



Labor Market Trends in **Massachusetts**

By Robert Clifford

Policy Analyst
New England Public Policy Center
Federal Reserve Bank of Boston

A joint project of Commonwealth Corporation
and New England Public Policy Center of the
Federal Reserve Bank of Boston

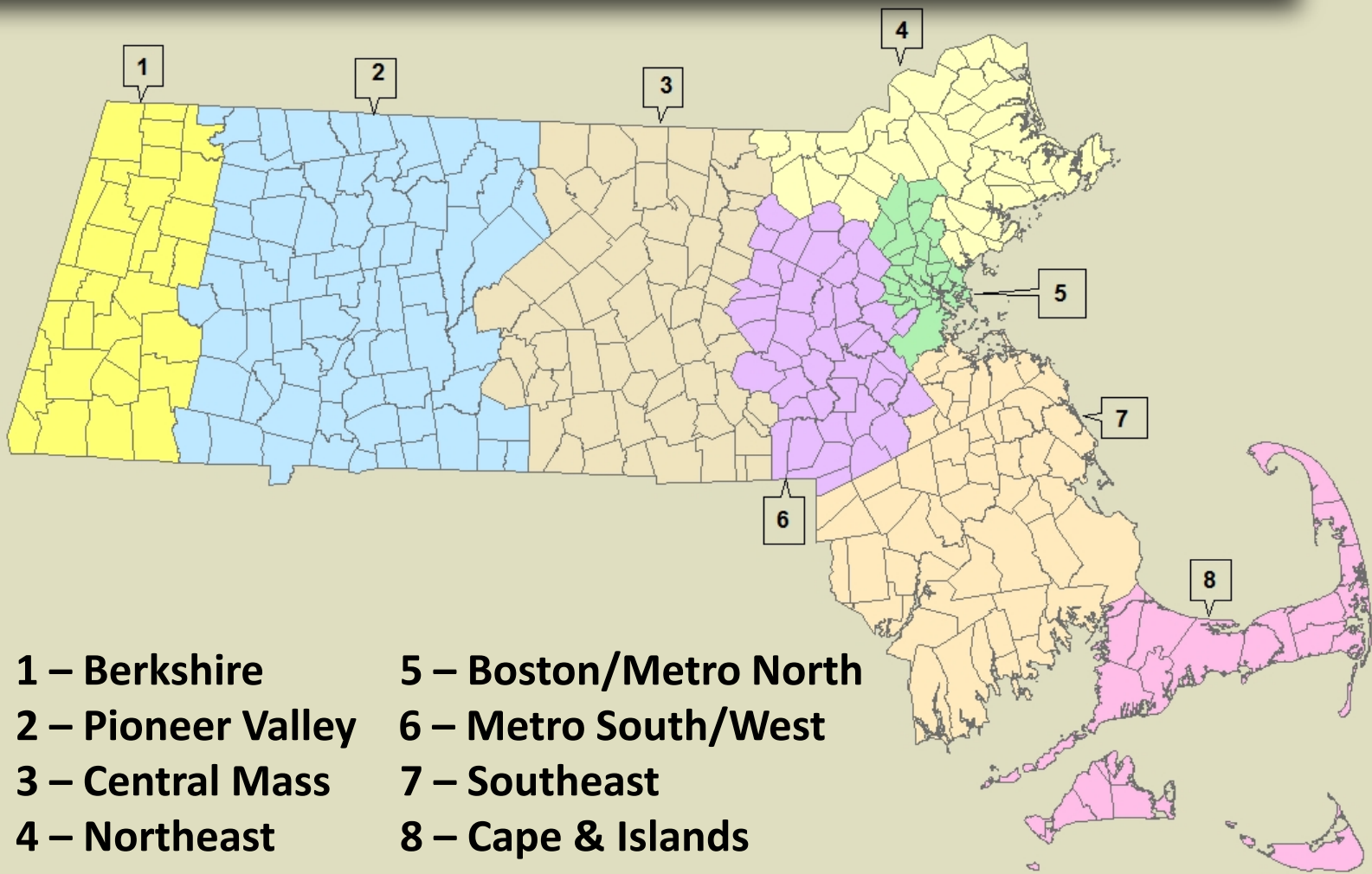
The Collaboration

- NEPPC promotes better public policy in New England by conducting objective high-quality research and analysis of regional economic and policy issues.
- Workforce investment boards, education leaders, and local businesses had limited information by which to assess long-term challenges.
- The project goal is to provide detailed data on labor supply and demand trends to support workforce development policy discussions at a local level.

The Results to Date: Reports and Summits

- Reports analyzing the labor market trends of the past decade for Massachusetts regions.
 - Berkshire, Boston/Metro North, Cape & Islands, Central Mass, Metro South/West, Northeast, Pioneer Valley, and Southeast
- Presented at regional summits to begin a conversation about the long-term challenges facing the regions.
- Follow-on work: additional regional presentations with select audiences and a statewide report and summit to compare findings across labor markets.
- Reports, presentations, data appendices, and more are available online at www.bostonfed.org/neppc.

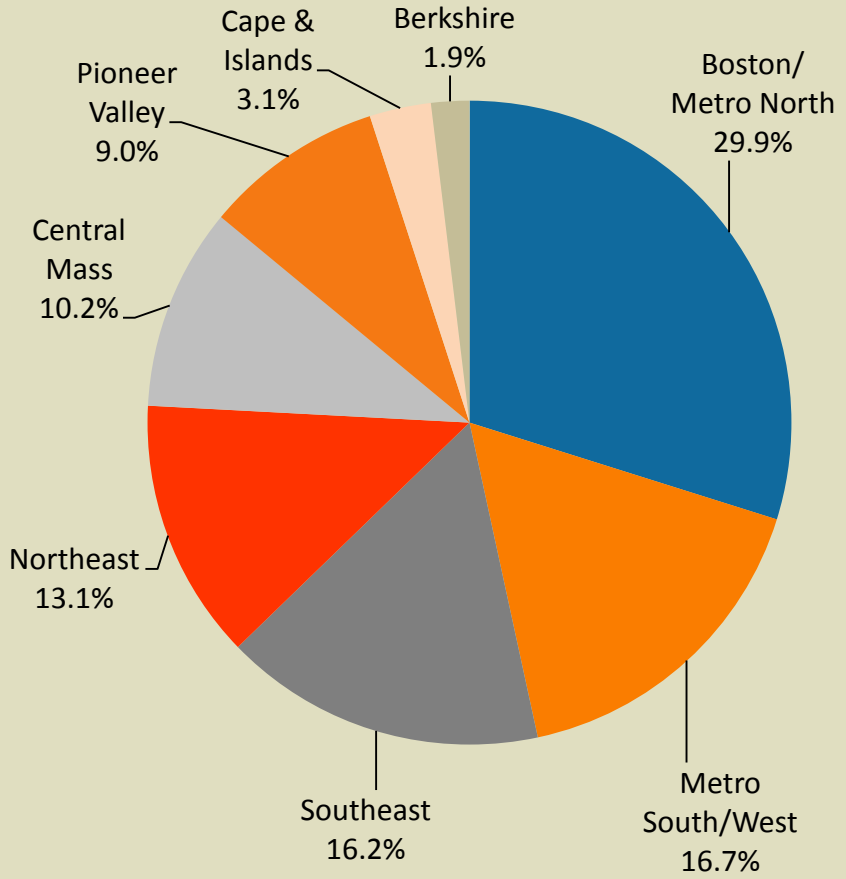
Massachusetts Regions



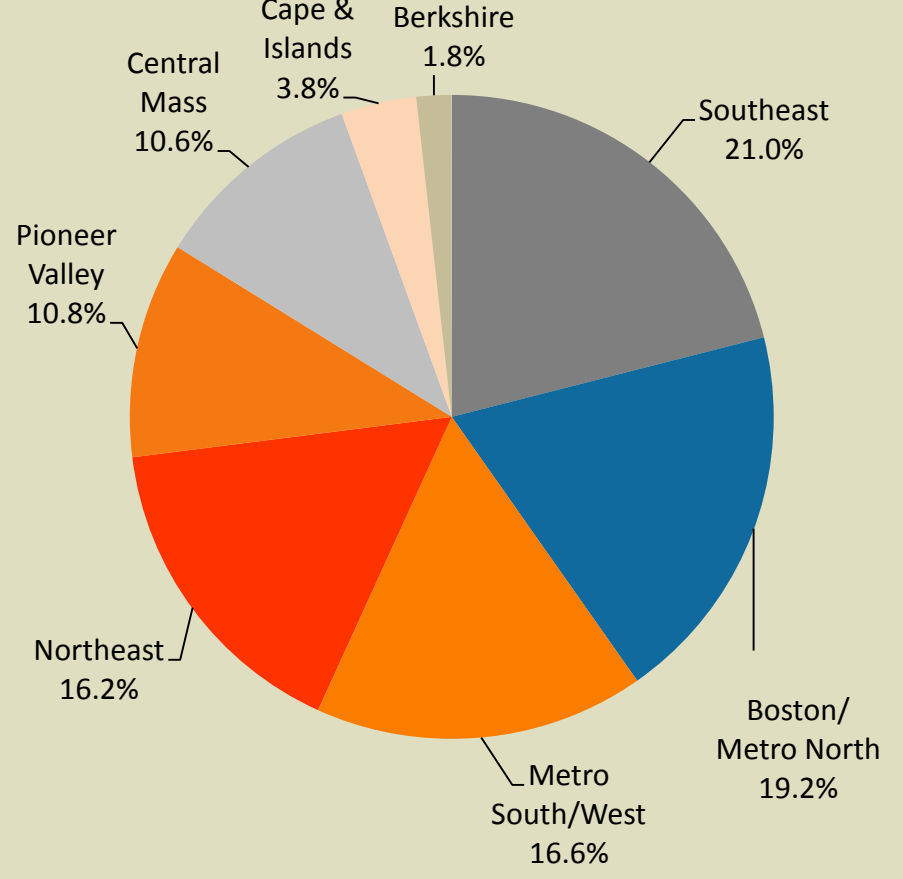
- 1 – Berkshire**
- 2 – Pioneer Valley**
- 3 – Central Mass**
- 4 – Northeast**
- 5 – Boston/Metro North**
- 6 – Metro South/West**
- 7 – Southeast**
- 8 – Cape & Islands**

The Metro Boston regions account for three-quarters of the state economy and drive many of the statewide trends.

Share of Massachusetts Employment, Q4 2011



Share of Massachusetts Population, 2008-2010



Today:

- Overview of the Labor Market Trends and Content of the Reports
- Introduction to Online Content
- Access and Manipulate Data Appendices

Type of Information in the Reports:

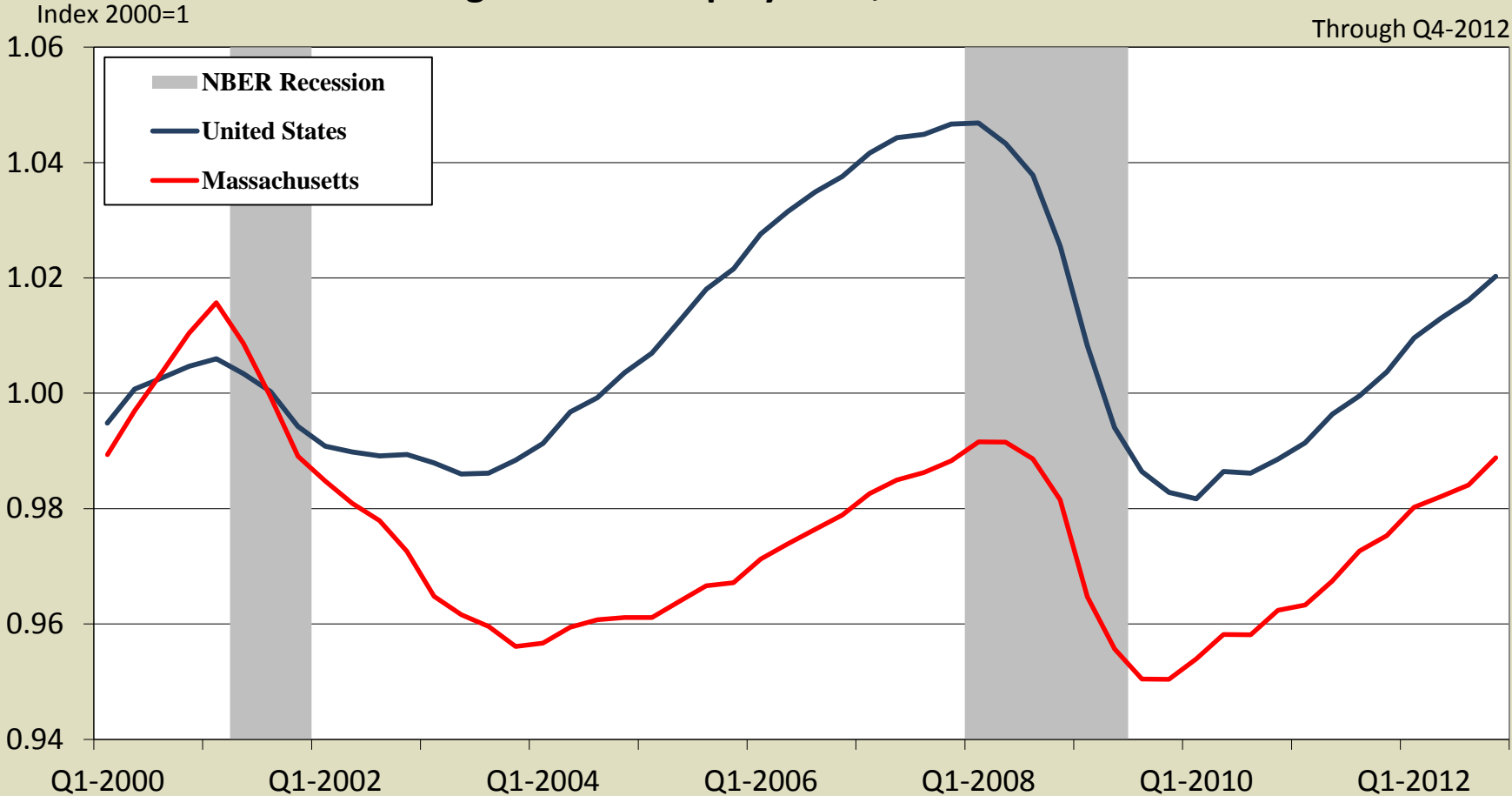
- Labor Market Performance
- Measures of Labor Supply
- Measures of Labor Demand
- The Pipeline: Educational Supply of Post-Secondary Degrees

Labor Market Performance

- National and State Employment Trends
- Performance of the Regional Labor Market
- Industry Trends
- Unemployment Trends

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

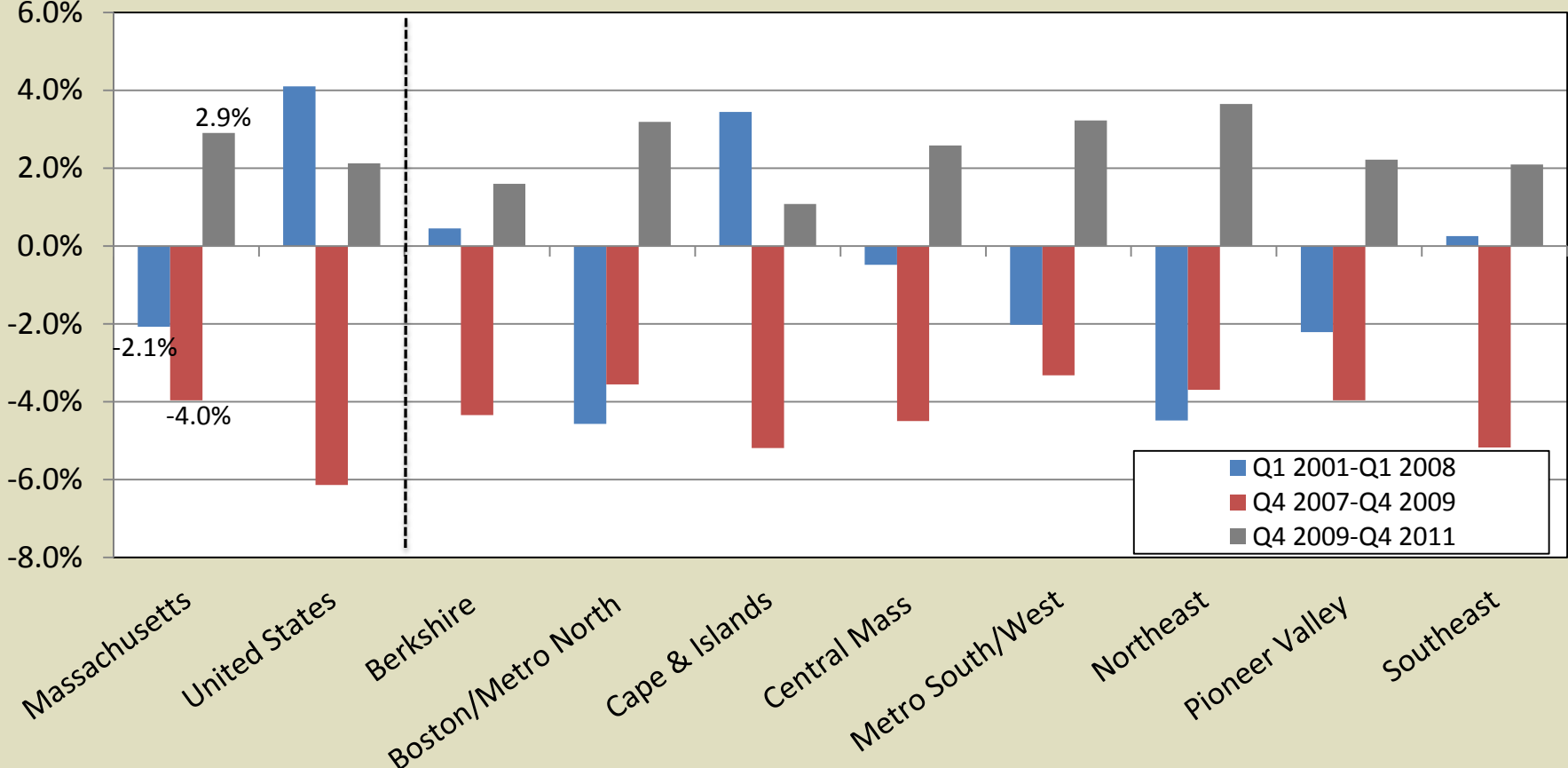
Total Non-Agricultural Employment, Q1-2000 to Q4-2012



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

Most of the Metro Boston regions have recovered at a faster rate than the state, with the exception of the Southeast.

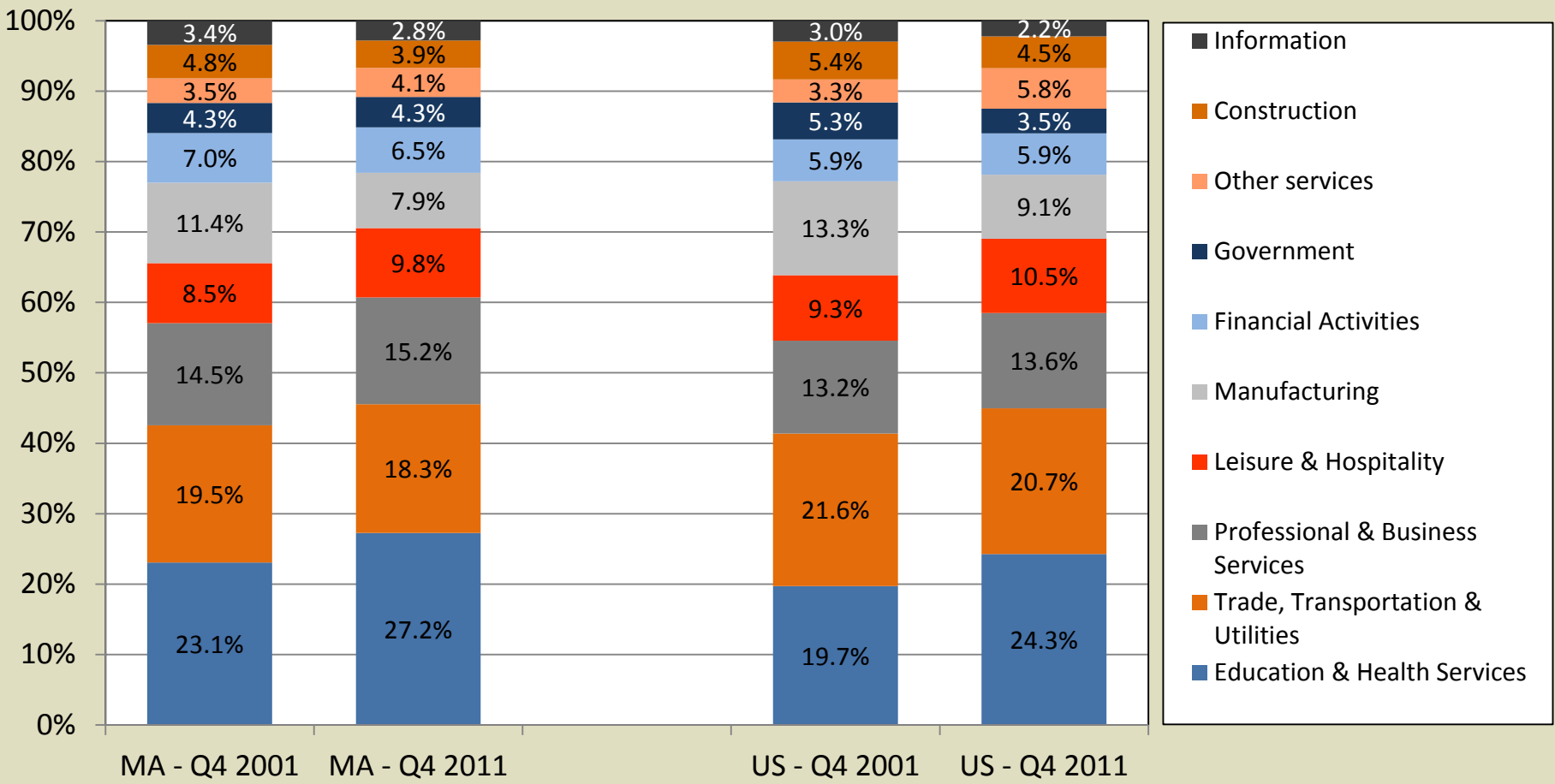
Total Growth Rates in Employment



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).

Education & Health Services and Professional & Business Services are much larger sectors of employment in the state.

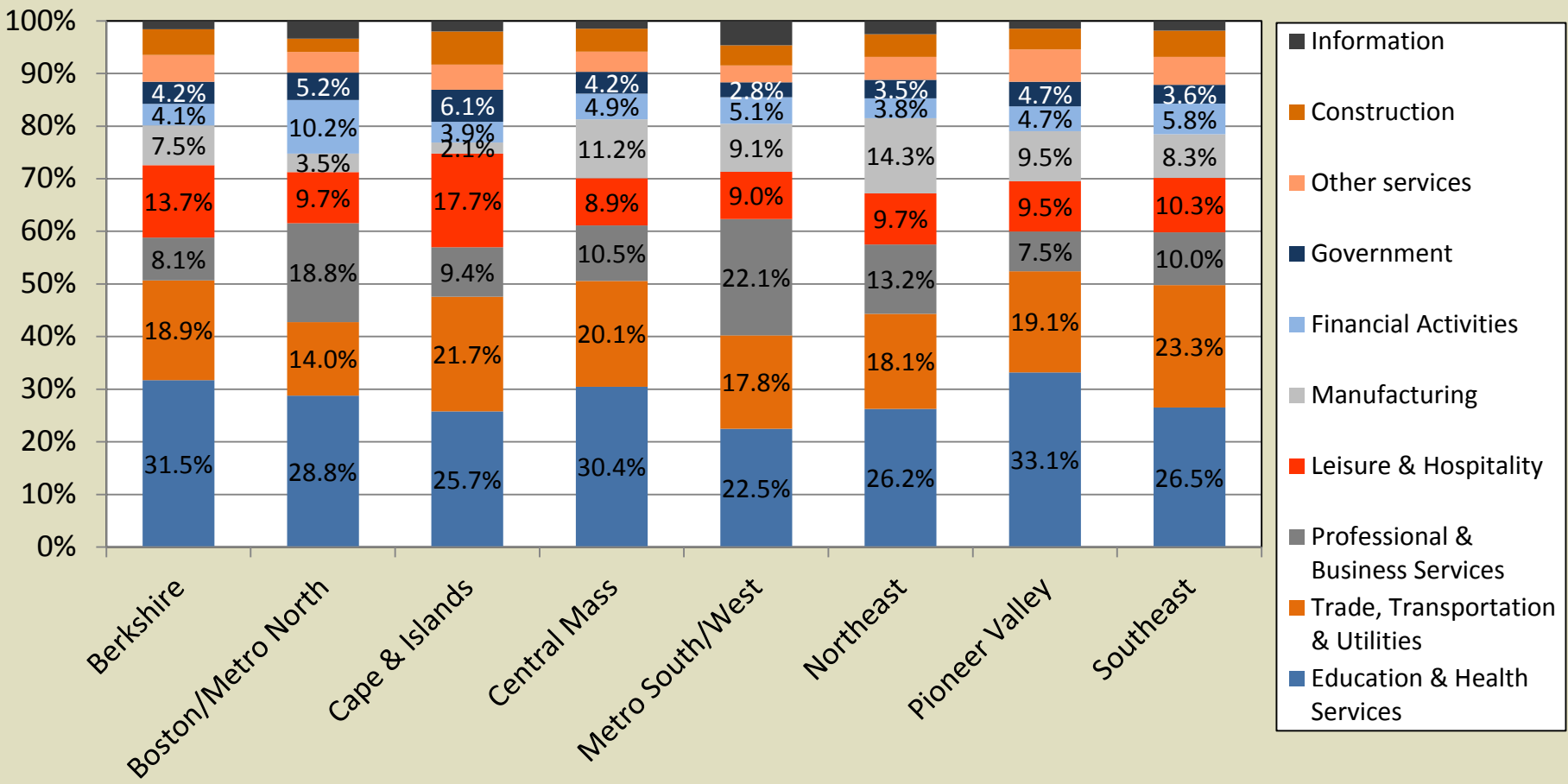
Employment Distribution by Supersector, Q4 2001 and 2011



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

Professional & Business Services is a larger sector of employment in Metro Boston, while Manufacturing is largest in the Northeast.

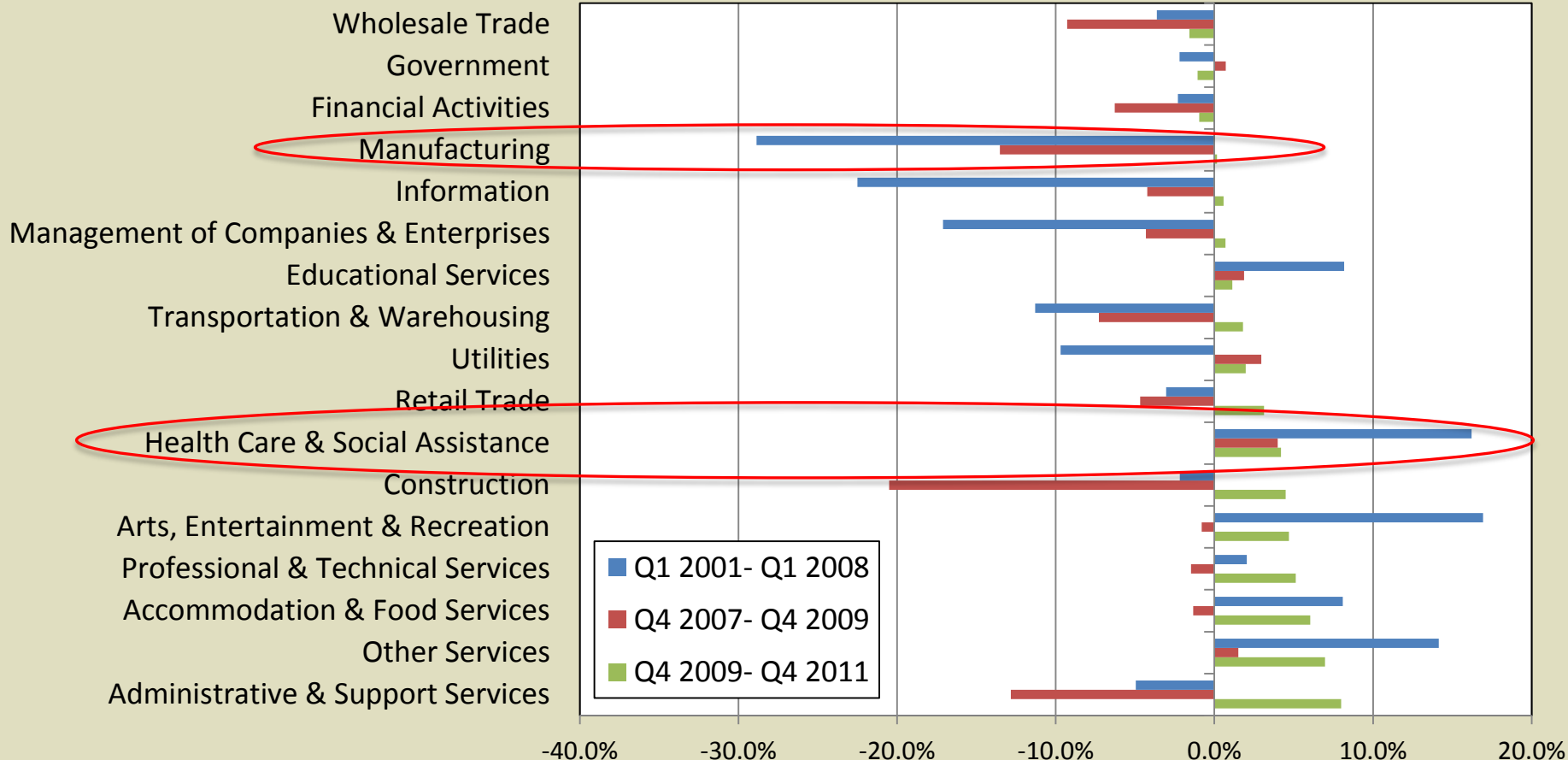
Employment Distribution by Supersector, Q4 2011



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

Construction and Health Care & Social Assistance accounted for a majority of the regions employment growth between recessions.

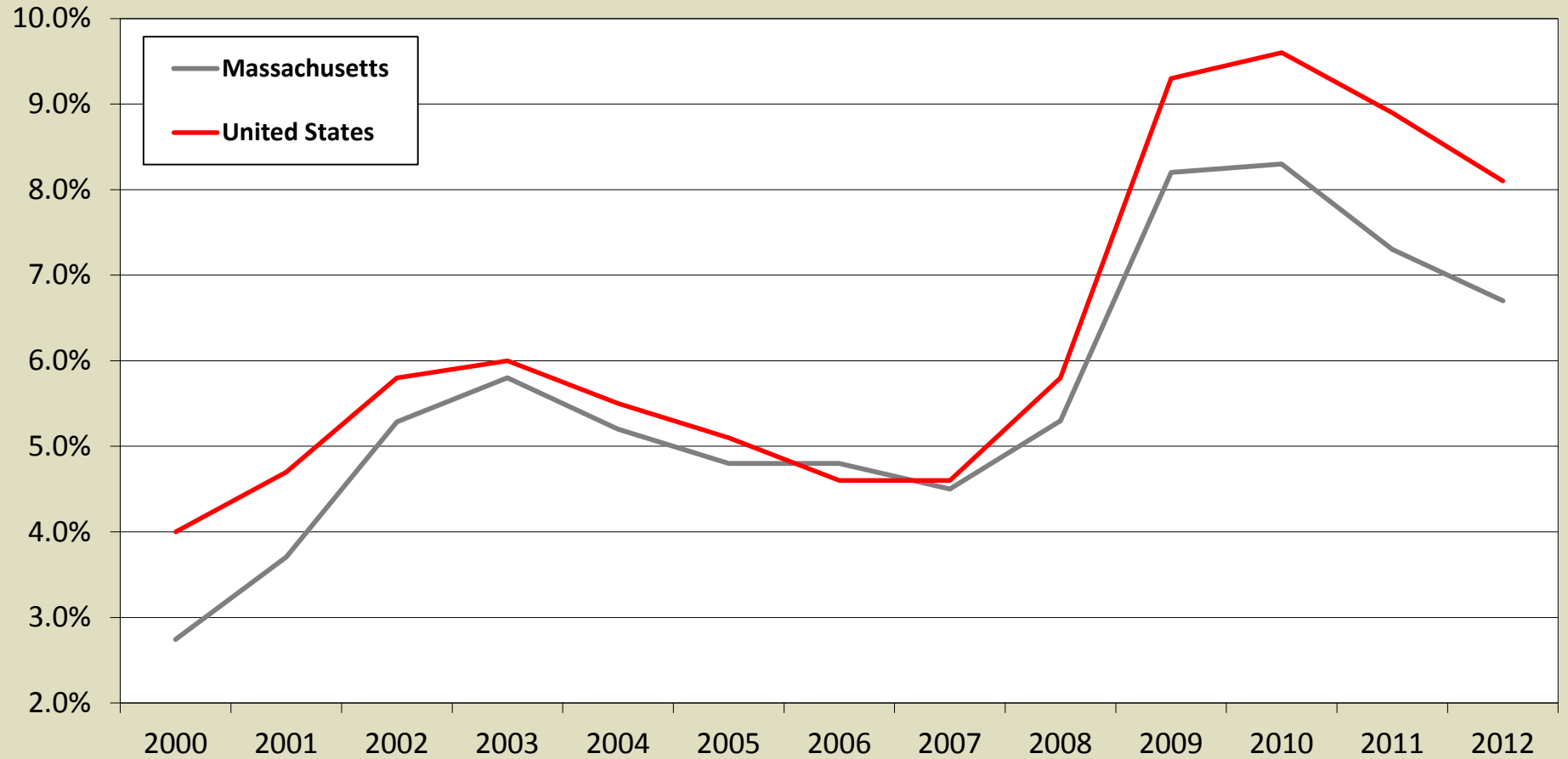
Employment Changes, Q1-2001 to Q1-2008



Sources: Massachusetts EOLWD, ES-202.

Massachusetts unemployment rate has been below the national rate nearly every year in the past decade.

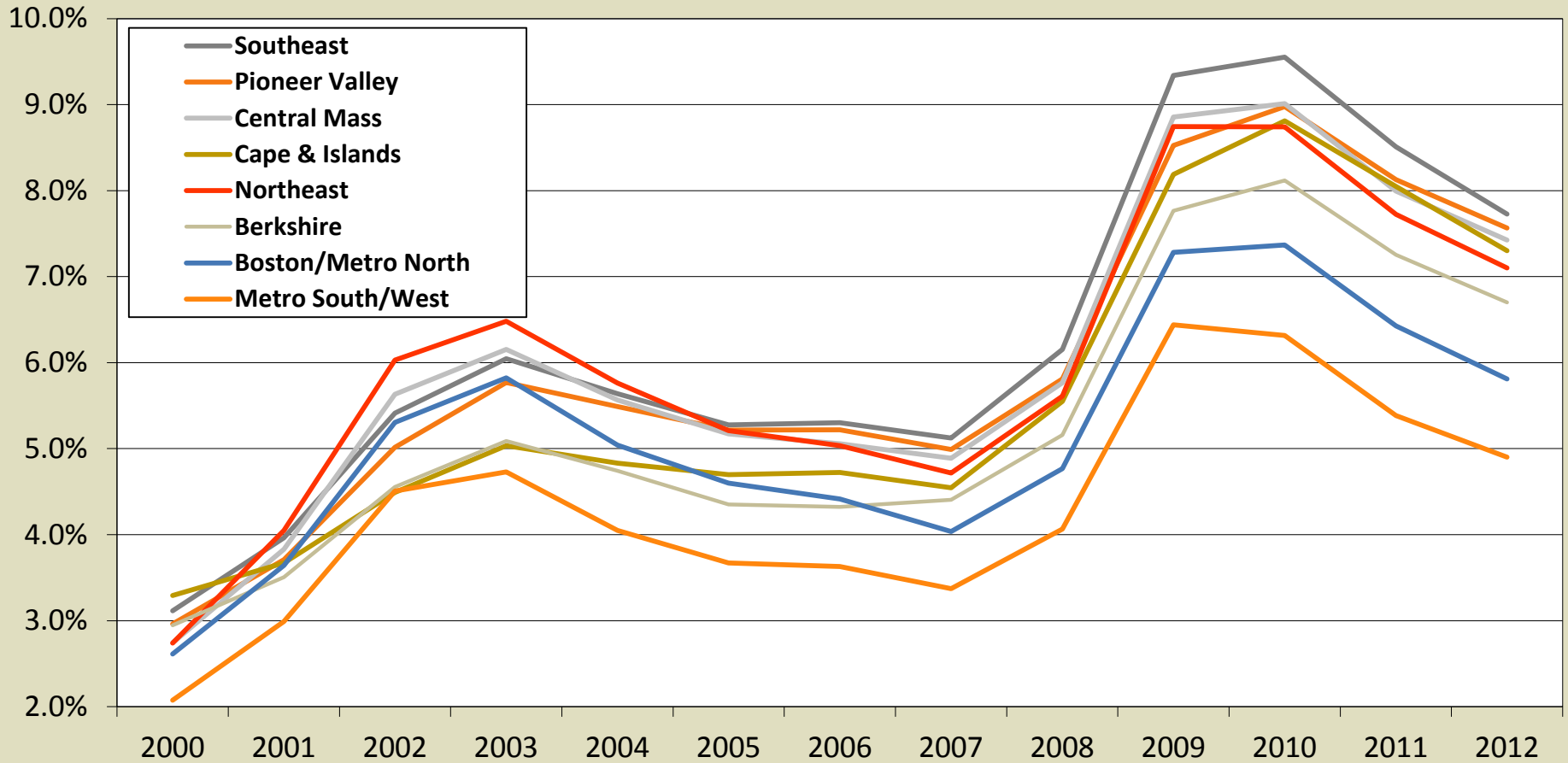
Unemployment Rates, 2000 to 2012



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

Unemployment rates peaked in 2010, ranging from 6.3 percent in Metro South/West to 9.6 percent in the Southeast.

Unemployment Rates, 2000 to 2012



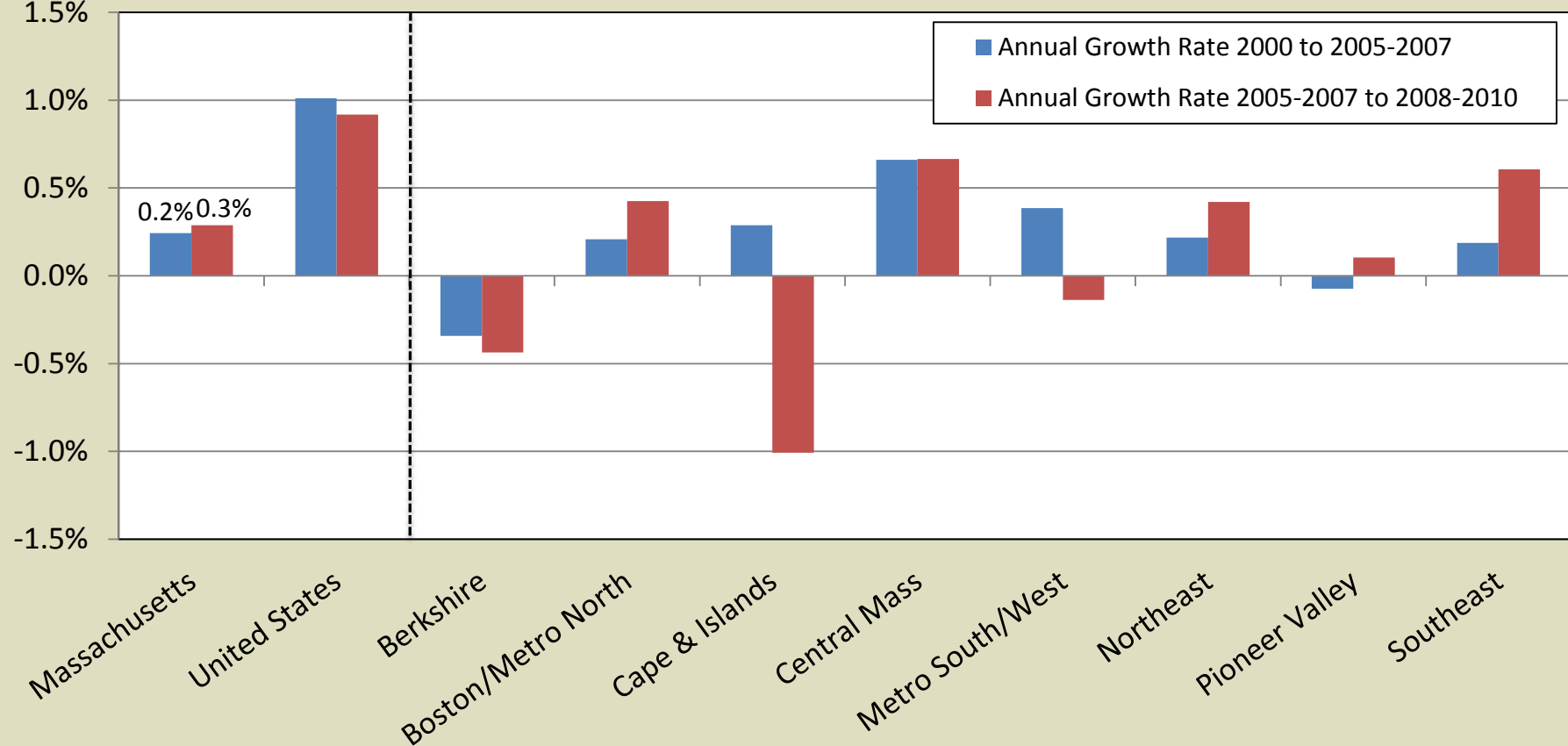
Source: Massachusetts EOLWD, Labor Force and Unemployment Rates.

Measuring Labor Supply

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

Central Mass has been the fastest growing region in the state while Berkshire has seen the largest declines in population.

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.

Immigrants and minority populations were the major drivers of population over the course of the past decade.

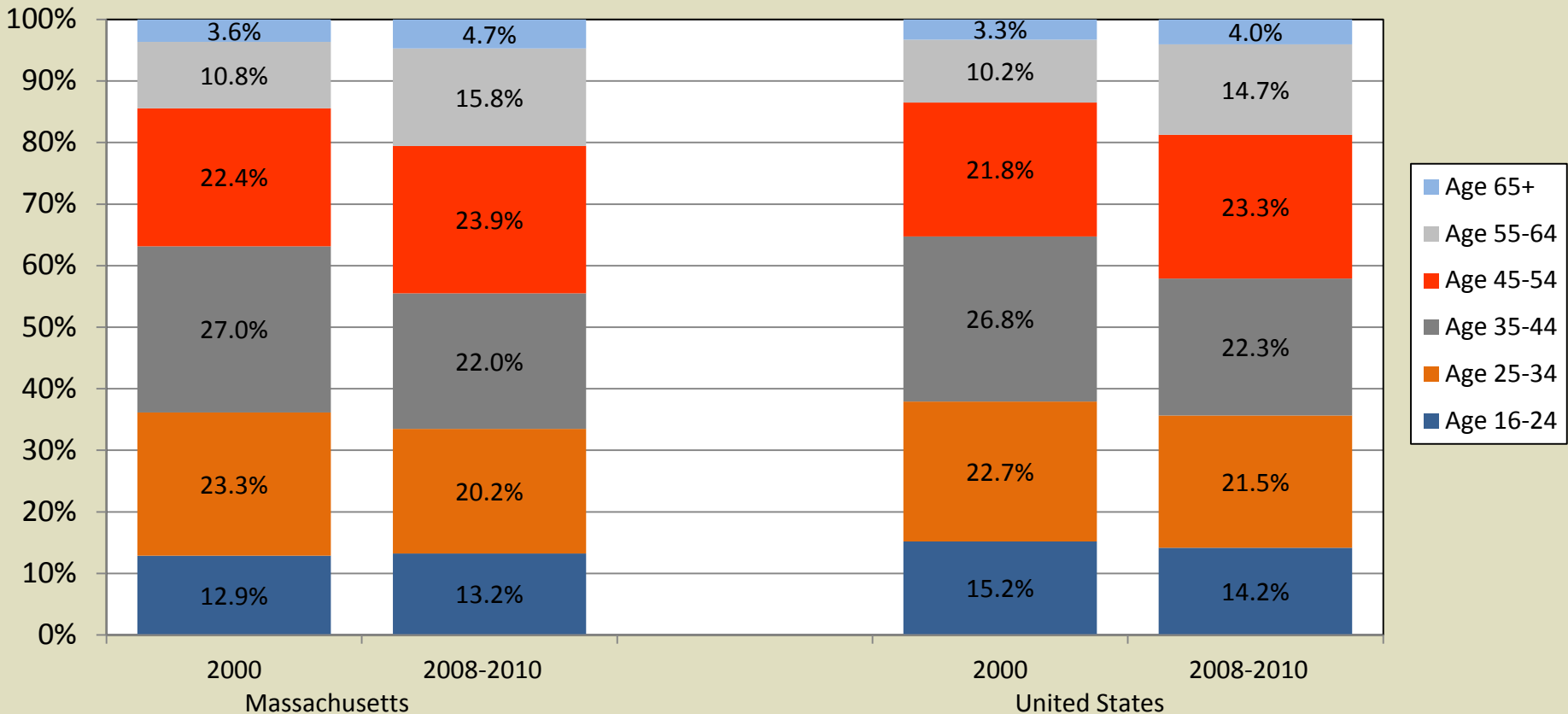
Demographic Characteristics of Massachusetts

	2000	2008-2010	Absolute Change	Annual Growth Rate
Resident Population	6,131,752	6,275,646	143,894	0.3%
<u>Gender</u>				
Male	2,949,155	3,031,990	82,835	0.3%
Female	3,182,597	3,243,656	61,059	0.2%
<u>Nativity</u>				
Native Born	5,241,790	5,183,529	-58,261	-0.1%
Immigrant	889,962	1,092,117	202,155	2.3%
<u>Race/Ethnicity</u>				
White, non-Hispanic	5,026,398	4,827,483	-198,915	-0.4%
Black, non-Hispanic	300,758	381,488	80,730	2.7%
Asian, non-Hispanic	225,949	332,793	106,844	4.4%
Hispanic	412,496	588,635	176,139	4.0%
Other race, non-Hispanic	166,151	145,247	-20,904	-1.5%

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

With 44 percent of its labor force age 45 or older, Massachusetts has the 12th oldest labor force in the United States.

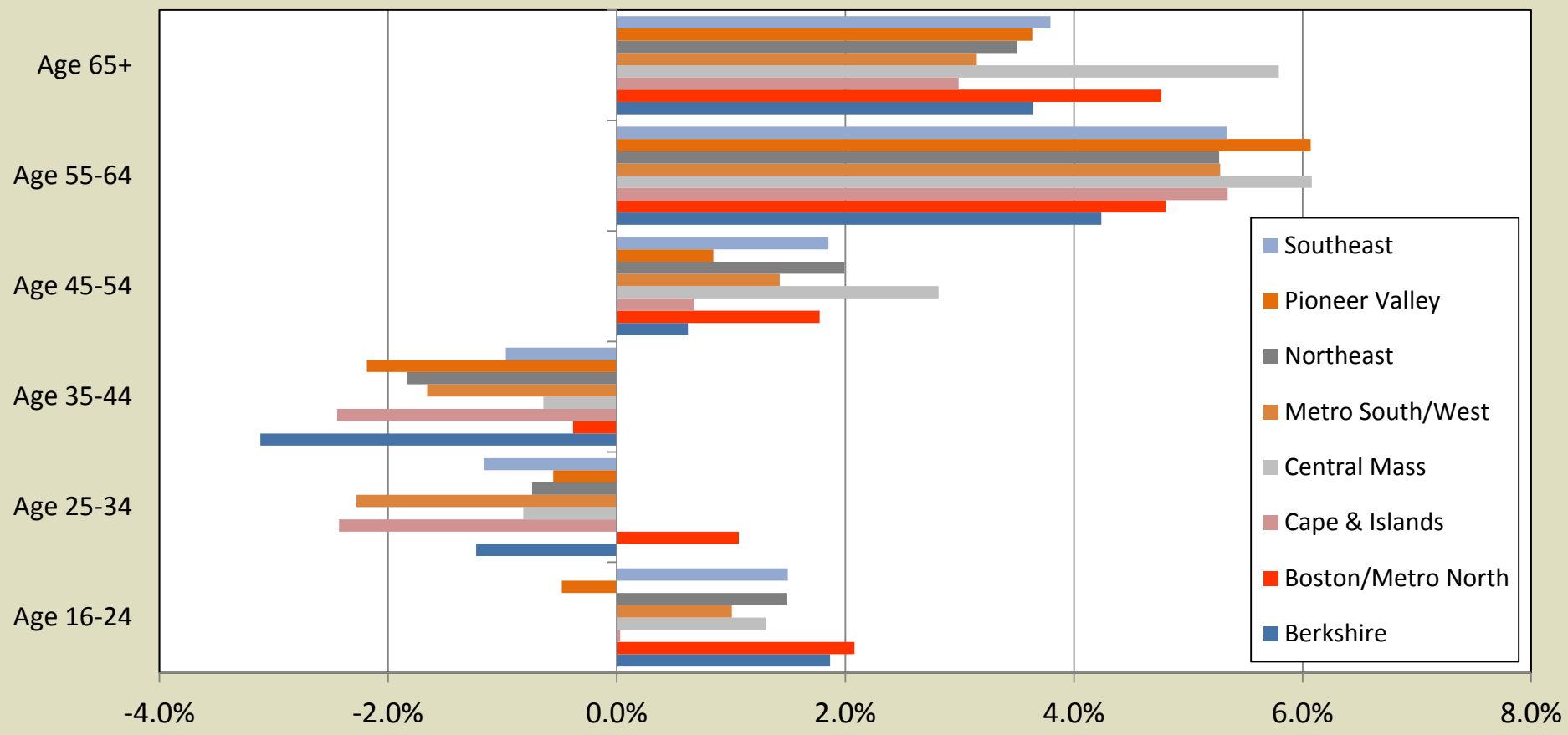
Age Distribution of the Civilian Labor Force



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

The aging of baby boomers is starting to shift the age distribution of the labor force into the oldest age cohorts.

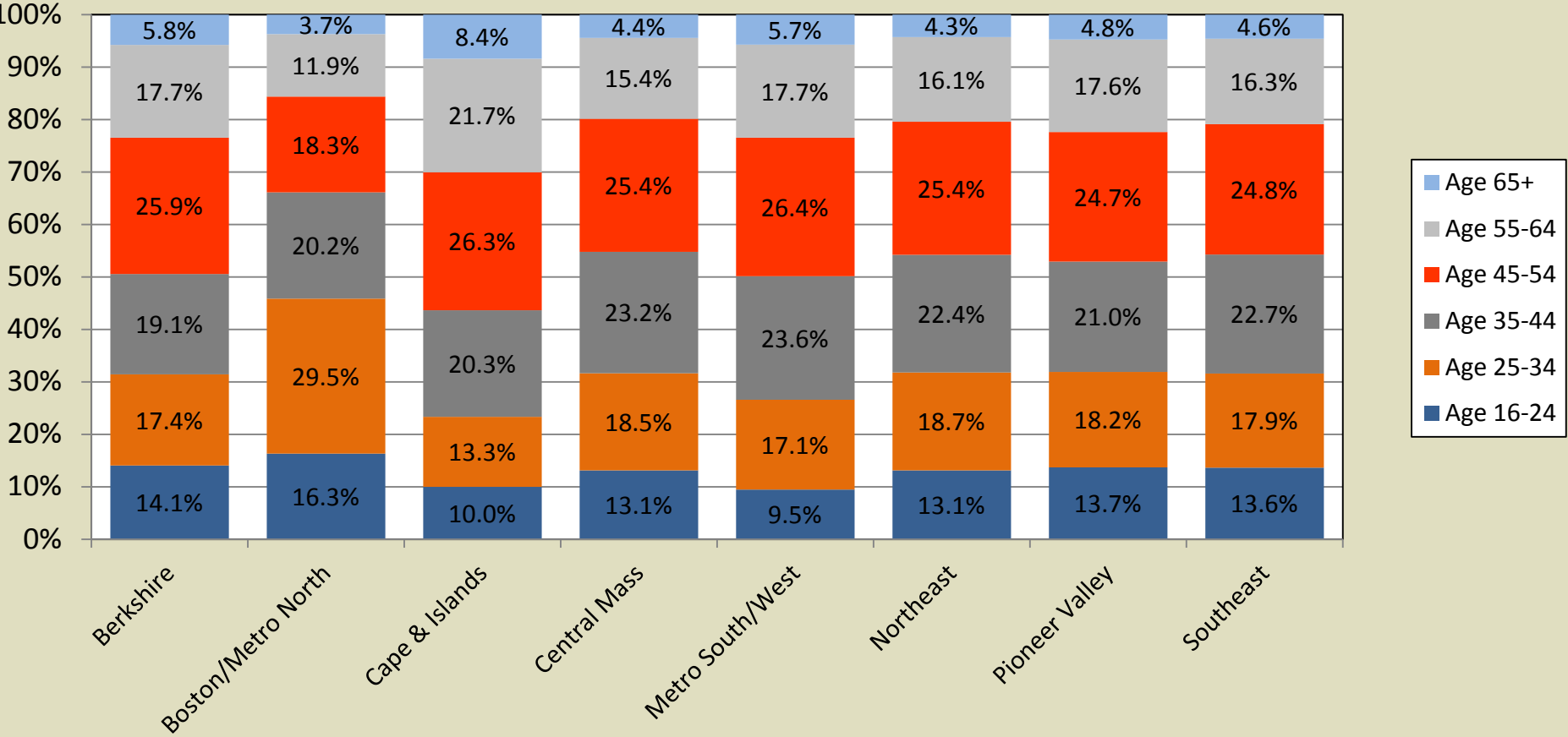
Annual Growth in the Civilian Labor Force by Age, 2000 to 2008-2010



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

In the Berkshire, the Cape & Islands, and Metro South/West a majority of the labor force is now age 45 or older.

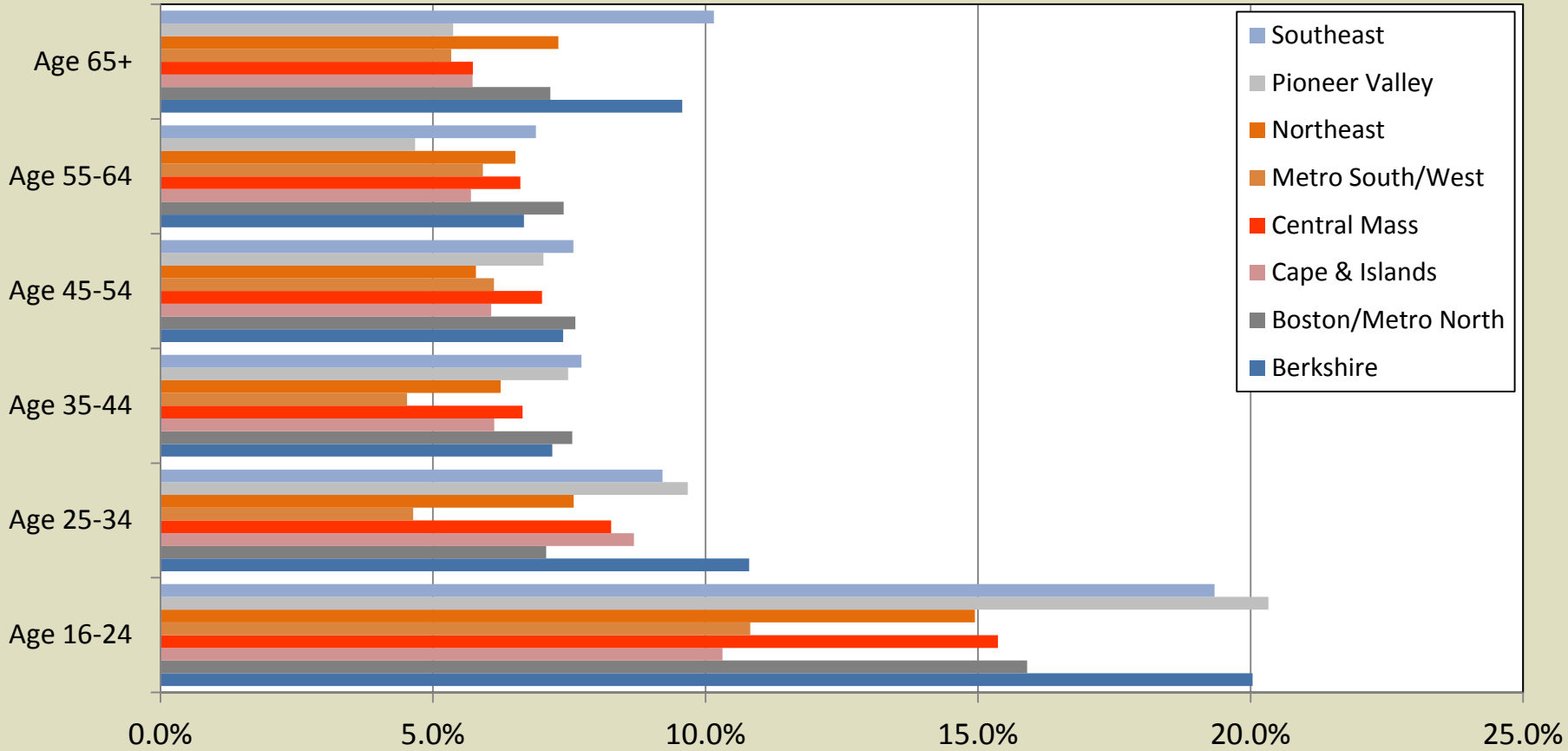
Age Distribution of the Civilian Labor Force



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

Unemployment rates for 16-24 years old are the highest of all age cohorts, reaching 20 percent in the Pioneer Valley.

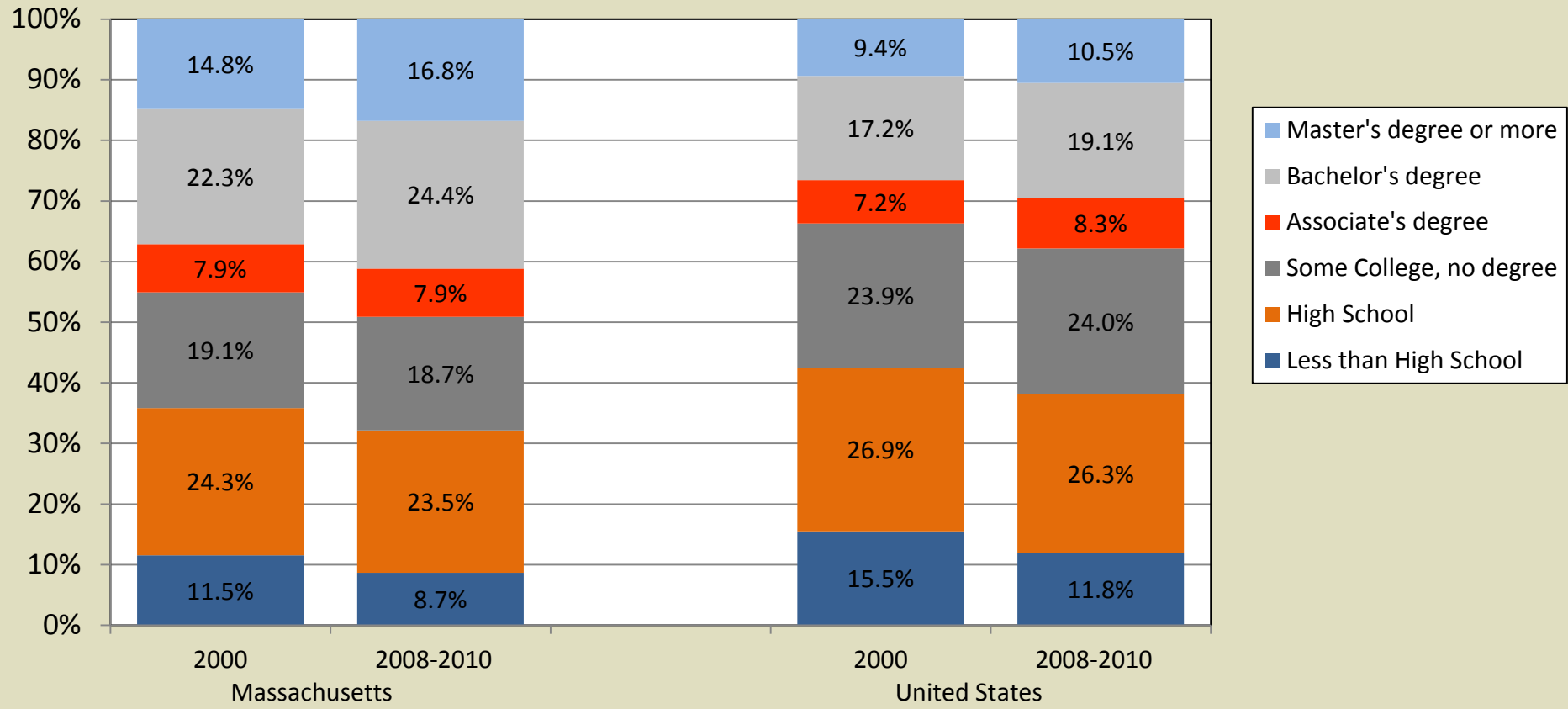
Unemployment Rates by Age, 2008-2010



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

Massachusetts has the most highly educated labor force in the nation, with 41 percent having a Bachelor's Degree or higher.

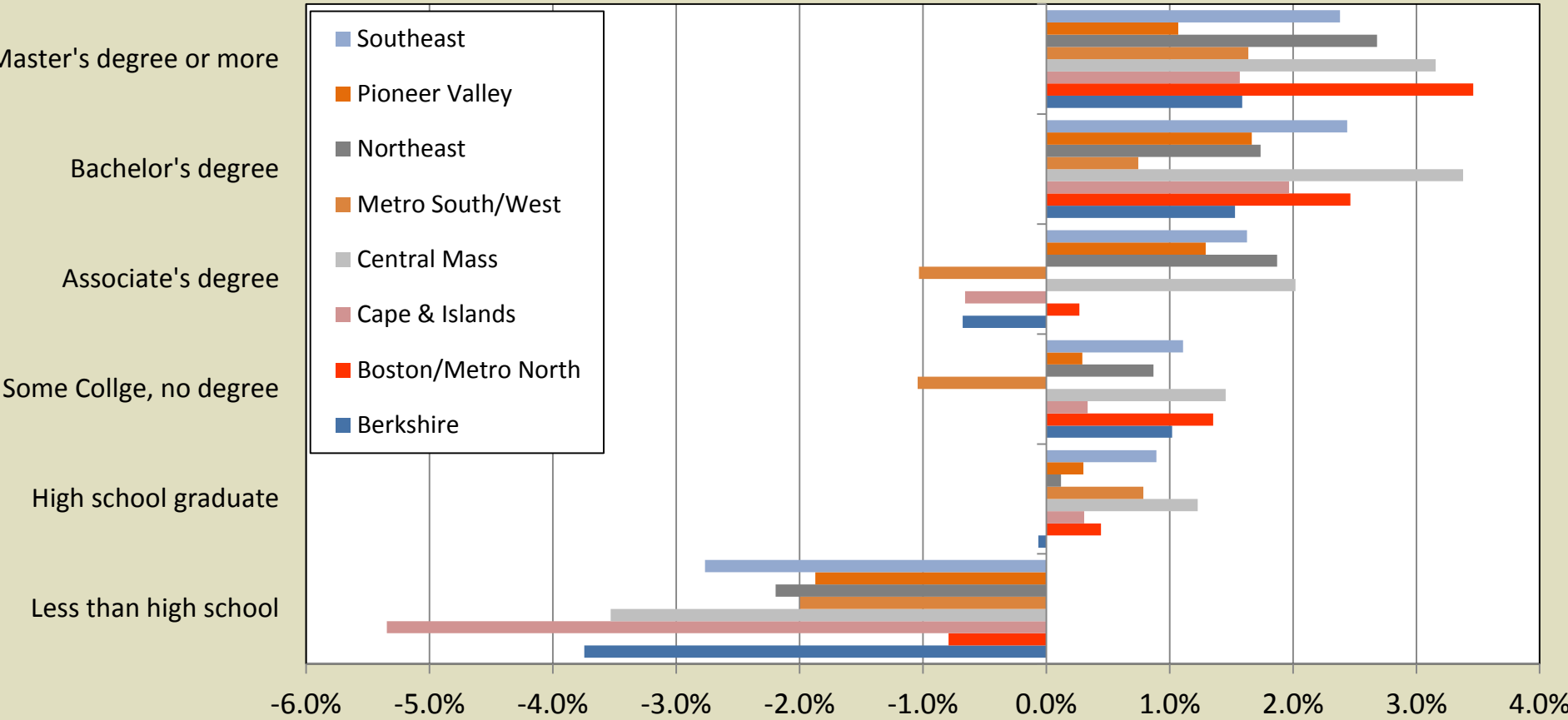
Educational Attainment of the Civilian Labor Force



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

Over the past decade, all regions have seen major shifts in the educational attainment of their labor force.

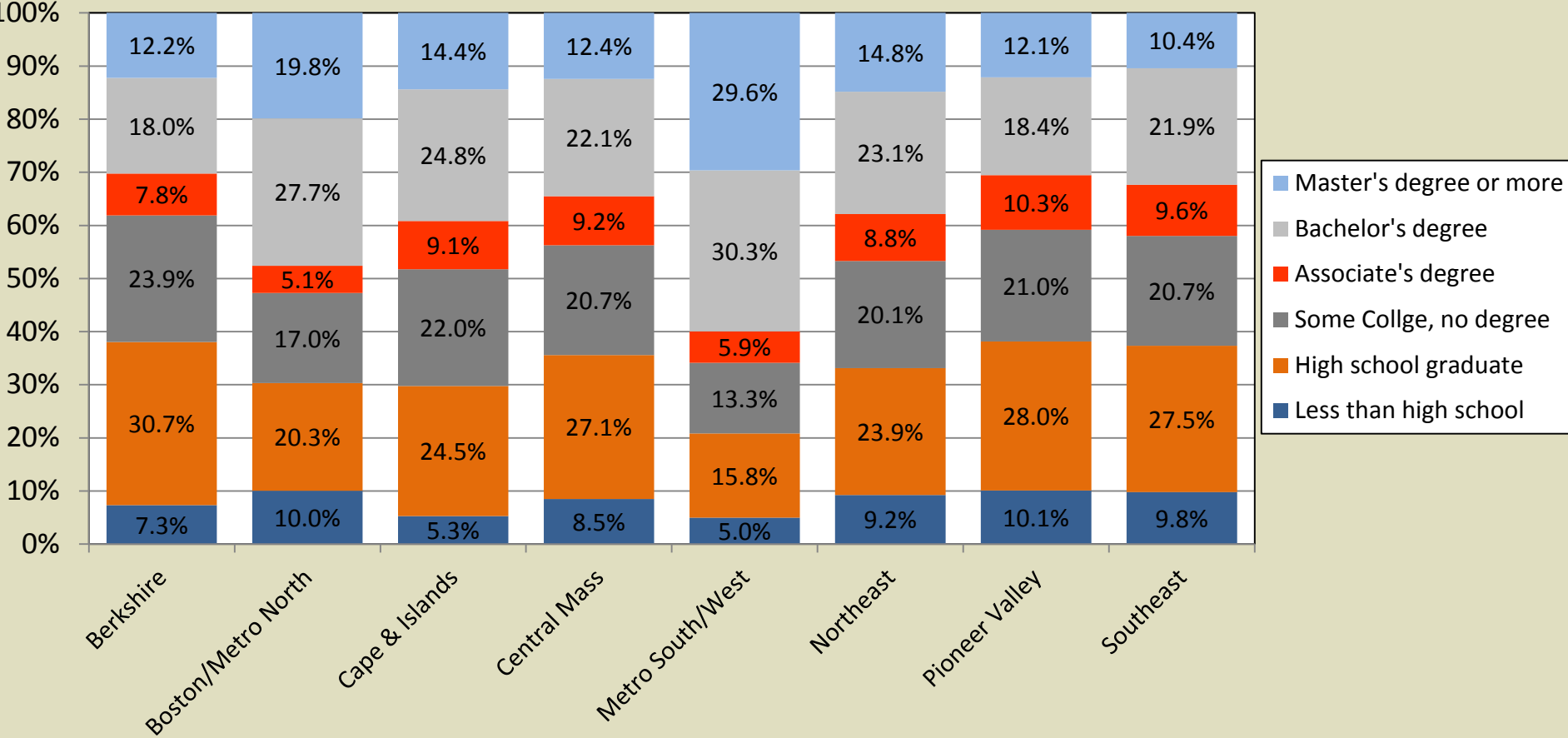
Annual Growth in the Civilian Labor Force by Education, 2000 to 2008-2010



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

However, each regions labor force has considerably different educational compositions.

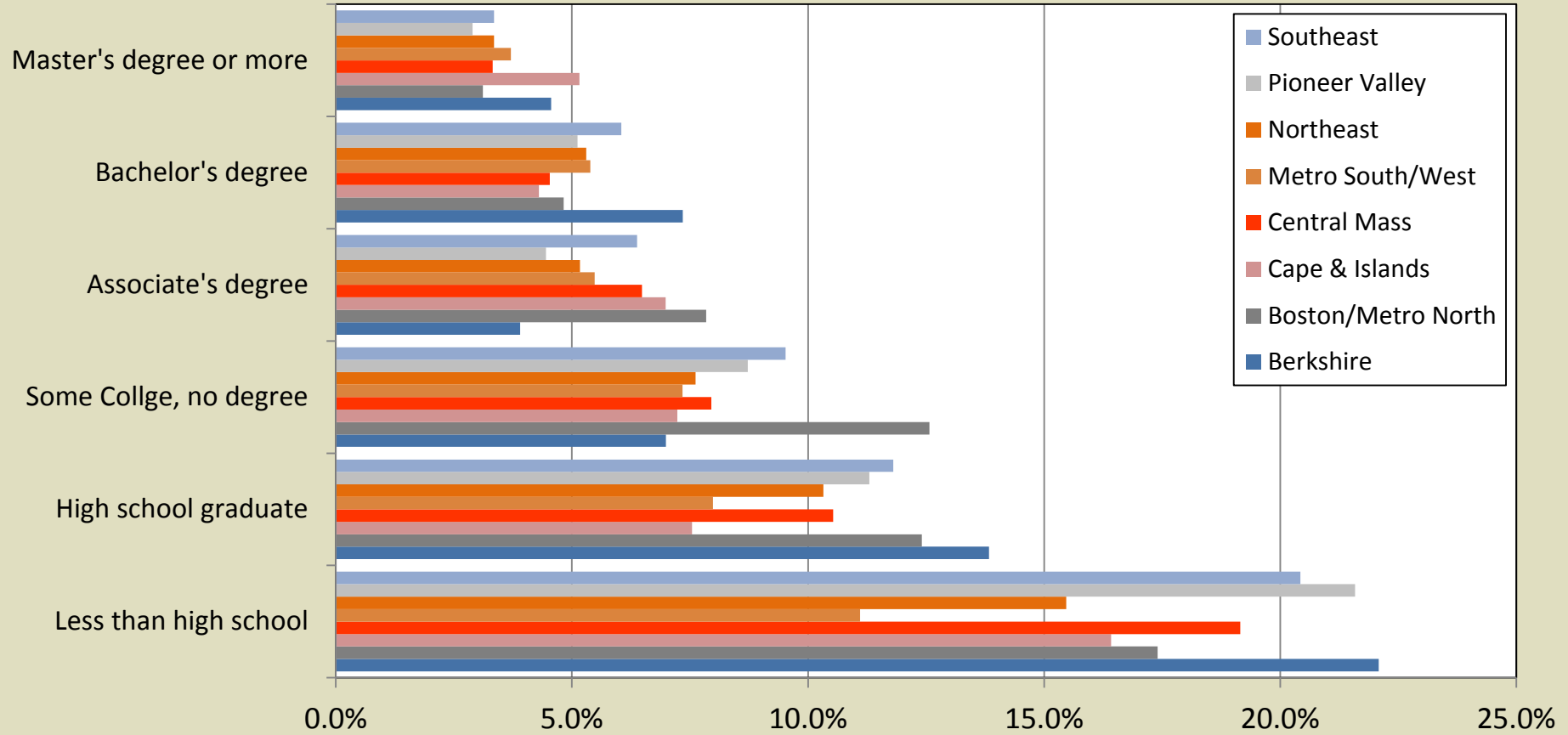
Educational Attainment of the Civilian Labor Force, 2008-2010



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

Those with less than a High School education have the highest unemployment rates, reaching 22 percent in Berkshire.

Unemployment Rates by Educational Attainment, 2008-2010



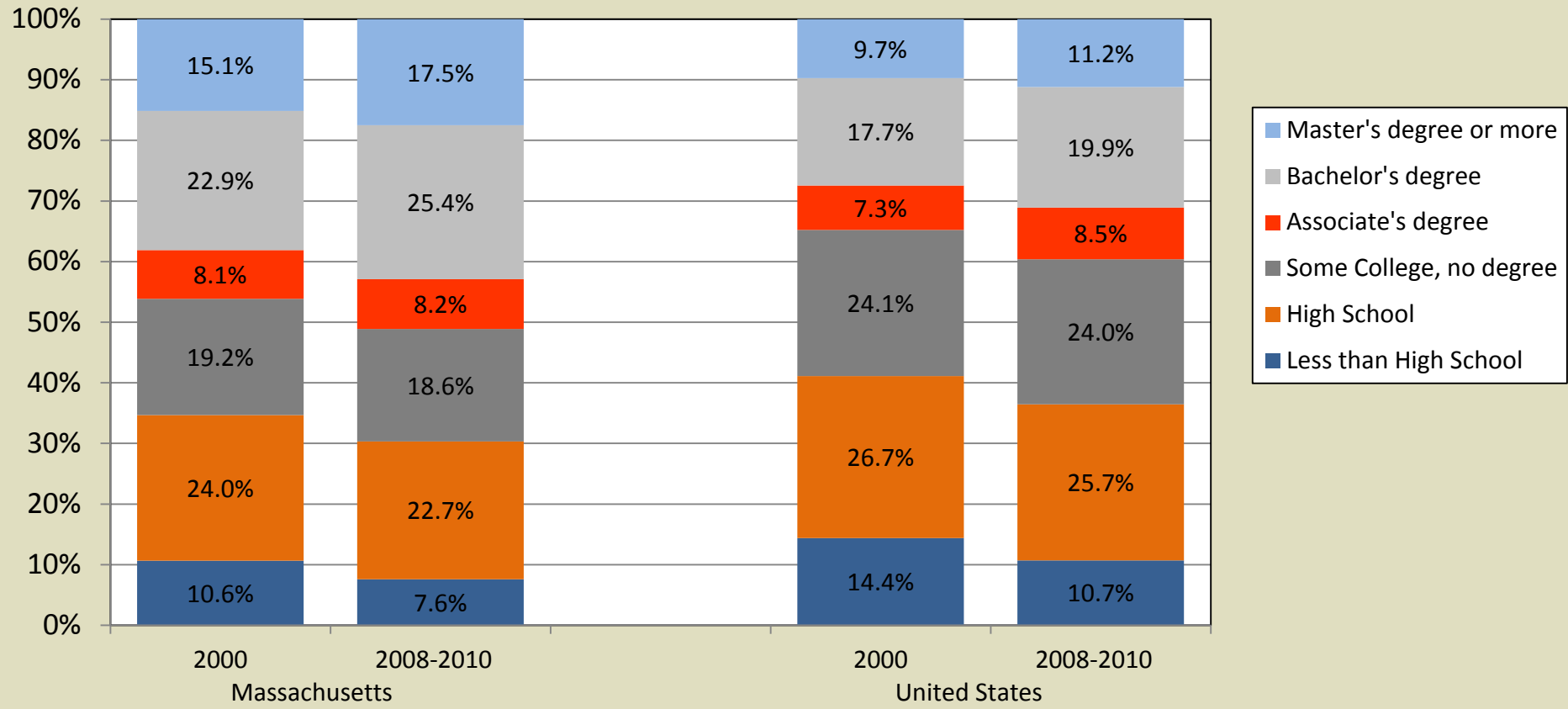
Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.

Measuring Labor Demand

- Educational Attainment of Employed
- Educational Attainment and Composition of Industries and Occupations
- Job Vacancy Data by Industry and Occupation

The importance of education in Massachusetts becomes most apparent when looking at the characteristics of the employed.

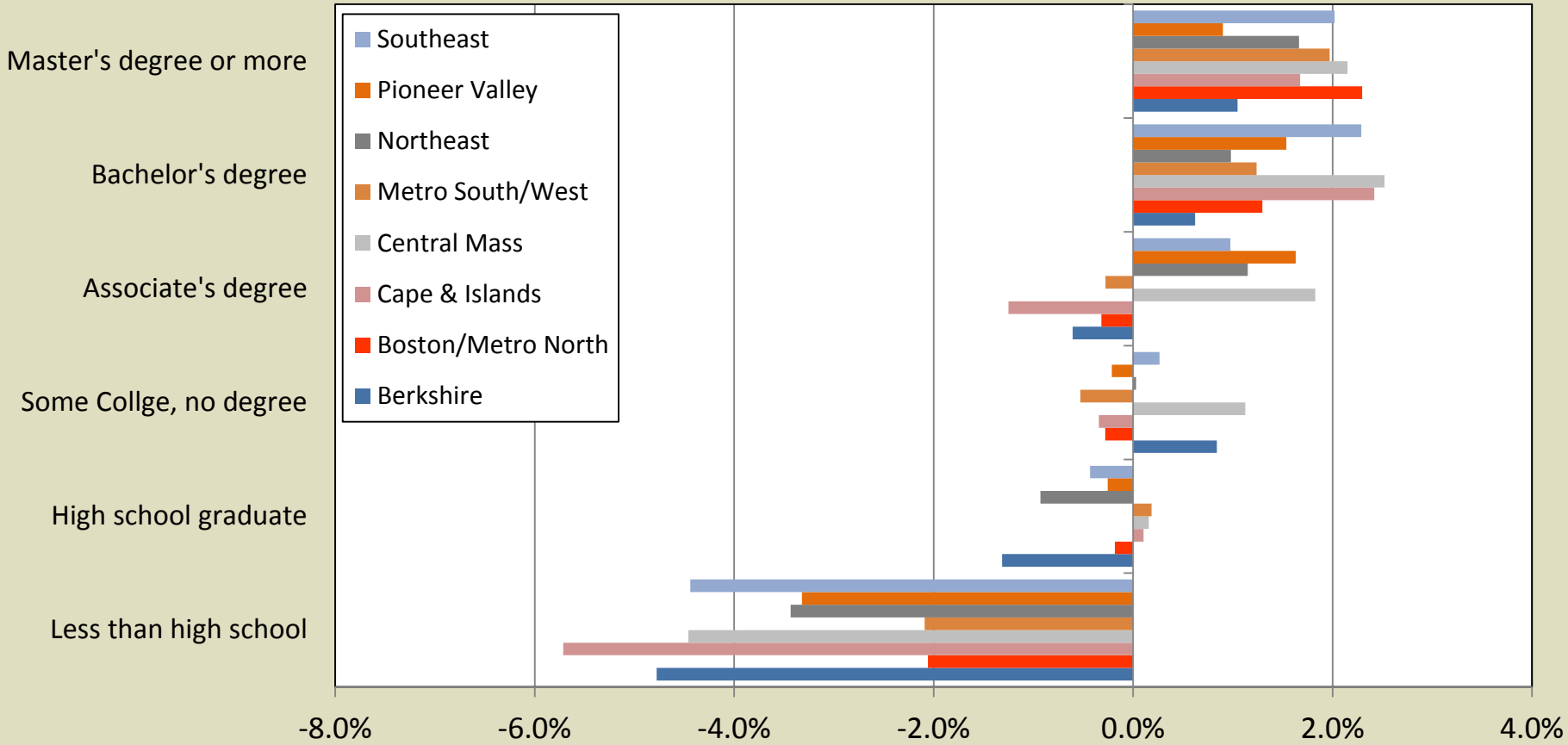
Educational Attainment of Individuals Employed in the Region



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

In the past decade employment opportunities have grown, almost exclusively, for workers with a college degree.

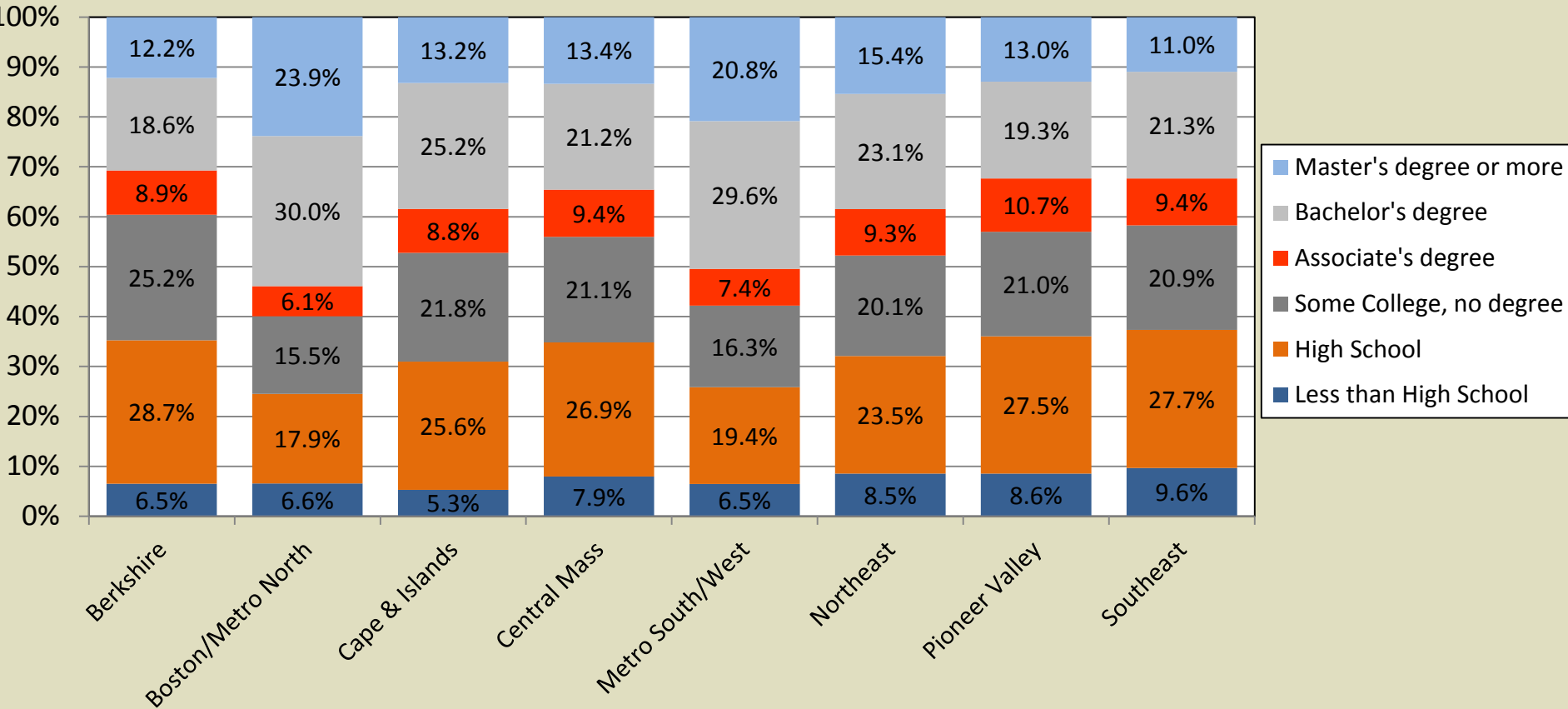
Annual Growth in the Employed by Education, 2000 to 2008-2010



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

Boston/Metro North and Metro South/West are the regions that demand the highest levels of education for employment.

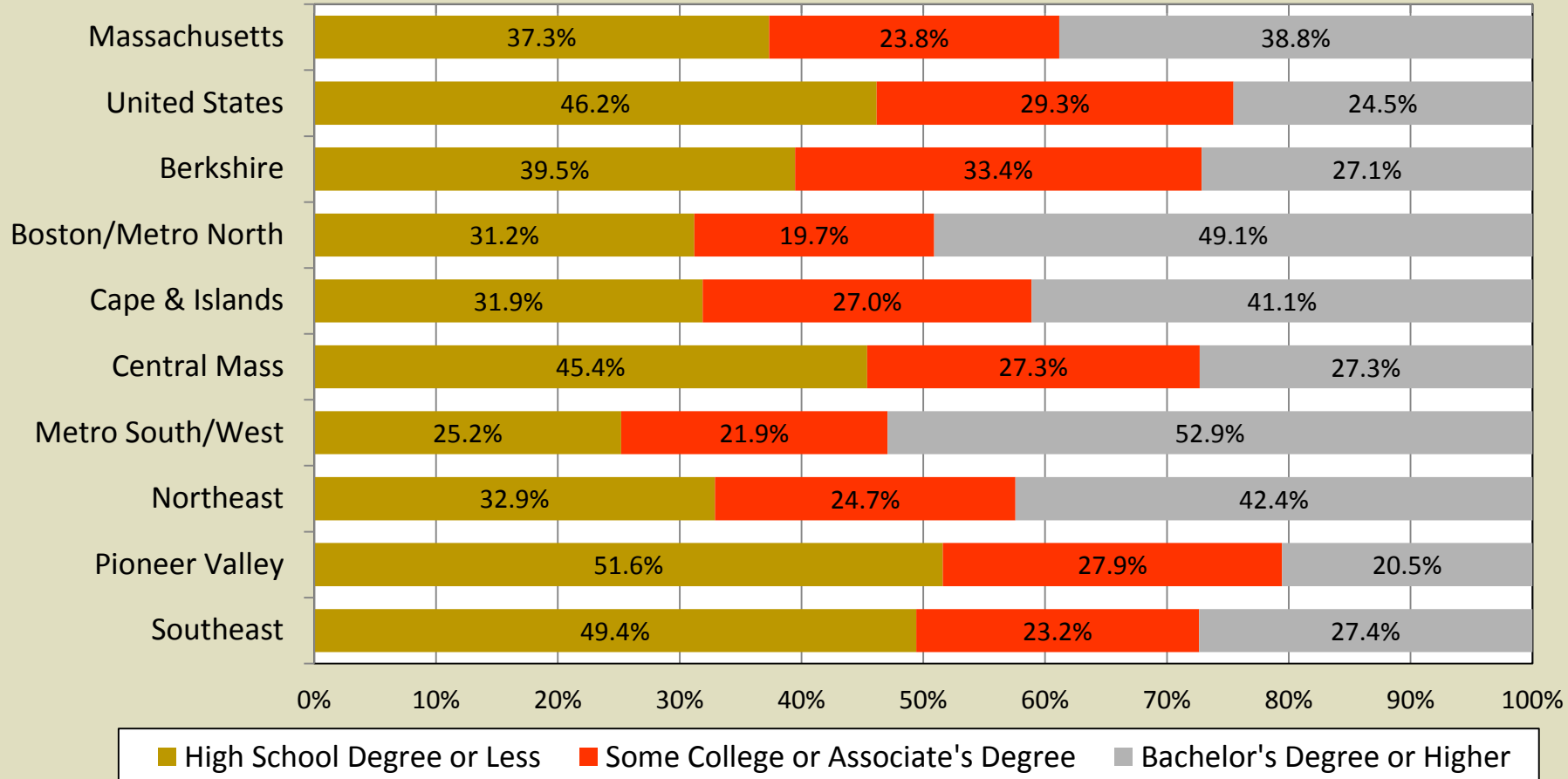
Educational Attainment of Individuals Employed in the Regions, 2008-2010



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

Nearly half of the manufacturing workers in Boston/Metro North and Metro South/West have at least a four-year degree.

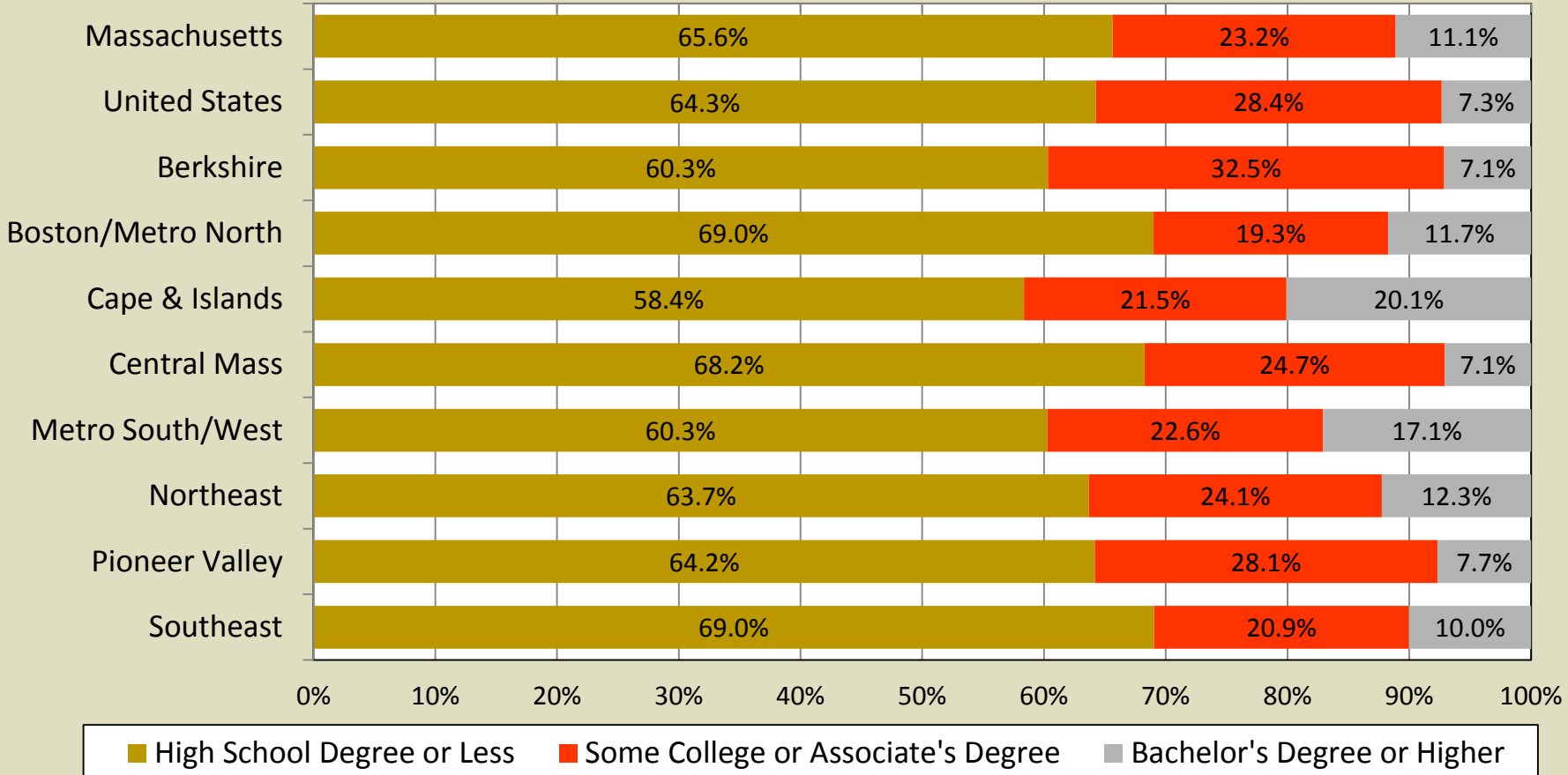
Educational Attainment of Employees in Manufacturing, 2008-2010



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

As in the U.S., the majority of production workers in across Massachusetts regions have a High School education or less.

Educational Attainment of Employees in Production Occupations, 2008-2010



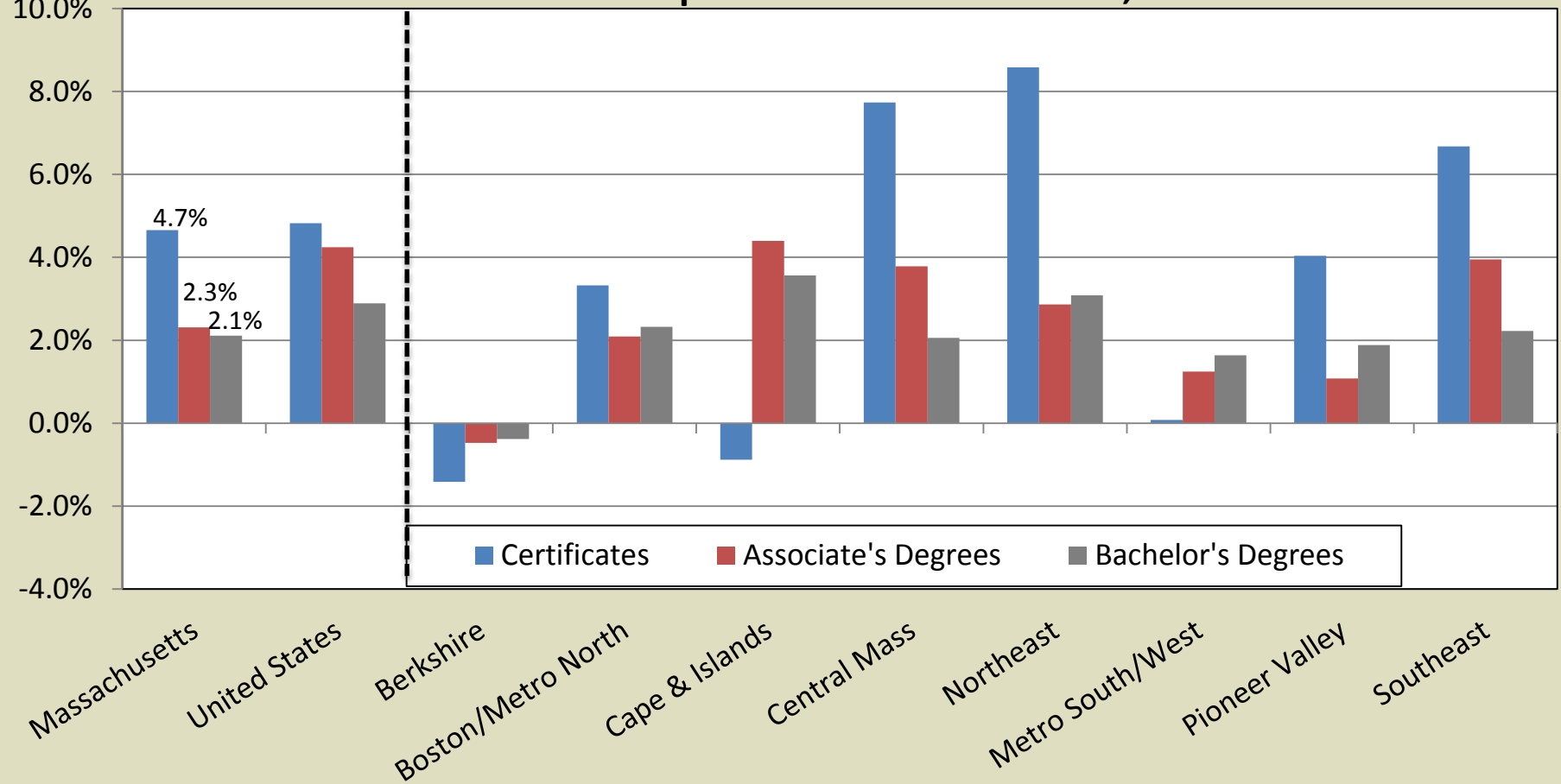
Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.

The Pipeline: Educational Supply of Post-Secondary Degrees

- Enrollment Trends by Type of Institution, Full-Time and Part-Time
- Graduation Rates by Type of Institution
- Certificate and Degree Completions Trends
- Major Fields of Study for Certificates and Degrees

Central Mass, the Northeast, and the Southeast reported some of strongest growth in completions across degree types.

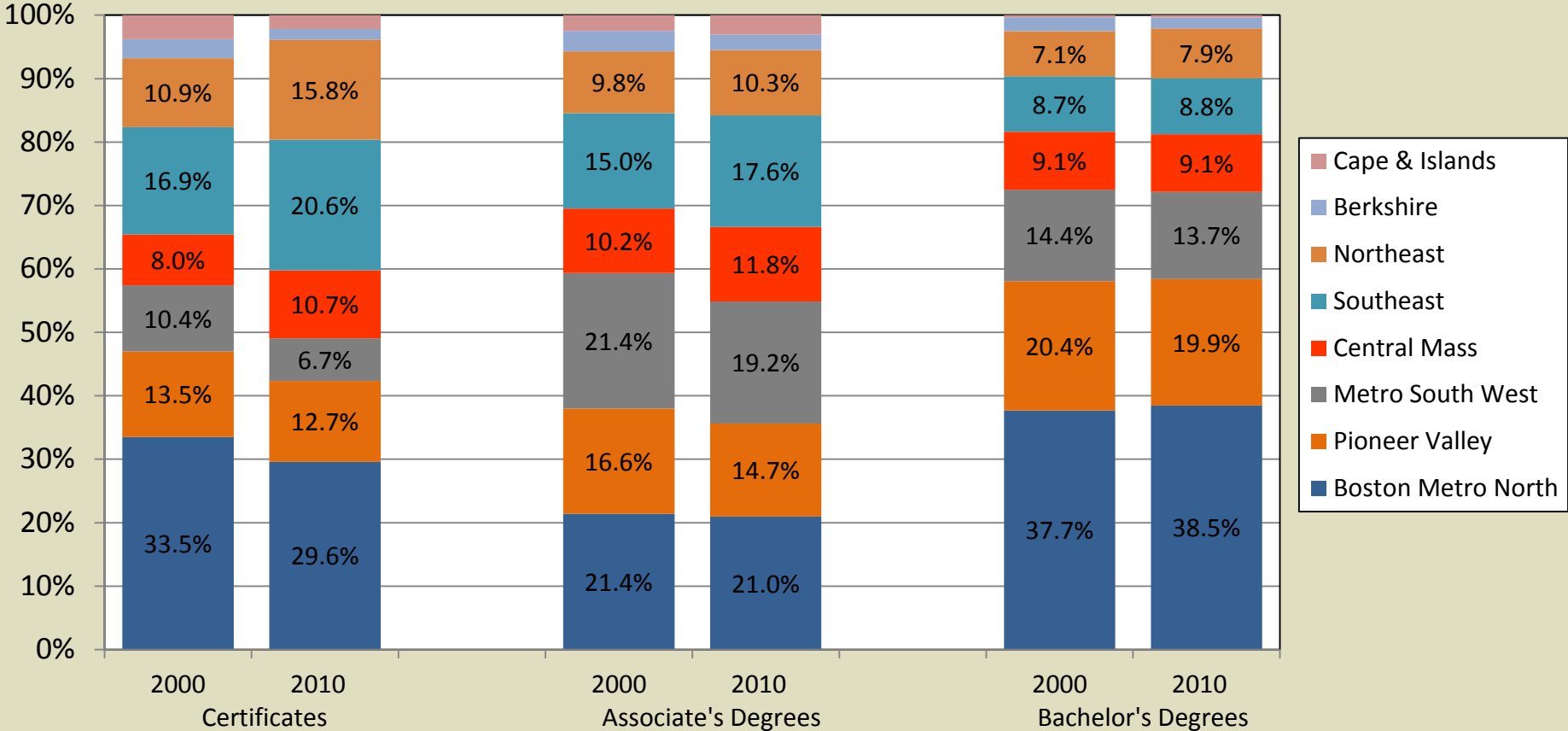
Annual Growth in Completions at All Institutions, 2000 to 2010



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

The supply of post-secondary educated workers comes from a number of regions, with Boston/Metro North accounting for the largest shares.

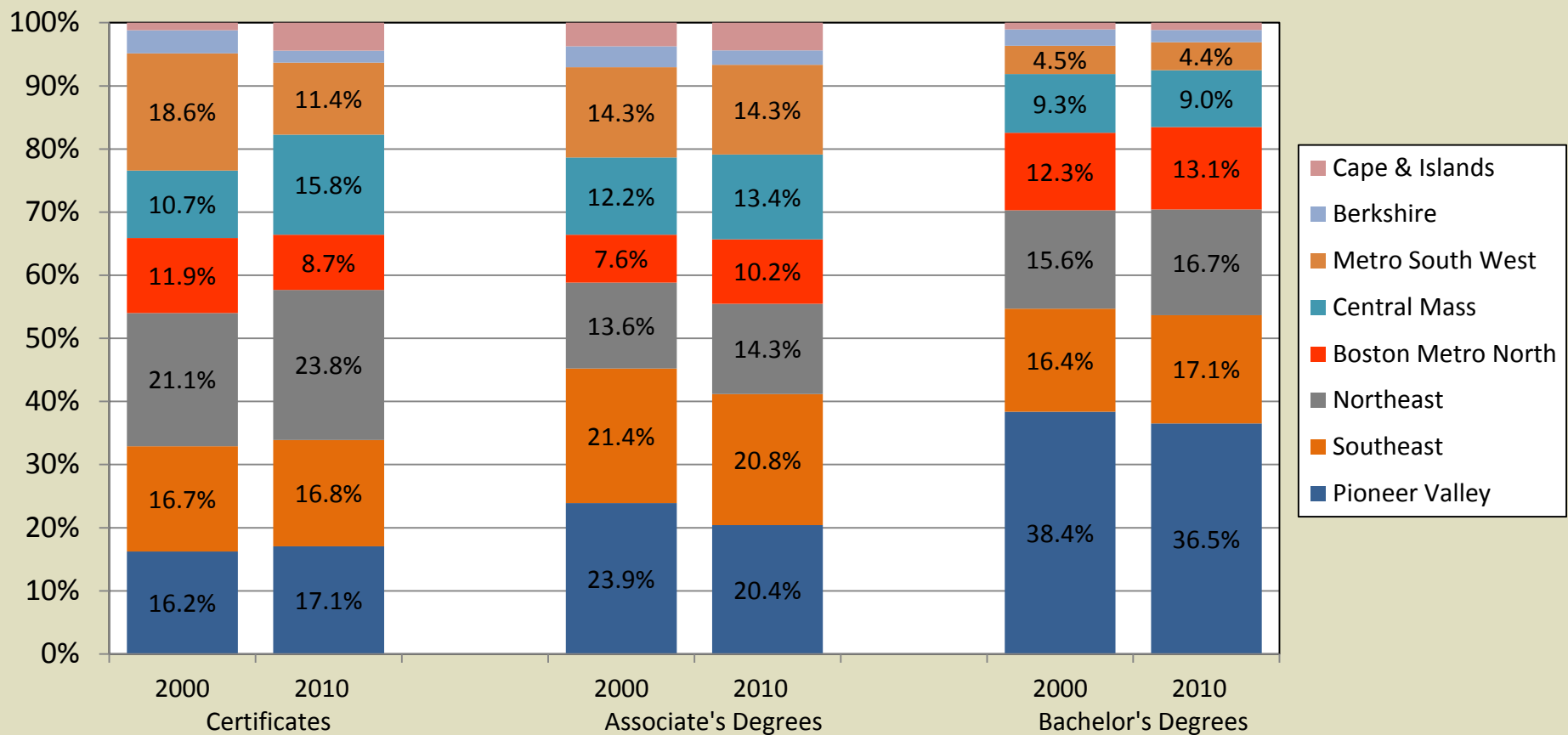
Distribution of Certificates and Degrees by Regional Labor Market



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

The Pioneer Valley, Northeast and Southeast play a larger role in public higher education in Massachusetts.

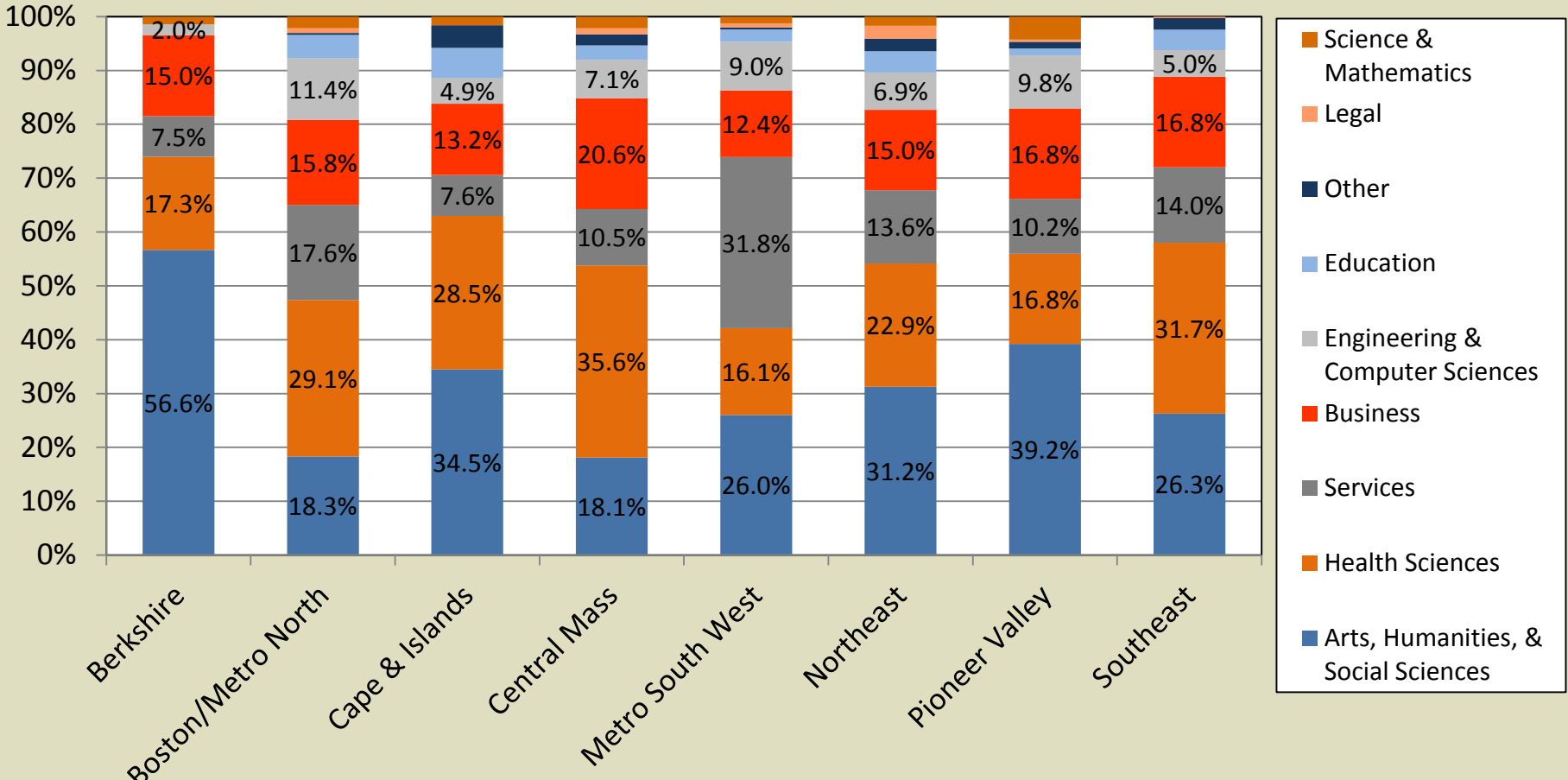
Distribution of Public Certificates and Degrees by Regional Labor Market



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

Associate's Degree completions are spread across majors such as Health Sciences, Arts, Humanities, & Social Sciences, and Services.

Distribution of Major Fields of Study for Associate's Degrees Completed in 2010



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

Online Content

- Reports are available in two locations:

The Commonwealth Corporation:

<http://commcorp.org/resources/grid.cfm?ID=36>

Federal Reserve Bank of Boston (including appendices):

<http://www.bostonfed.org/economic/neppc/labor-market-trends-in-massachusetts-regions/index.htm>

Supplemental Data:

- Massachusetts EOLWD:
 - ES-202: http://lmi2.detma.org/lmi/lmi_es_a.asp
 - Labor Force: http://lmi2.detma.org/lmi/lmi_lur_a.asp
 - Job Vacancy: http://lmi2.detma.org/Lmi/JVS_a.asp
- National Center for Education Statistics:
 - IPEDS: <http://nces.ed.gov/collegenavigator>

Thank You



Robert.Clifford@bos.frb.org

www.bostonfed.org/neppc