

Labor Market Trends in the Pioneer Valley Region

By Robert Clifford

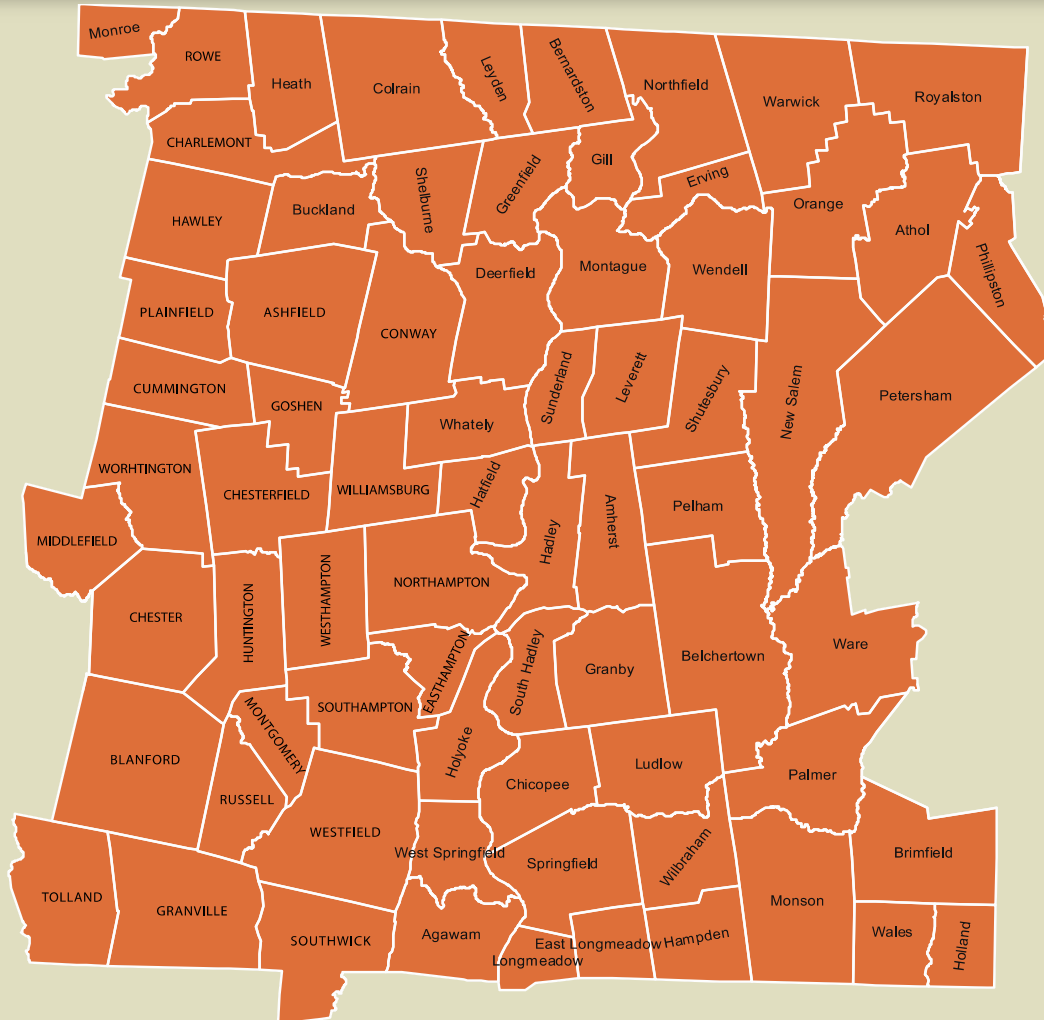
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and New England Public Policy Center of the
Federal Reserve Bank of Boston

Motivation

- Promote better public policy by conducting objective research and analysis of regional economic/policy issues.
- Understand the long-term labor force challenges facing the regional labor markets in Massachusetts.
- Provide detailed data on labor supply and demand trends to support workforce development policy discussions at a local level.
- Build off the labor market work of Harrington and Fogg (2008) and the demographics research of Sasser Modestino (2009, 2010).

The Pioneer Valley Region



Summary

- After nearly a decade of declining employment, Pioneer Valley is recovering at a modest pace, but continues to have one of the highest unemployment rates statewide.
- An aging workforce, declines in younger workers, and a stagnant population will force the region to confront demographic challenges sooner than other regions.
- Despite gains in the educational attainment of its labor force in the past decade, Pioneer Valley still has the highest share of individuals with only a High School Degree or less.
- Addressing the barriers to employment facing the region's unemployed, particularly among the young and less educated, is key to the economic vitality of the region.

Outline

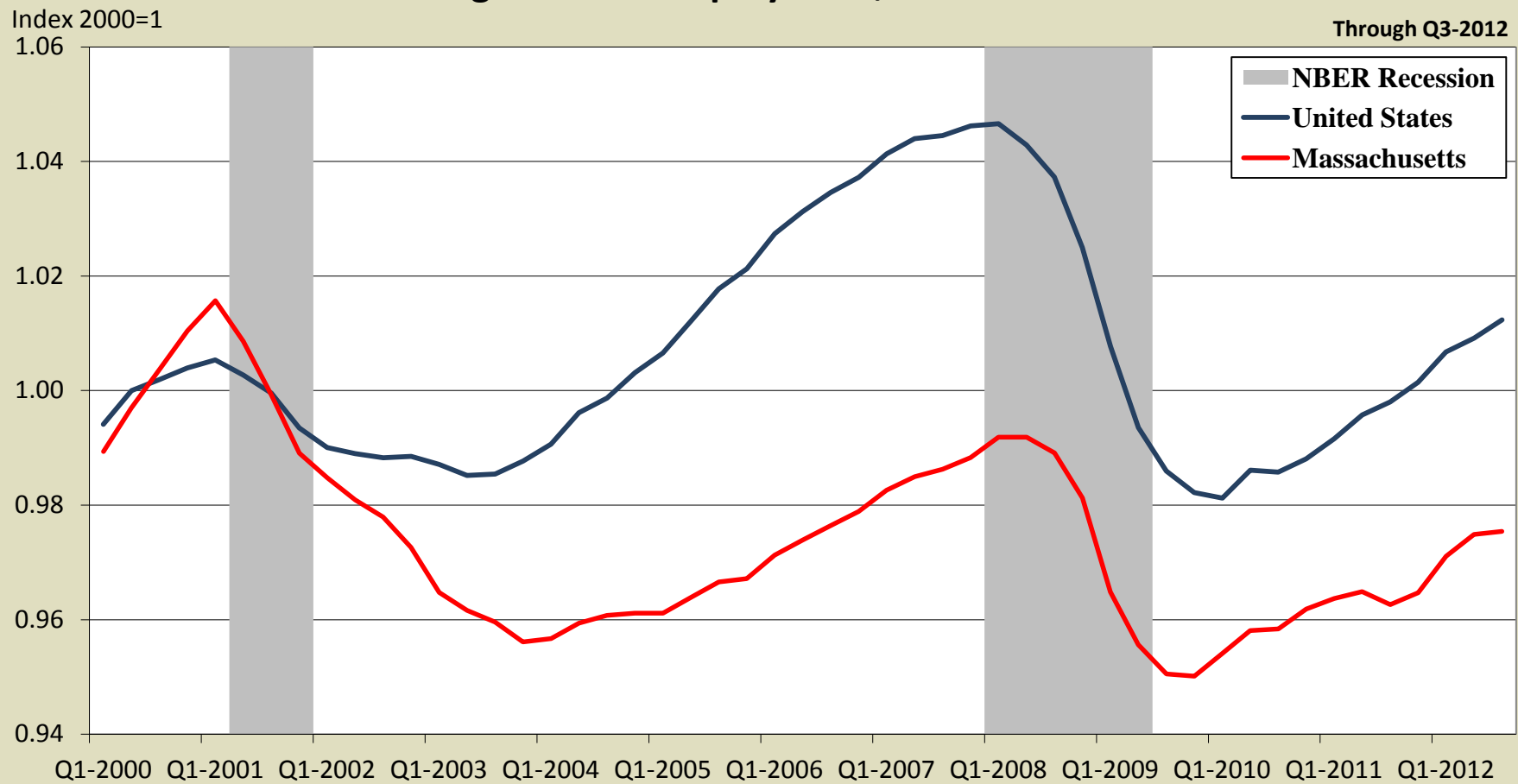
- Labor Market Performance
- Labor Supply
- Labor Demand
- The Pipeline: Educational Supply of Post-Secondary Degrees

Labor Market Performance

- National and State Employment Trends
- Performance of Regional Labor Markets
- Employment Trends by Industry in Pioneer Valley and Massachusetts

Massachusetts is still far below its peak employment levels of the early 2000's.

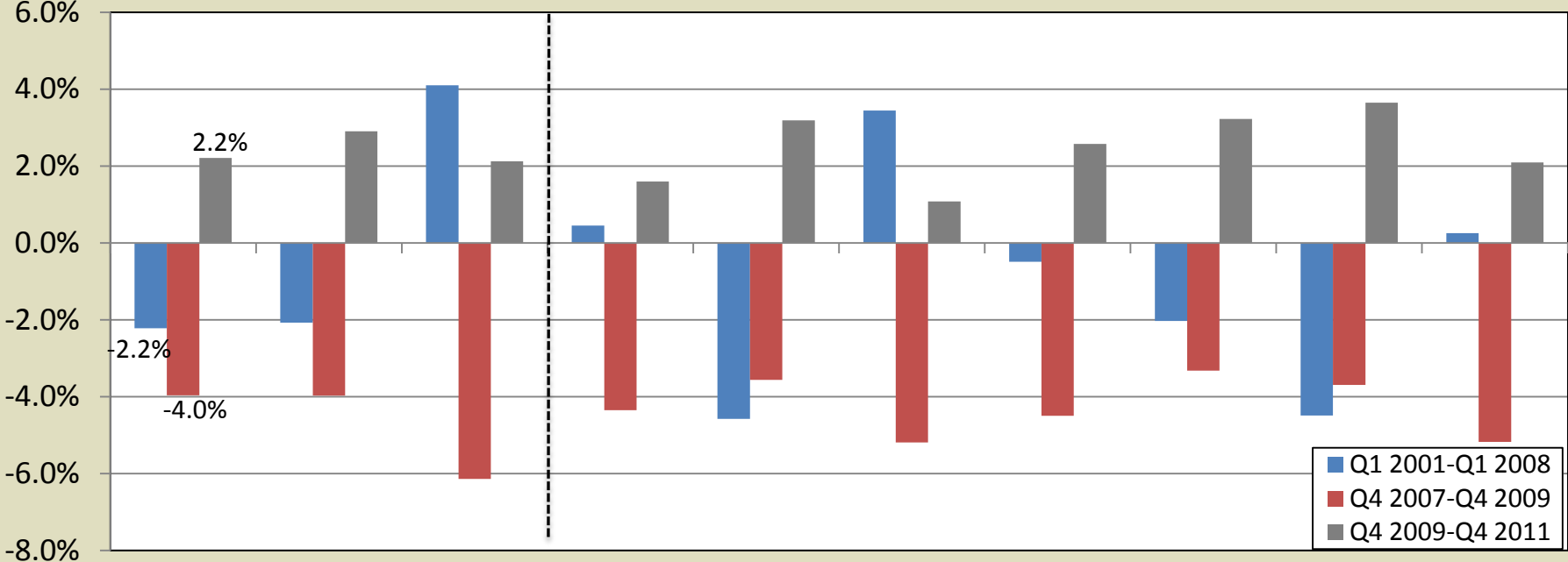
Total Non-Agricultural Employment, Q1-2000 to Q3-2012



Sources: U.S. Bureau of Labor Statistics, Current Employment Statistics.

Employment changes in Pioneer Valley mirrored statewide trends over most of the past decade, but trailed in the recovery.

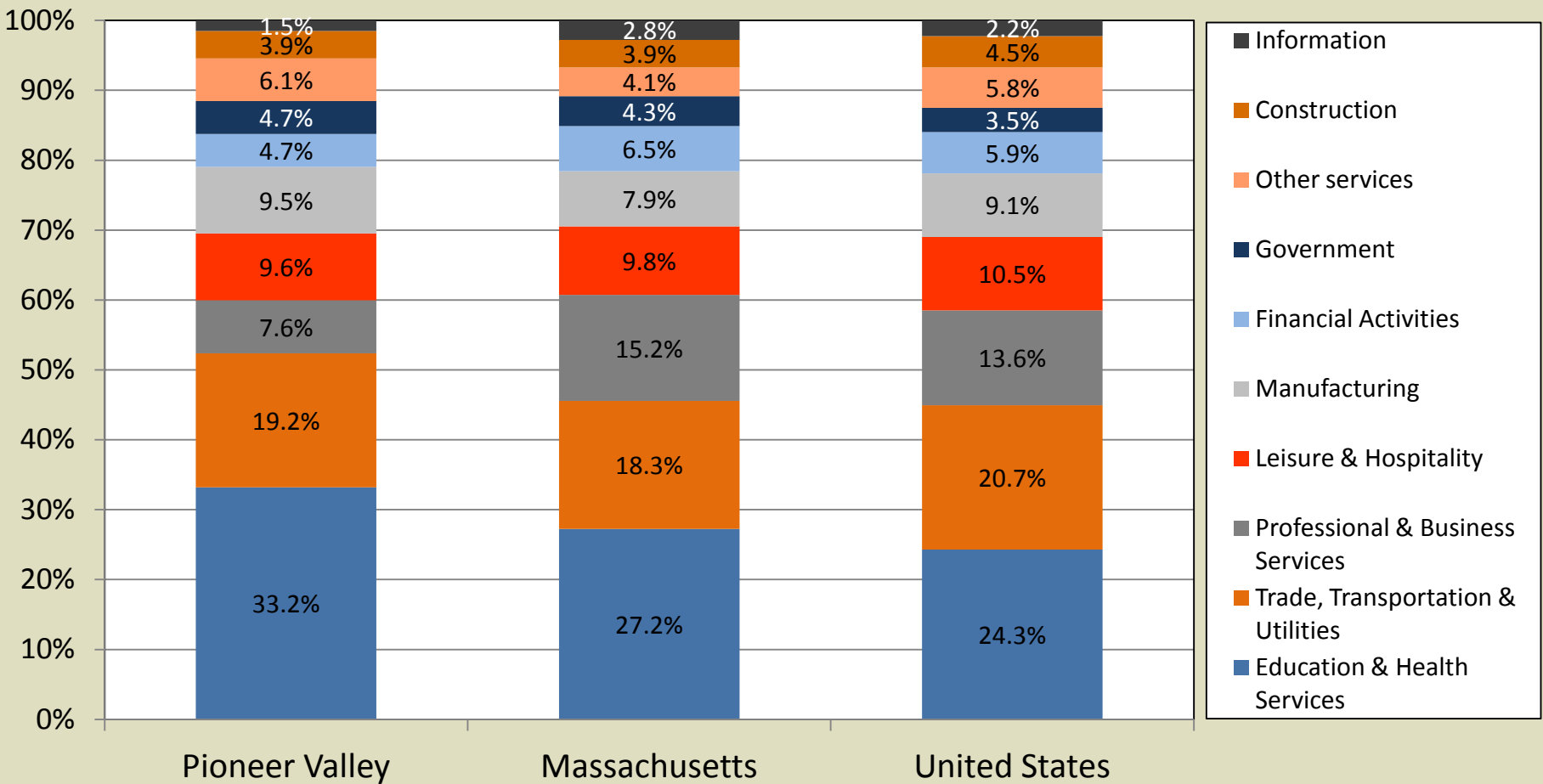
Total Growth Rates in Employment



Sources: Massachusetts Executive Office of Labor and Workforce Development (EOLWD), ES-202 and U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

The region's share of employment in Education & Health Services is larger than in any other regional labor market.

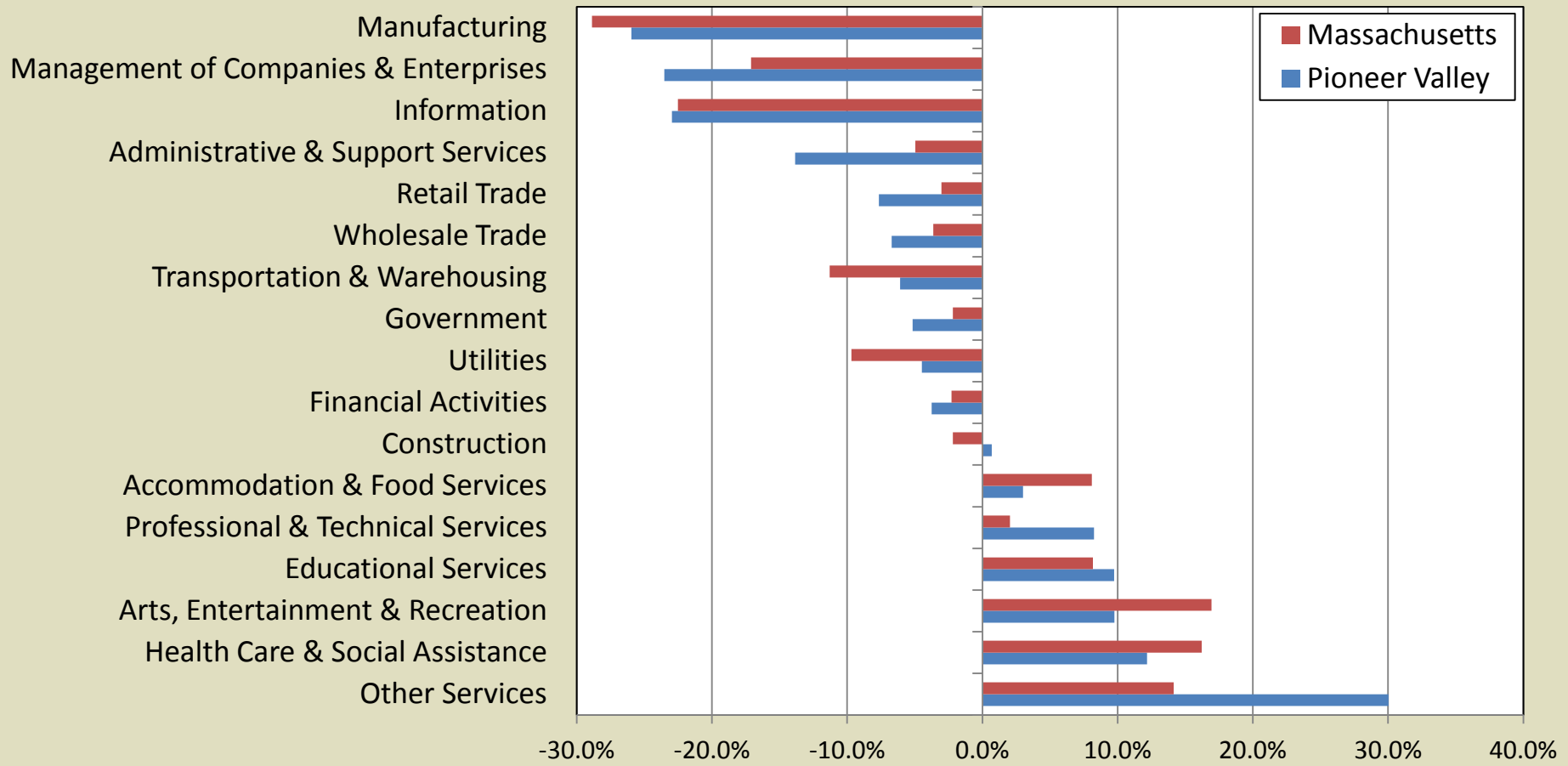
Employment Distribution by Supersector, Q4 2011



Sources: Massachusetts EOLWD, ES-202 and U.S. Bureau of Labor Statistics, QCEW.

Between recessions, the state and region had similar employment trends across most industries.

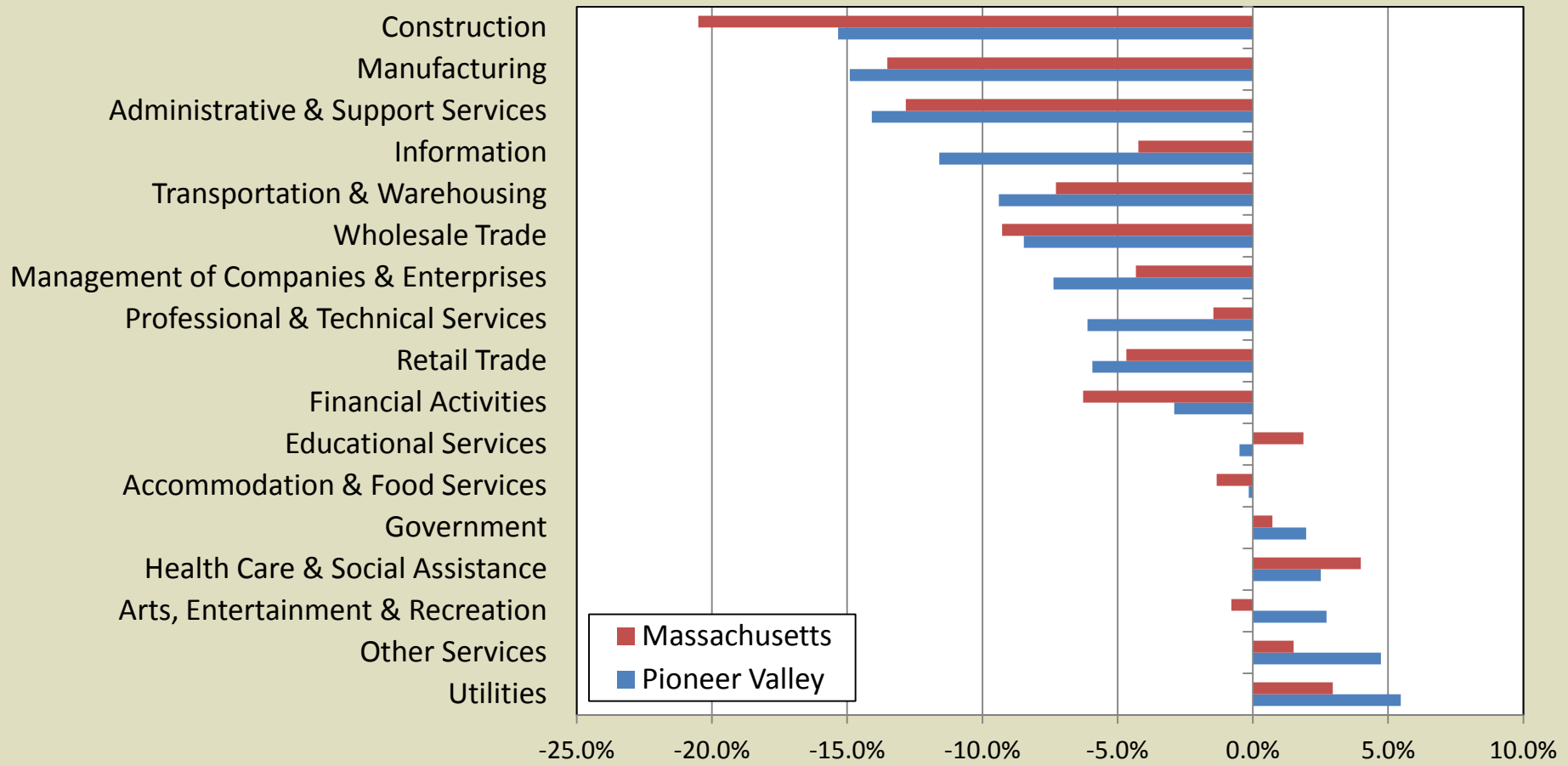
Employment Changes, Q1-2001 to Q1-2008



Sources: Massachusetts EOLWD, ES-202.

Similarly, in the Great Recession, the region and state had comparable employment changes across most industries.

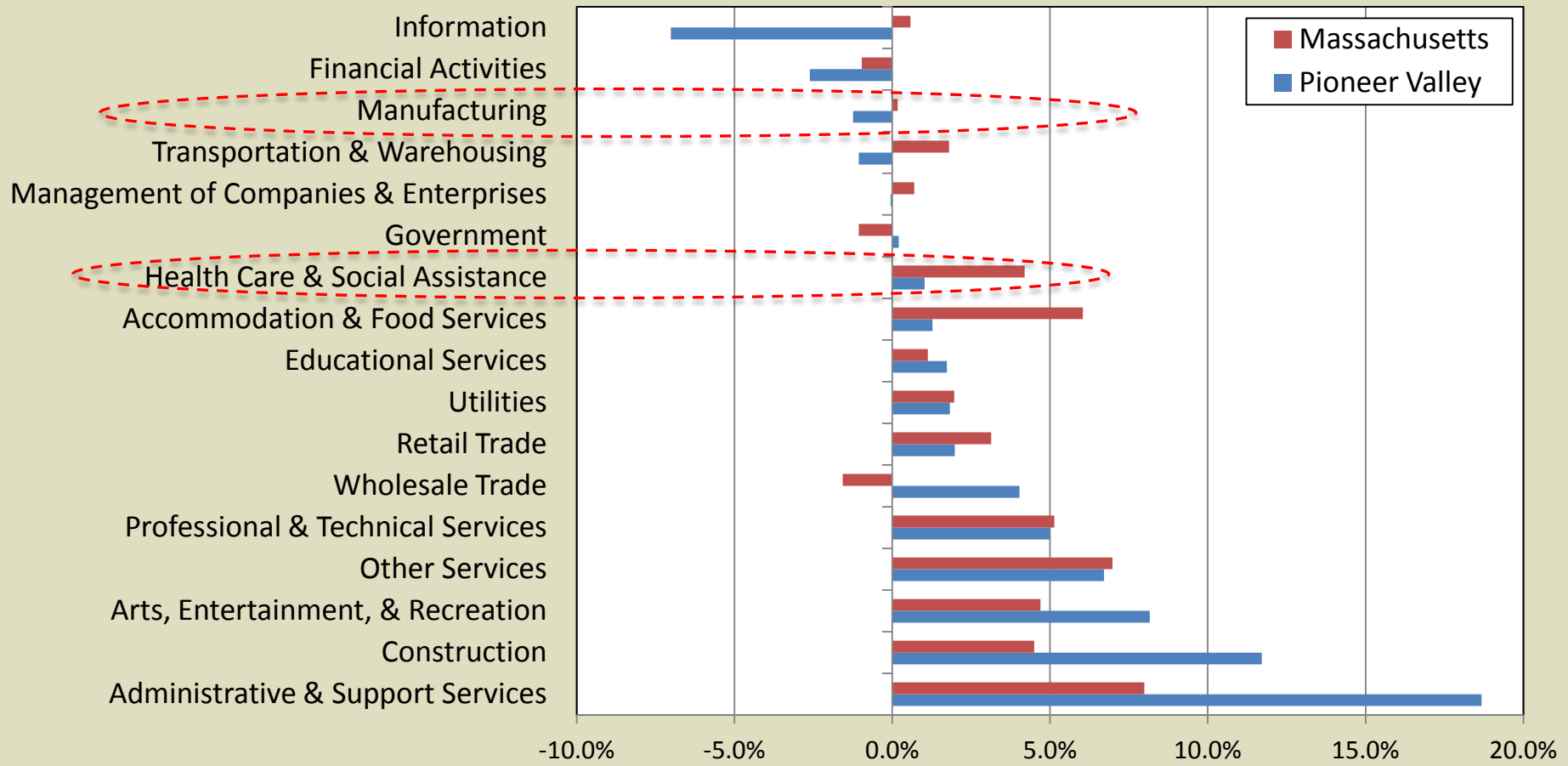
Employment Changes, Q4-2007 to Q4-2009



Sources: Massachusetts EOLWD, ES-202.

Strong employment gains in a few industries were mitigated by losses and slow growth among others in Pioneer Valley.

Employment Changes, Q4-2009 to Q4-2011



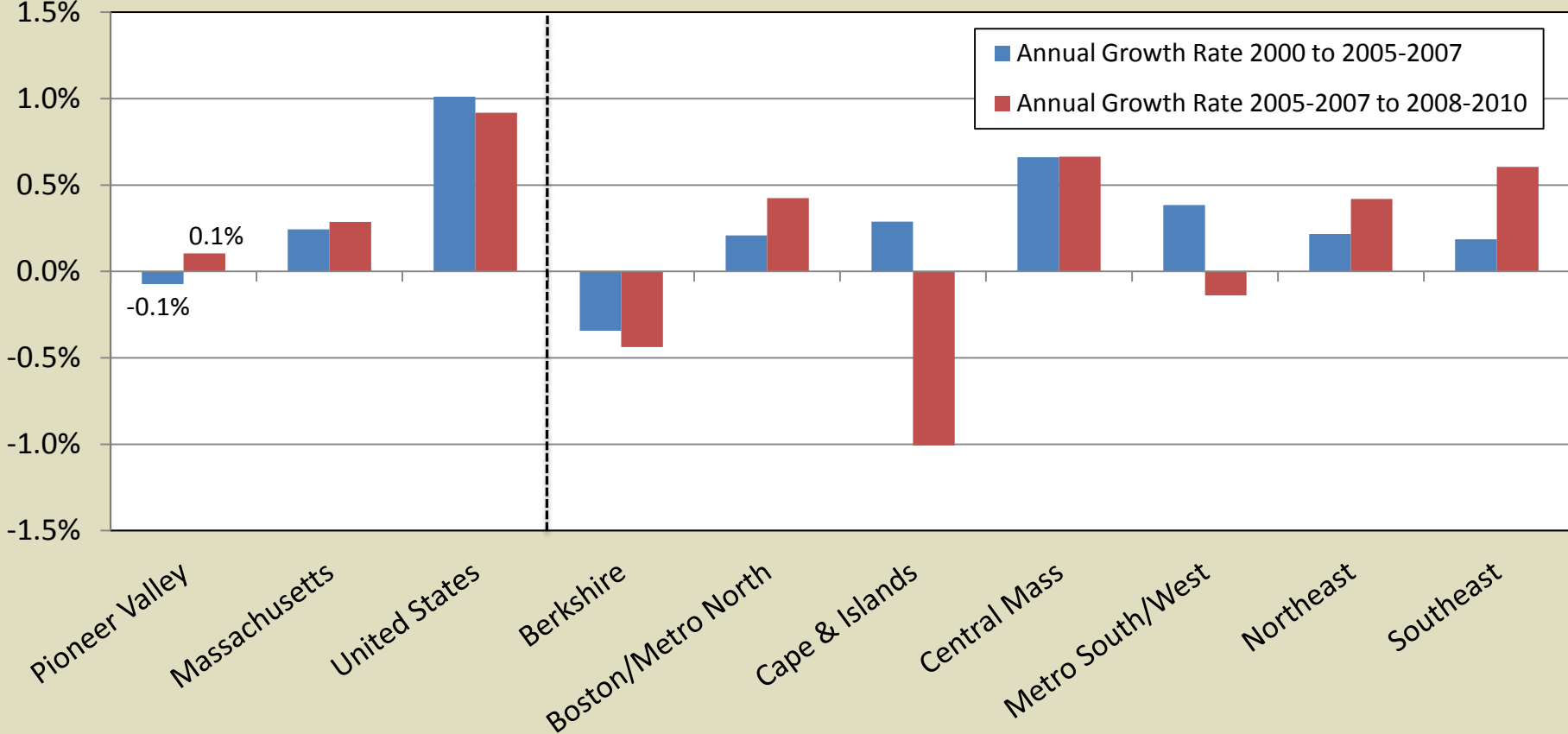
Sources: Massachusetts EOLWD, ES-202.

Labor Supply

- Residential Population Changes and Characteristics
- Age and Education of the Civilian Labor Force
- Trends and Characteristics of the Unemployed
- Commuting Patterns

Pioneer Valley's total residential population was essentially unchanged over the course of the last decade.

Total Residential Population Growth



Source: U.S. Census Bureau 2000 Decennial Census Public Use Microdata Samples (PUMS) data files, 2005-2007 and 2008-2010 American Community Survey (ACS) Public Use Micro Sample (PUMS) data files.

While the total population was stagnant, the region saw growing numbers of immigrants and minorities in the past decade.

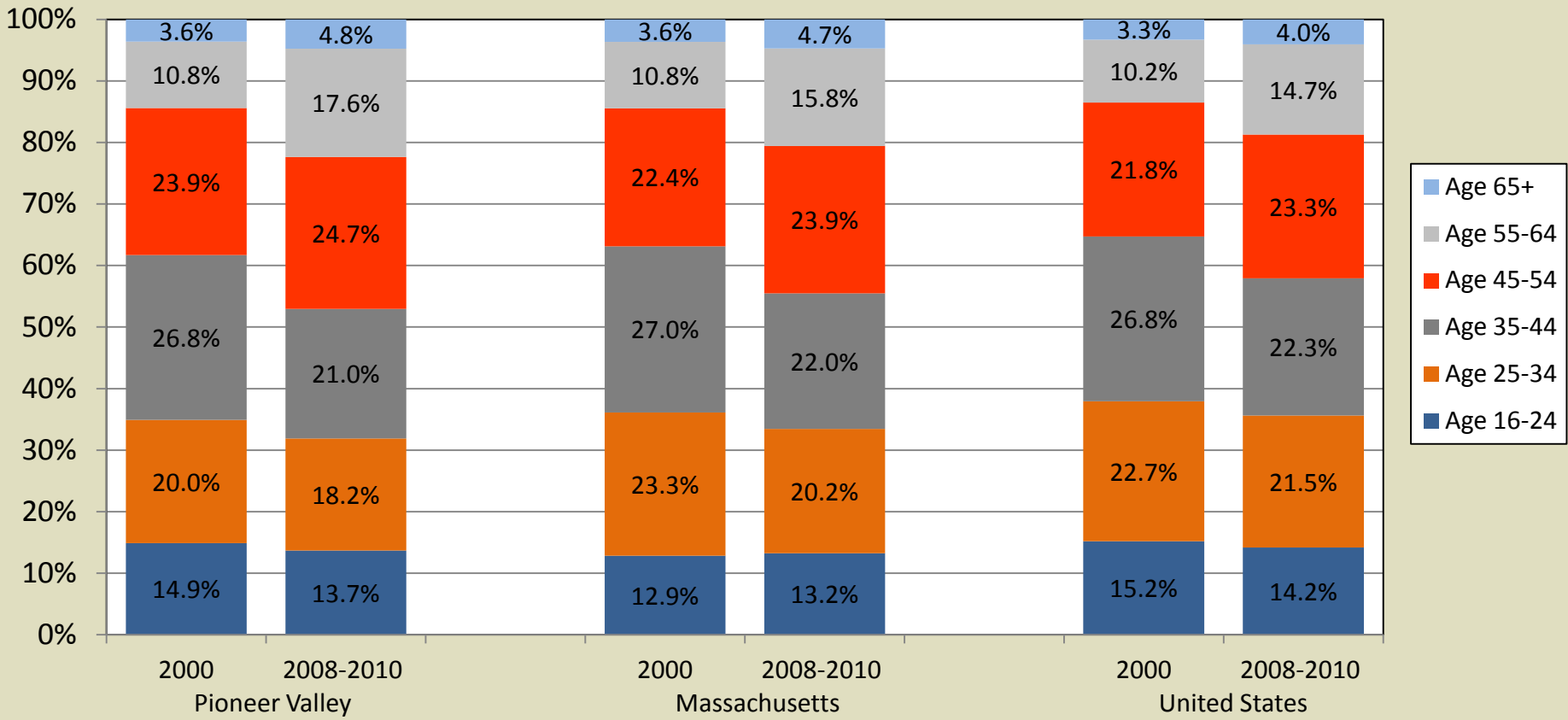
Demographic Characteristics of Pioneer Valley

	2000	2008-2010	Absolute Change	Annual Growth Rate
Resident Population	680,610	679,768	-842	0.0%
<u>Gender</u>				
Male	326,958	325,509	-1,449	0.0%
Female	353,652	354,259	607	0.0%
<u>Nativity</u>				
Native Born	600,950	586,125	-14,825	-0.3%
Immigrant	79,660	93,643	13,983	1.8%
<u>Race/Ethnicity</u>				
White, non-Hispanic	547,634	515,440	-32,194	-0.7%
Black, non-Hispanic	35,871	37,056	1,185	0.4%
Asian, non-Hispanic	10,919	15,118	4,199	3.7%
Hispanic	74,134	100,538	26,404	3.4%
Other race, non-Hispanic	12,052	11,616	-436	-0.4%

Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.

The labor force in Pioneer Valley increased in age over the past decade and is older than the state's labor force.

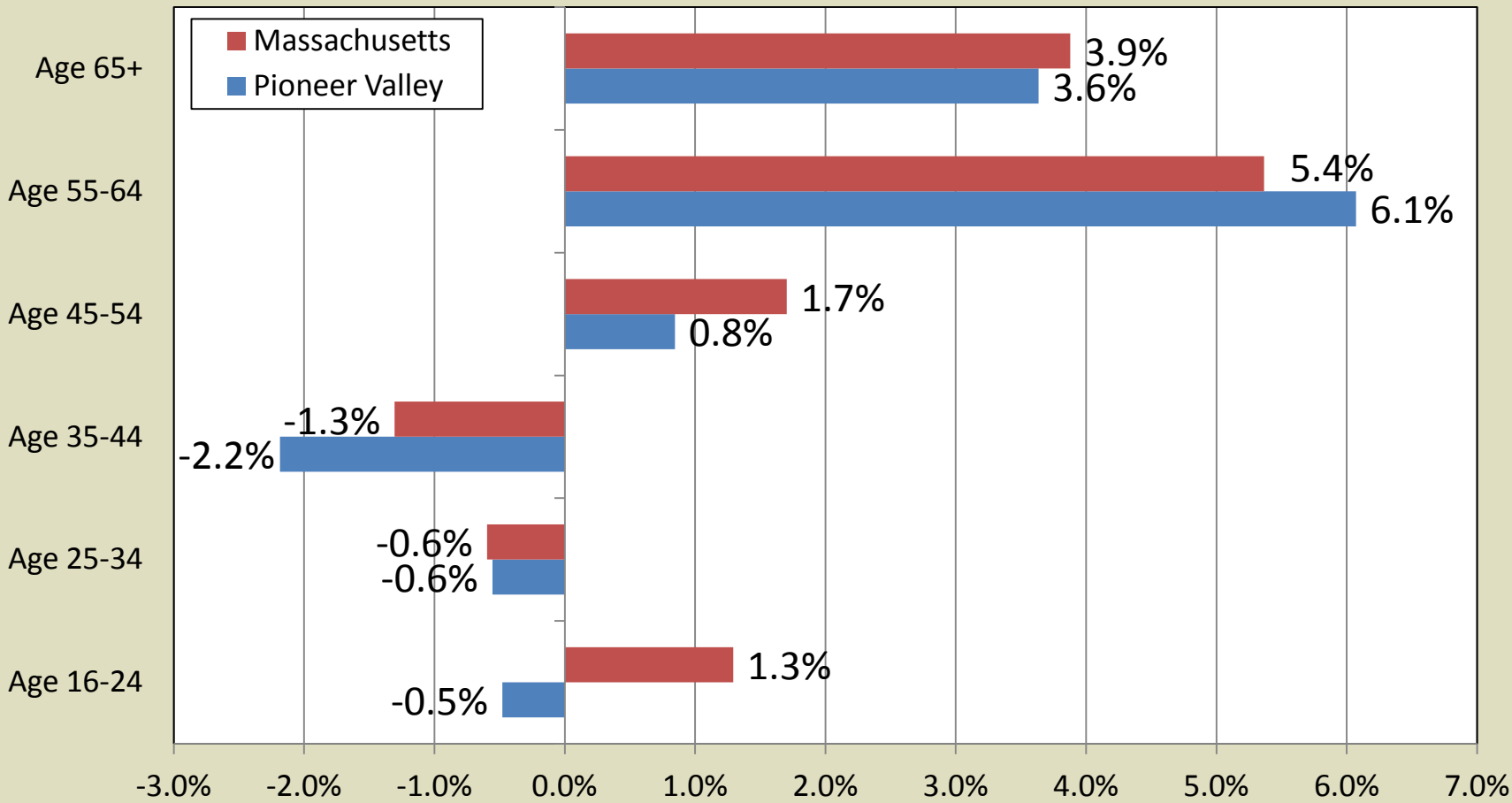
Age Distribution of the Civilian Labor Force



Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.

Pioneer Valley was the only region to see a decline in the number of 16-24 year olds in the labor force in the past decade.

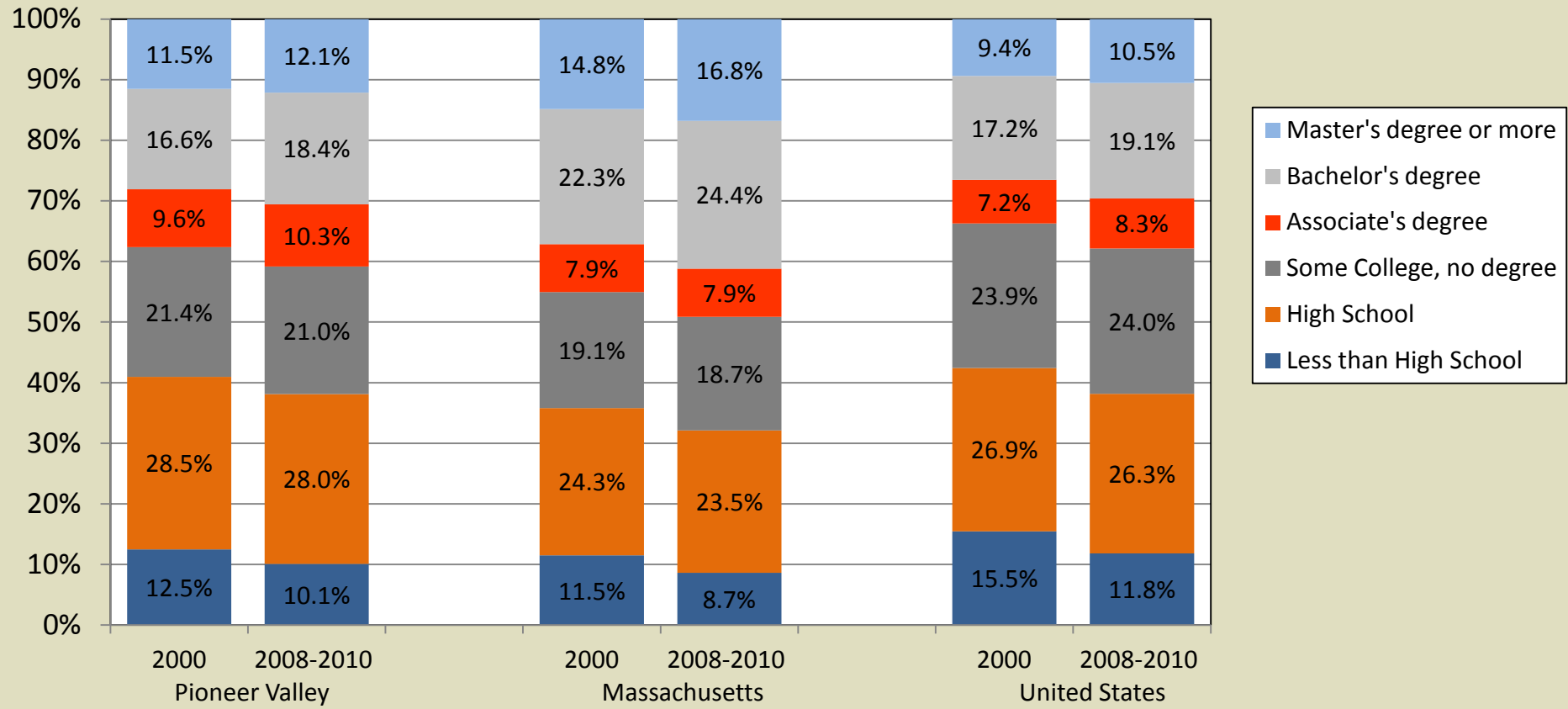
Annual Growth in the Civilian Labor Force by Age, 2000 to 2008-2010



Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.

The region's labor force has the highest concentration of individuals with a High School Degree or less in the state.

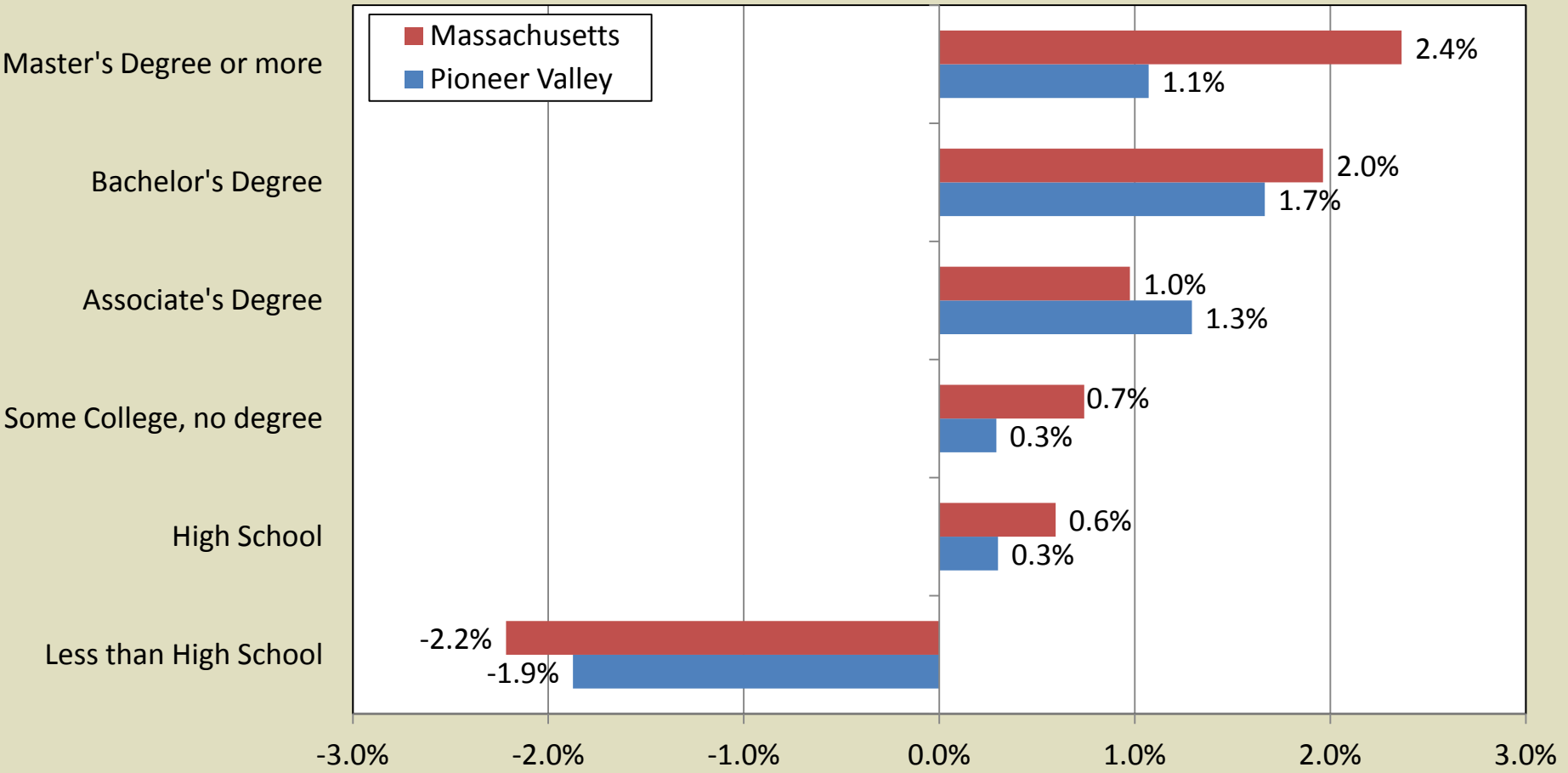
Educational Attainment of the Civilian Labor Force



Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.

Educational attainment has increased considerably in the past decade, but Pioneer Valley has trailed Massachusetts.

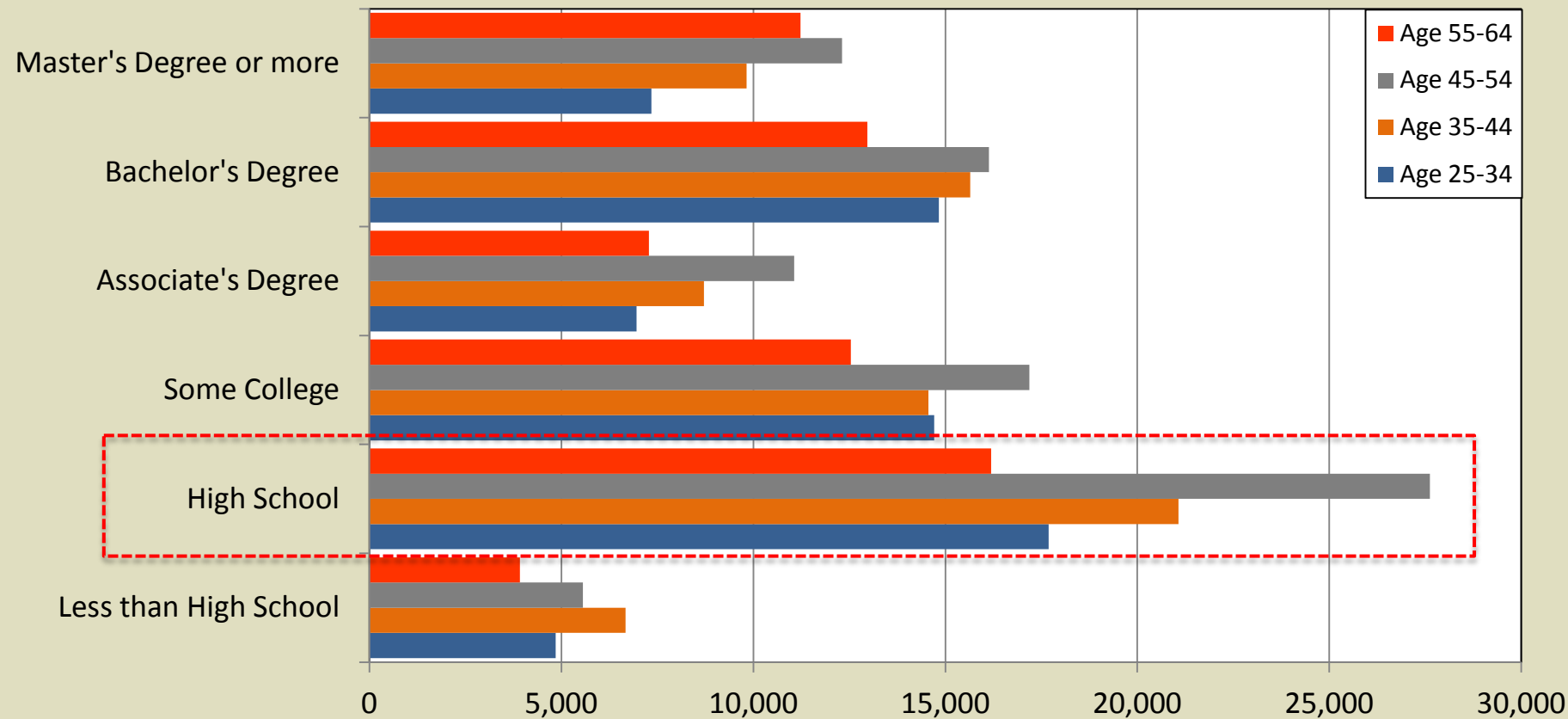
Annual Growth in the Civilian Labor Force by Education, 2000 to 2008-2010



Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.

The combination of lower levels of educational attainment and an aging population present challenges for Pioneer Valley.

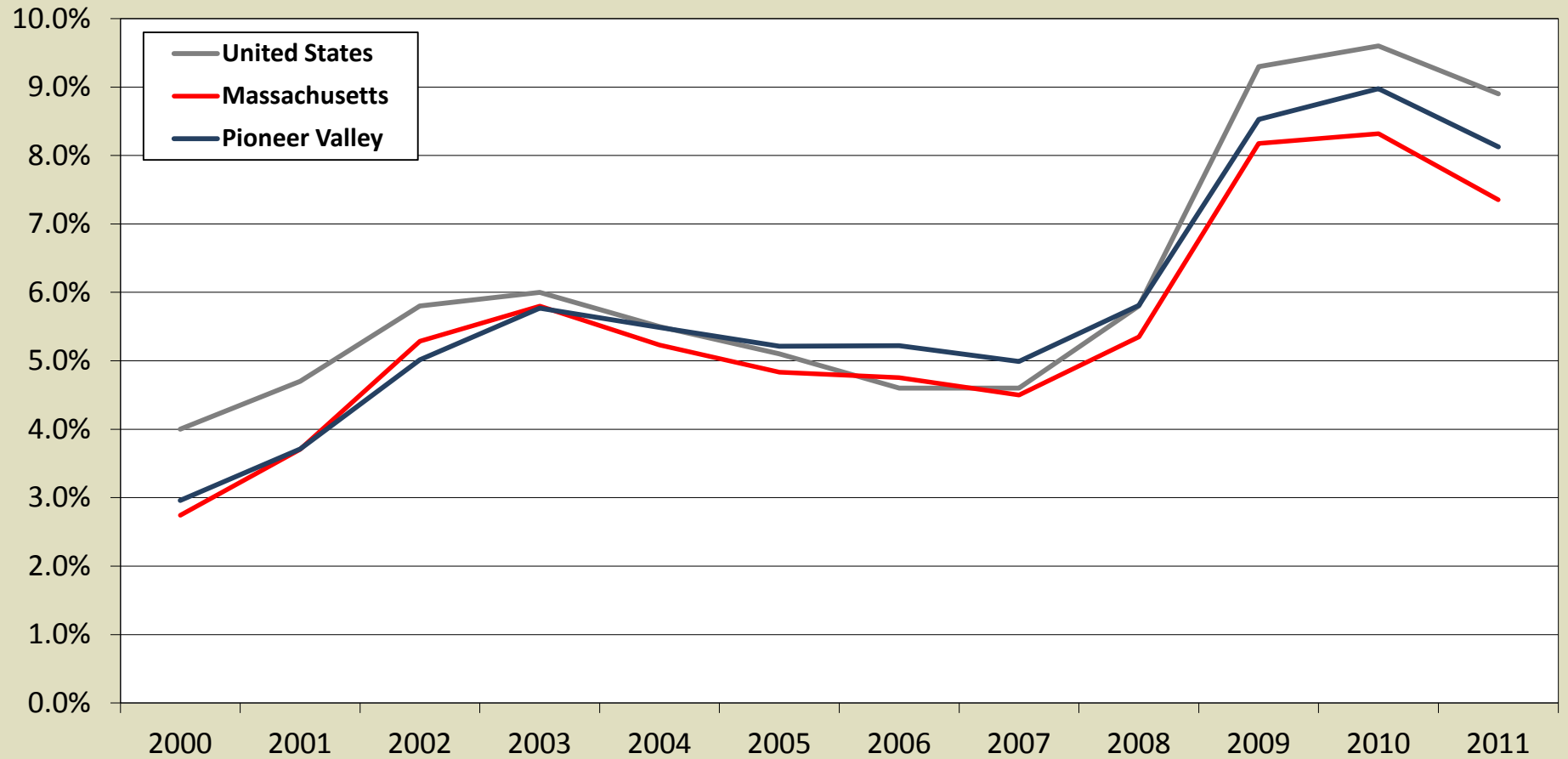
Educational Attainment of the Civilian Labor Force in Pioneer Valley



Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.

In the Great Recession the unemployment rate reached 9.0 percent in Pioneer Valley, third highest among all regions.

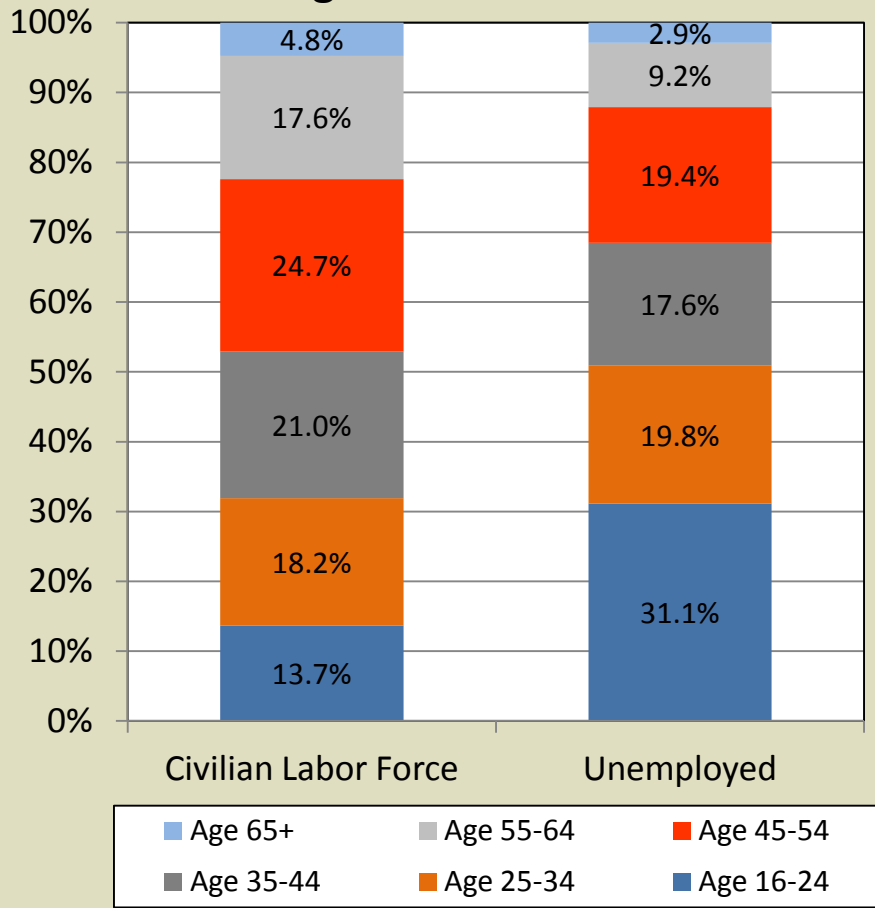
Unemployment Rates, 2000 to 2011



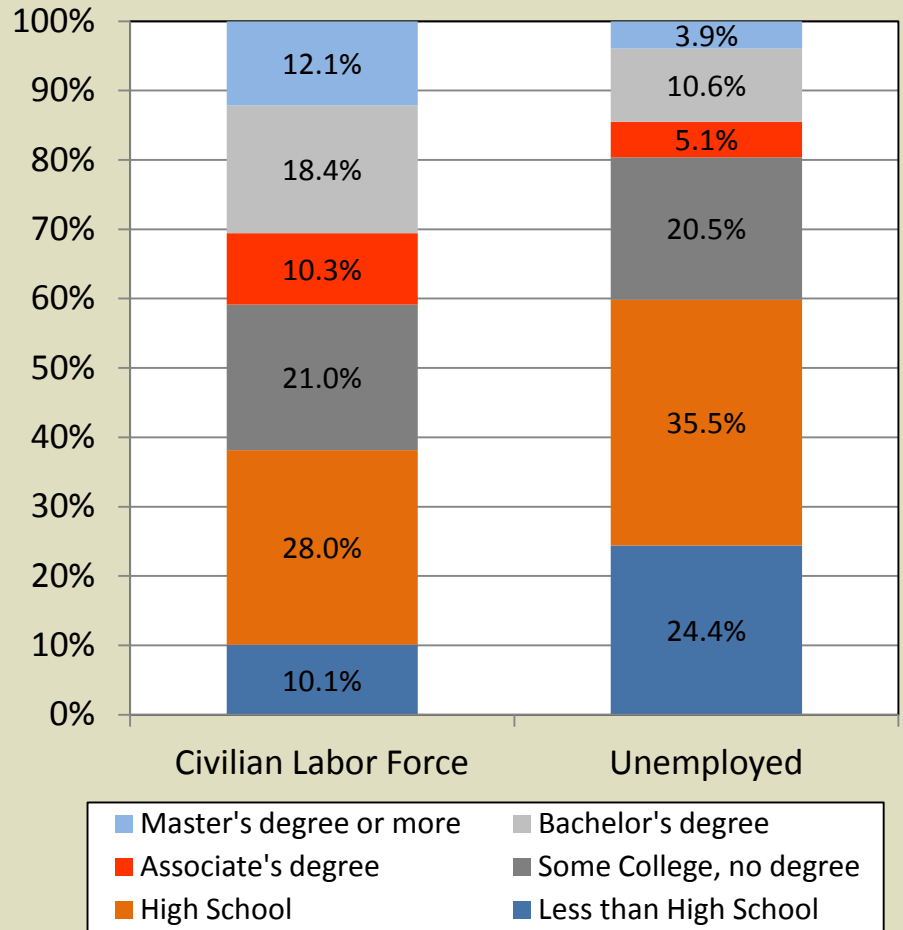
Source: U.S. Bureau of Labor Statistics, Current Population Survey and Massachusetts EOLWD, Labor Force and Unemployment Rates.

The unemployed in Pioneer Valley are disproportionately younger and have lower levels of educational attainment.

Age Distribution



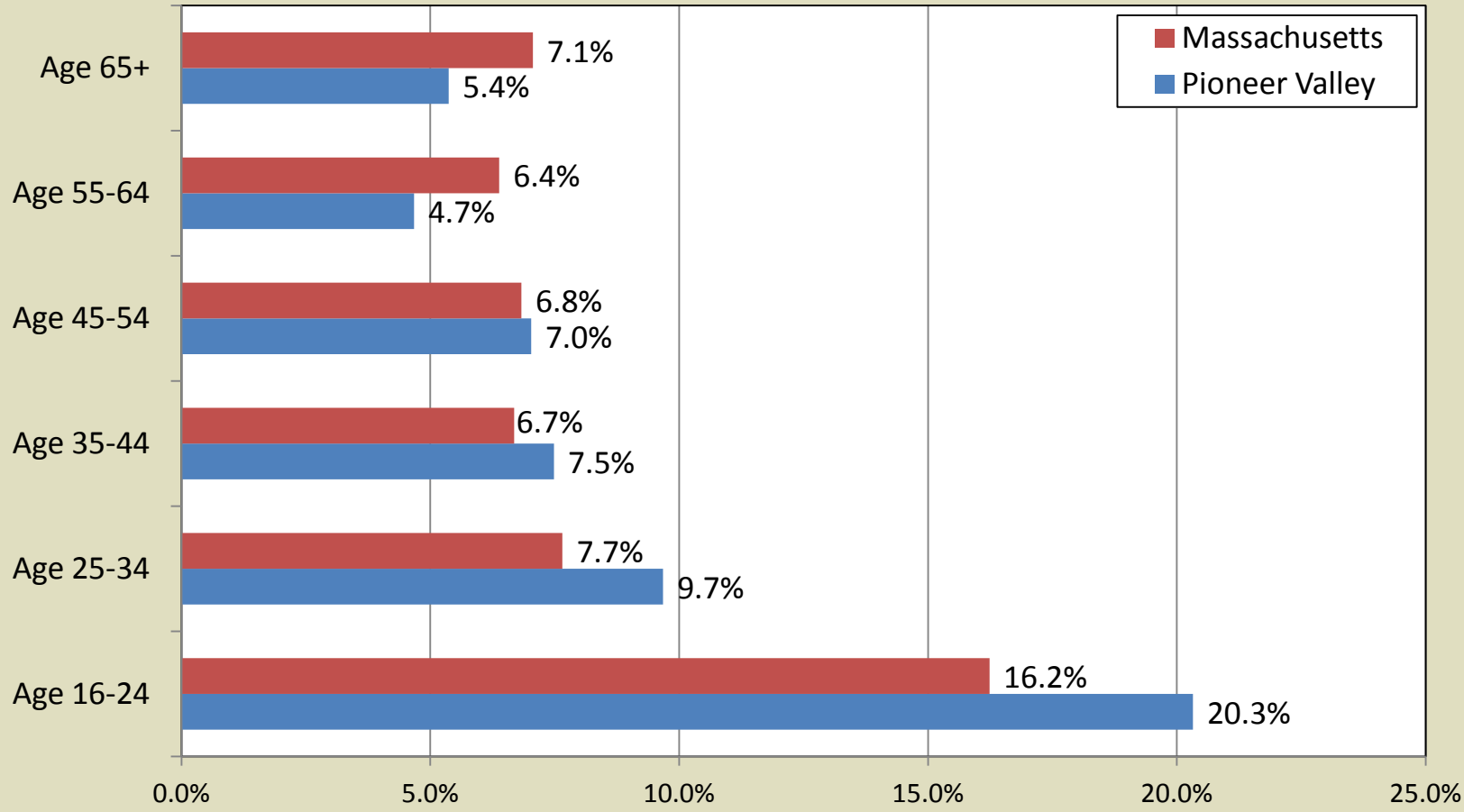
Education Distribution



Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.

One in five 16-24 year olds in Pioneer Valley is unemployed, and is more likely to be unemployed than any other age group.

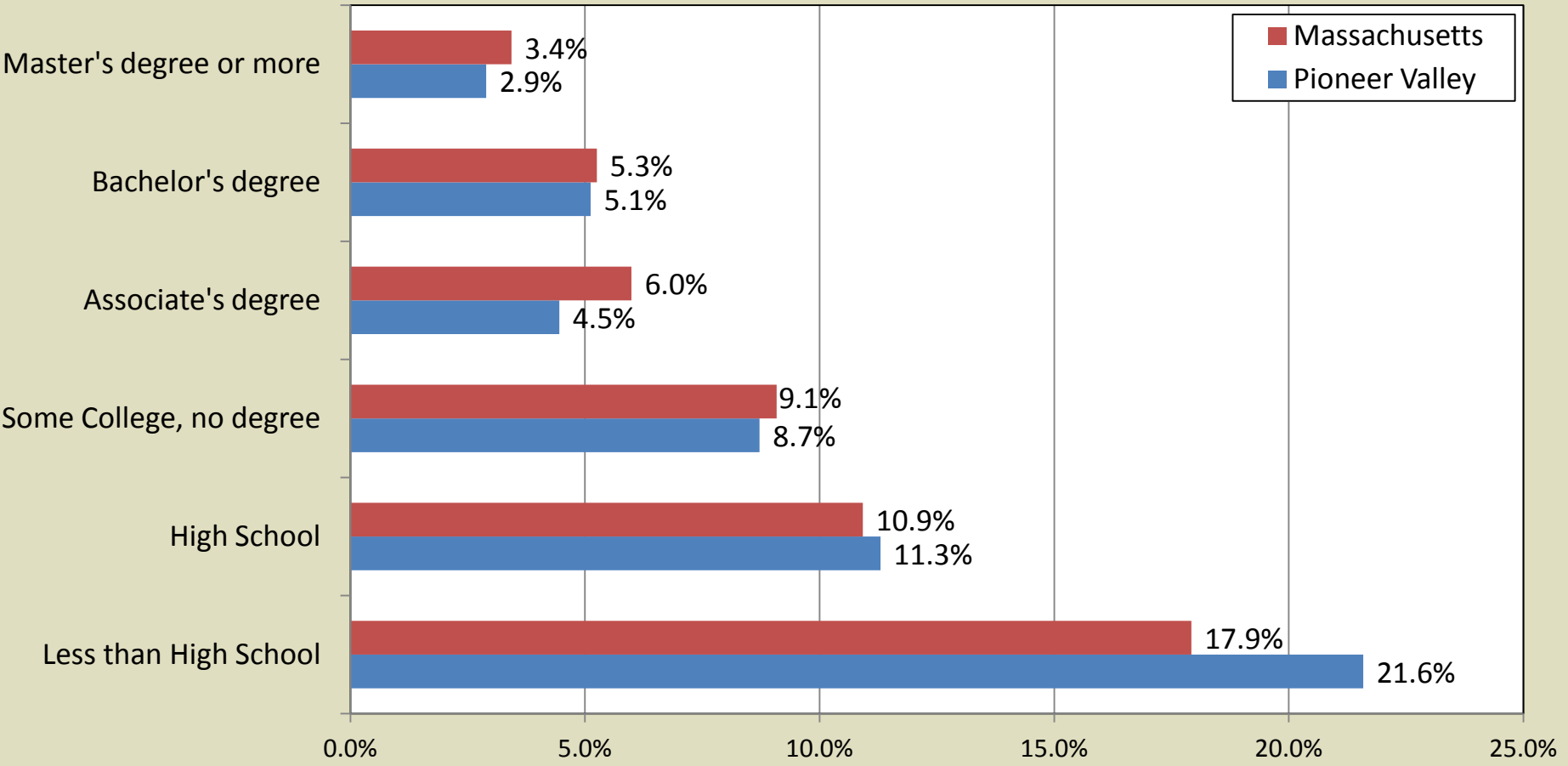
Unemployment Rates by Education, 2008-2010



Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.

Those with less than a high school education are seven times more likely to be unemployed than those with a Master's Degree or higher.

Unemployment Rates by Education, 2008-2010



Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.

Compared to other labor markets, Pioneer Valley has strong commuting ties to Connecticut but weak ties with other regions.

	Number	Percent of Total
Total number of employed persons living in Pioneer Valley...	324,026	100.0%
...that work in:		
Pioneer Valley	277,172	85.5%
Central Mass	8,718	2.7%
Berkshire	5,431	1.7%
Other parts of Massachusetts	4,714	1.5%
Connecticut	23,550	7.3%
Vermont	1,337	0.4%
New York	1,032	0.3%
Other places outside Massachusetts	2,072	0.6%
Total number of persons working in Pioneer Valley...	302,831	100.0%
...that live in:		
Pioneer Valley	277,172	91.5%
Central Mass	5,902	1.9%
Berkshire	2,762	0.9%
Other parts of Massachusetts	2,309	0.8%
Connecticut	10,797	3.6%
New York	1,039	0.3%
Vermont	832	0.3%
Other places outside Massachusetts	2,018	0.7%
Net in-commuting	-21,195	-

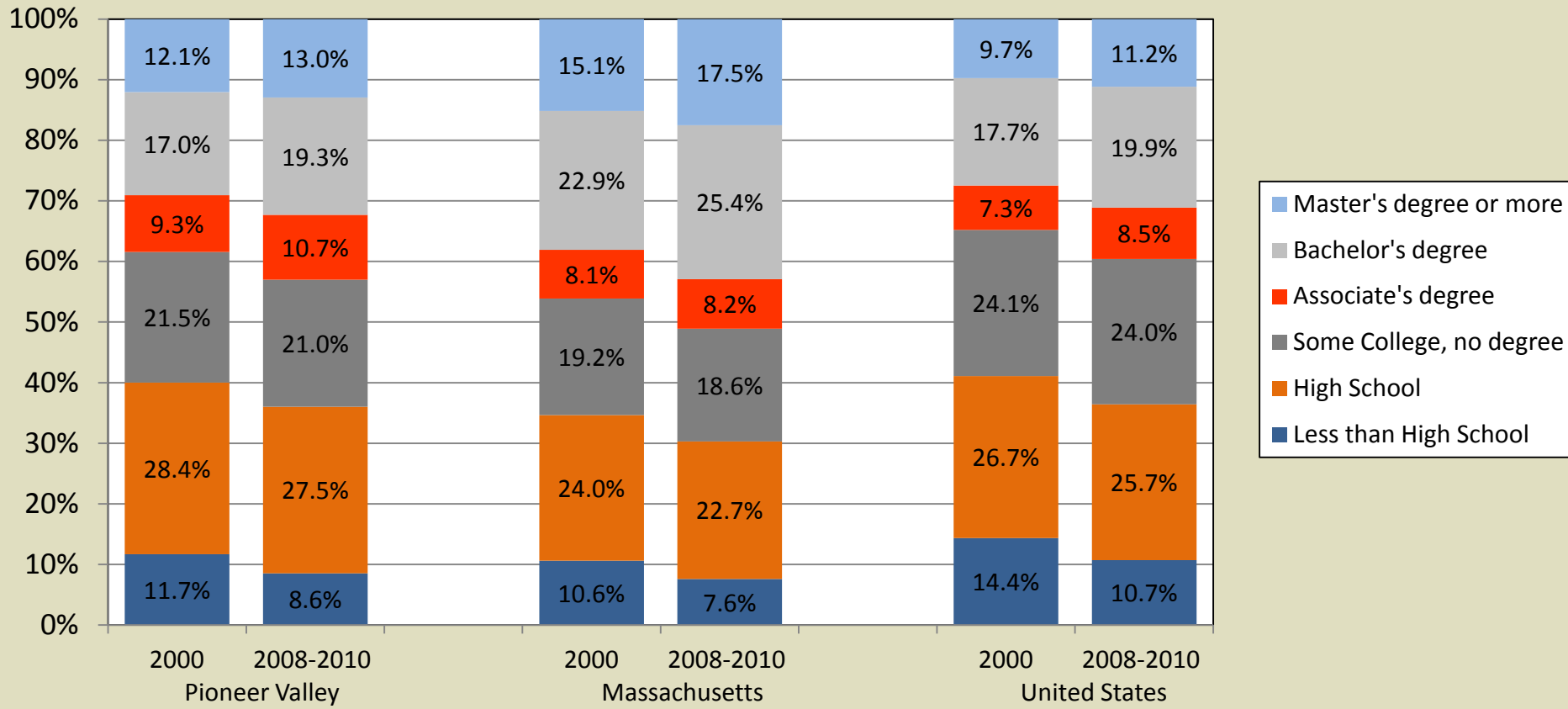
Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.

Labor Demand

- Educational Attainment of Employed
- Educational Attainment and Composition of Industries and Occupations
- Demand for Workers with Post-Secondary Education Pre-Recession

The educational attainment of those employed in Pioneer Valley is closer to the nationwide workforce than statewide.

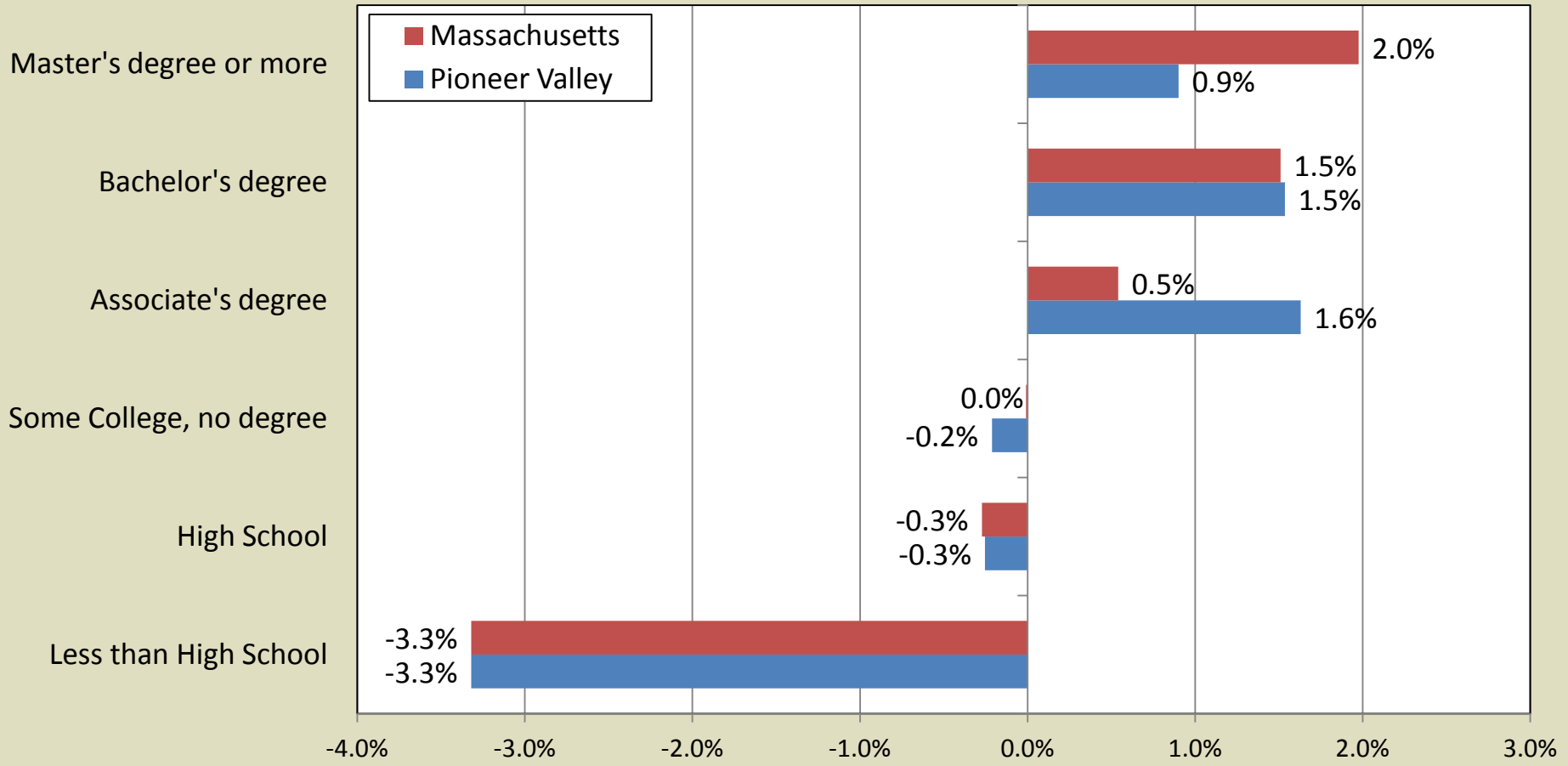
Educational Attainment of Individuals Employed in the Region



Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.

A growing number of employees have an Associate's Degree or higher, while a shrinking number have lower levels of education.

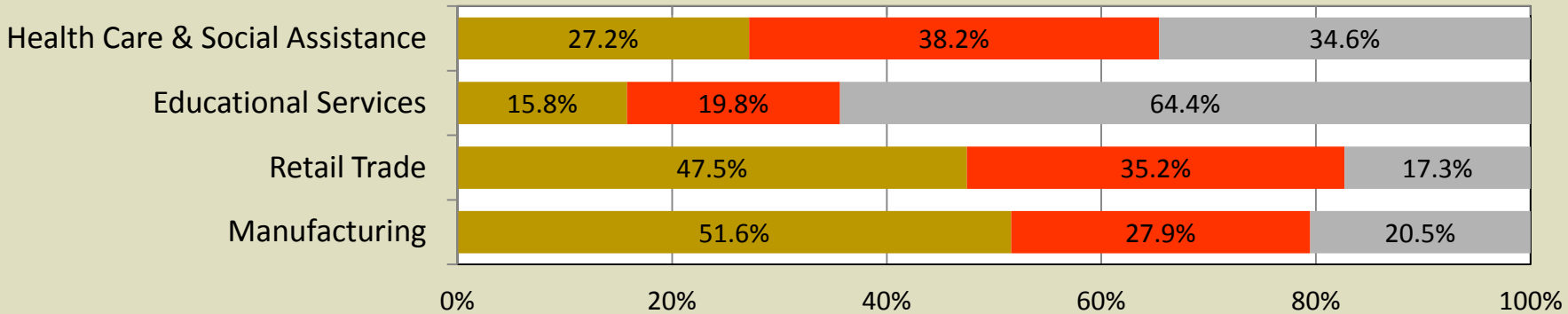
Annual Growth in the Employed by Education, 2000 to 2008-2010



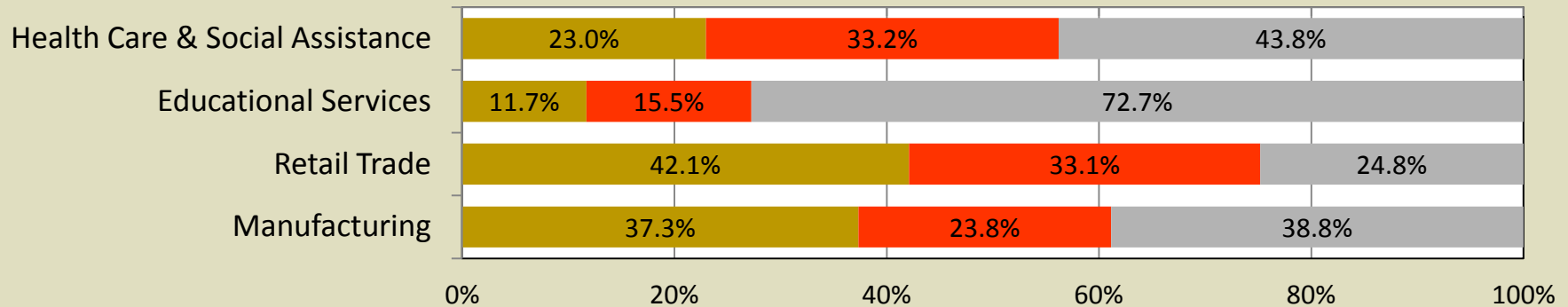
Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.

Industries in Pioneer Valley have smaller shares of employees with a Bachelor's Degree or Higher, but larger shares with "middle-skills".

Educational Attainment of Employees by Selected Major Industries in Pioneer Valley



Educational Attainment of Employees by Selected Major Industries in Massachusetts

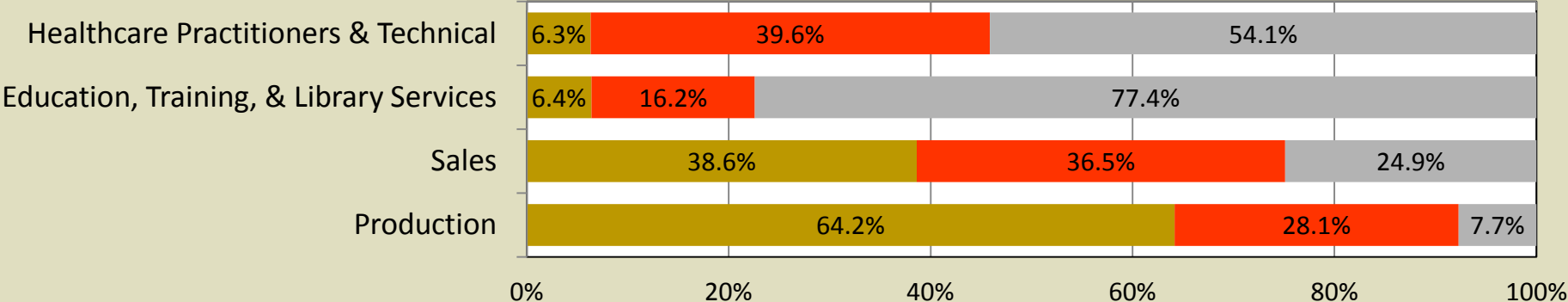


■ High School Degree or Less
 ■ Some College or Associate's Degree
 ■ Bachelor's Degree or Higher

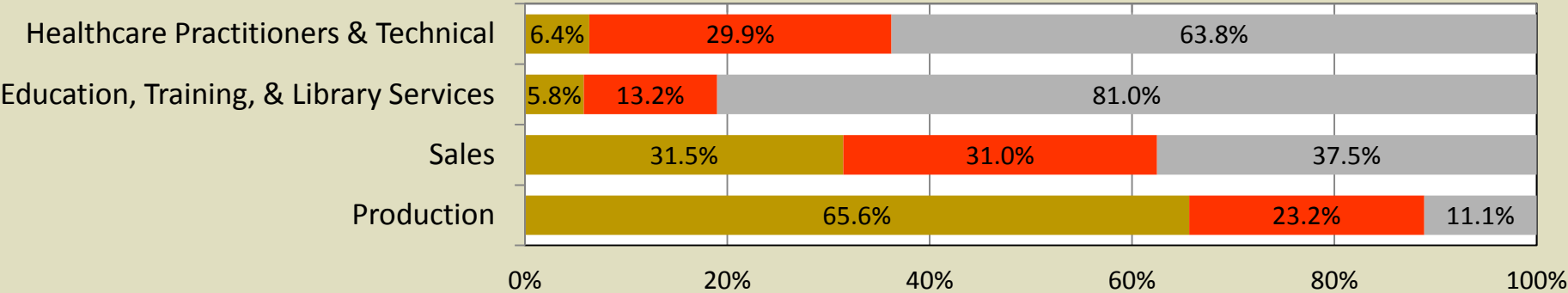
Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.

The pattern persists across occupations, especially for Healthcare Practitioners & Technical occupations.

Educational Attainment of Employees by Selected Occupations in Pioneer Valley



Educational Attainment of Employees by Selected Occupation in Massachusetts

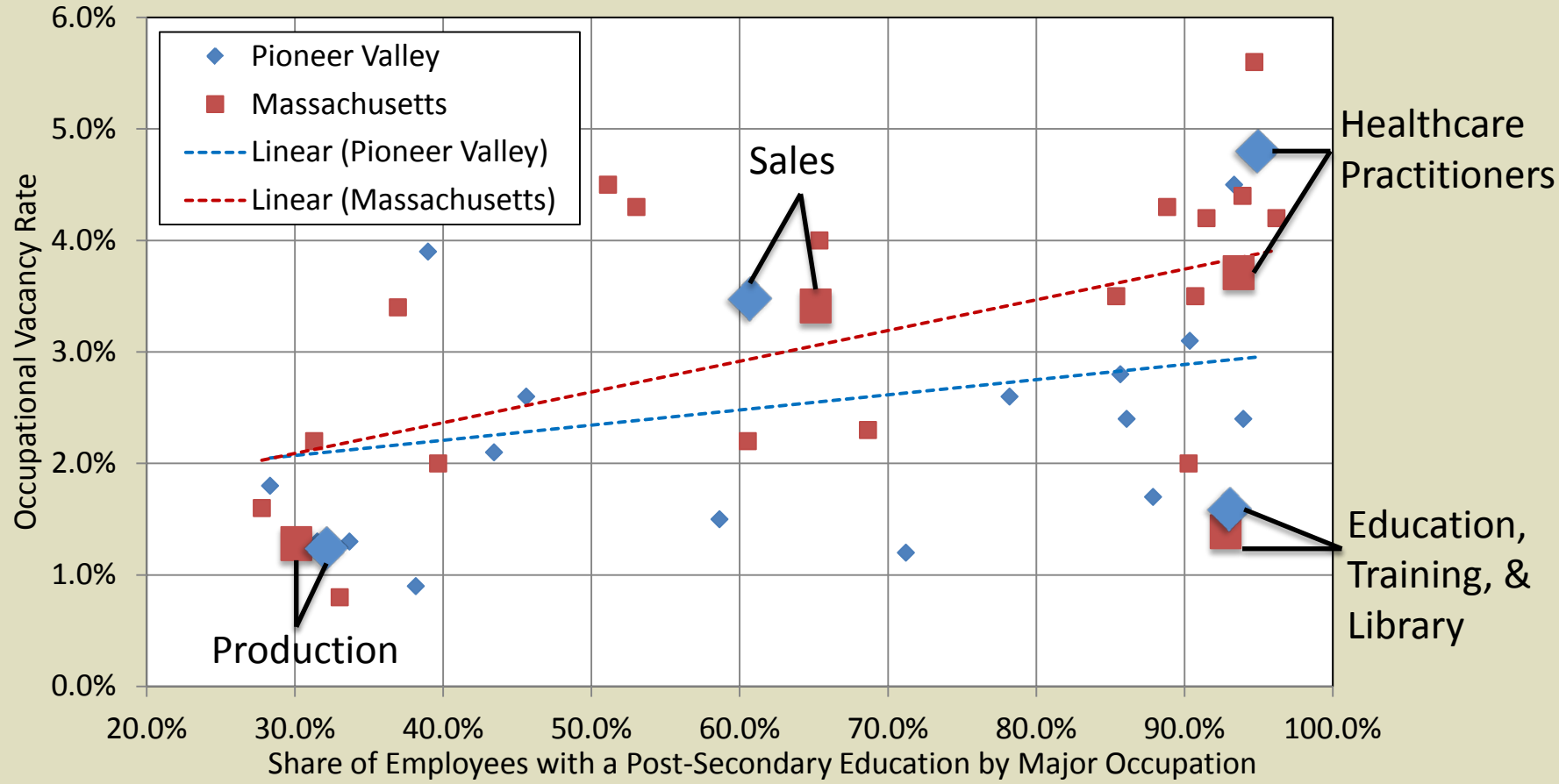


■ High School Degree or Less ■ Some College or Associate's Degree ■ Bachelor's Degree or Higher

Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.

Prior to the recession, there were higher vacancy rates in the more highly educated occupations than the less educated ones.

Job Vacancies and Educational Attainment by Occupation, Pre-Recession



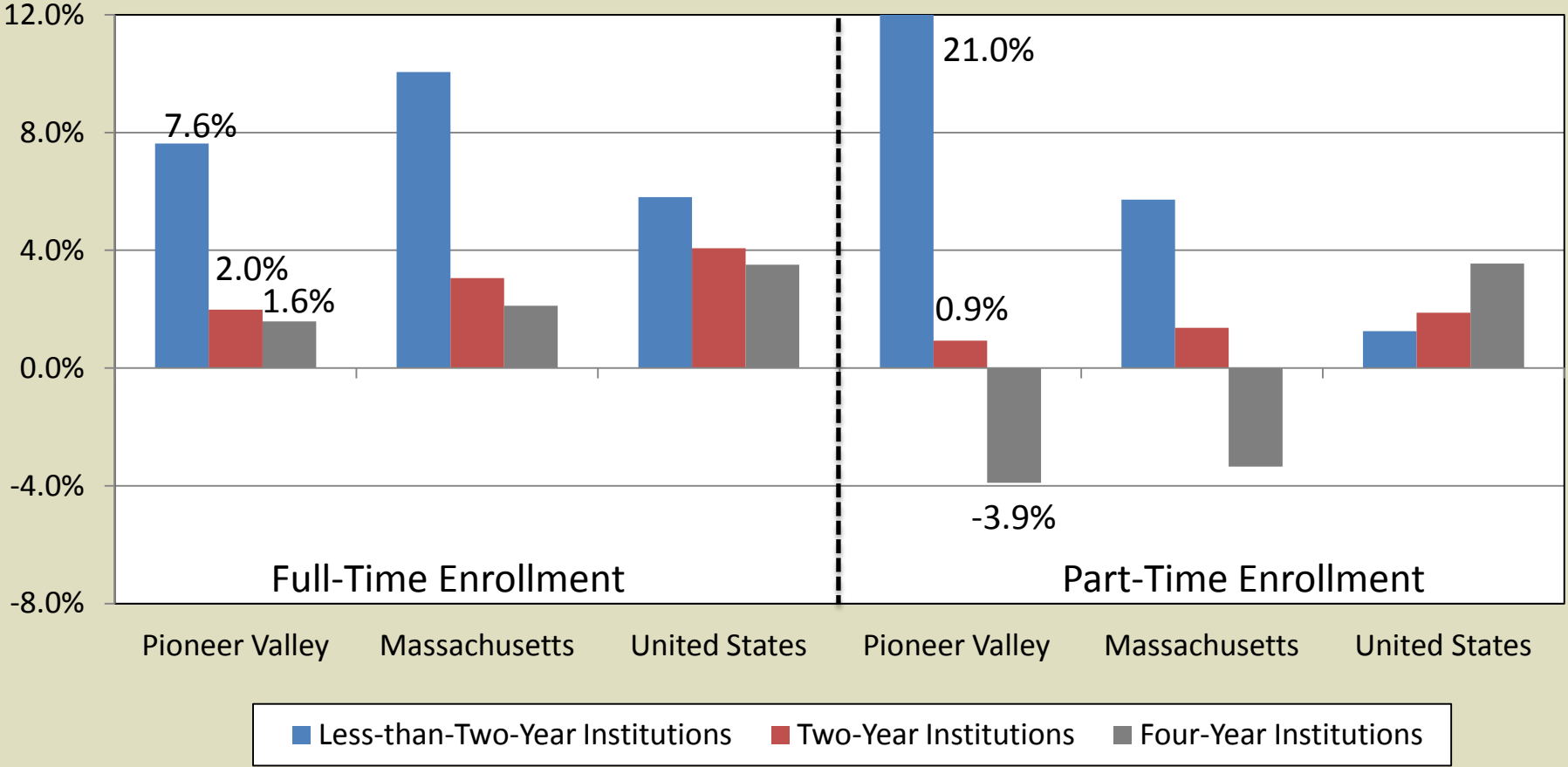
Source: Massachusetts EOLWD, Job Vacancy Survey and U.S. Census Bureau 2005-2007 ACS PUMS data files.

The Pipeline: Educational Supply of Post-Secondary Degrees

- Enrollment Patterns
- Degree Completions

Enrollments at institutions in Pioneer Valley have trailed statewide trends, and most national trends, in the past decade.

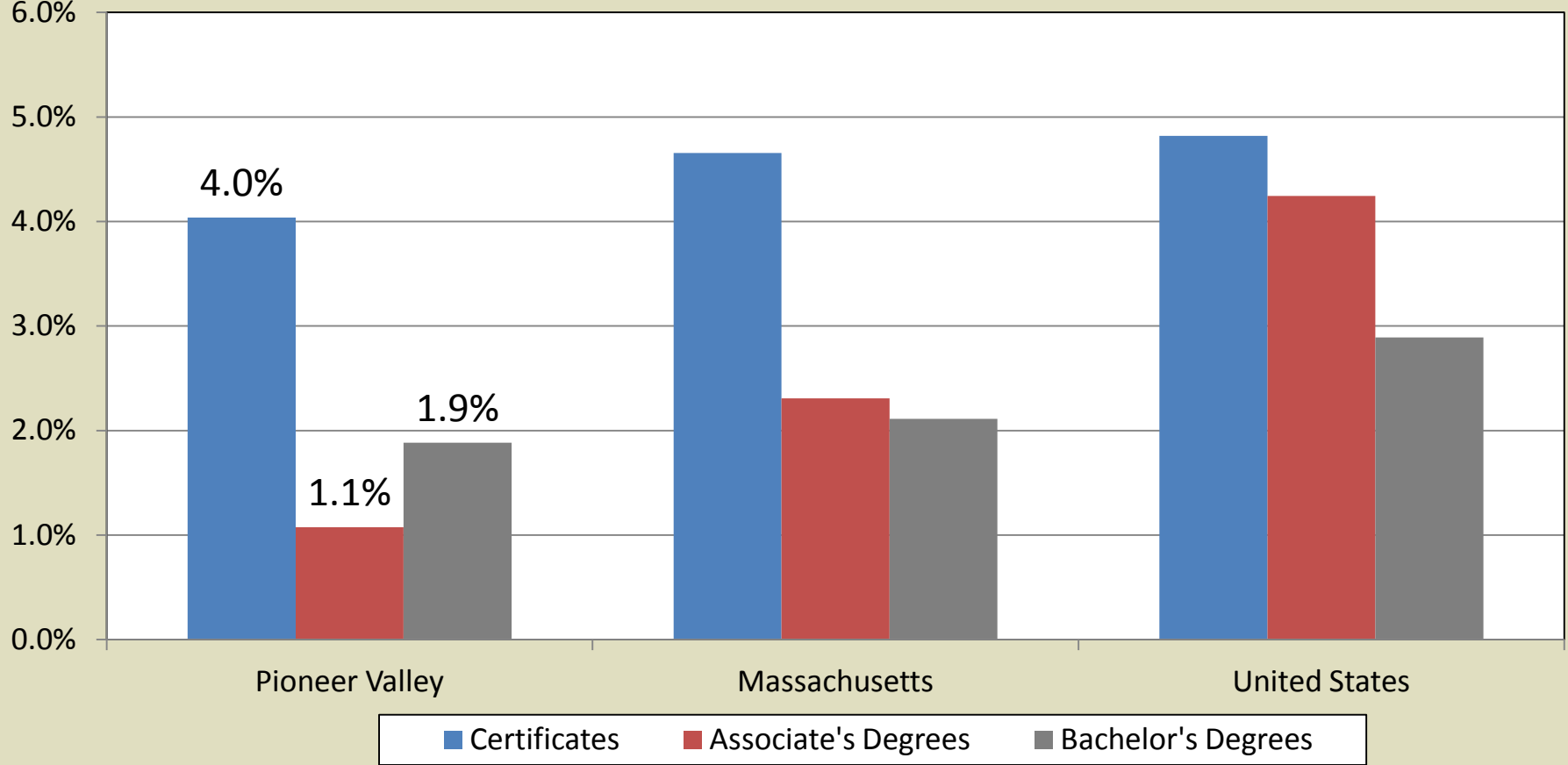
Annual Growth in Enrollments, 2000 to 2010



Source: National Center for Education Statistics, Integrated Post-Secondary Educational Data System.

Over the last decade completions of programs and degrees in Pioneer Valley have trailed state and national trends.

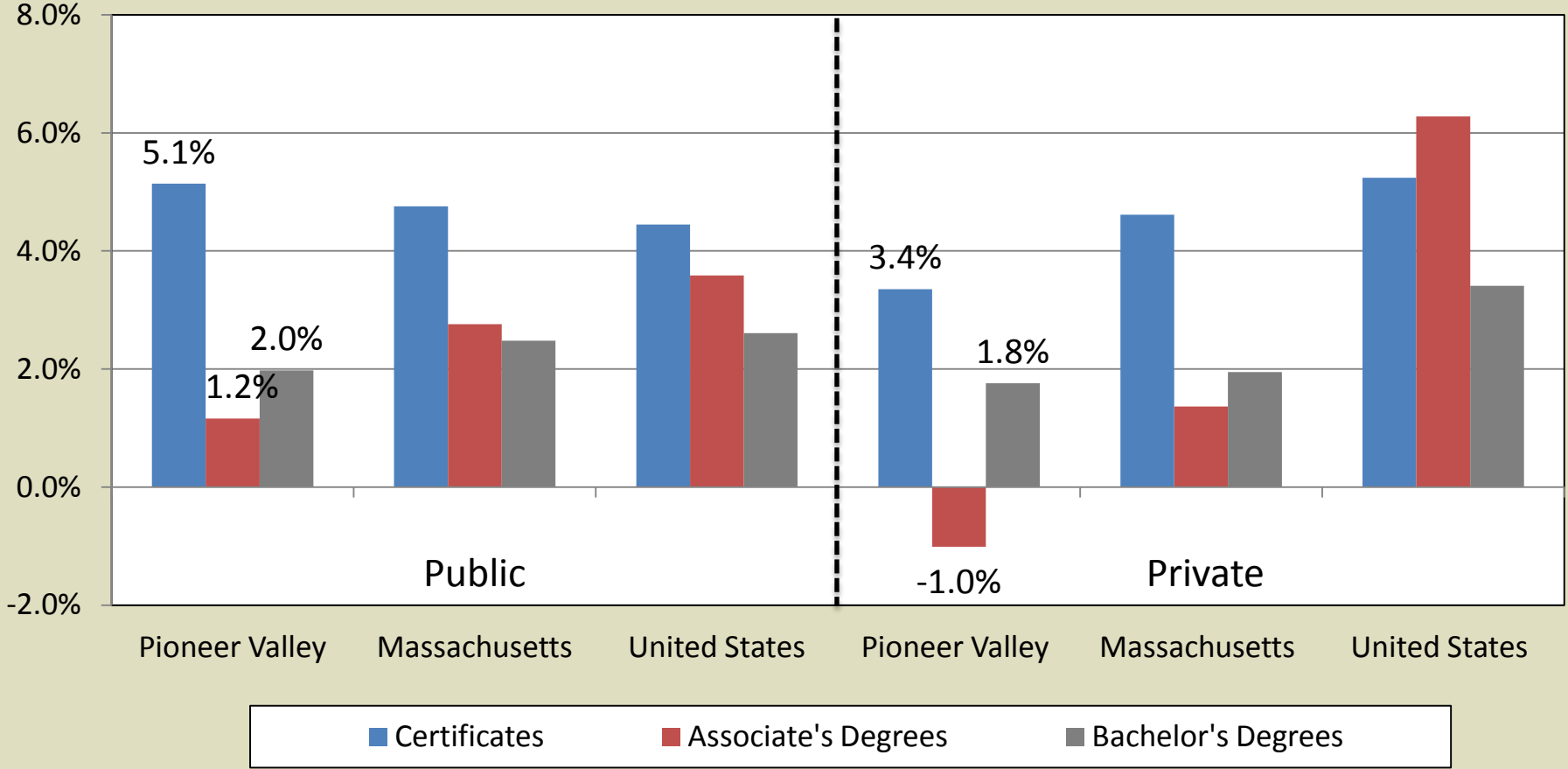
Annual Growth in Completions, 2000 to 2010



Source: National Center for Education Statistics, Integrated Post-Secondary Educational Data System.

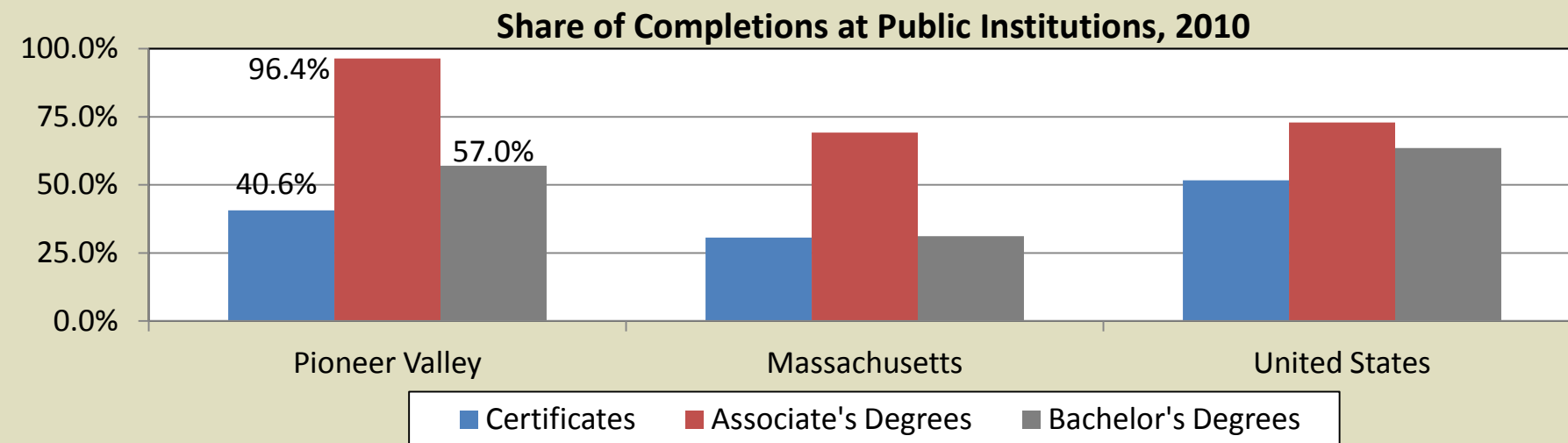
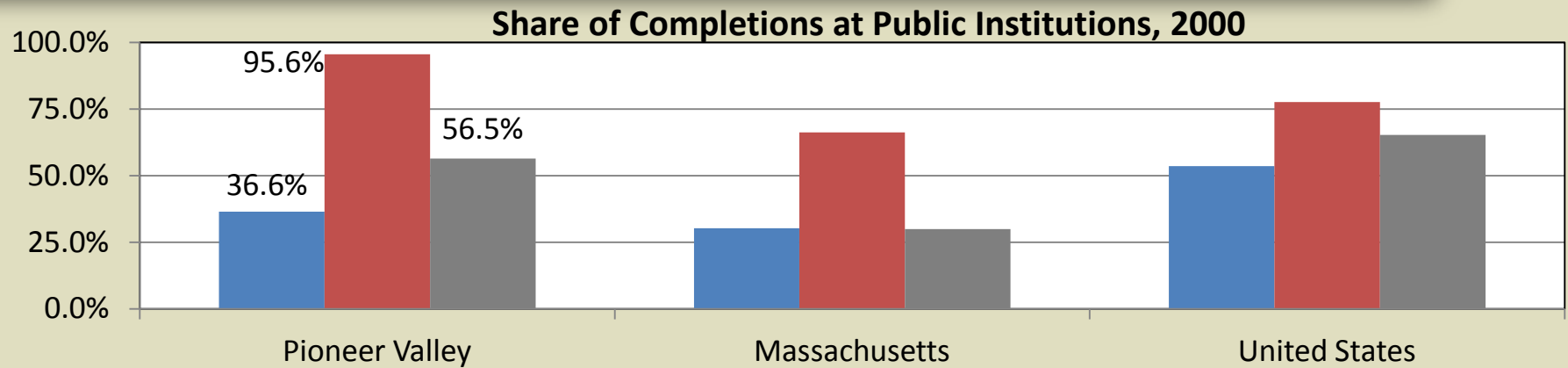
Completions from public institutions in Pioneer Valley have outpaced private ones in the region.

Annual Growth in Completions, 2000 to 2010



Source: National Center for Education Statistics, Integrated Post-Secondary Educational Data System.

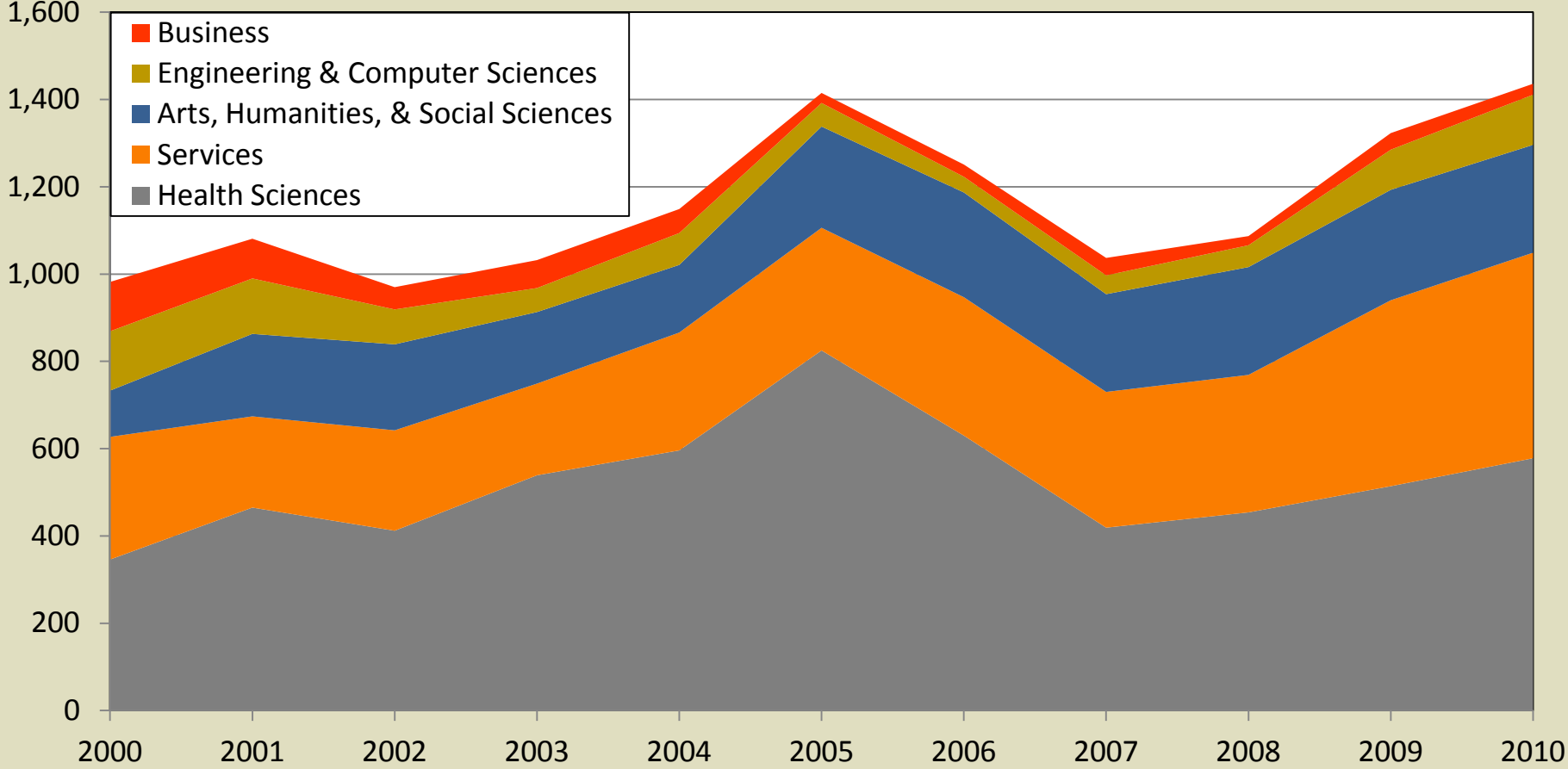
Public institutions in Pioneer Valley play a larger role in all forms of post-secondary education than statewide.



Source: National Center for Education Statistics, Integrated Post-Secondary Educational Data System.

Health Sciences and Services have accounted for most of the Certificates completed in Pioneer Valley.

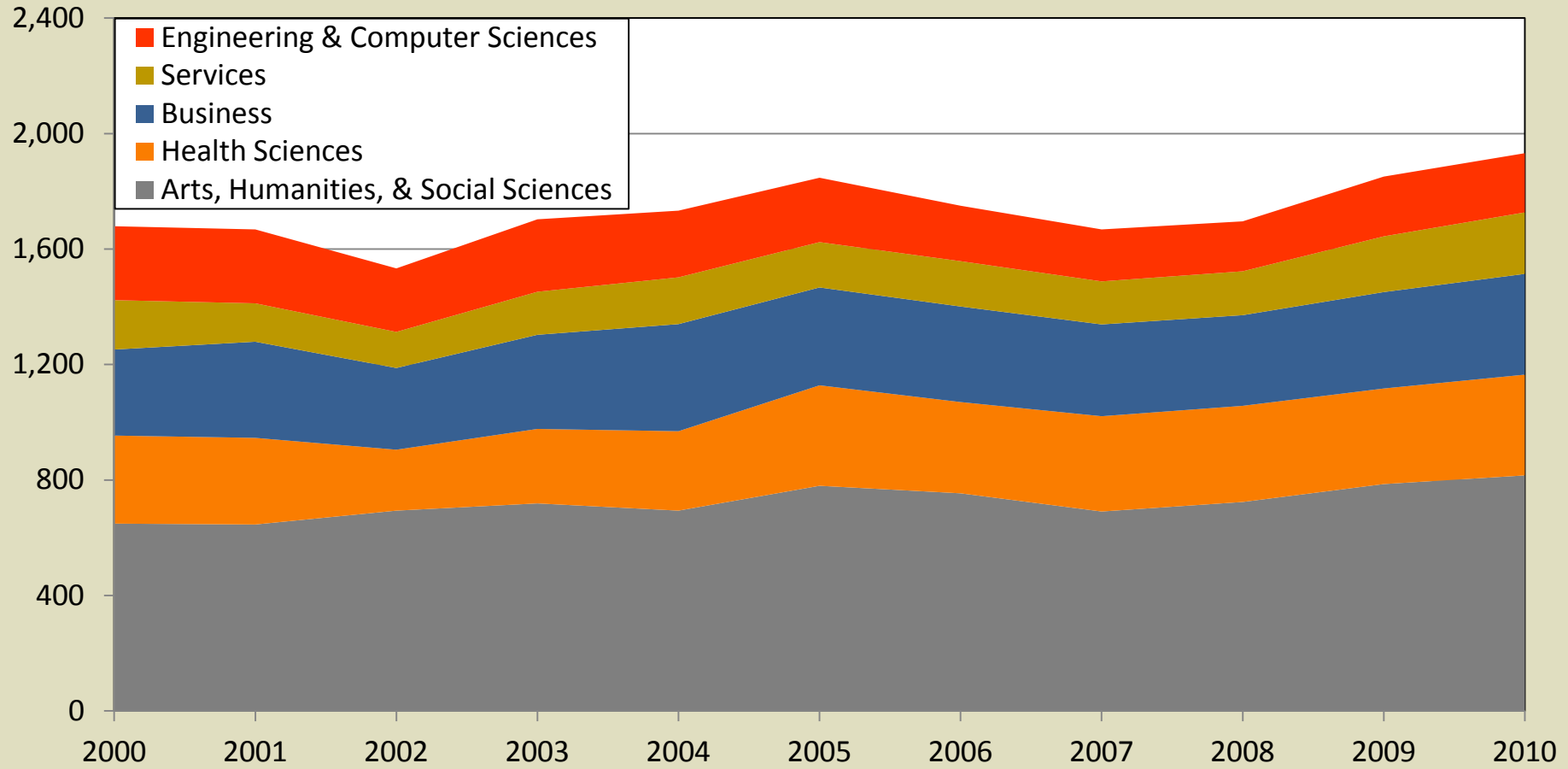
Annual Certificate Completions by Major in Pioneer Valley, 2000 to 2010



Source: National Center for Education Statistics, Integrated Post-Secondary Educational Data System.

Nearly 40 percent of Associate's Degrees completed in Pioneer Valley are in Arts, Humanities, & Social Sciences.

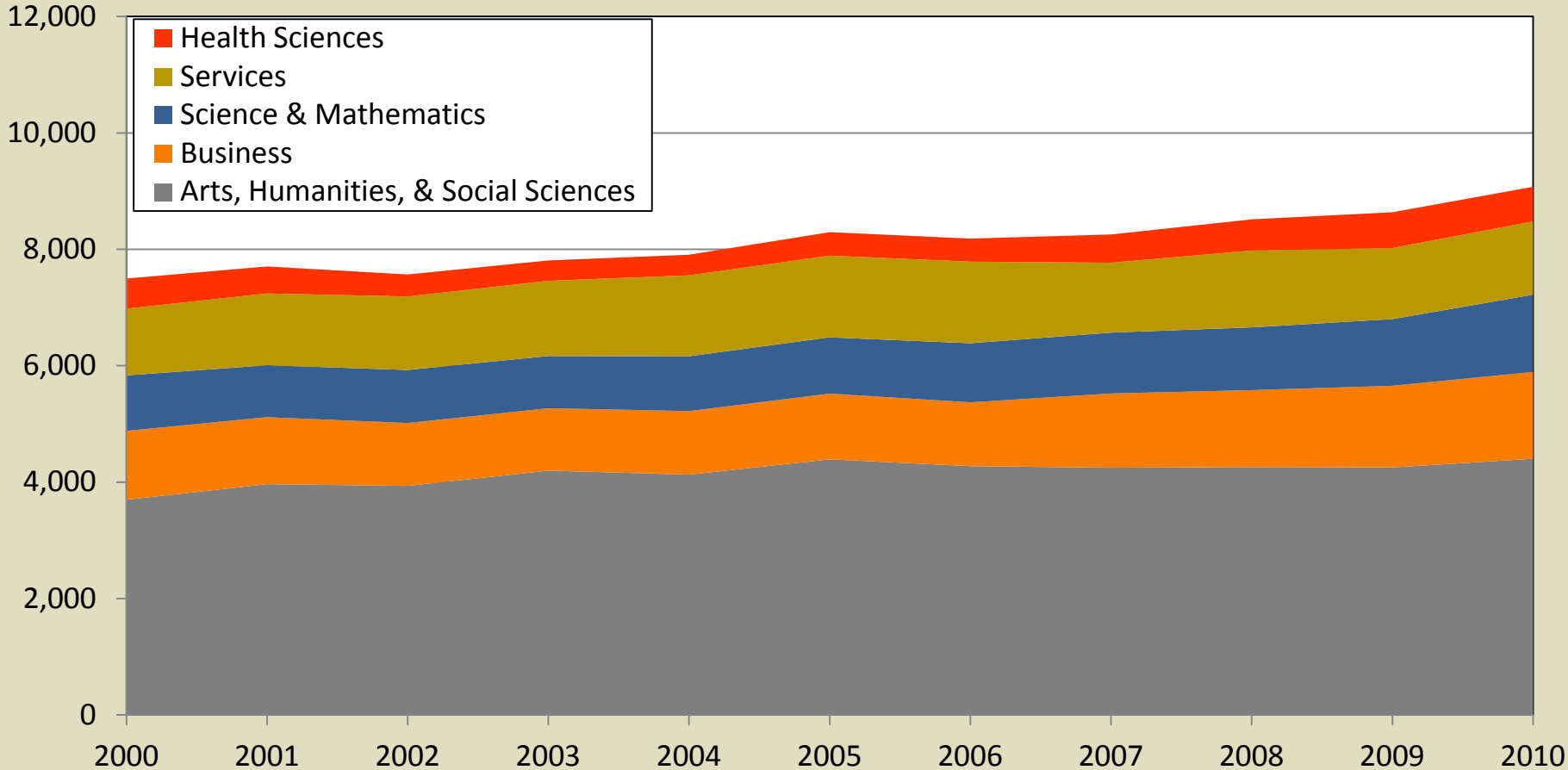
Annual Associate's Degree Completions by Major in Pioneer Valley, 2000 to 2010



Source: National Center for Education Statistics, Integrated Post-Secondary Educational Data System.

Similar to Associate's Degrees, more than 40 percent of the region's Bachelor's Degrees are in Art, Humanities, & Social Sciences.

Annual Bachelor's Degree Completions by Major in Pioneer Valley, 2000 to 2010



Source: National Center for Education Statistics, Integrated Post-Secondary Educational Data System.

Summary

- An aging workforce, declines in younger workers, and a stagnant population will force the region to confront demographic challenges sooner than other regions.
- Despite gains in the educational attainment of its labor force in the past decade, Pioneer Valley still has the highest share of individuals with only a High School Degree or less.
- Addressing the barriers to full employment facing the region's unemployed, particularly among the young and less educated, is key to the recovery of the region.
- Given such trends, what should be done to ensure the future economic vitality of Pioneer Valley moving forward?

Thank You



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