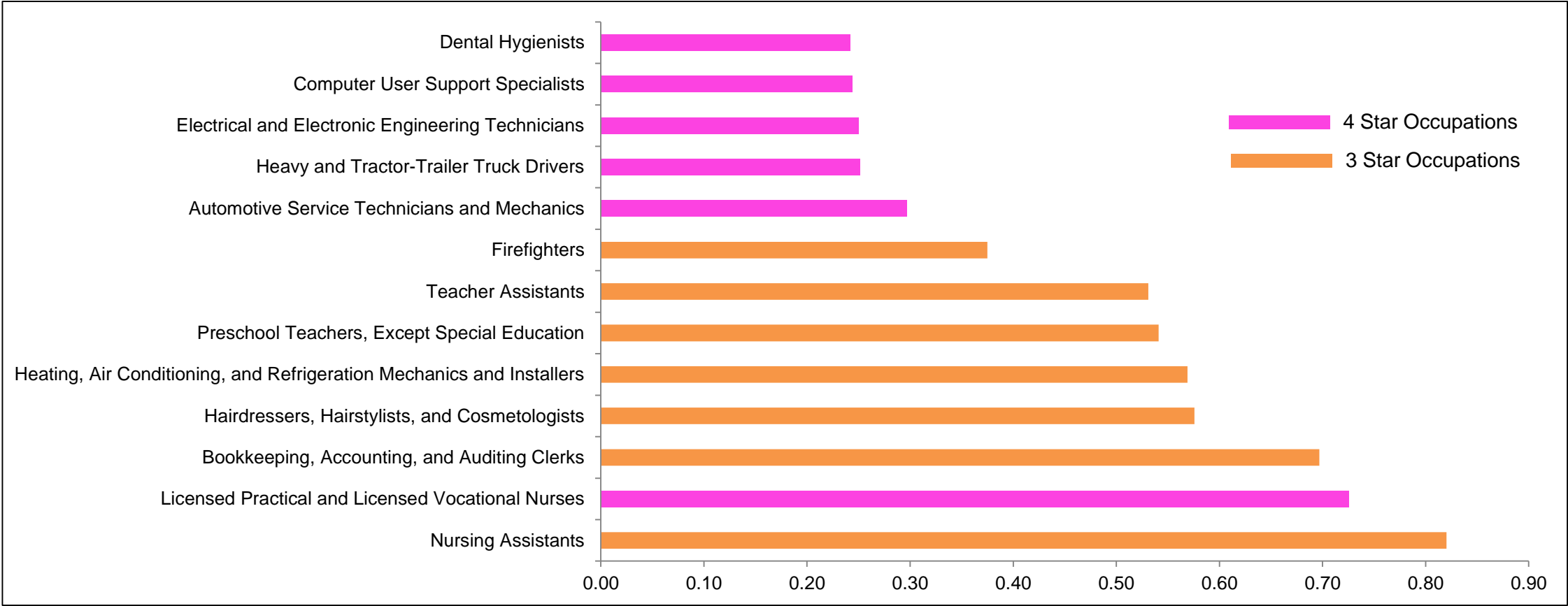
- Unique UI claims, 2016 (DUA)
- Relevant completer data
  - Voc-Tech completers, 2013-2015 average (DESE), 50% available\*
  - Community College completers, 2013-2015 average (DHE), 90% available
  - State University completers, 2013-2015 average (DHE), 71% available
  - Private University completers, 2013-2015 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

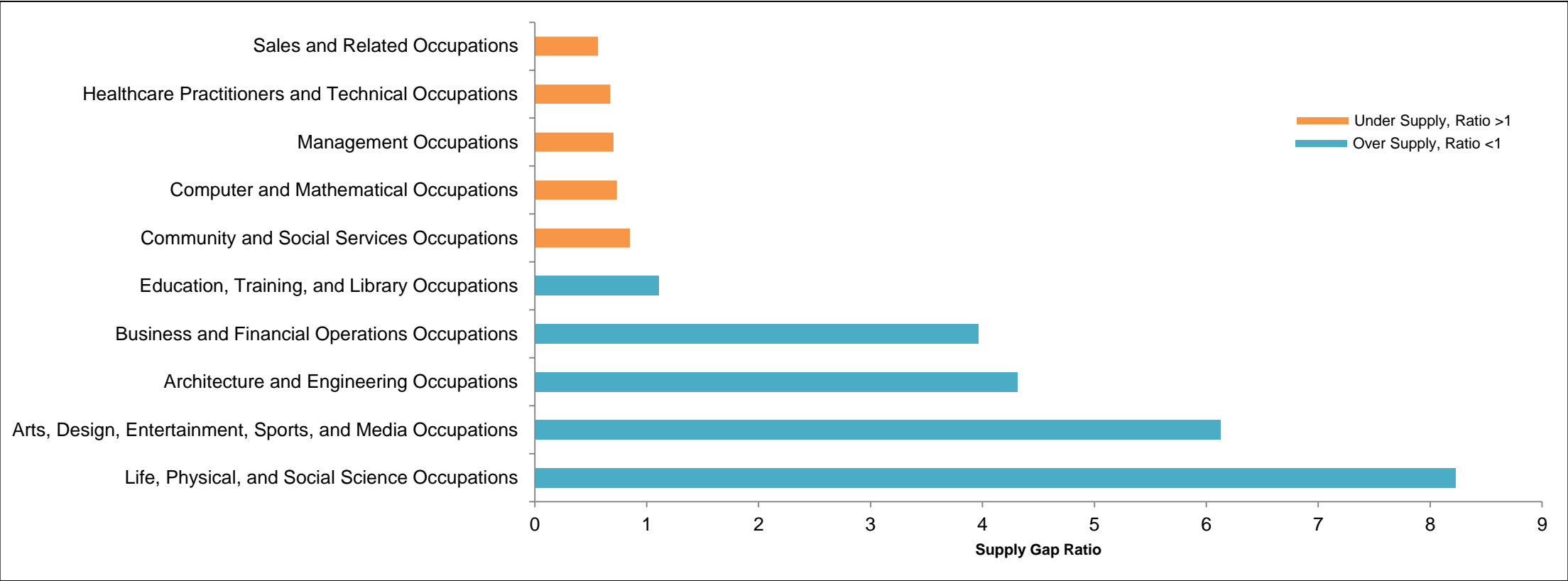
Among all occupations requiring an Associates or Certificate, healthcare support occupations, engineering and tech, transportation, and a number of installation professions face supply gaps.



*Occupations requiring a postsecondary non-degree award, some college, or an Associate's Degree*

# State Supply Gap Overview: BA Clusters

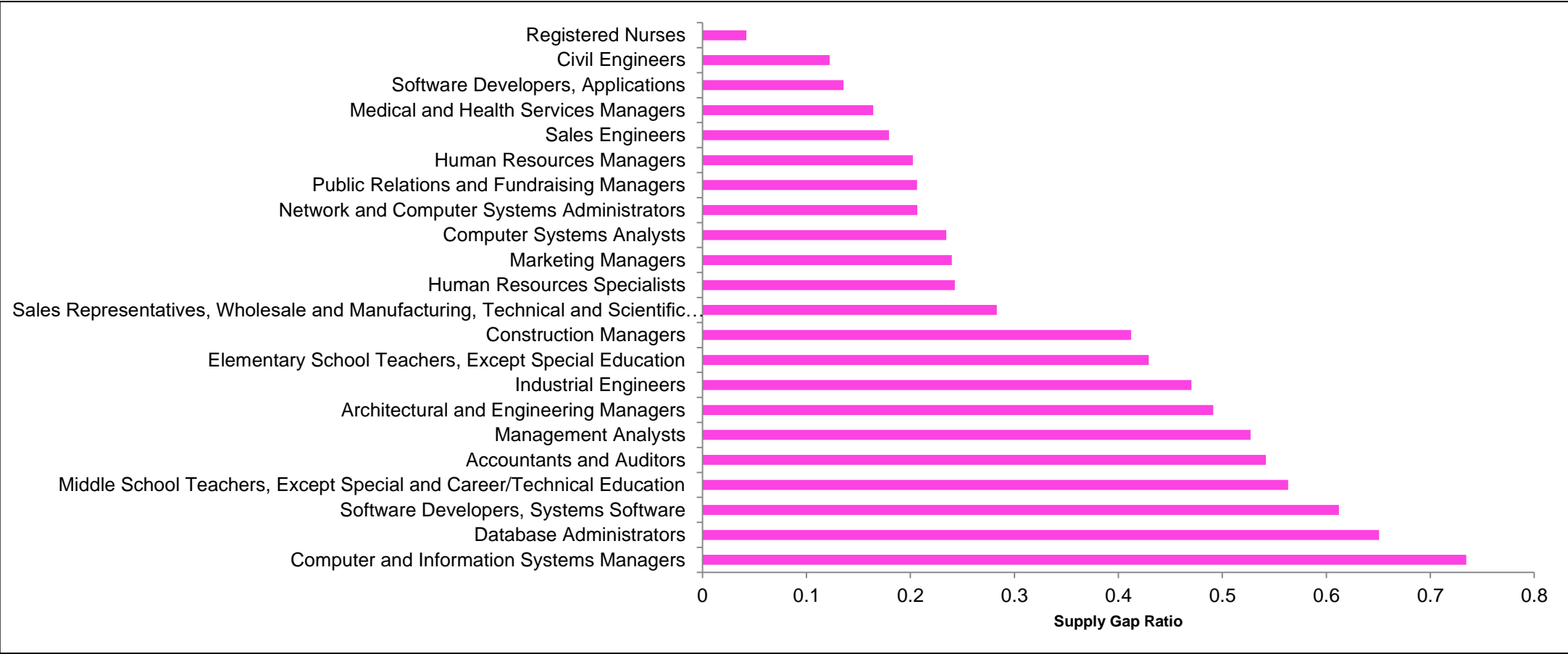
Sales, Healthcare, Management, and Computer and Mathematical Occupations average the lowest ratios of qualified individuals per opening at the BA level.



*Occupations requiring a Bachelor's Degree, Demand Index 100+ Only*

# More Openings than Qualified: State BA Occupations

A number of 4 and 5 star occupations, largely in STEM fields, are in short supply.



*Occupations requiring a Bachelor's Degree, 4 and 5 stars, Demand Index 100+ only*



# Takeaways

## Associate's, Some college, Post-secondary Certificate

- In Berkshire County, a specific set of 3 and 4 star occupations face supply gaps – most notably in healthcare support, computer support/IT, engineering, installation, and transportation fields.

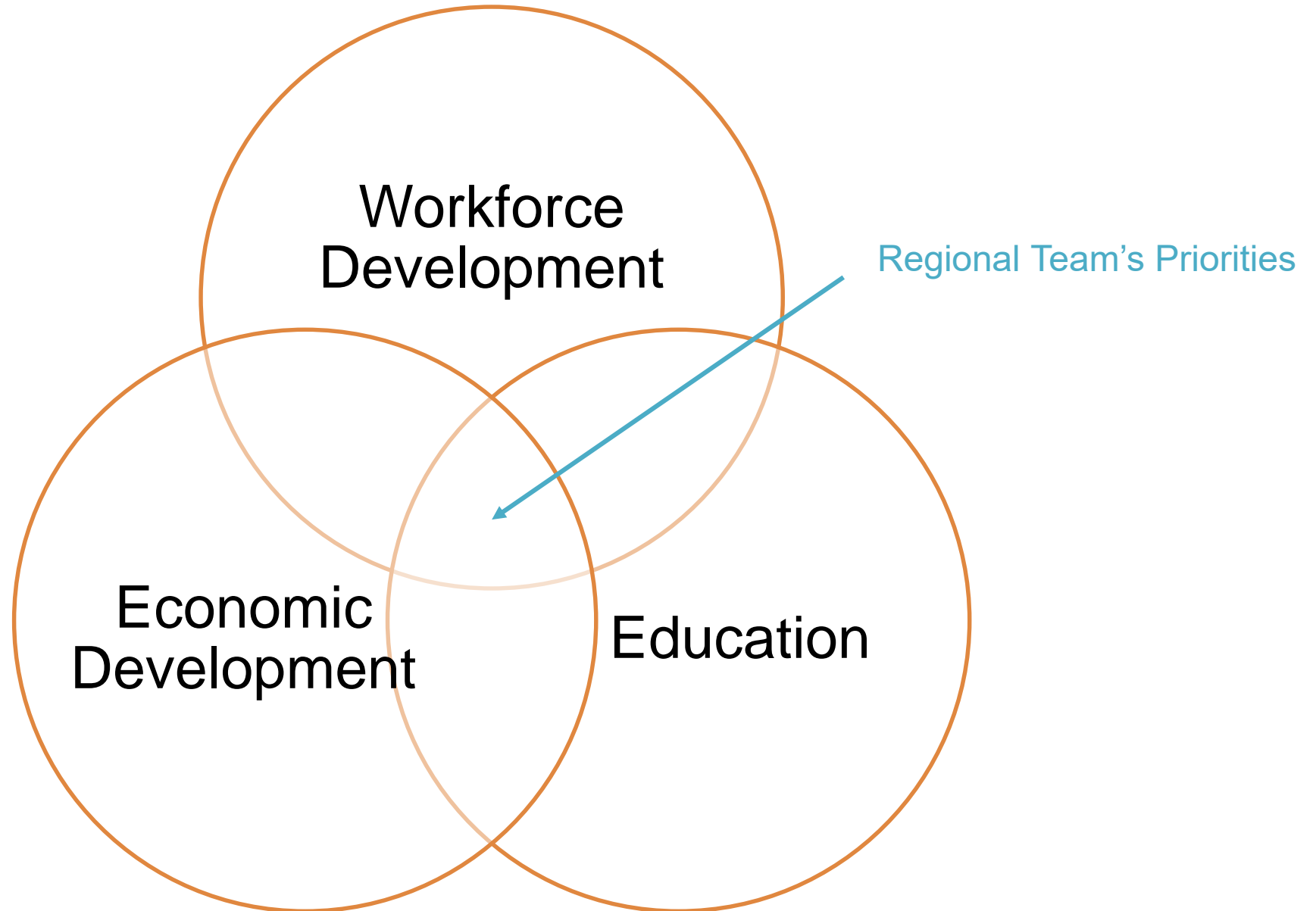
## Bachelor's Degree

- Across the State, we expect supply gaps in 4 and 5 star occupations primarily in STEM fields, with an emphasis on Healthcare and Computer and Mathematical occupations.

# Regional Industry/Occupation Priorities, Sub-BA

Industry Priorities	Supply Gap, 4-5 Star, Associates/Cert/Some College	Supply Gap, 1-3 Star, Associates/Cert/Some College	High Indexed Demand	4 and 5 Star Occupations, HS or Below	Career Pathway Entryway	Supportive Employer/Aligned with Econ Dev
1. Accommodation and Food Services				Food Service Managers Chefs and Head Cooks	<i>Combined Food Preparation and Serving Workers</i>	
2. Arts, Entertainment, and Recreation						
3. Construction		Heating, AC, and Refrigeration Mechanics and Installers		Electricians Construction Laborers Carpenters FirstLine Supervisors of Construction Trades	<i>Construction Laborers</i>	
4. Education Services		Teacher Assistants Preschool Teachers			<i>Teacher Assistants</i>	
5. Healthcare and Social Services	Dental Hygienists LPNs	Nursing Assistants	Home Health Aides Social and Human Service Assistants Nursing Assistants	<i>Social and Human Service Assistants</i> Medical Secretaries	<i>Nursing Assistants</i> <i>Home Health Aides</i>	
6. Manufacturing	Electrical and Electronic Engineering Technicians				<i>Team Assemblers</i>	
7. Professional and Technical Services (IT and Engineering)	Computer User Support Specialists				<i>Computer User Support Specialists</i>	

# Reminder



# Data Tool

- Demo

## Group Review

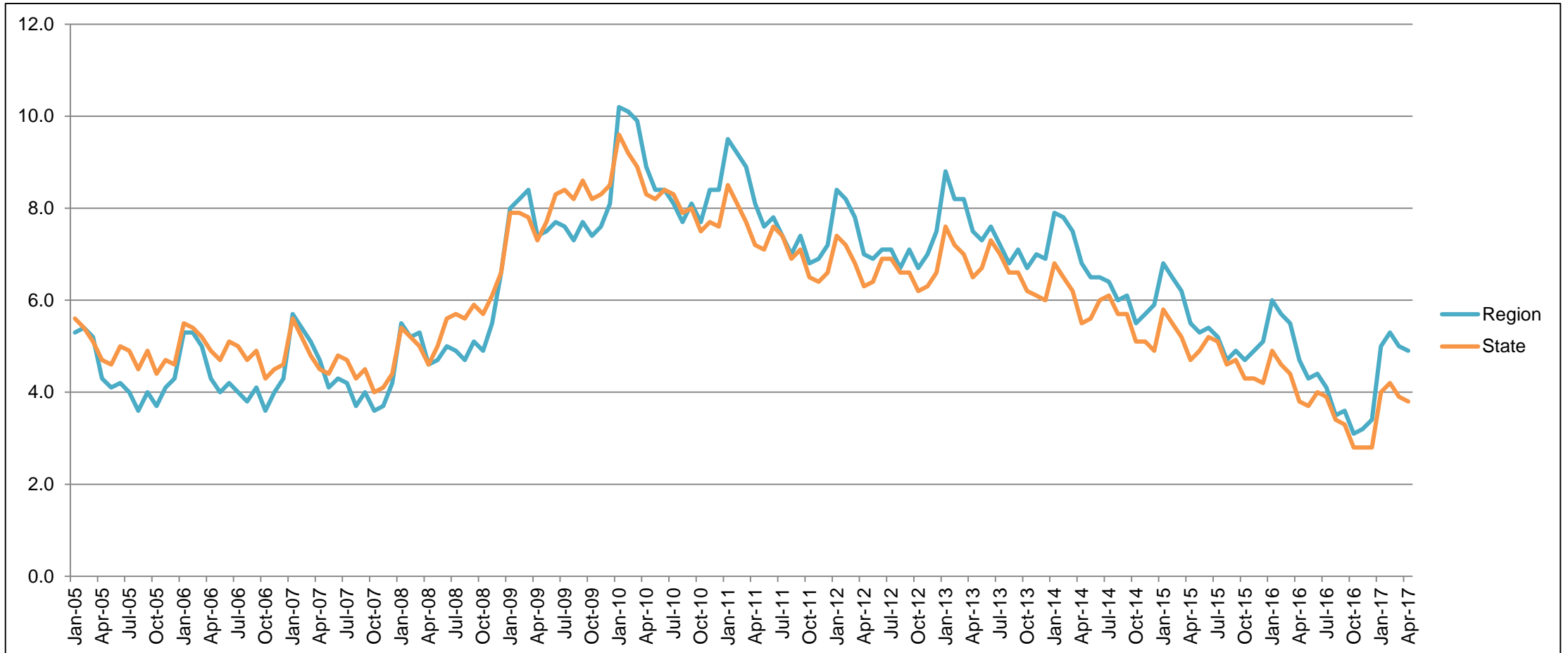
- Work in mixed groups (workforce, education, economic development groups)
- Confirm **regional criteria** to select high priority industries and occupations
- Discuss and confirm regional **high priority industries and occupations (slide 34)**
- Share out upon conclusion of work time

# Appendix

# I. Labor Force and Unemployment Demographics

# State and Regional Unemployment Rate

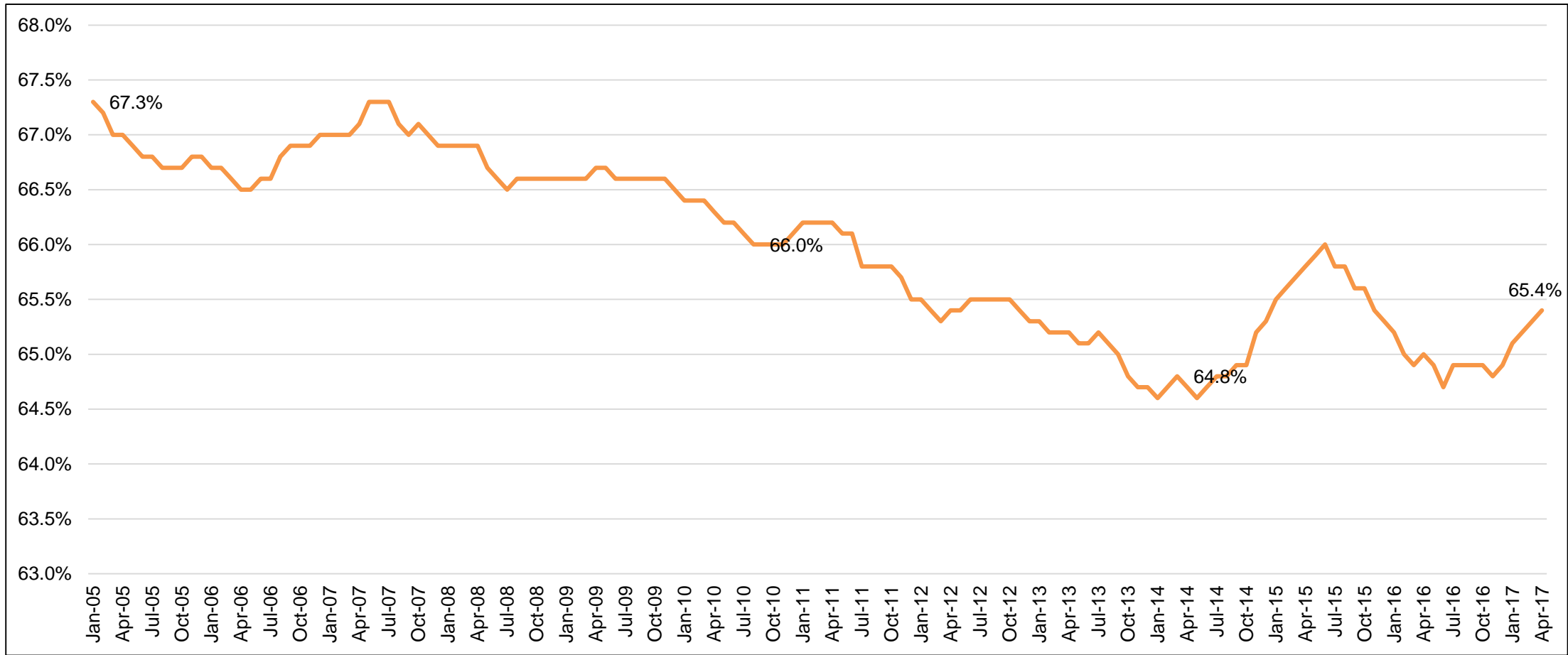
Berkshire County's unemployment rates trend about a .5 percentage point above those of the State, although prior to the recession, Berkshire often outperformed the State.





# State Labor Force Participation Rate

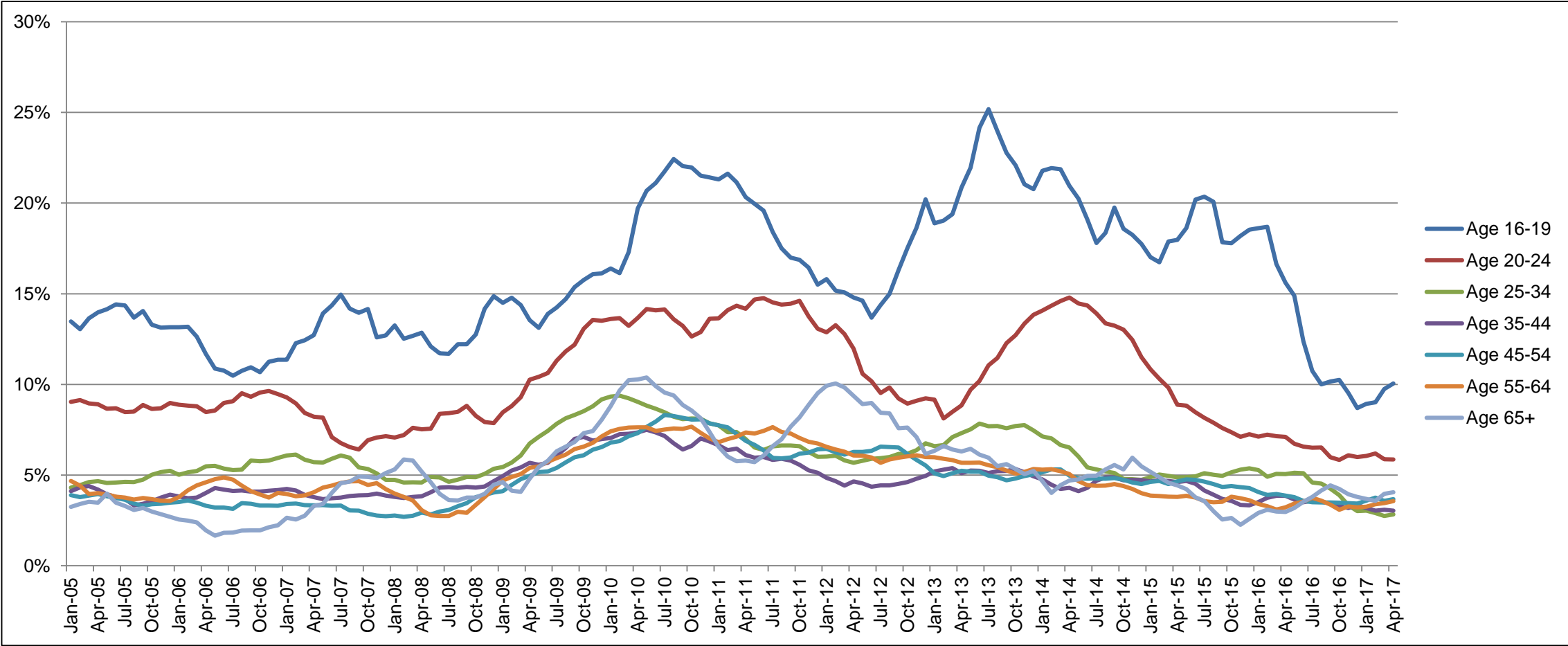
The labor force participation rate has not recovered to pre-recession levels.



Source: Bureau of Labor Statistics, 2005-2017 Seasonally Unadjusted Data

# State Unemployment Rate by Age, 20-64

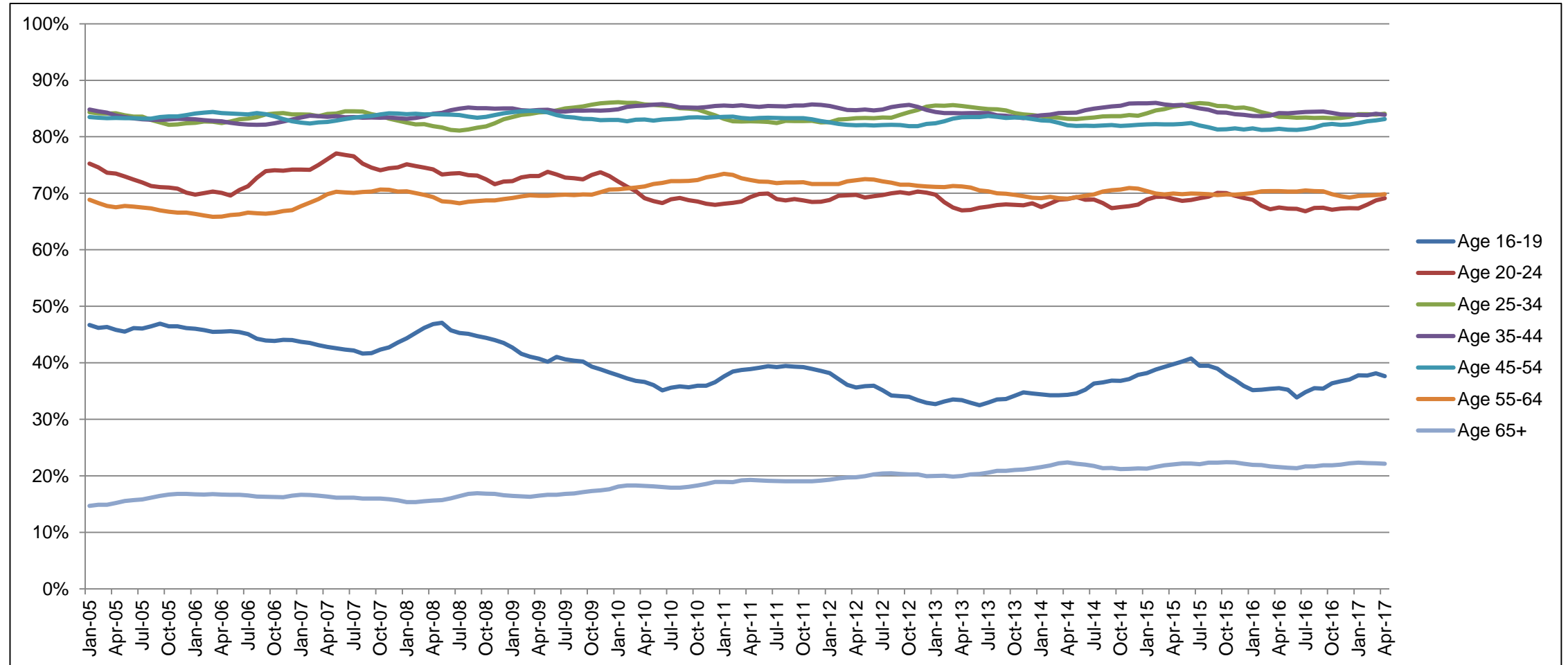
Cohorts age 16-19, 20-24, and 65+ have demonstrated the most sensitivity to changing labor market conditions. The highest unemployment rates are among young adults 16-19 and 20-24.



Source: BLS Current Population Survey, 12 Month Moving Averages

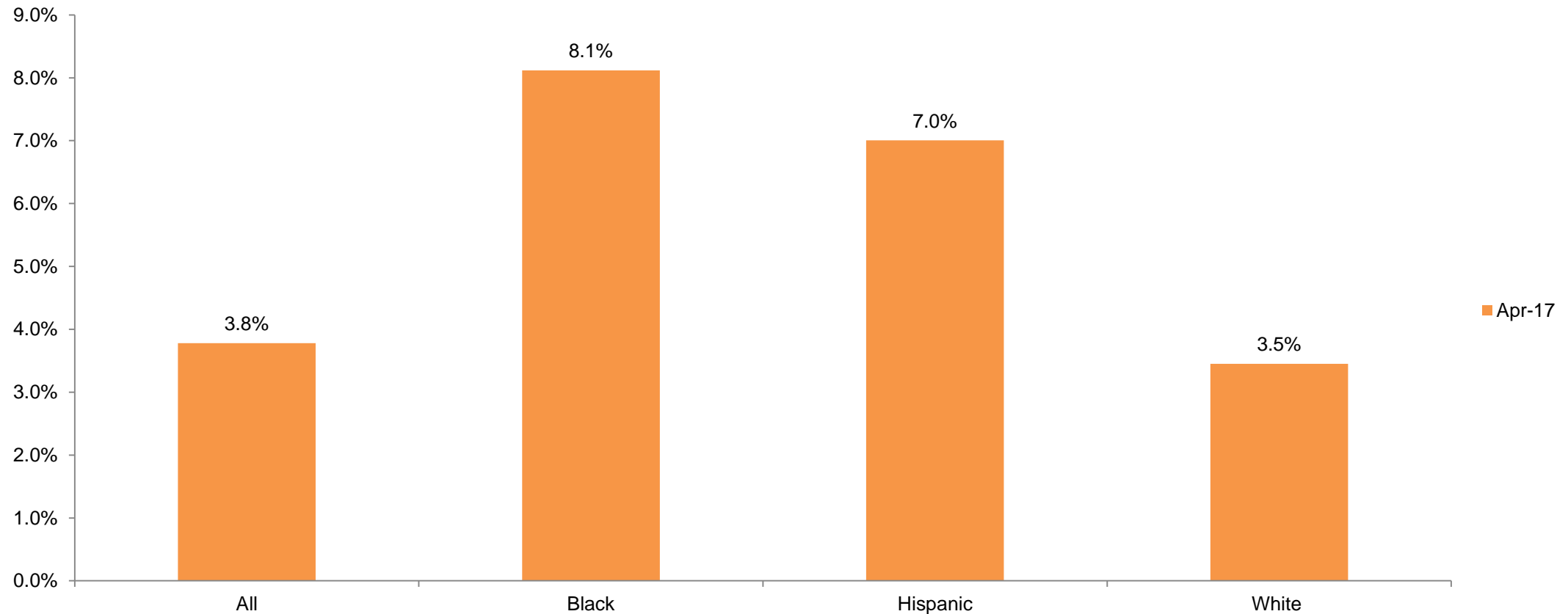
# State Labor Force Participation by Age, 16+

Since the year 2005, labor force participation has declined by 5% for 20-24 year olds and has declined by almost 10% for 16-19 year olds. Labor force participation for seniors has increased since 2005 by approximately 7%.



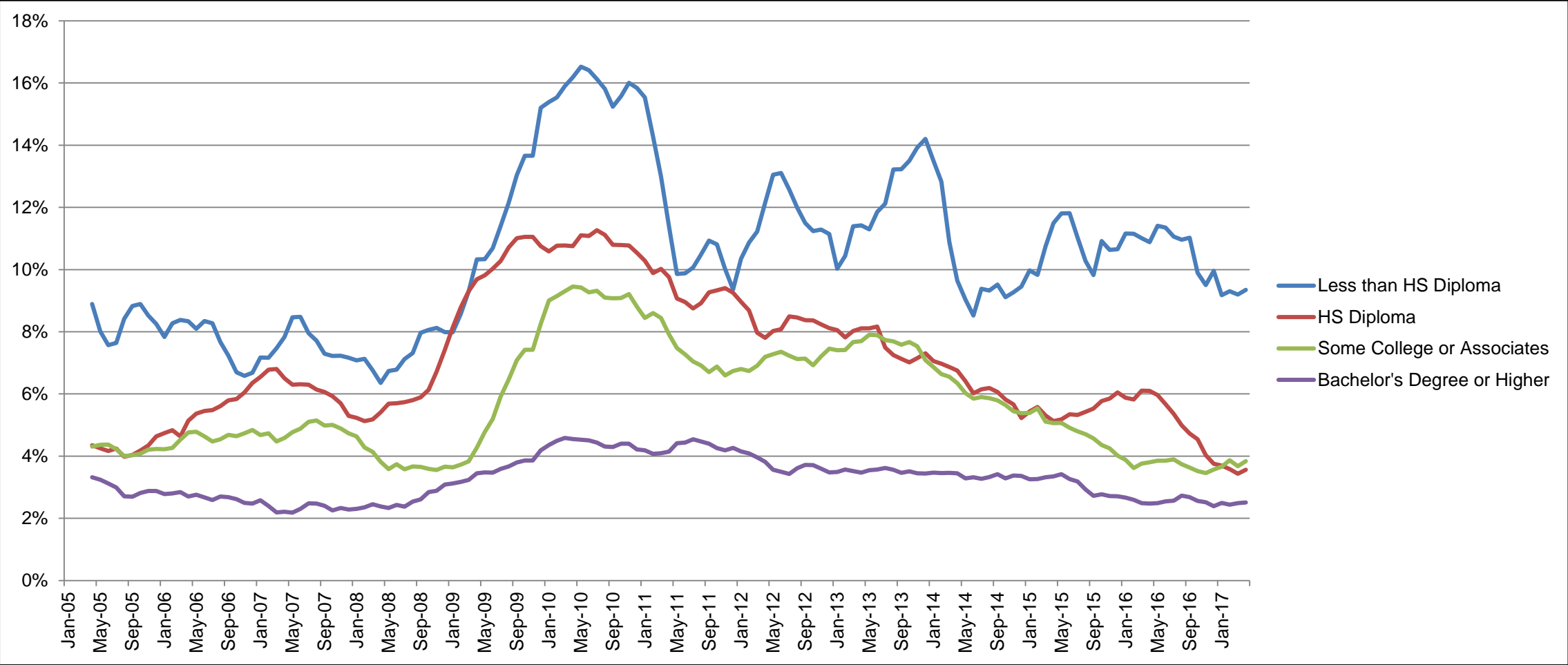
# State Unemployment Rate by Race

The white unemployment rate aligns with the state average, whereas Black and Hispanic unemployment rates tend to significantly exceed the trend.



# State Unemployment Rate by Education, 25+

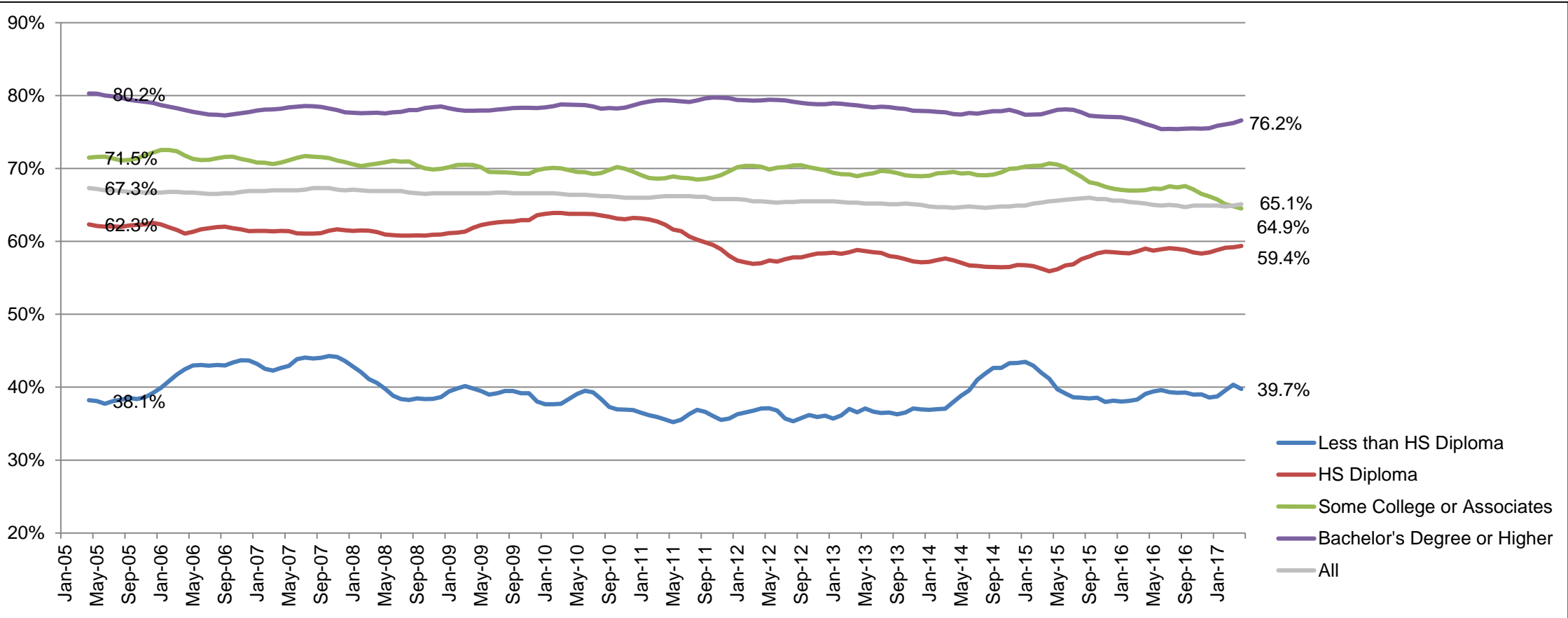
Higher levels of education tend to correlate with lower unemployment levels and more stability during uncertain economic times.



Source: BLS Current Population Survey, 12 Month Moving Averages

# State Labor Force Participation by Education, 25+

Higher education levels are correlated with higher labor force participation rates. However, as the unemployment has declined, labor force participation has also declined in all categories except sub-high school.



# Takeaways

- Labor force participation has not recovered after the recession.
- Compared to pre-recession, less young people are in the labor force, and older residents are working longer.
- Minority populations experience higher levels of unemployment and less consistent levels of labor force participation.
- Compared to pre-recession, less educated workers are in the labor force.