

Labor Market Trends in the Northeast Region

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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 Northeast Region



Summary

- After nearly a decade of declining employment the Northeast region is recovering at the strongest pace of all regional labor markets, but continues to face high levels of unemployment.
- The demographic challenges of slow population growth and an aging labor force *may* result in shortfalls of the workers demanded by employers.
- Despite having smaller shares of residents and workers with a Bachelor's Degree, the Northeast region has comparable levels of post-secondary educational attainment to the state.
- The region's higher education institutions had some of the strongest growth in enrollments and completions in the state.

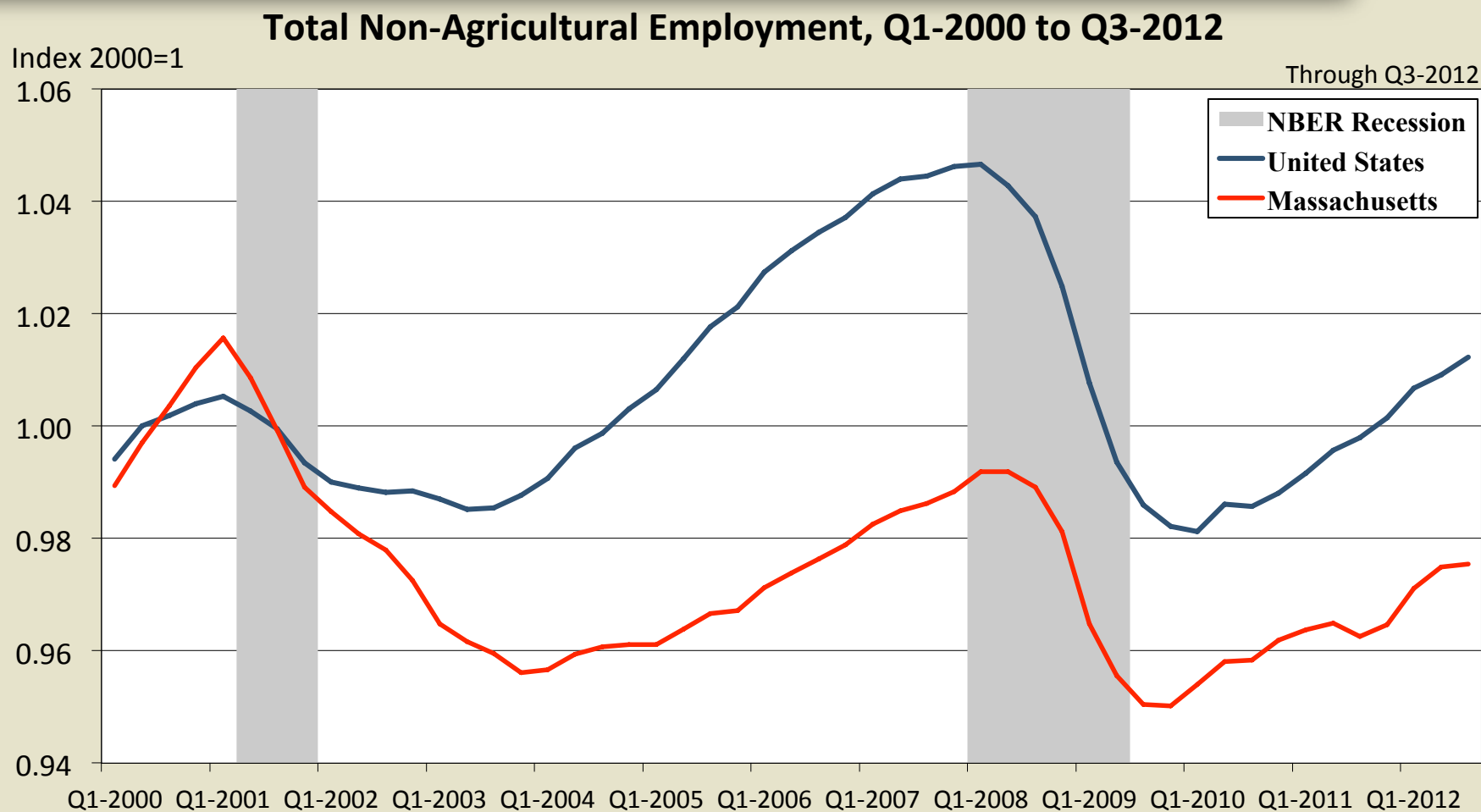
Outline

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

Labor Market Performance

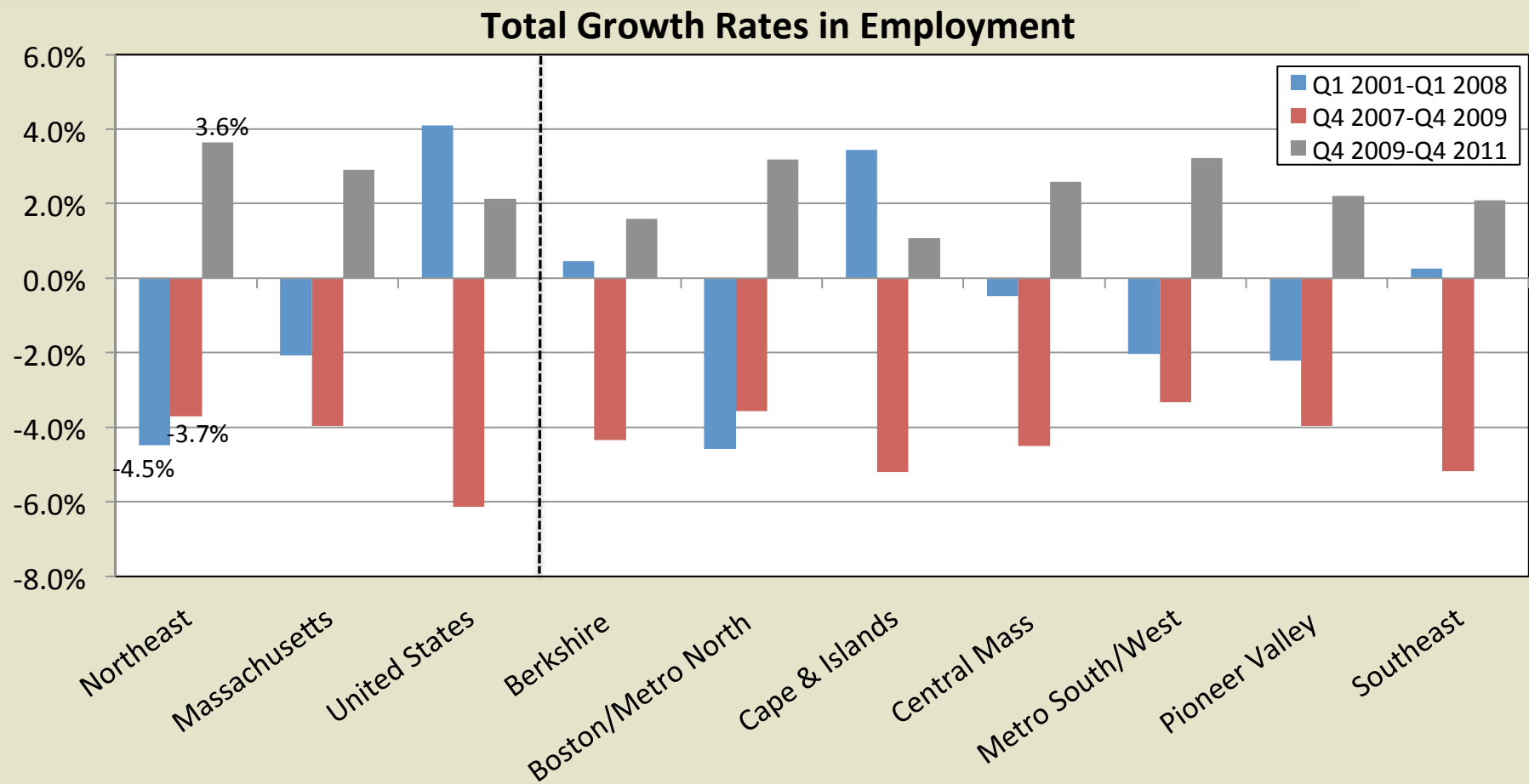
- National and State Employment Trends
- Performance of Regional Labor Markets
- Employment Trends by Industry in the Northeast Region and Massachusetts

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



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

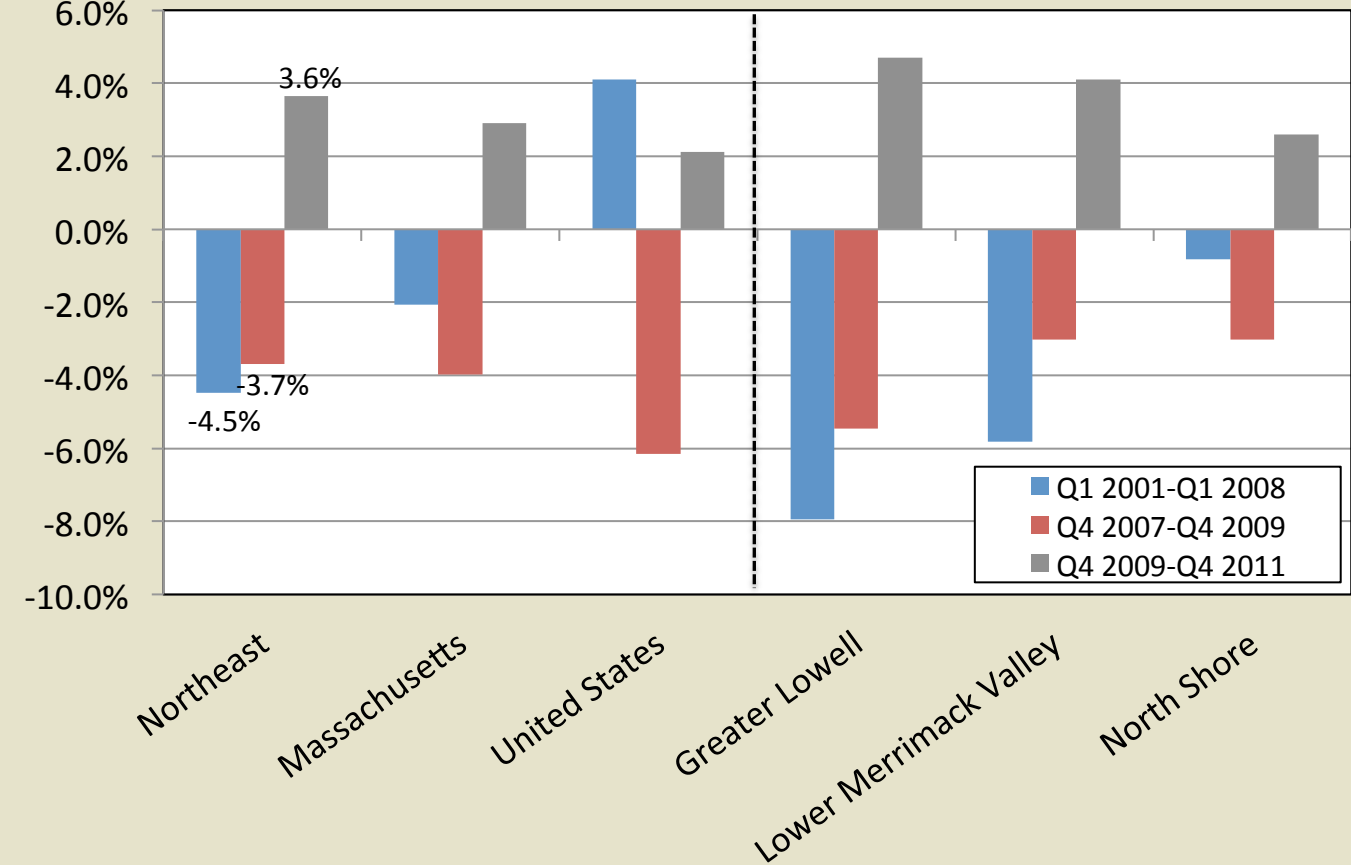
Following employment losses over much of the past decade, the Northeast region has had the strongest recovery in the state.



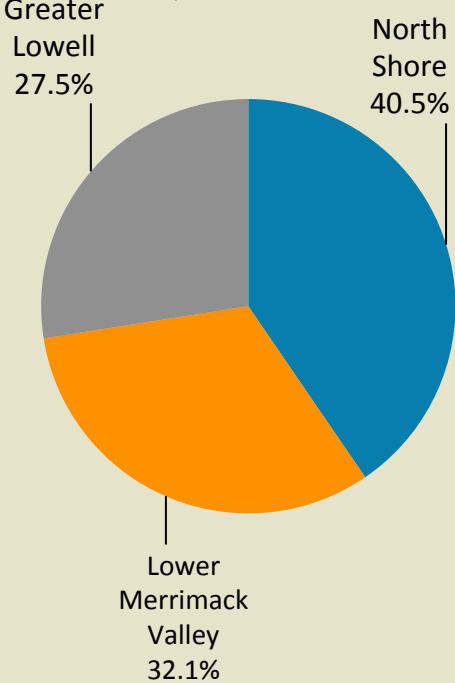
Sources: Massachusetts Executive Office of Labor and Workforce Development (EOLWD), ES-202 and U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

Following steep declines in employment, Greater Lowell and Lower Merrimack Valley are leading in the recovery of jobs.

Total Growth Rates in Employment



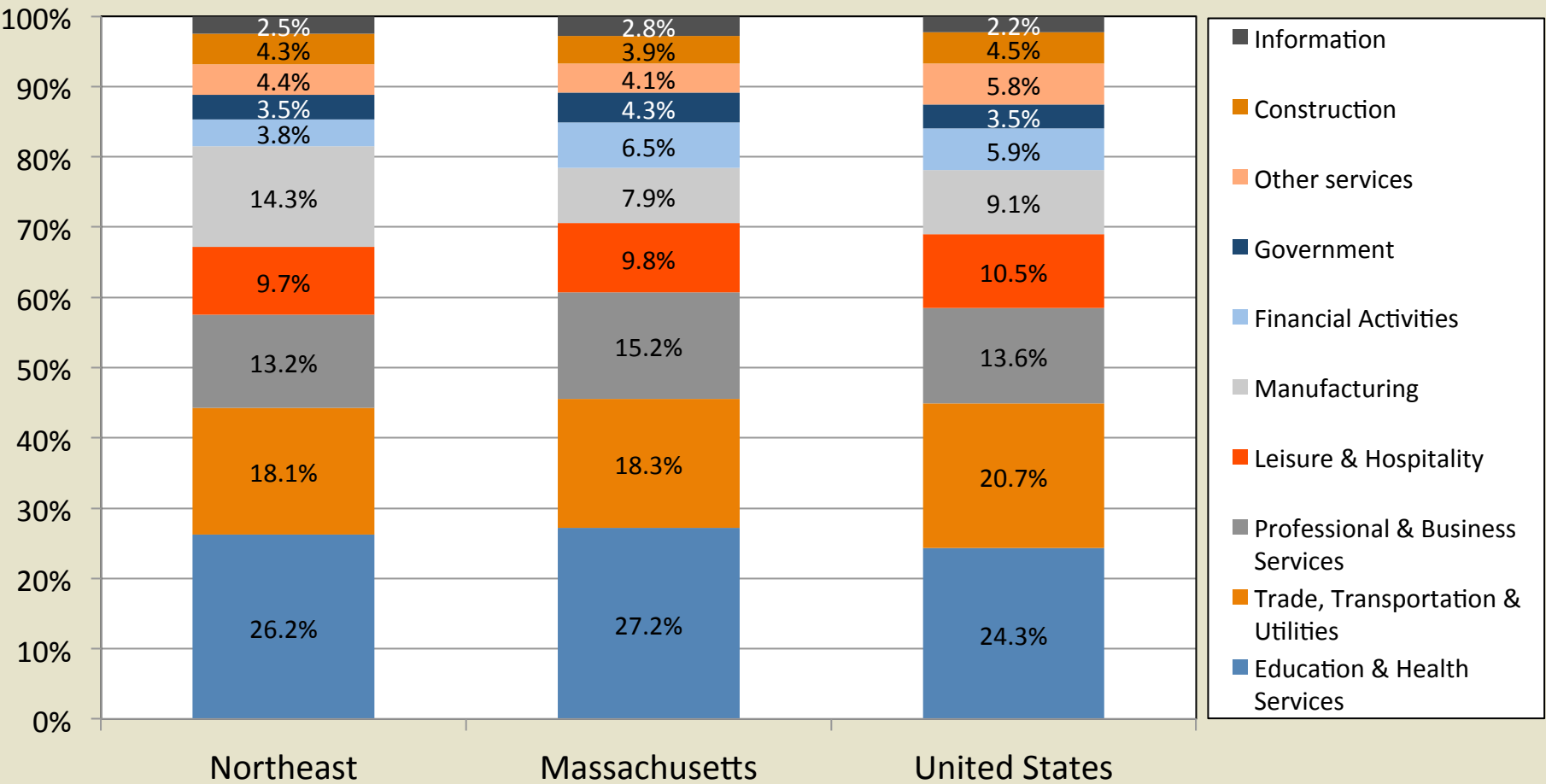
Share of Employment, Q4 2011



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 share of employment in Manufacturing in the Northeast region is larger than in every other regional labor market.

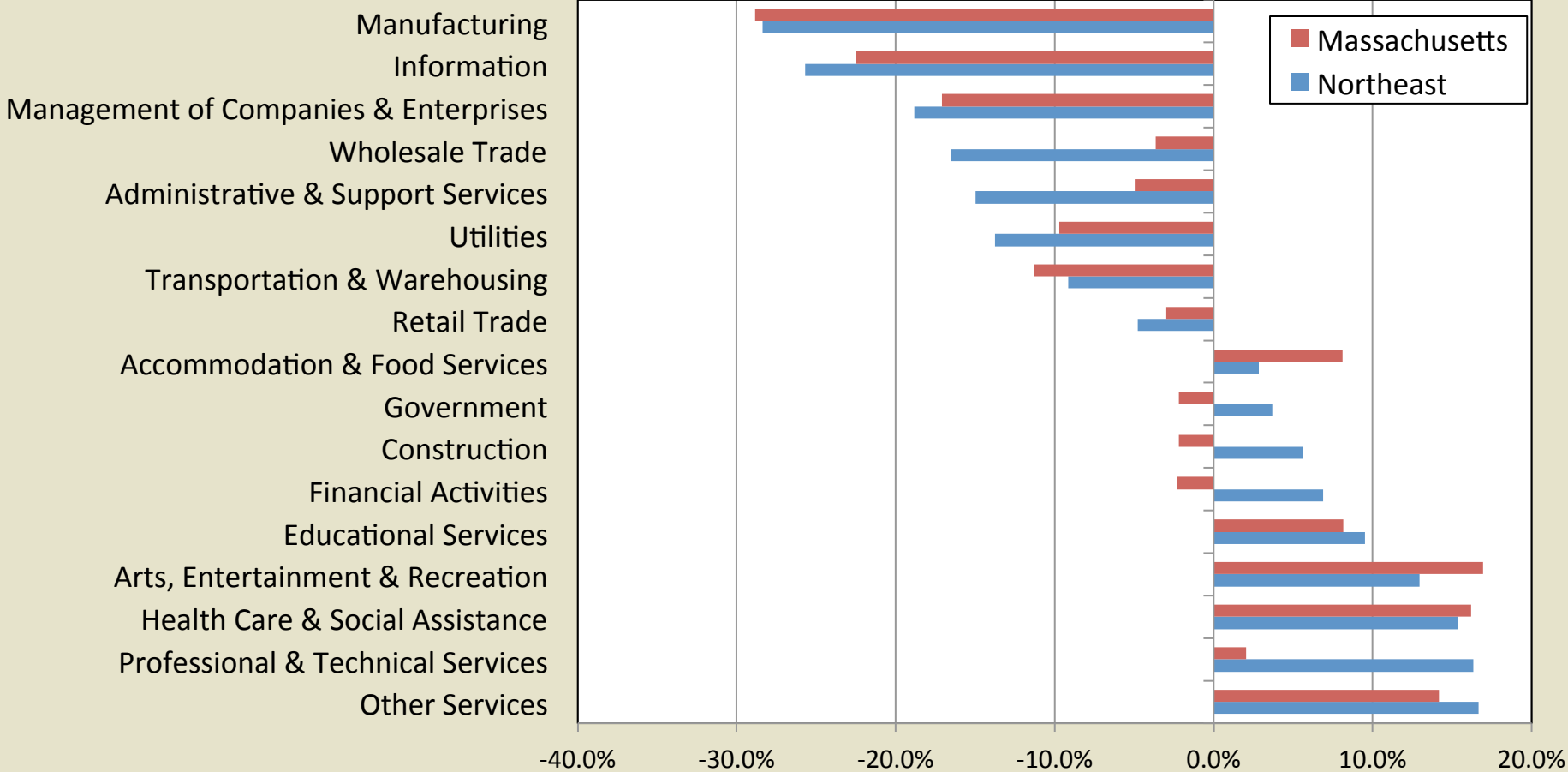
Employment Distribution by Supersector, Q4 2011



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

Large job losses in Manufacturing, among other industries, resulted in steeper employment declines in the Northeast region than statewide.

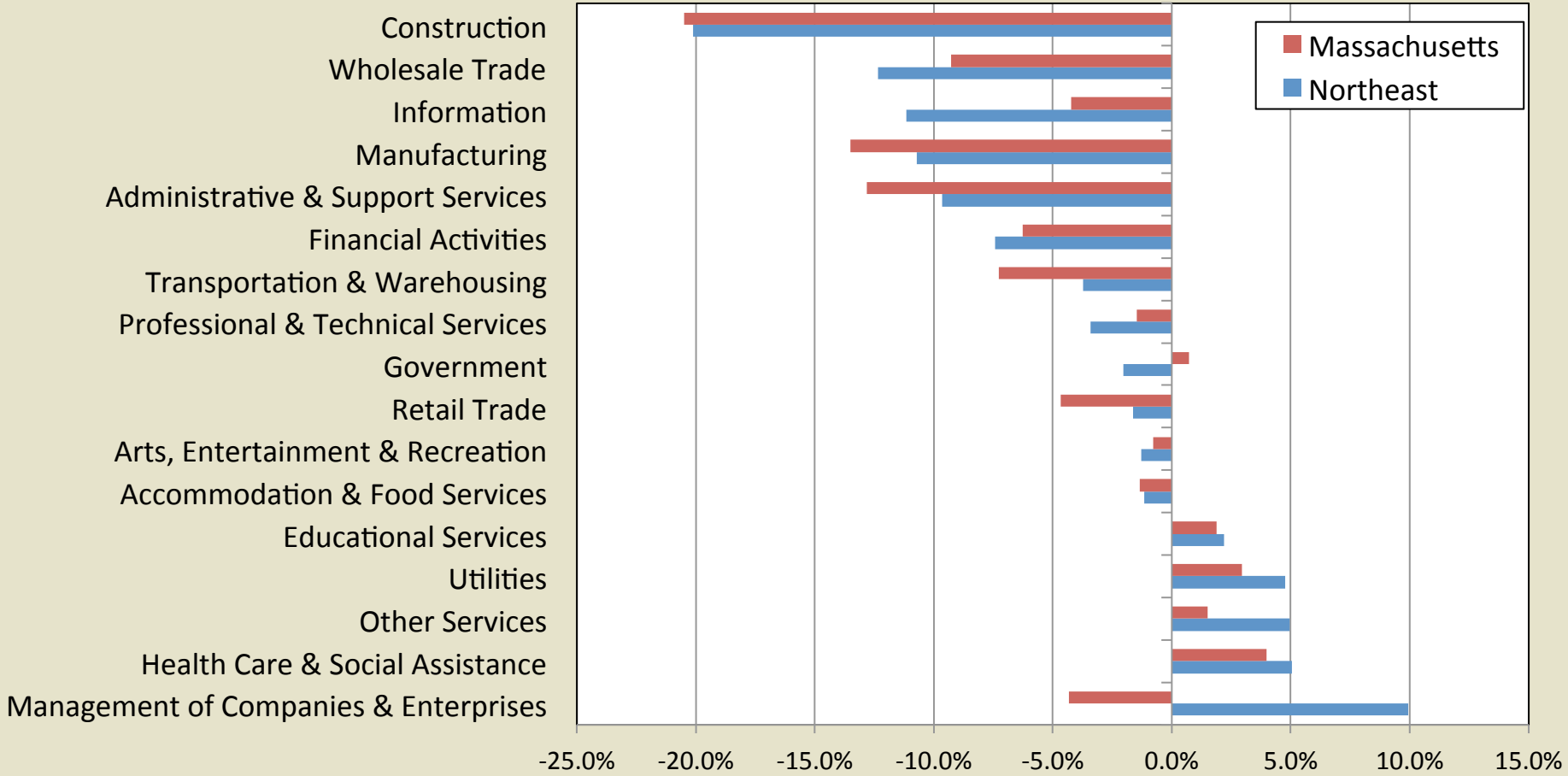
Employment Changes, Q1-2001 to Q1-2008



Sources: Massachusetts EOLWD, ES-202.

In the Great Recession, the Northeast region shed jobs in most major industries, with gains limited to only five industries.

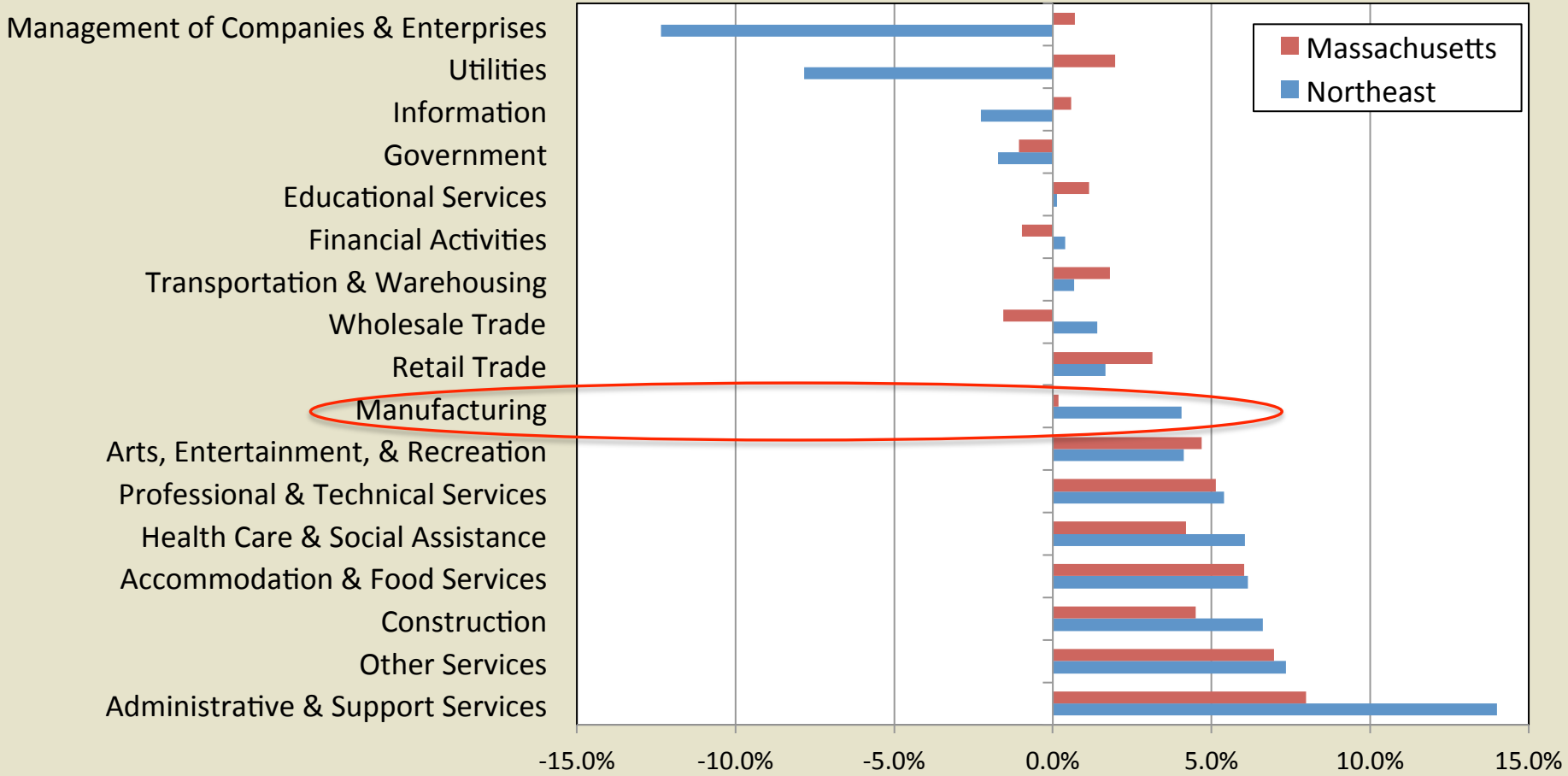
Employment Changes, Q4-2007 to Q4-2009



Sources: Massachusetts EOLWD, ES-202.

In the early stages of the labor market recovery, the Northeast region has outpaced the state in most industries.

Employment Changes, Q4-2009 to Q4-2011

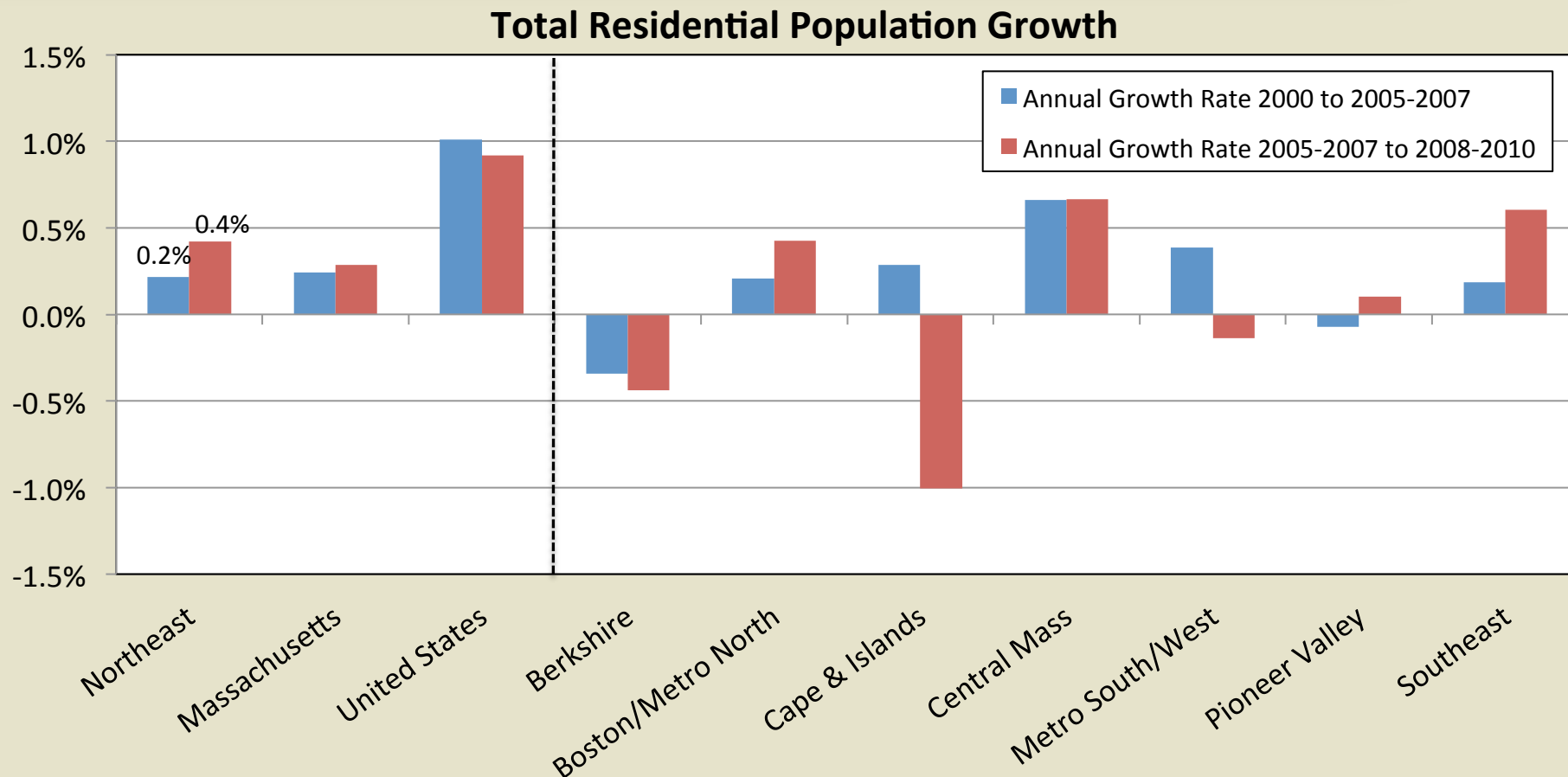


Sources: Massachusetts EOLWD, ES-202.

Labor Supply

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

The growth of the residential population in the region has kept pace with statewide rates but trailed national trends.



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.

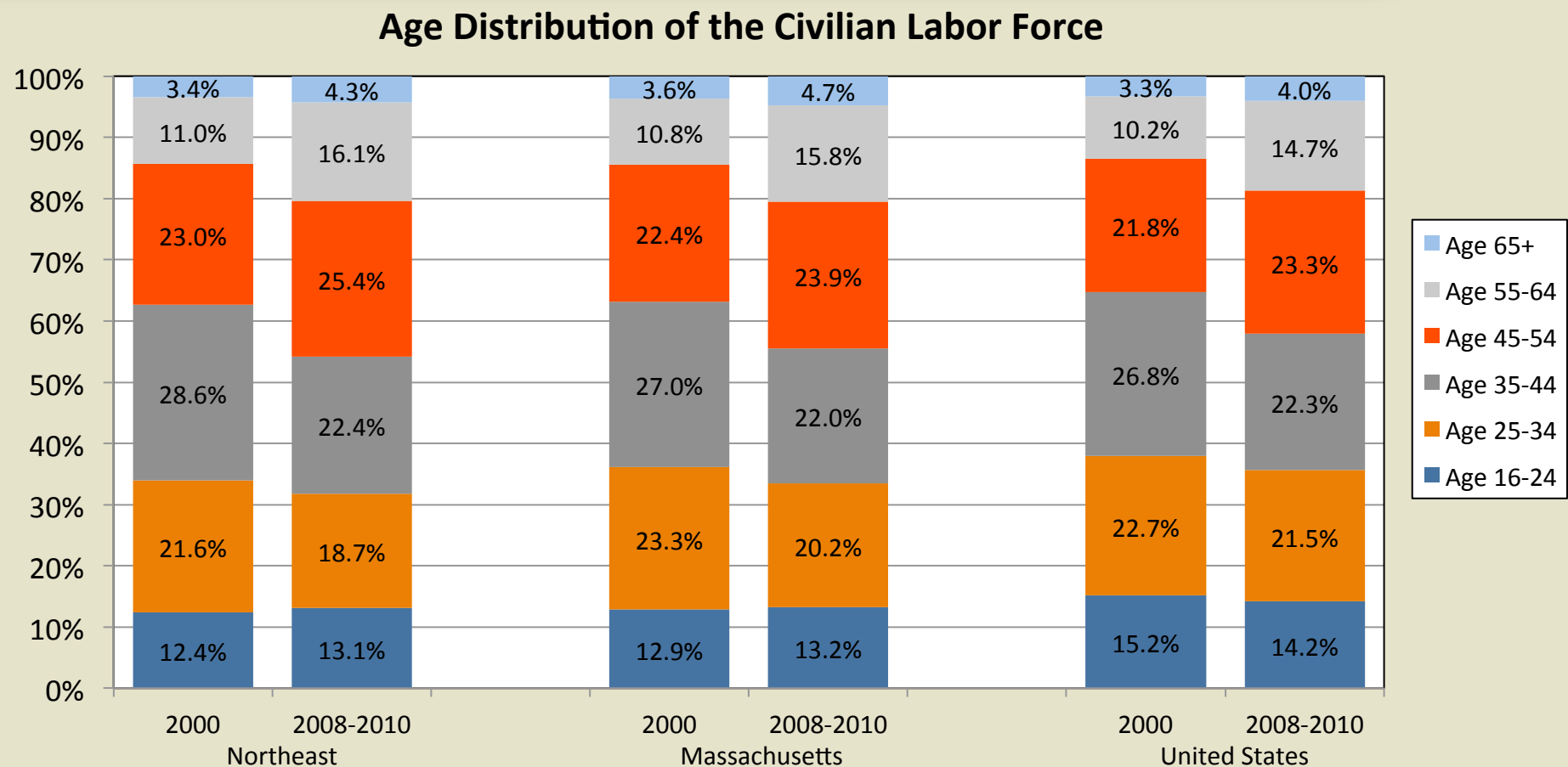
Growth in immigrant and minority populations have offset losses of native born and white, non-Hispanic residents.

Demographic Characteristics of the Northeast Region

| | 2000 | 2008-2010 | Absolute Change | Annual Growth Rate |
|------------------------------|---------|-----------|-----------------|--------------------|
| Resident Population | 989,793 | 1,015,435 | 25,642 | 0.3% |
| <u>Gender</u> | | | | |
| Male | 478,081 | 489,454 | 11,373 | 0.3% |
| Female | 511,712 | 525,981 | 14,269 | 0.3% |
| <u>Nativity</u> | | | | |
| Native Born | 852,839 | 836,870 | -15,969 | -0.2% |
| Immigrant | 136,954 | 178,565 | 41,611 | 3.0% |
| <u>Race/Ethnicity</u> | | | | |
| White, non-Hispanic | 821,239 | 775,438 | -45,801 | -0.6% |
| Black, non-Hispanic | 17,103 | 28,332 | 11,229 | 5.8% |
| Asian, non-Hispanic | 39,026 | 56,967 | 17,941 | 4.3% |
| Hispanic | 93,955 | 138,980 | 45,025 | 4.4% |
| Other race, non-Hispanic | 18,470 | 15,718 | -2752 | -1.8% |

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

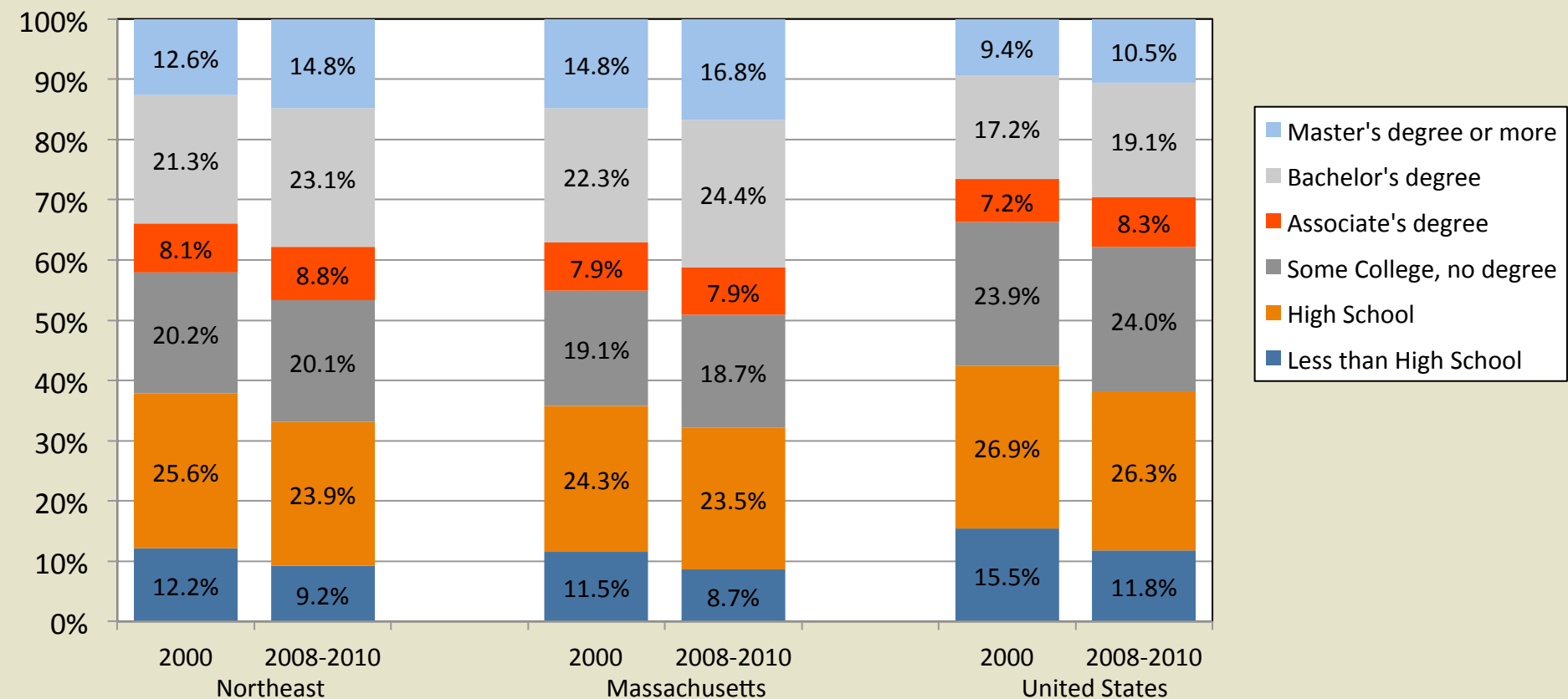
The civilian labor force in the Northeast region is slightly older than that of Massachusetts.



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

Education levels have risen in the past decade, but high school remains the most common attainment level in the region.

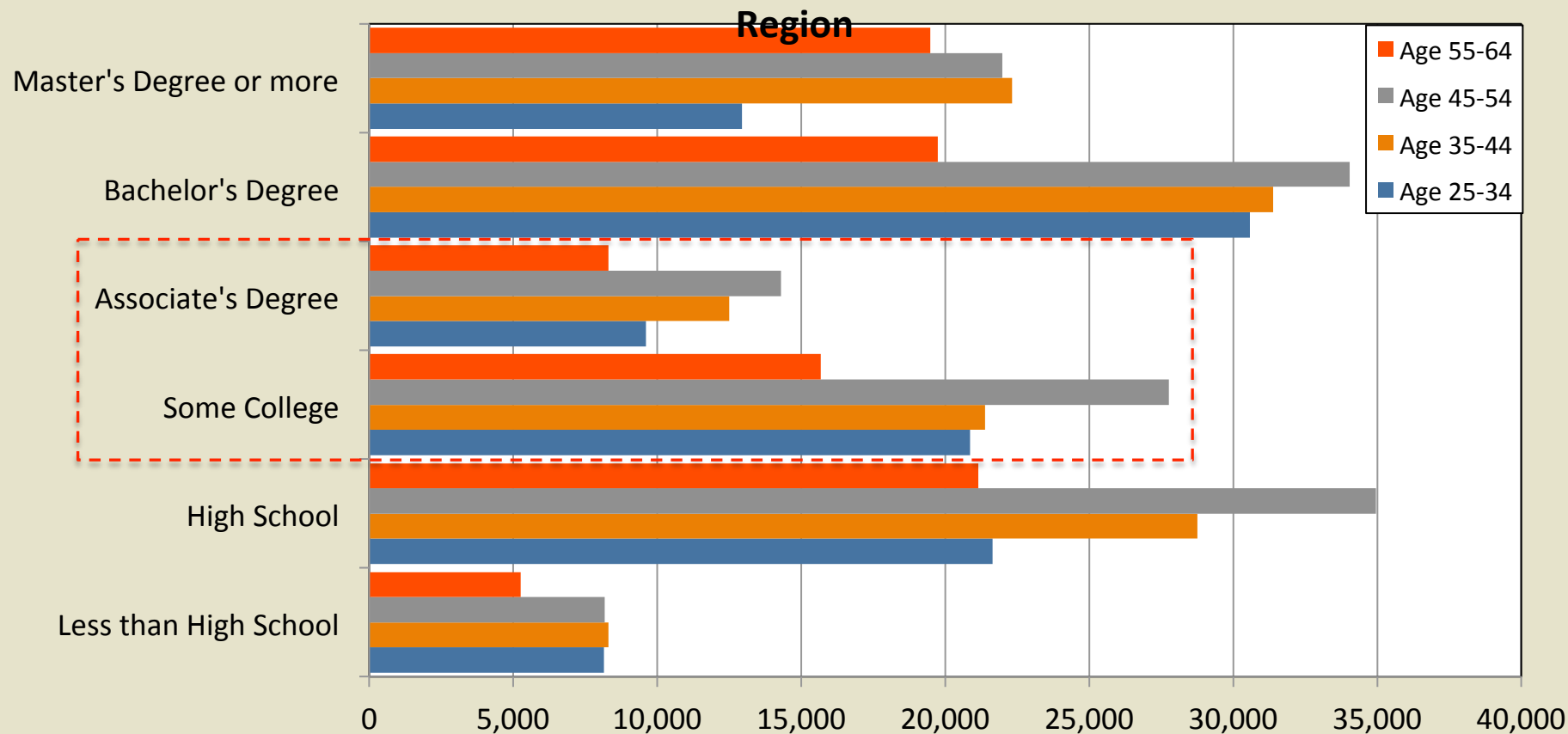
Educational Attainment of the Civilian Labor Force



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

The trends in educational attainment and aging leave the region with ***potential*** shortfalls of workers in nearly every category.

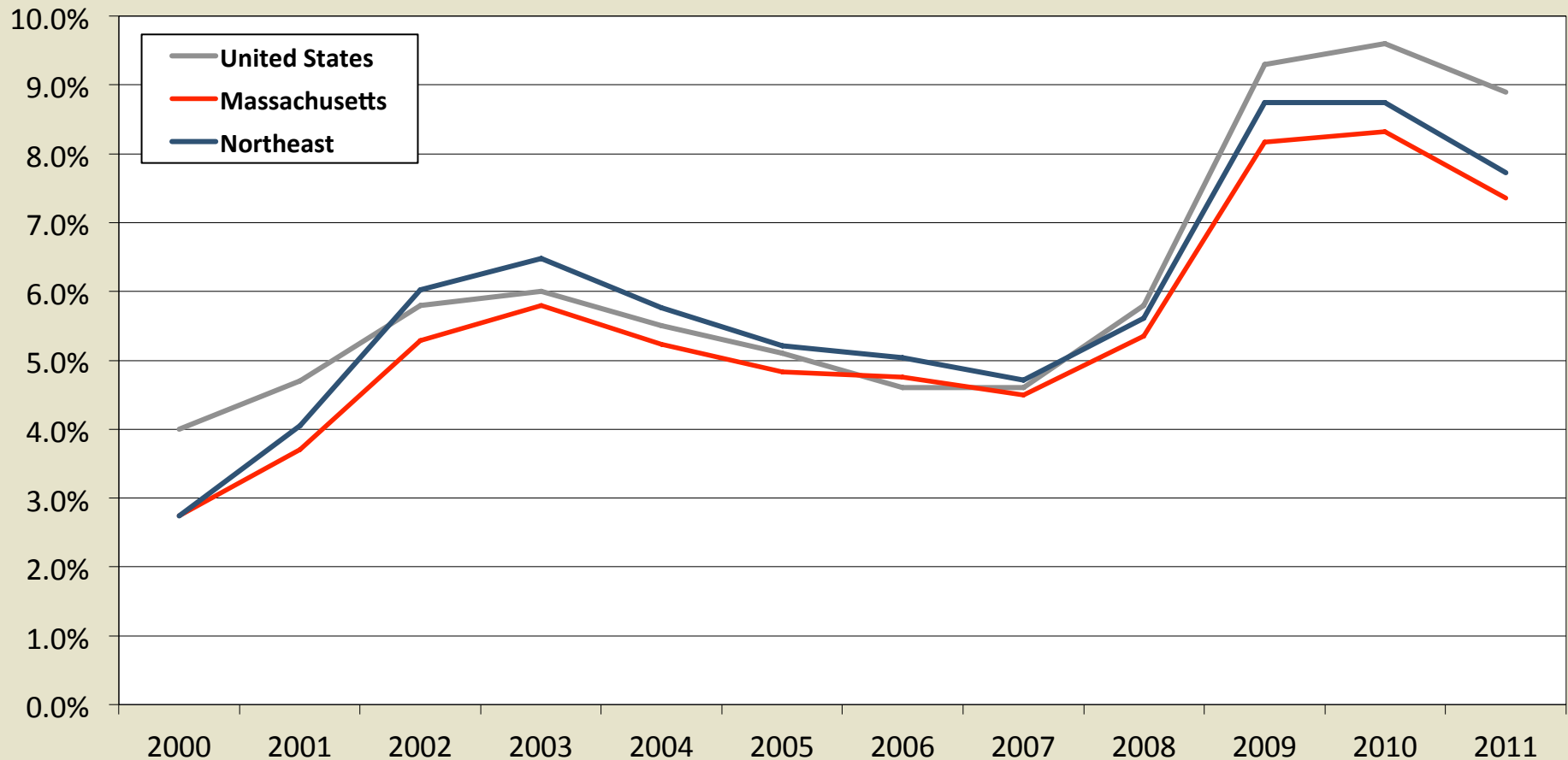
Educational Attainment of the Civilian Labor Force in the Northeast



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

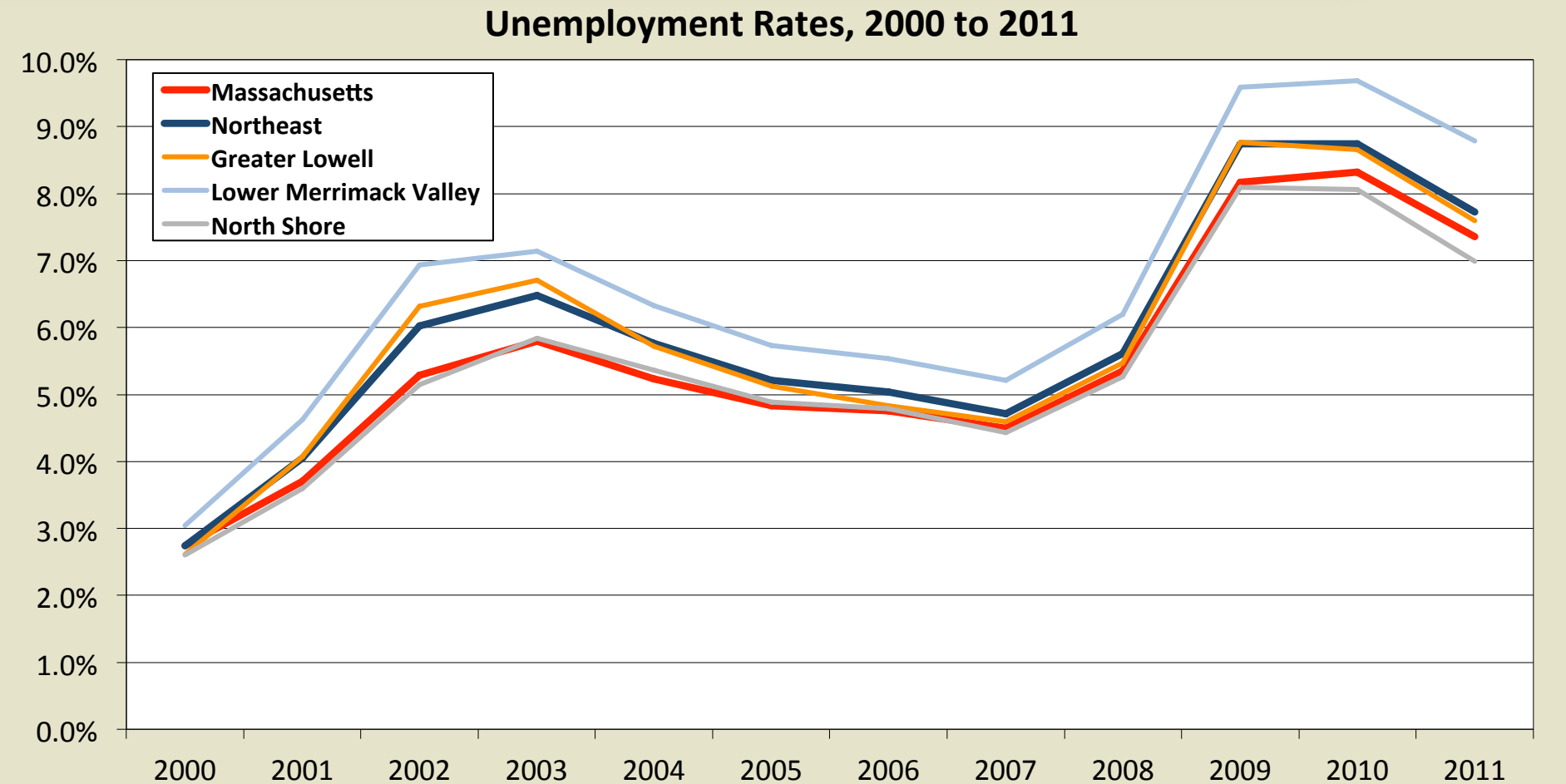
In the Great Recession, the unemployment rate in the Northeast region reached a high of 8.7 percent in both 2009 and 2010.

Unemployment Rates, 2000 to 2011



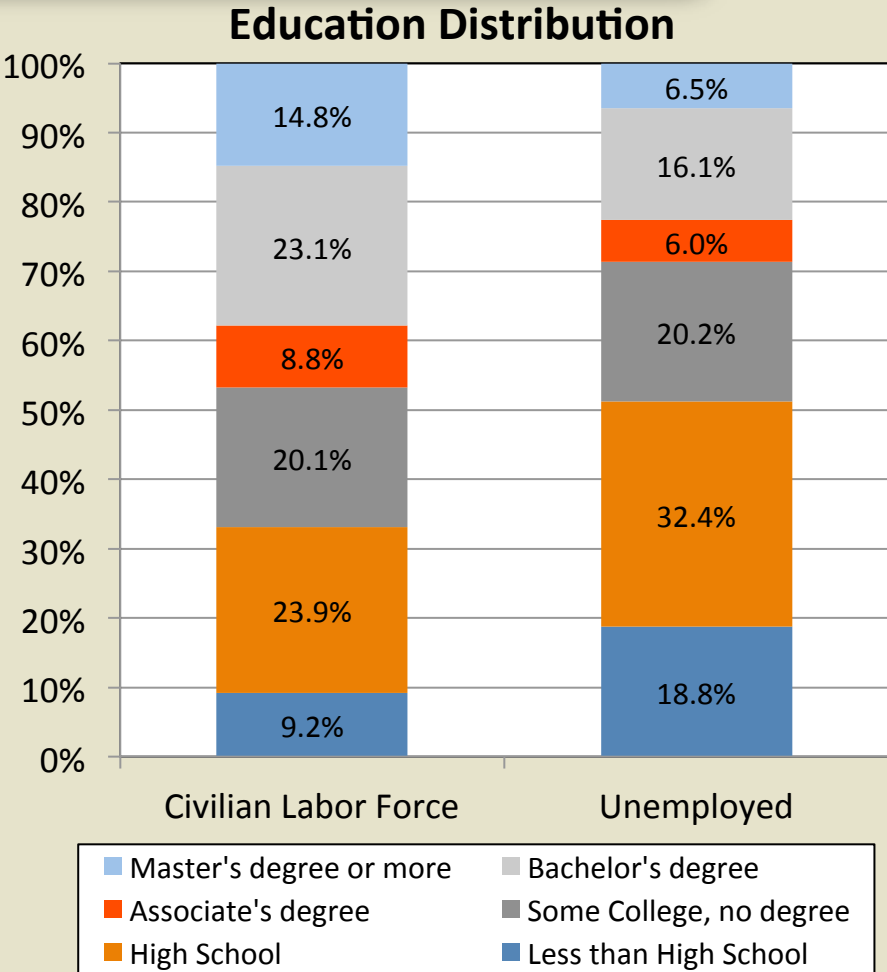
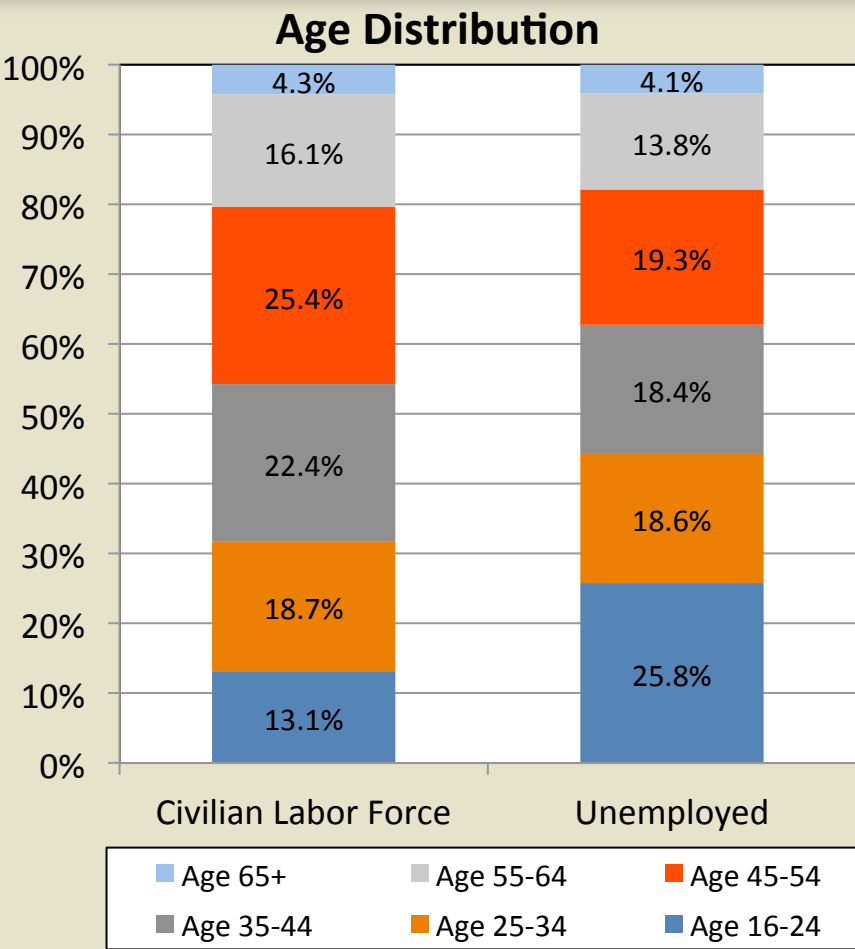
Source: U.S. Bureau of Labor Statistics, Current Population Survey and Massachusetts EOLWD, Labor Force and Unemployment Rates.

The highest unemployment rate was in Lower Merrimack Valley (9.7 percent) while the lowest was in the North Shore (8.1 percent).



Source: Massachusetts EOLWD, Labor Force and Unemployment Rates.

The unemployed in the Northeast region are disproportionately younger and have lower levels of educational attainment.



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

The Northeast region is closely tied to neighboring labor markets, with large shares of residents working elsewhere.

| | Number | Percent of Total |
|---|----------------|------------------|
| Total number of employed persons living in the Northeast Region... | 501,228 | 100.0% |
| ...that work in: | | |
| Northeast | 313,338 | 62.5% |
| Boston/Metro North | 110,133 | 22.0% |
| Metro South/West | 45,878 | 9.2% |
| Southeast | 4,157 | 0.8% |
| Other parts of Massachusetts | 4,509 | 0.9% |
| New Hampshire | 19,172 | 3.8% |
| Other places outside Massachusetts | 4,041 | 0.8% |
| Total number of persons working in the Northeast Region... | 424,579 | 100.0% |
| ...that live in: | | |
| Northeast | 313,338 | 73.8% |
| Boston/Metro North | 36,693 | 8.6% |
| Metro South/West | 18,260 | 4.3% |
| Southeast | 3,717 | 0.9% |
| Other parts of Massachusetts | 7,895 | 1.9% |
| New Hampshire | 41,939 | 9.9% |
| Other places outside Massachusetts | 2,737 | 0.6% |
| Net in-commuting | -76,649 | - |

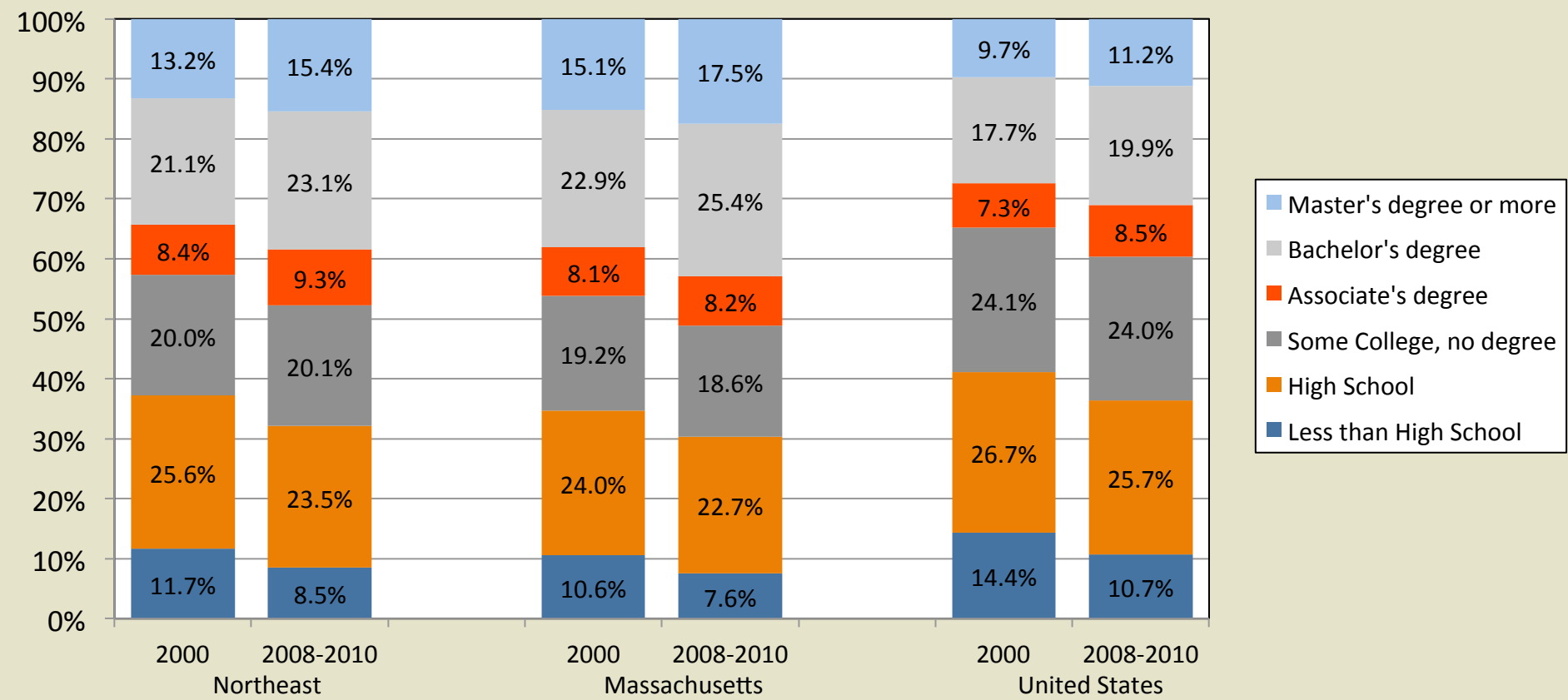
Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.

Labor Demand

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

The region's workforce trails the state in the share with Bachelor's Degrees or higher, but has larger shares of "middle-skilled" workers.

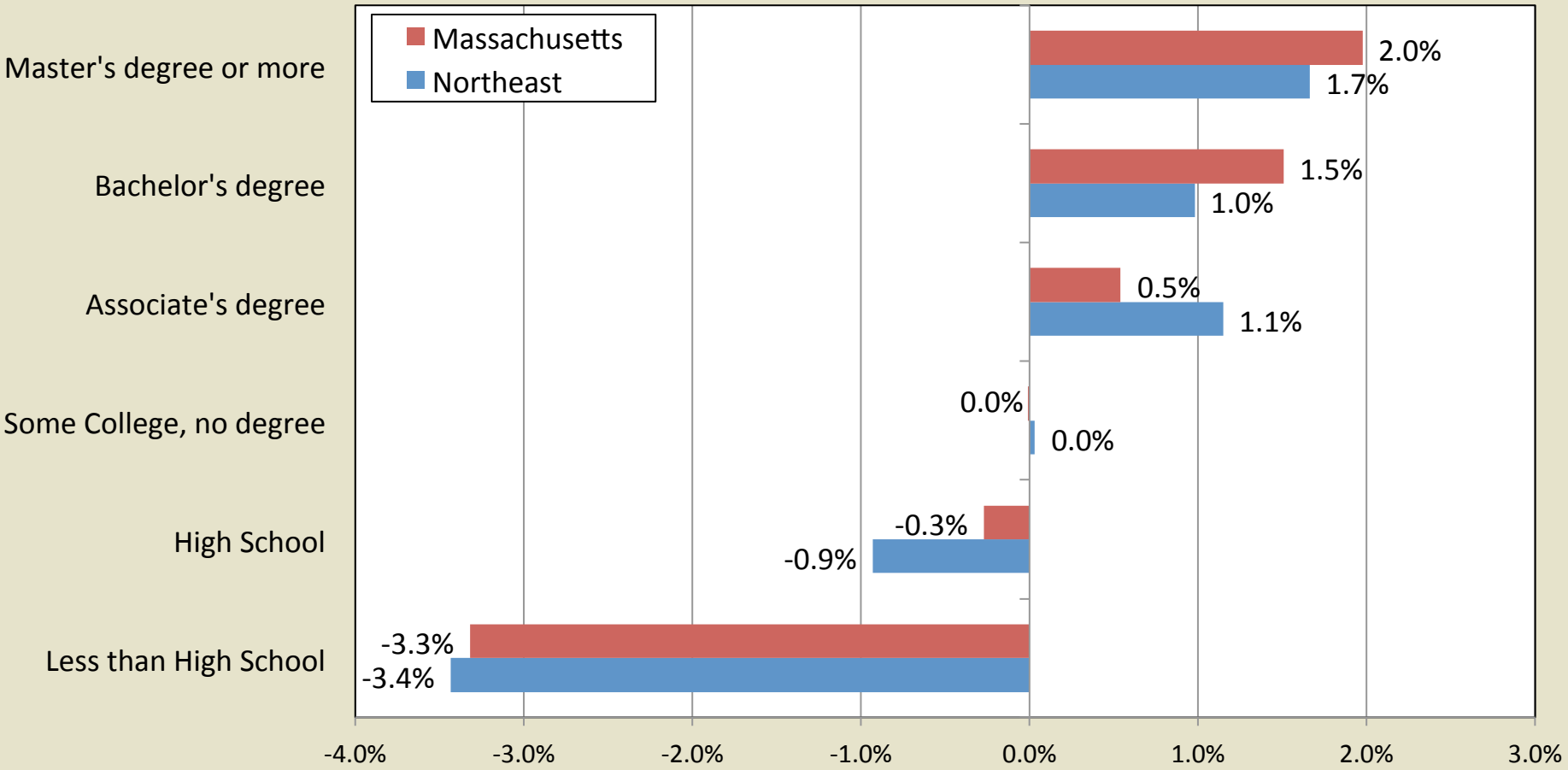
Educational Attainment of Individuals Employed in the Region



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

Increasingly over the last decade, a growing number of employed individuals have had an Associate's Degree or higher.

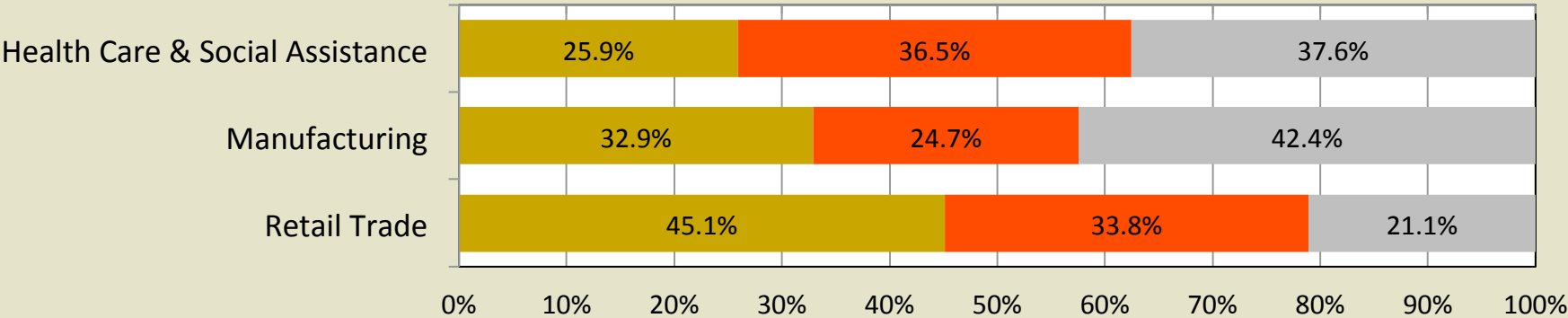
Annual Growth in the Employed by Education, 2000 to 2008-2010



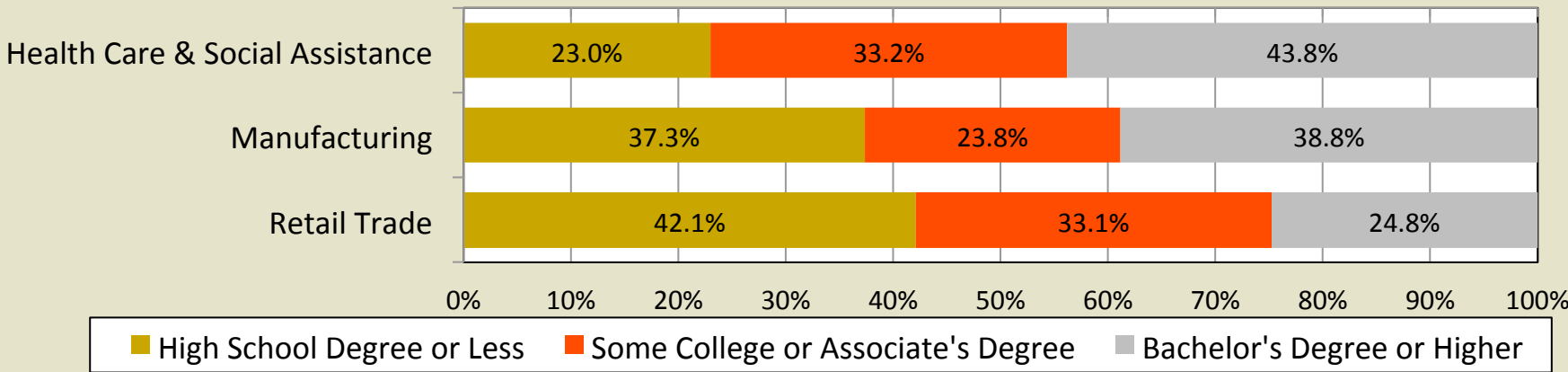
Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.

Most industries in the region 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 the Northeast Region



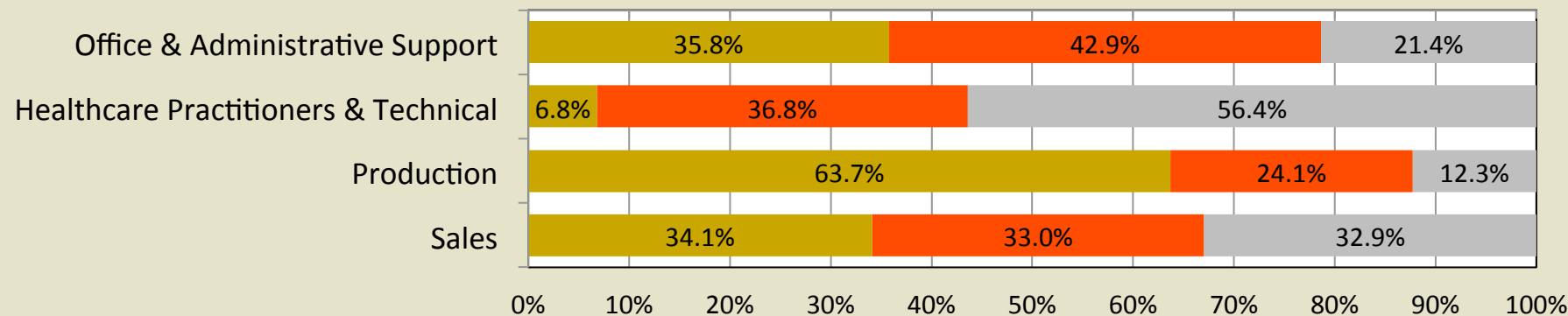
Educational Attainment of Employees by Selected Major Industries in Massachusetts



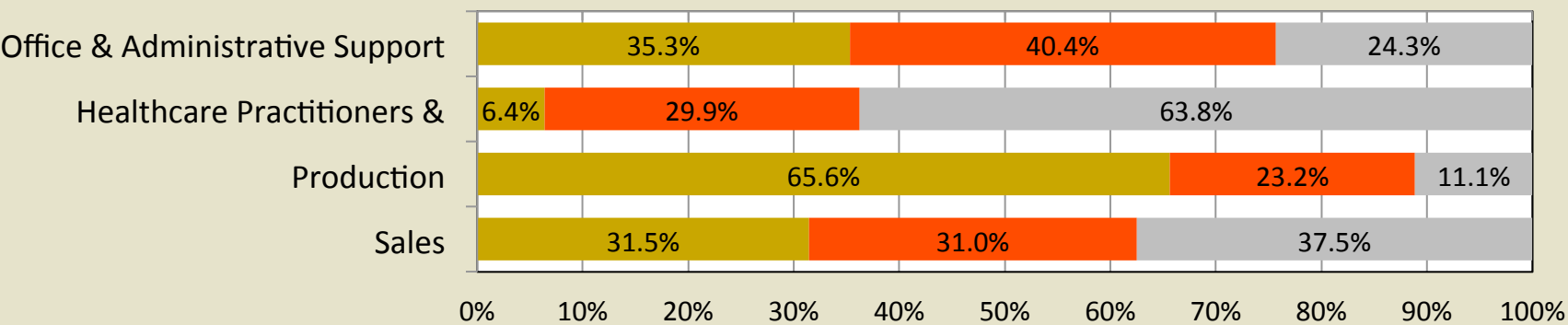
Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.

The pattern persists across occupations, although the difference in post-secondary educational attainment is not as large.

Educational Attainment of Employees by Selected Occupations in the Northeast Region



Educational Attainment of Employees by Selected Occupation in Massachusetts

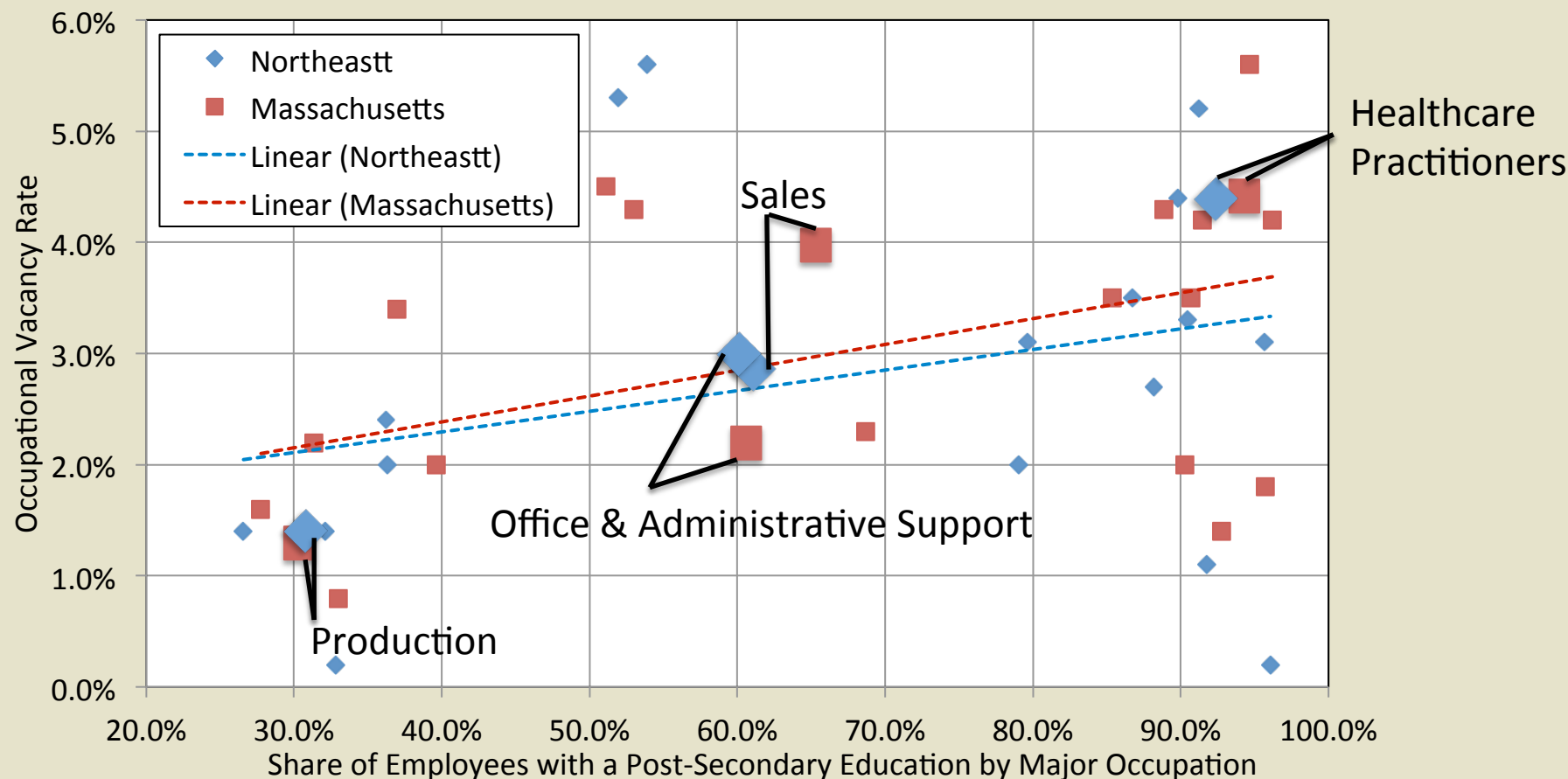


■ High School Degree or Less ■ Some College or Associate's Degree ■ Bachelor's Degree or Higher

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

Prior to the recession, vacancy rates were greater in most of the more highly educated occupations than in the less educated.

Job Vacancies and Educational Attainment by Occupation, Pre-Recession

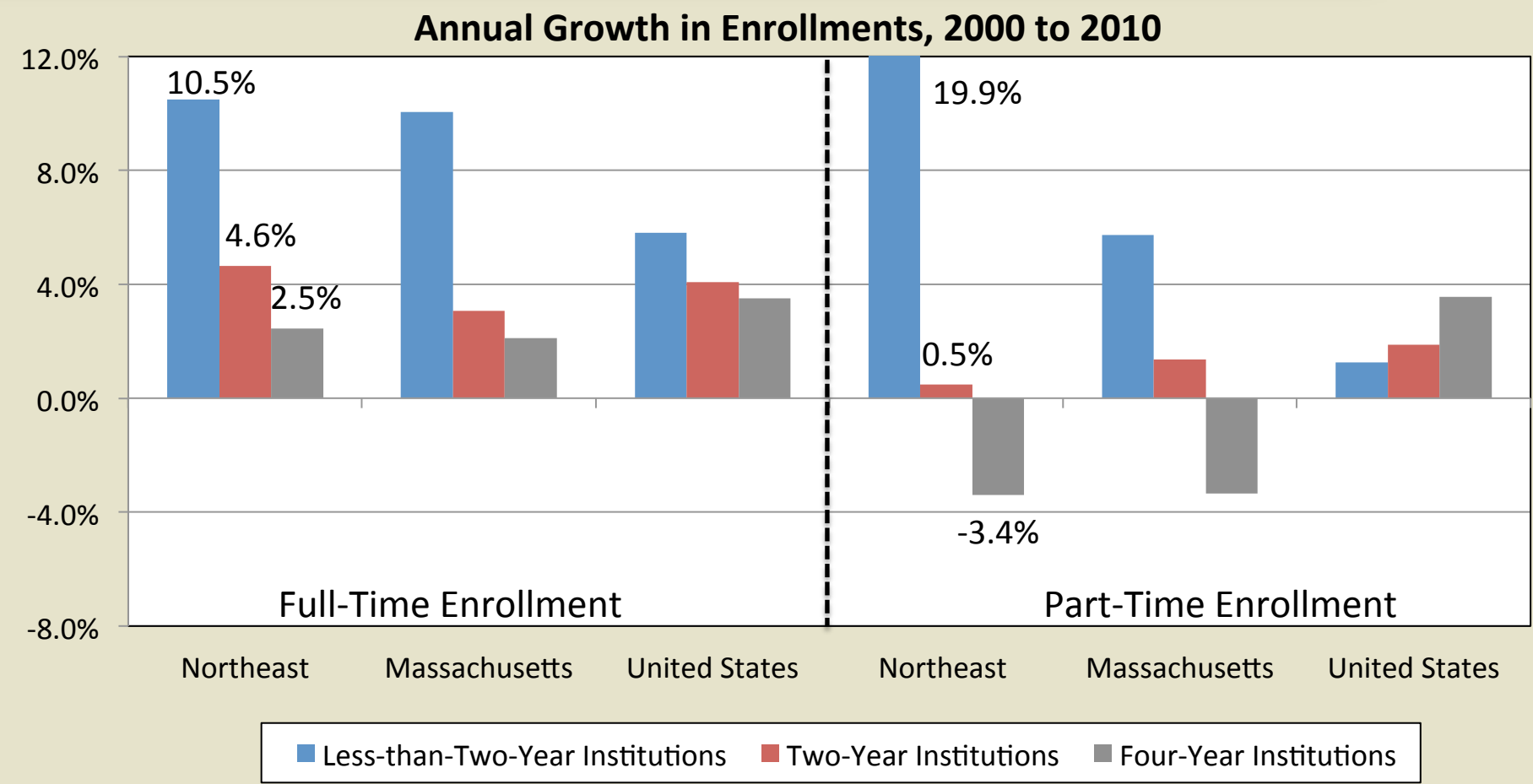


Source: Massachusetts EOLWD, Job Vacancy Survey and U.S. Census Bureau 2008-2010 ACS PUMS data files.

The Pipeline: Educational Supply of Post-Secondary Degrees

- Enrollment Patterns
- Degree Completions
- Major Fields of Study by Degree Type
- Middlesex Community College

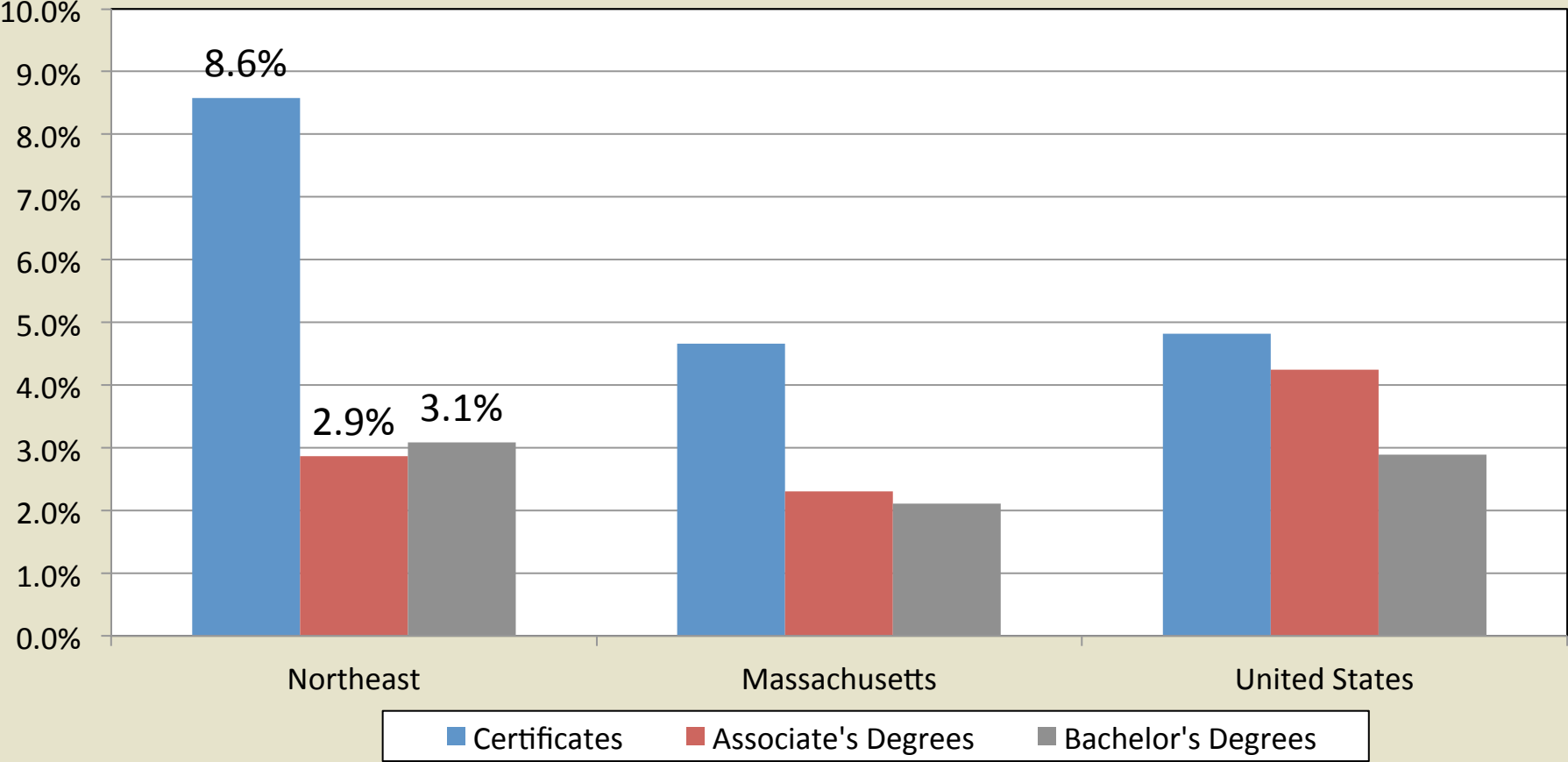
Growth in full-time enrollments at all types of higher educational institutions in the Northeast region exceed statewide trends.



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

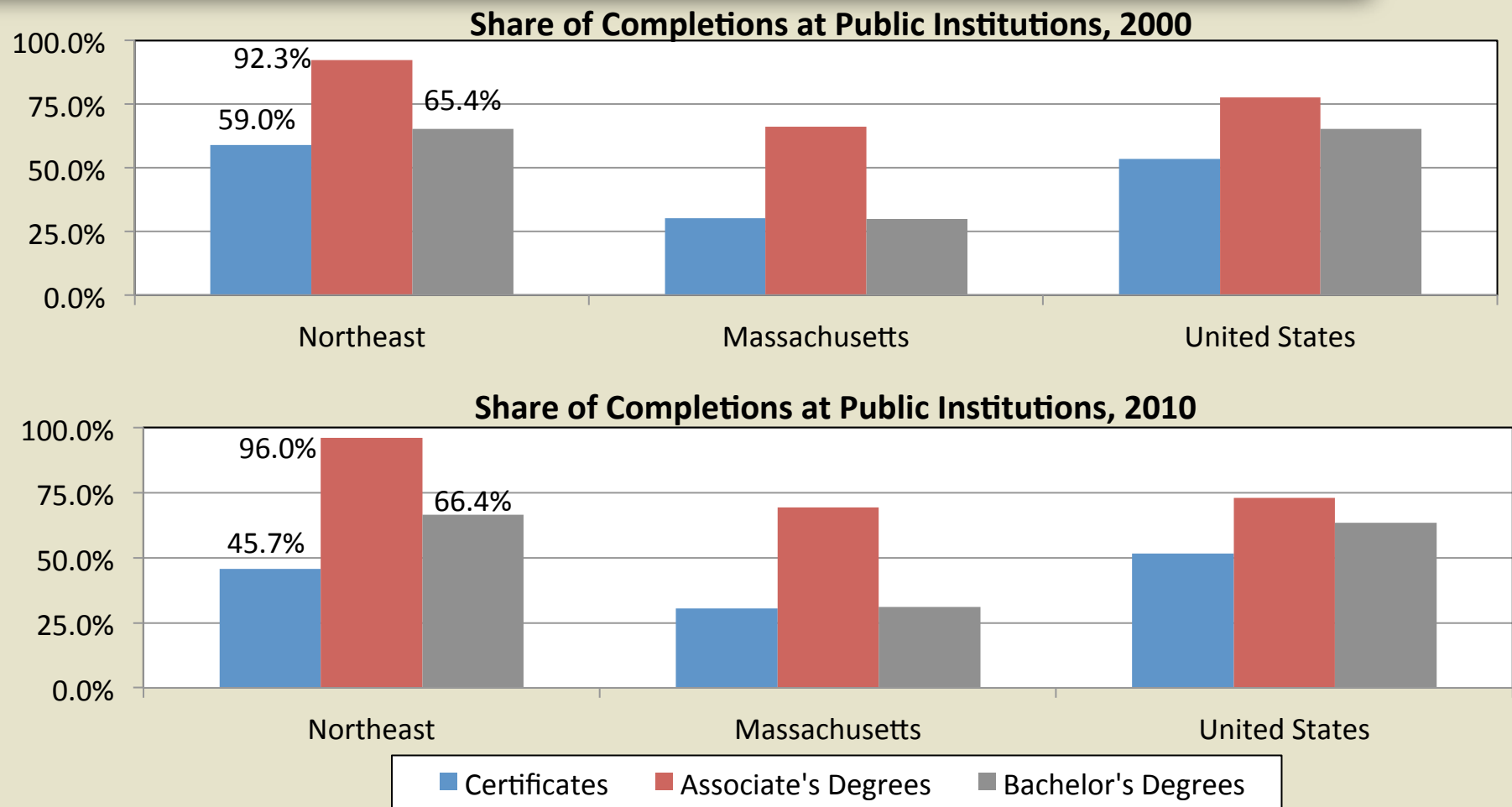
Regional growth in completions in all post-secondary degrees and programs outpaced statewide trends in the past decade.

Annual Growth in Completions, 2000 to 2010



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

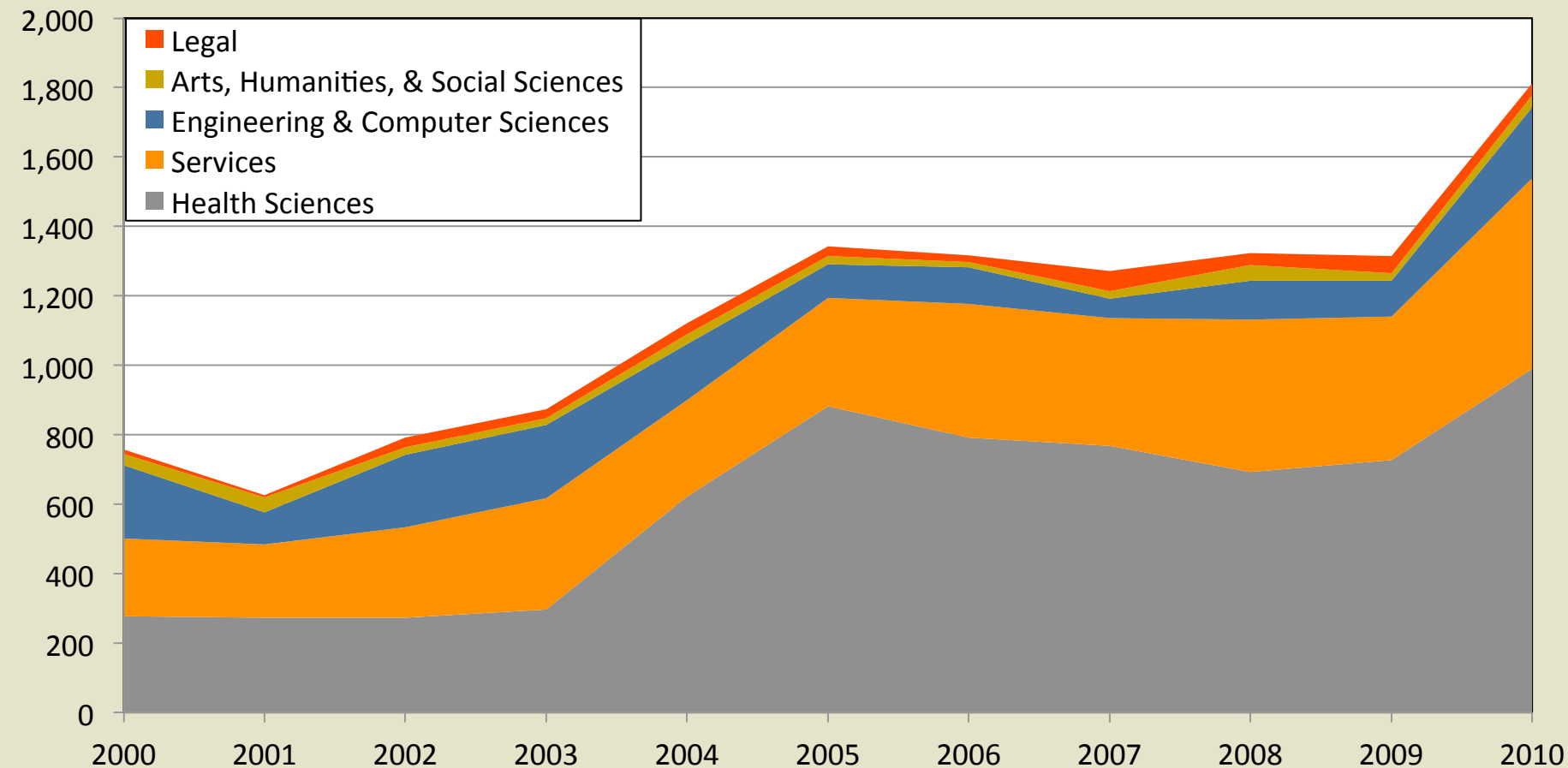
Public institutions in the Northeast region play a larger role in post-secondary education than statewide and nationally.



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

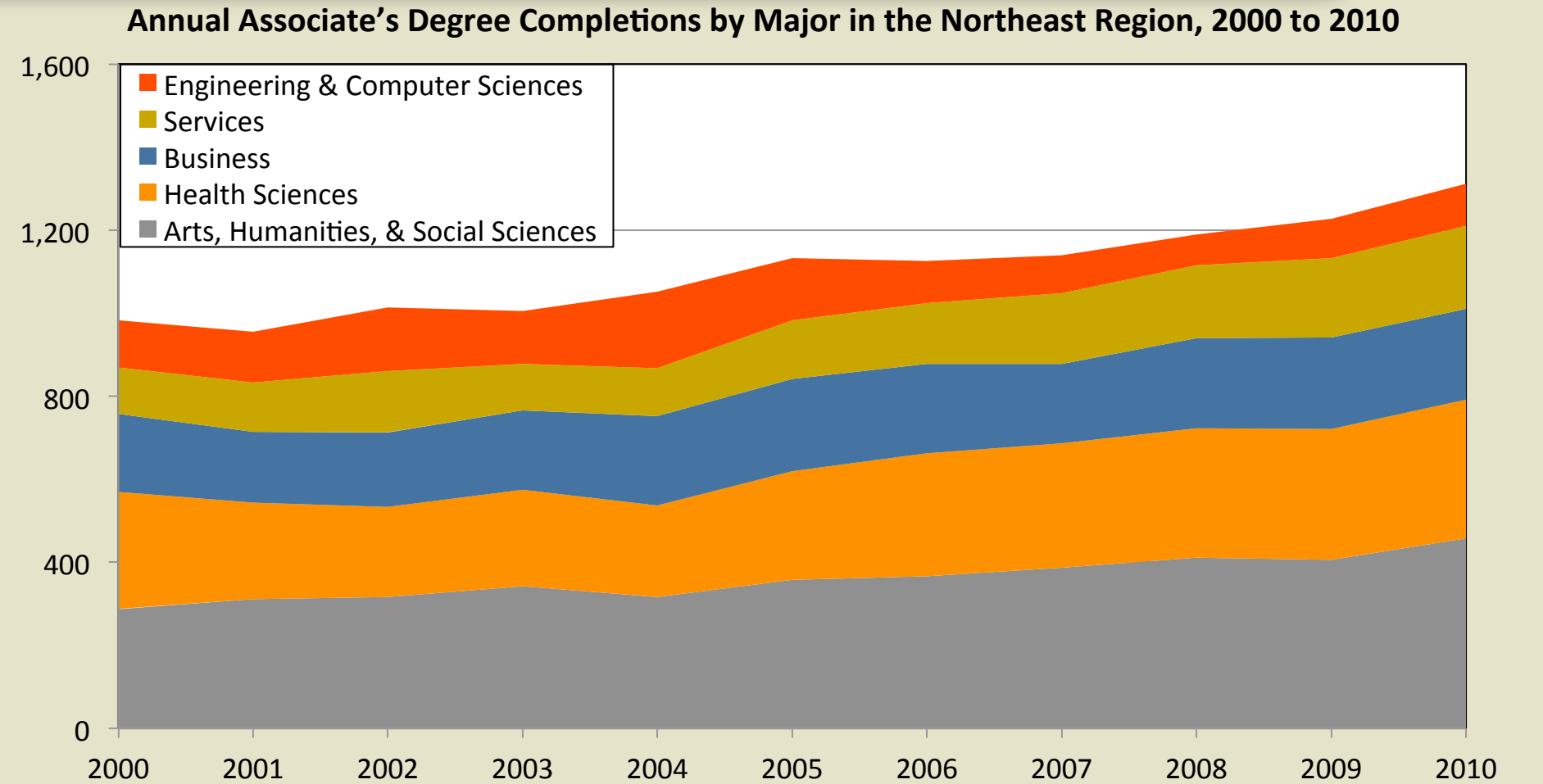
Health Sciences and Services have accounted for most of the Certificates completed in the Northeast region.

Annual Certificate Completions by Major in the Northeast Region, 2000 to 2010



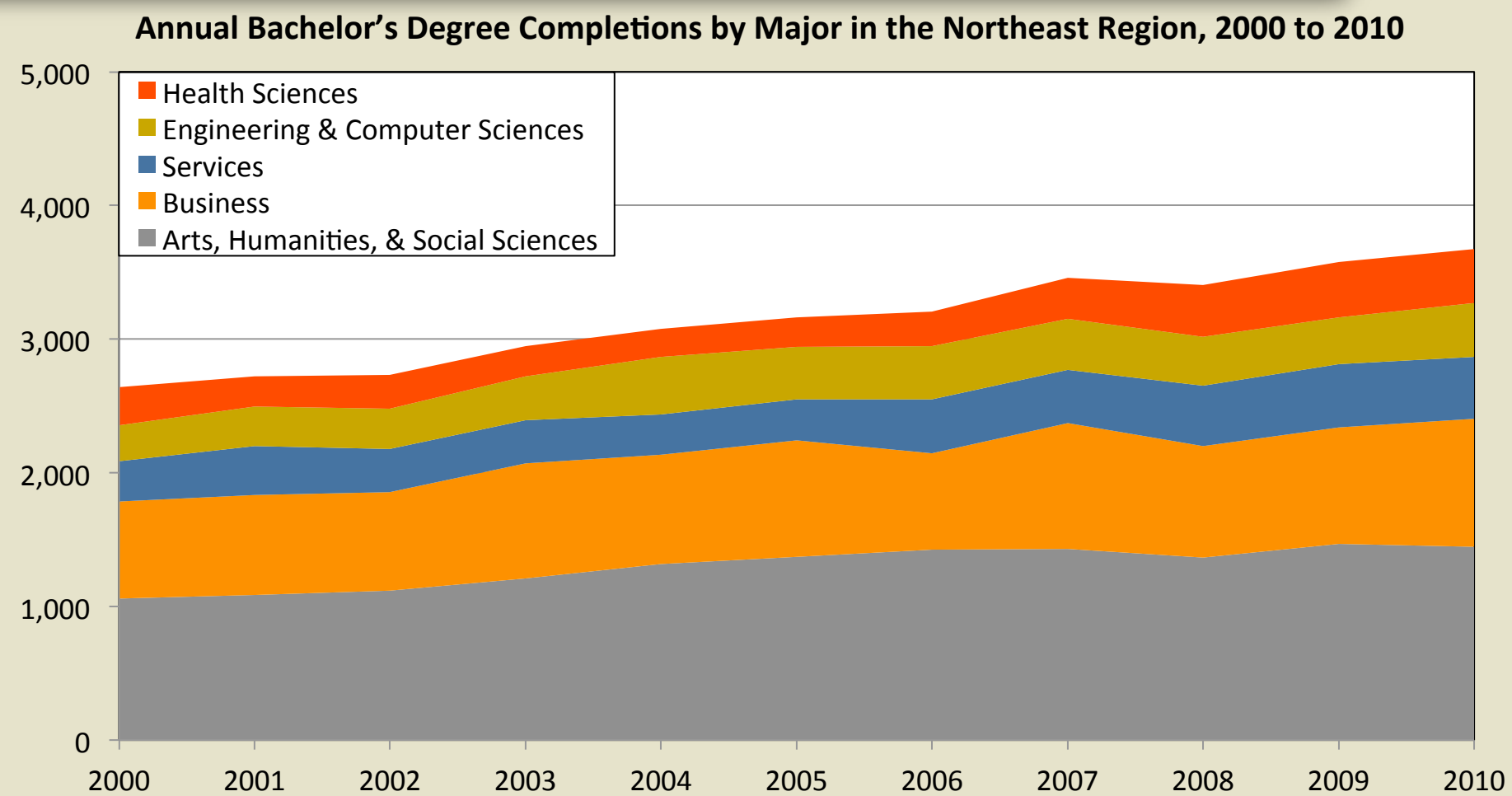
Source: National Center for Education Statistics, Integrated Post-Secondary Educational Data System.

The largest field of study for Associate's Degrees is Art, Humanities, & Social Sciences, followed by Health Sciences and Business.



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

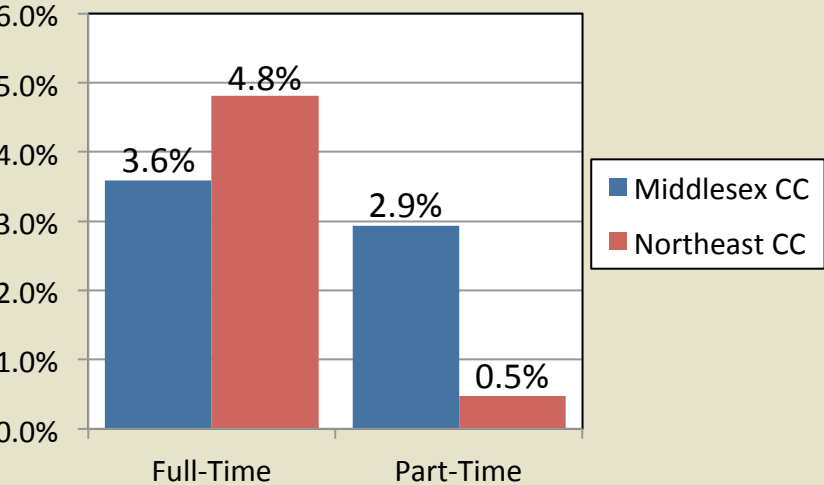
Art, Humanities, & Social Sciences accounted for more than a third of all Bachelor's Degrees completed in the Northeast region.



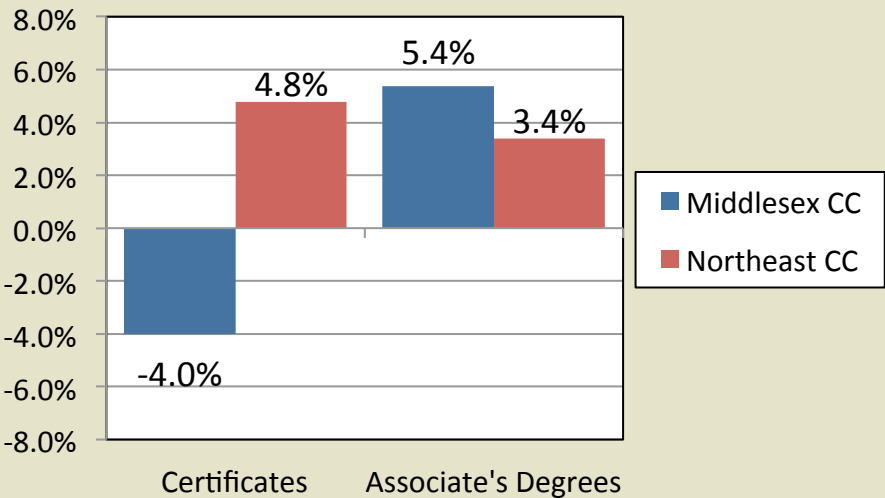
Source: National Center for Education Statistics, Integrated Post-Secondary Educational Data System.

Middlesex Community College plays an important role in higher education in the Northeast region.

Annual Enrollment Growth, 2000 to 2010



Annual Completions Growth, 2000 to 2010



Top Five Fields of Study at Middlesex Community College, 2010

| | Certificates | Associate's Degrees |
|-------------------------------------|--------------|---------------------|
| Arts, Humanities, & Social Sciences | 4 | 369 |
| Health Sciences | 57 | 181 |
| Business | 11 | 194 |
| Engineering & Computer Sciences | 15 | 86 |
| Services | 1 | 96 |
| Total | 111 | 1,012 |

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

Summary

- The Northeast has had the strongest labor market recovery in the state, but continues to face high levels of unemployment.
- Slow population growth, an aging population, and lagging levels of educational attainment create the *potential* for shortfalls in the workers demanded by employers.
- Increasingly employment opportunities in the region and state have favored those with a post-secondary education. For the Northeast region to recovery fully it will need to address the barriers to full employment facing the region's unemployed, particularly among the young and less educated.
- Given such trends, what should be done to ensure the future economic vitality of the Northeast region moving forward?

Thank You



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