



## Labor Market Trends in the Cape & Islands Region

By Robert Clifford

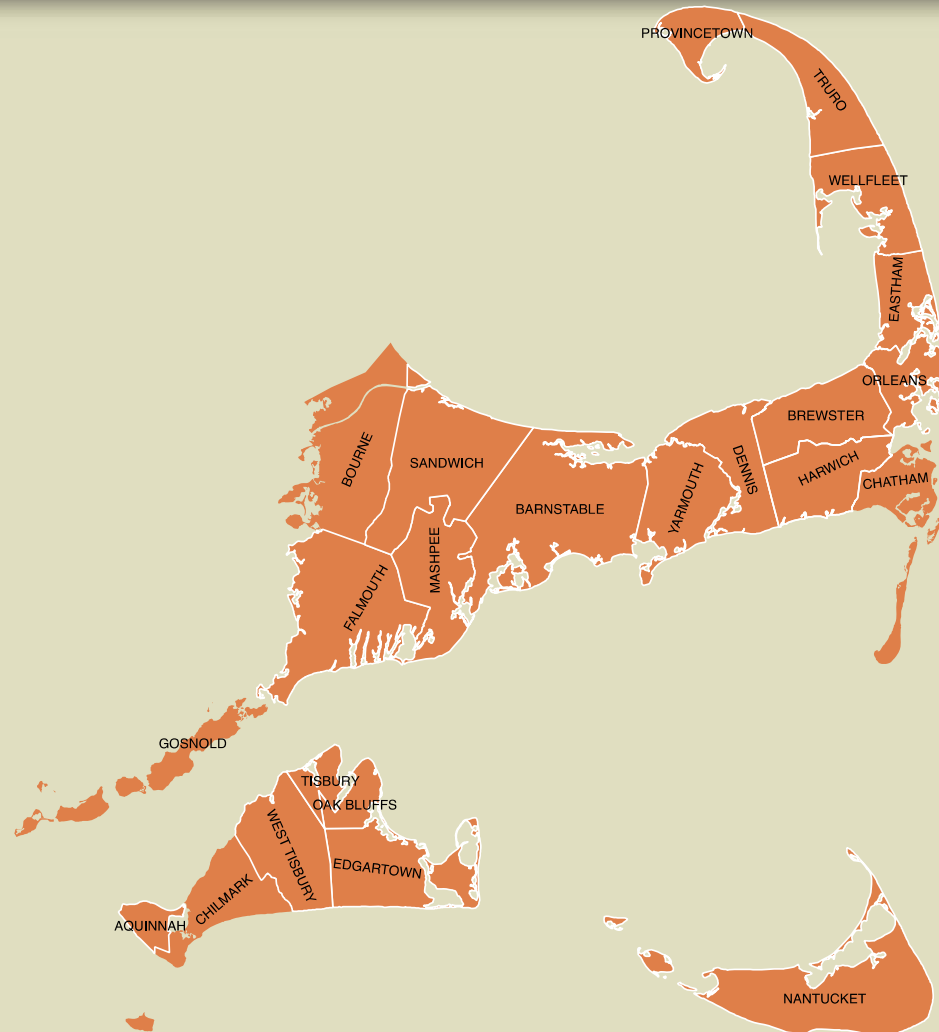
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A joint project of Commonwealth Corporation  
and New England Public Policy Center of the  
Federal Reserve Bank of Boston

# 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 Cape & Islands Region



# Summary

- The Cape & Islands was the hardest hit labor market in the Great Recession and has been the slowest to recover.
- The region was one of only two to lose population in the past decade, and was the only region to have its immigrant population decline in the Great Recession.
- Already having the oldest labor force in the state at the start of the decade, the age of the region's labor force increased dramatically in the past decade due to the aging of the baby boomers and a declining number of younger workers.
- The Cape & Islands has a limited number of higher education institutions to meet the region's demand for educated labor.

# Outline

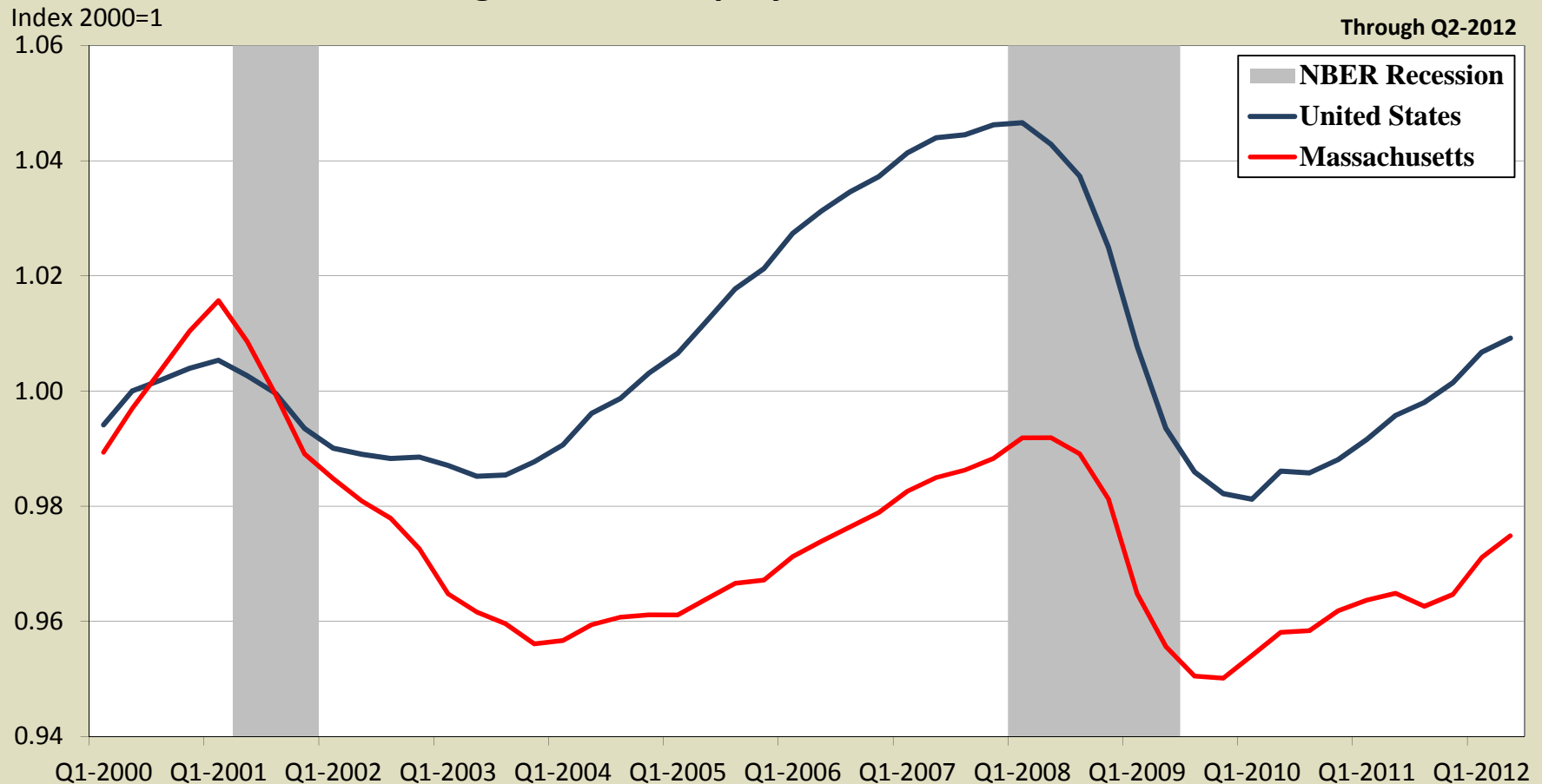
- Labor Market Performance
- Labor Supply
- Labor Demand
- The Pipeline: Educational Supply of Post-Secondary Degrees

# Labor Market Performance

- National and State Employment Trends
- Performance of Regional Labor Markets
- Employment Trends by Industry in the Cape & Islands and Massachusetts

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

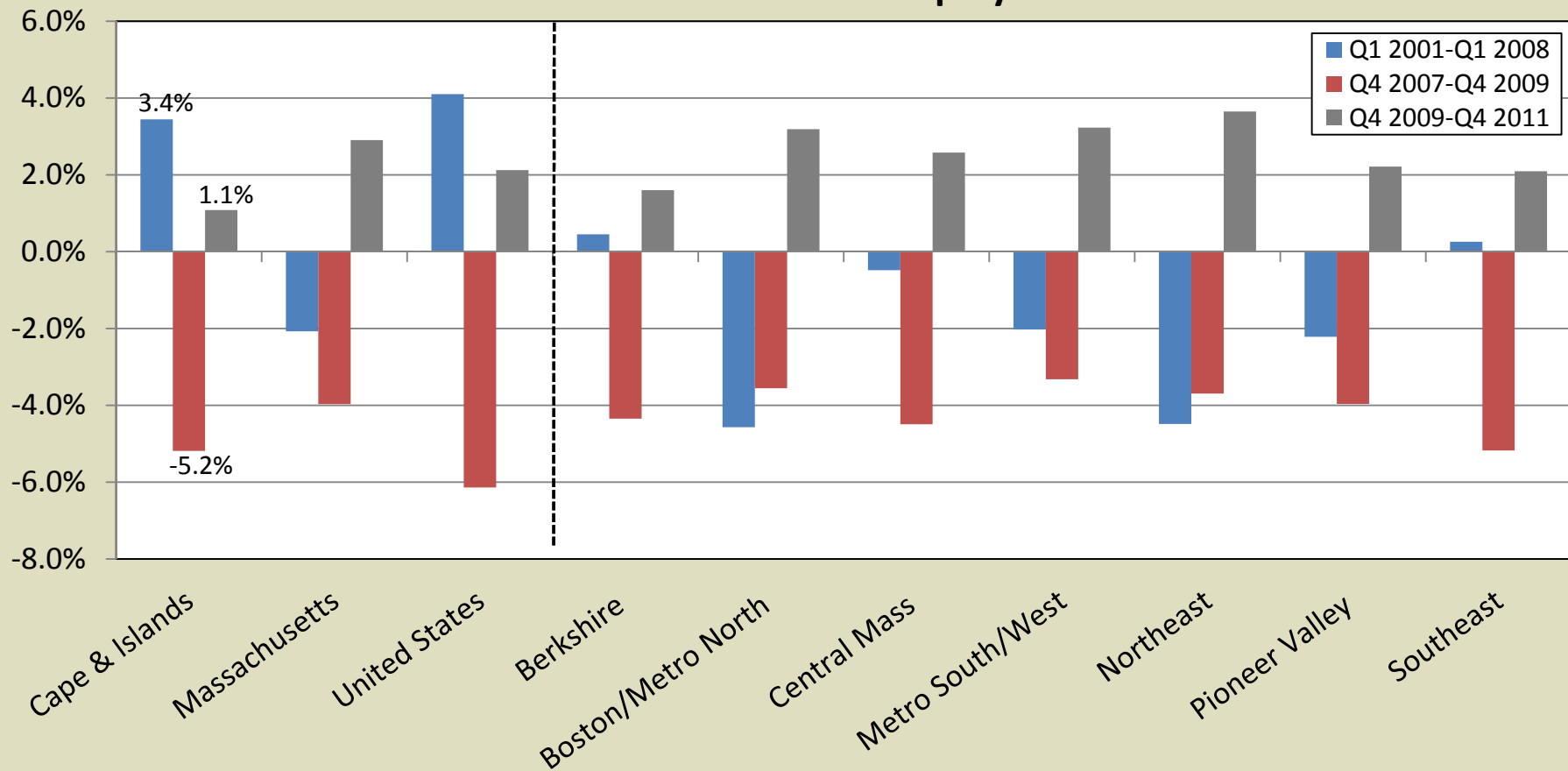
**Total Non-Agricultural Employment, Q1-2000 to Q2-2012**



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

After experiencing strong employment growth to start the decade, the Cape & Islands was the hardest hit region in the Great Recession.

### Total Growth Rates in Employment

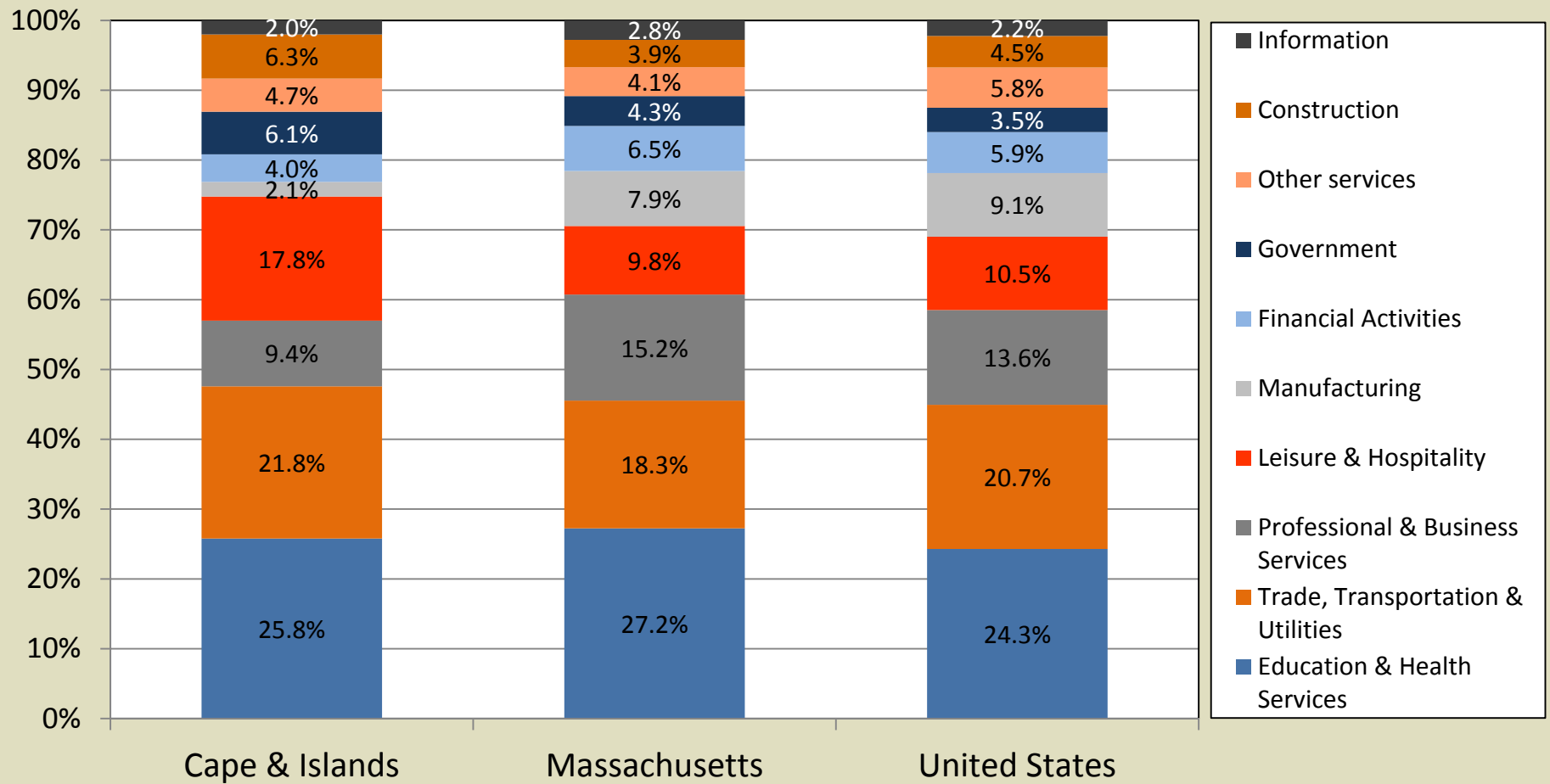


Sources: Massachusetts Executive Office of Labor and Workforce Development (EOLWD), ES-202 and U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).



Leisure & Hospitality is a major sector of employment in the region, far exceeding state and national shares.

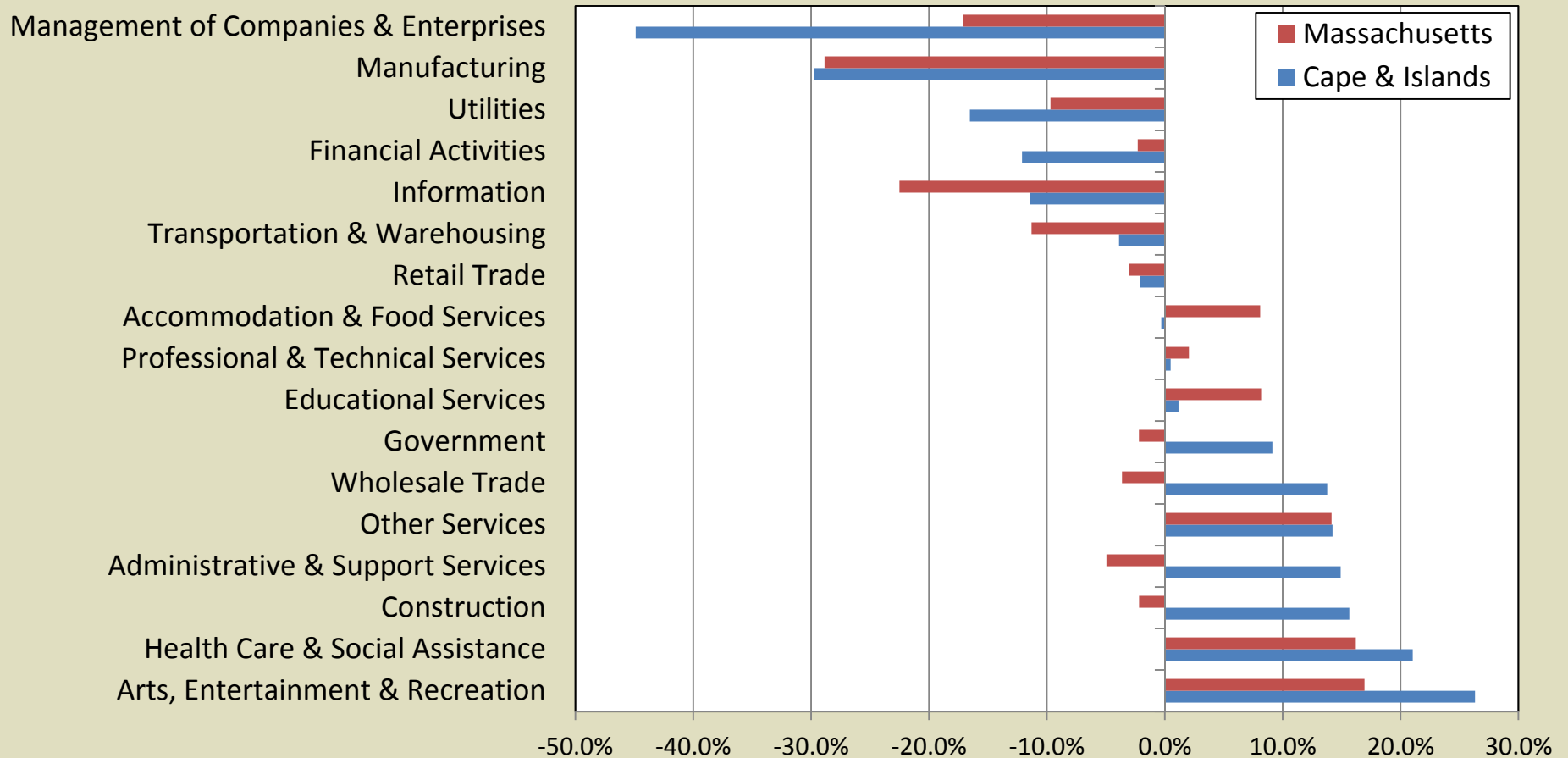
**Employment Distribution by Supersector, Q4 2011**



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.

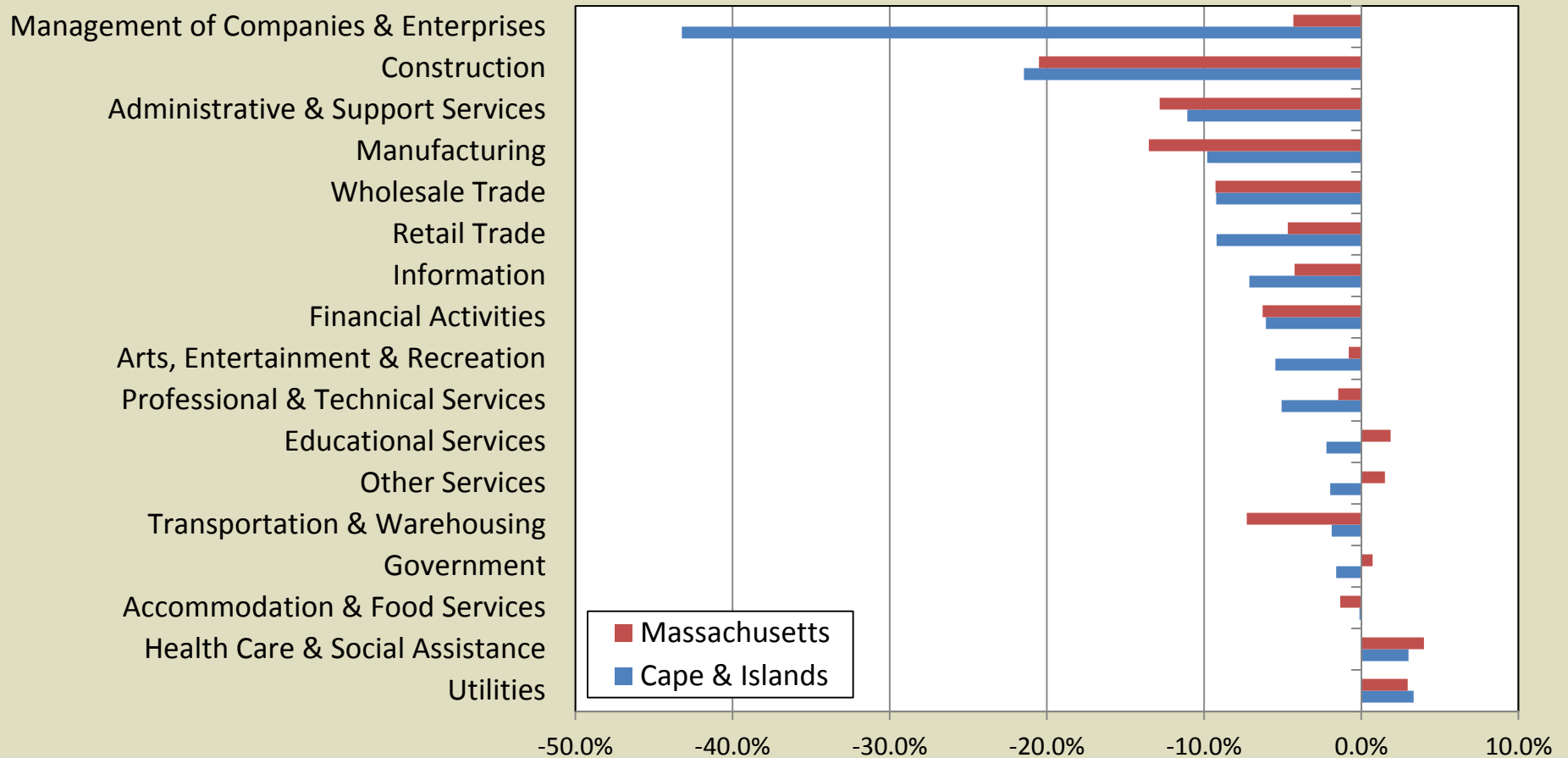
### Employment Changes, Q1-2001 to Q1-2008



Sources: Massachusetts EOLWD, ES-202.

# Health Care & Social Assistance continued to add jobs during the Great Recession.

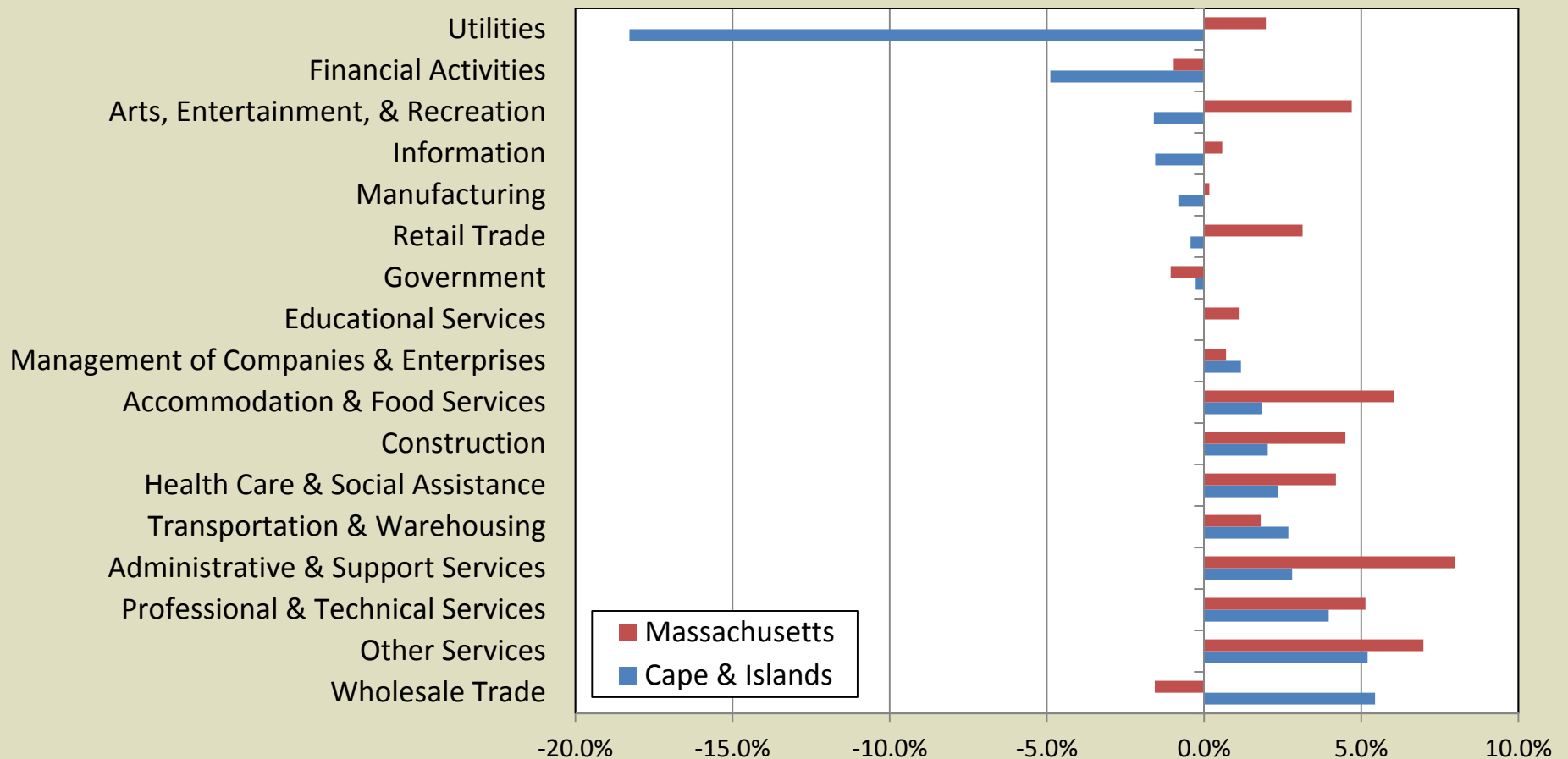
## Employment Changes, Q4-2007 to Q4-2009



Sources: Massachusetts EOLWD, ES-202.

In the recovery, half of the industries in the Cape & Islands have added jobs.

### Employment Changes, Q4-2009 to Q4-2011



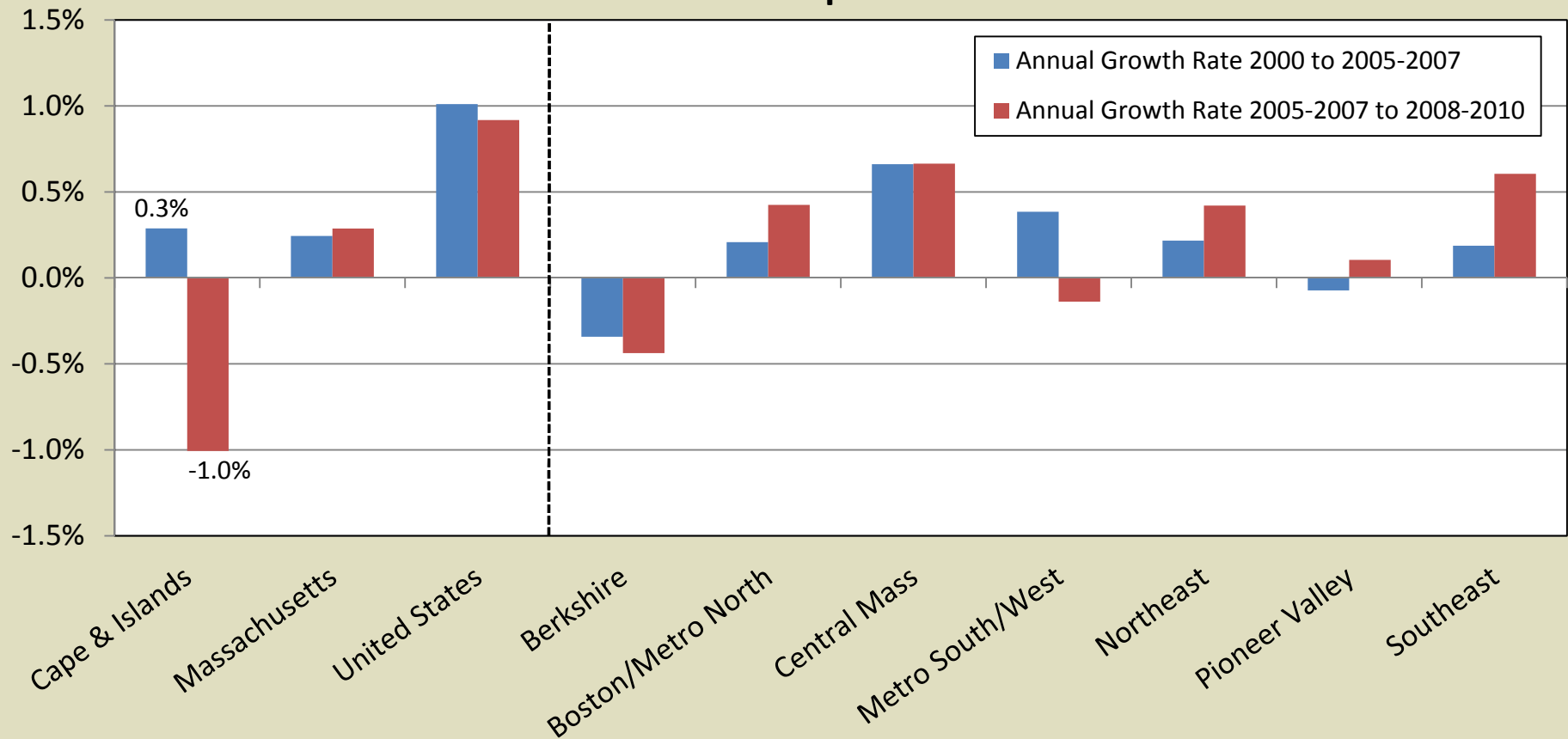
Sources: Massachusetts EOLWD, ES-202.

# Labor Supply

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

Following modest population growth early in the decade, the Cape & Islands experienced a steep decline 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.

Growth in immigrant and minority populations was not enough to offset losses of native born and white, non-Hispanic residents.

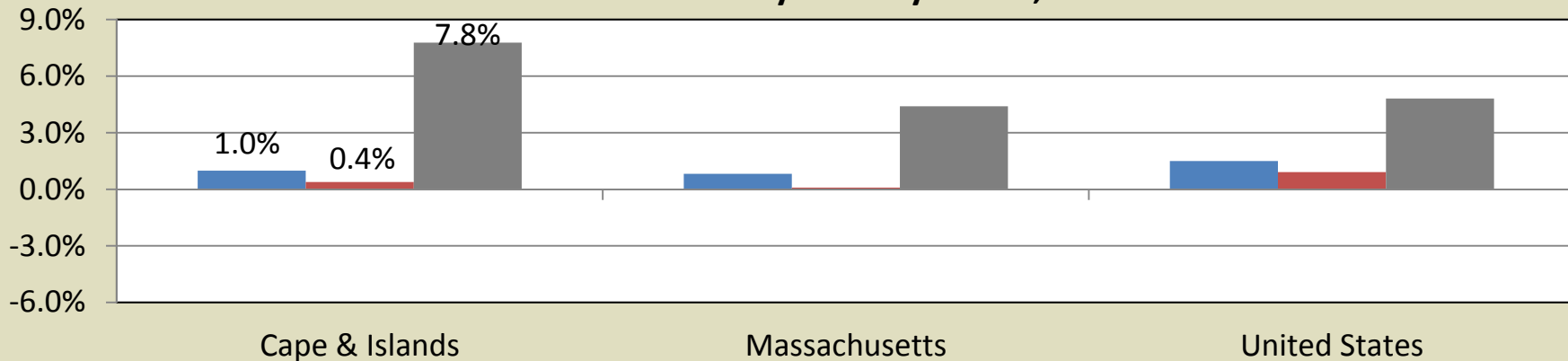
### Demographic Characteristics of the Cape & Islands

	2000	2008-2010	Absolute Change	Annual Growth Rate
Resident Population	240,708	237,569	-3,139	-0.1%
<b><u>Gender</u></b>				
Male	115,145	113,209	-1,936	-0.2%
Female	125,563	124,360	-1,203	-0.1%
<b><u>Nativity</u></b>				
Native Born	226,143	219,684	-6,459	-0.3%
Immigrant	14,565	17,885	3,320	2.3%
<b><u>Race/Ethnicity</u></b>				
White, non-Hispanic	223,758	218,496	-5,262	-0.3%
Black, non-Hispanic	3,415	5,083	1,668	4.5%
Asian, non-Hispanic	1,797	2,572	775	4.1%
Hispanic	3,260	4,984	1,724	4.8%
Other race, non-Hispanic	8,478	6,434	-2,044	-3.0%

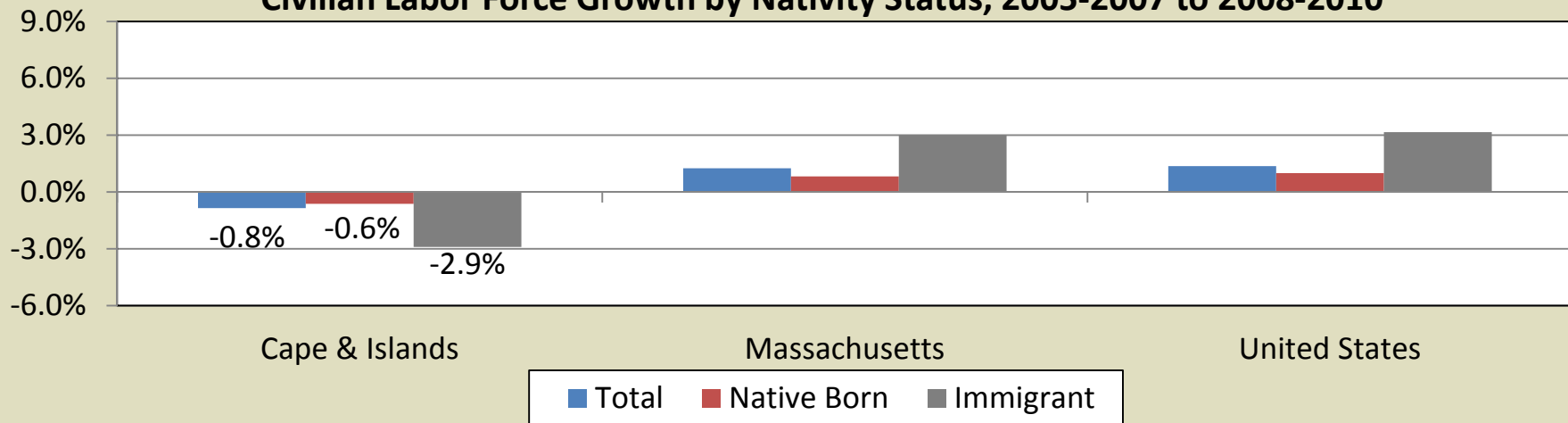
Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.

Following strong growth in the immigrant labor, the Cape & Islands experienced a drop in immigrants in recent years.

**Civilian Labor Force Growth by Nativity Status, 2000 to 2005-2007**



**Civilian Labor Force Growth by Nativity Status, 2005-2007 to 2008-2010**

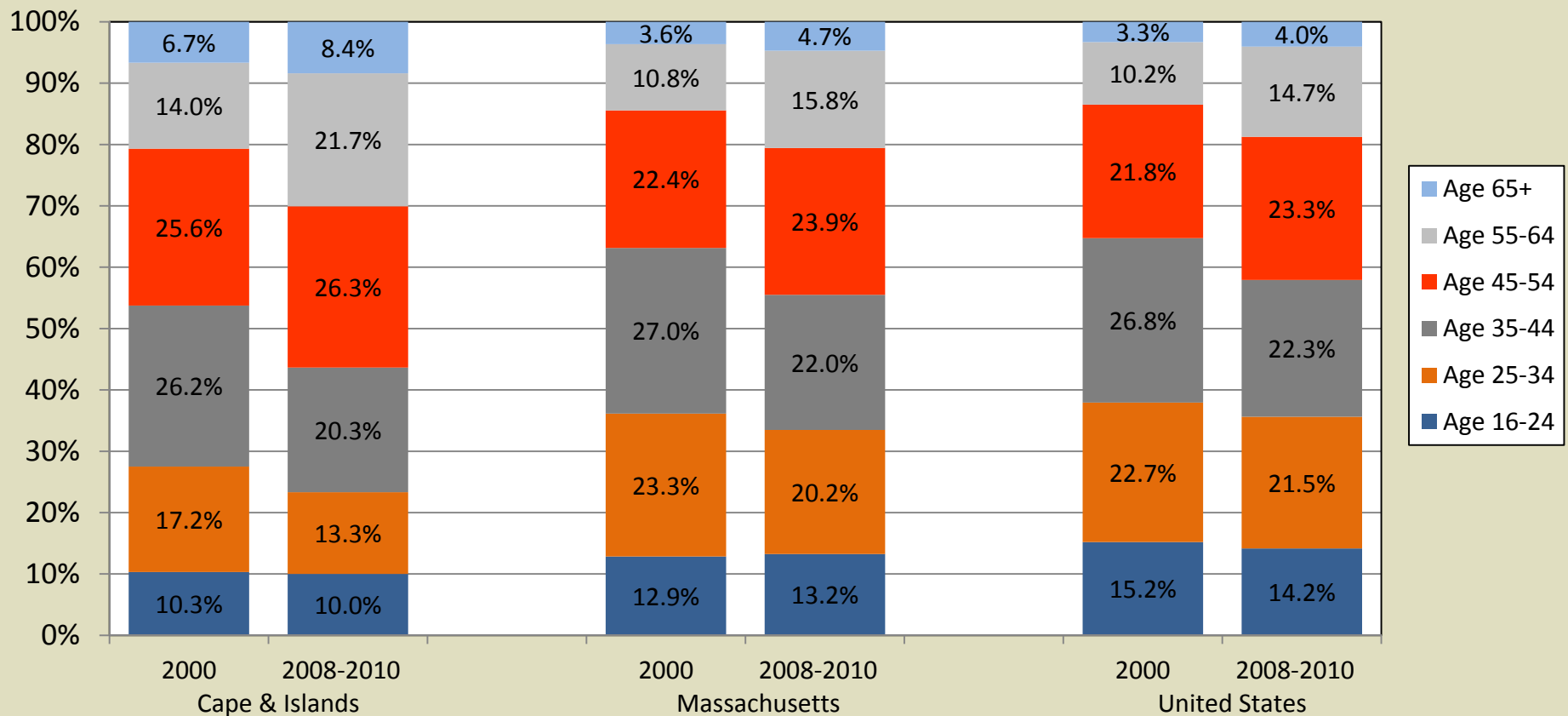


Source: U.S. Census Bureau 2000 Decennial Census PUMS data files, and 2005-2007 and 2008-2010 ACS PUMS data files.



The Cape & Islands has the oldest labor force of all regional labor markets, far exceeding the Massachusetts labor force.

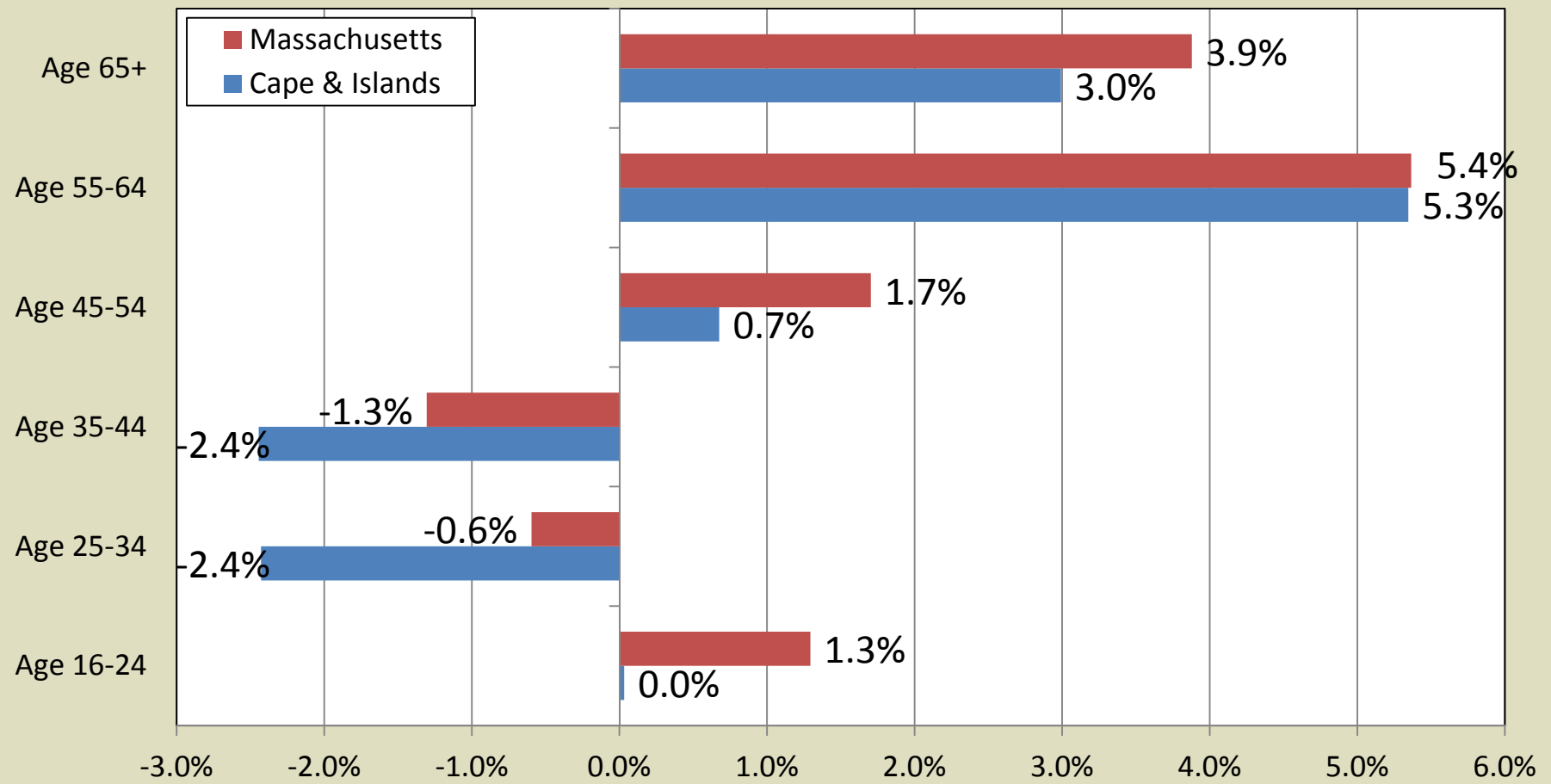
### Age Distribution of the Civilian Labor Force



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

The aging labor force was the result of a combination of strong growth among older cohorts and declines in younger cohorts.

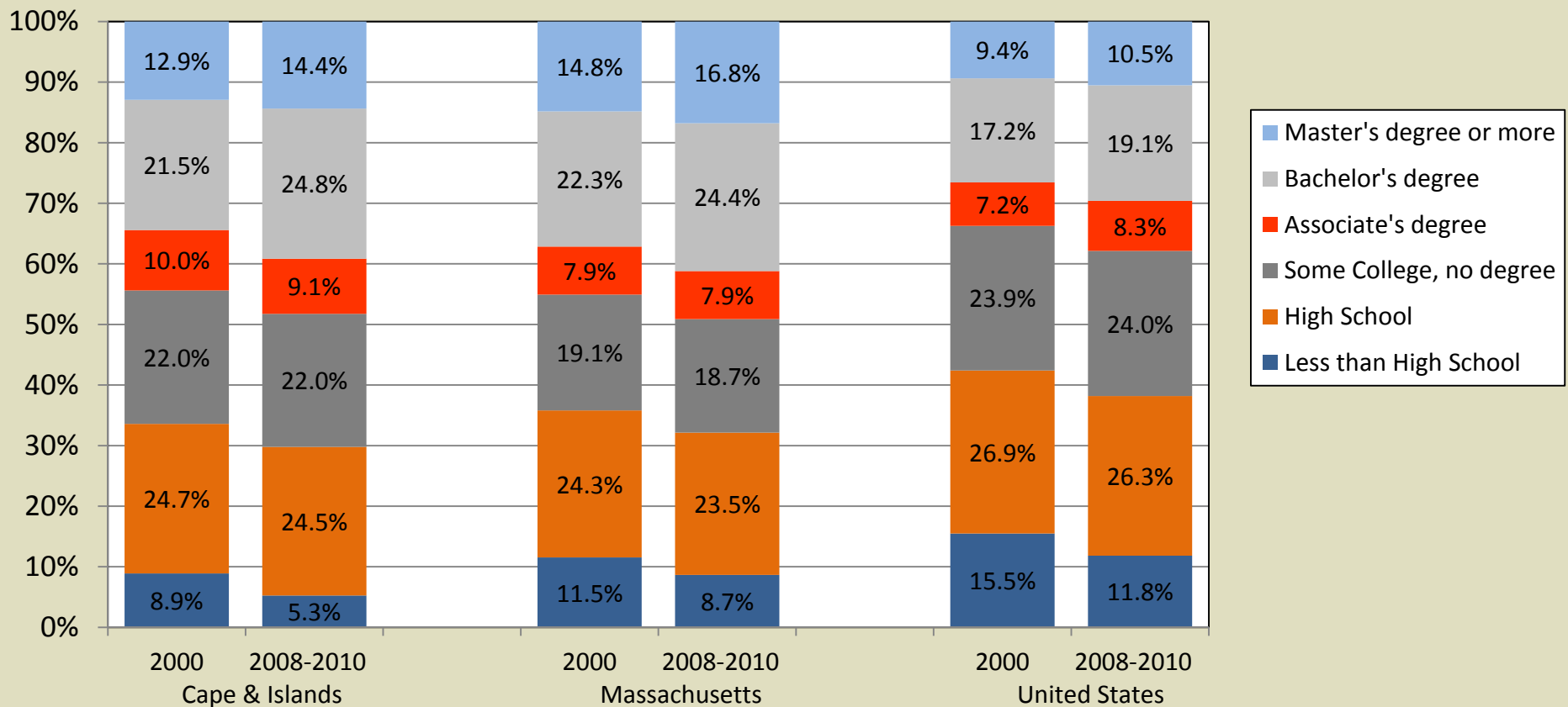
### Annual Growth in the Civilian Labor Force by Age, 2000 to 2008-2010



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

The Cape & Islands labor force has larger shares with Bachelor's Degrees, Associate's Degrees, and Some college than the state.

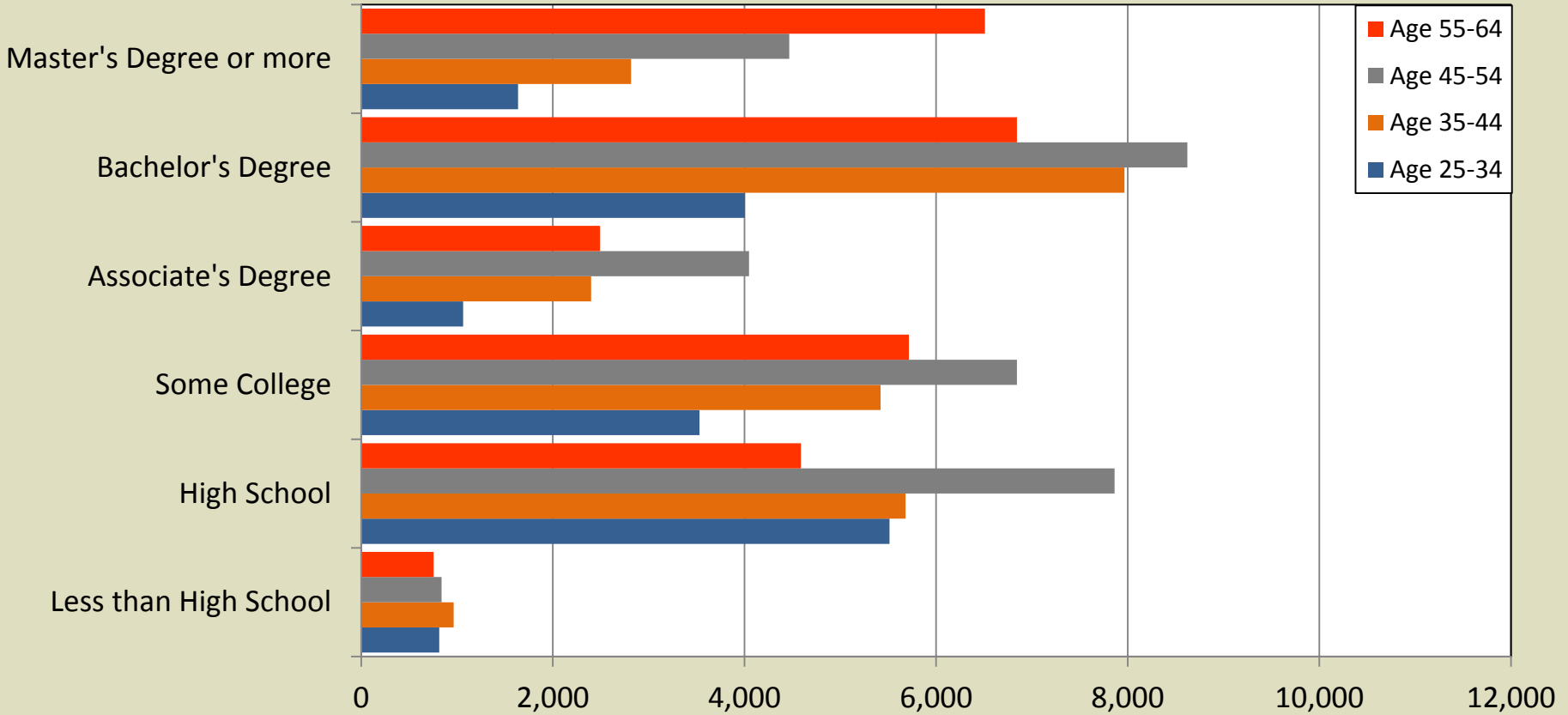
### Educational Attainment of the Civilian Labor Force



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

The Cape & Islands needs to attract more workers under age 45 in order to avoid potential shortfalls in the future.

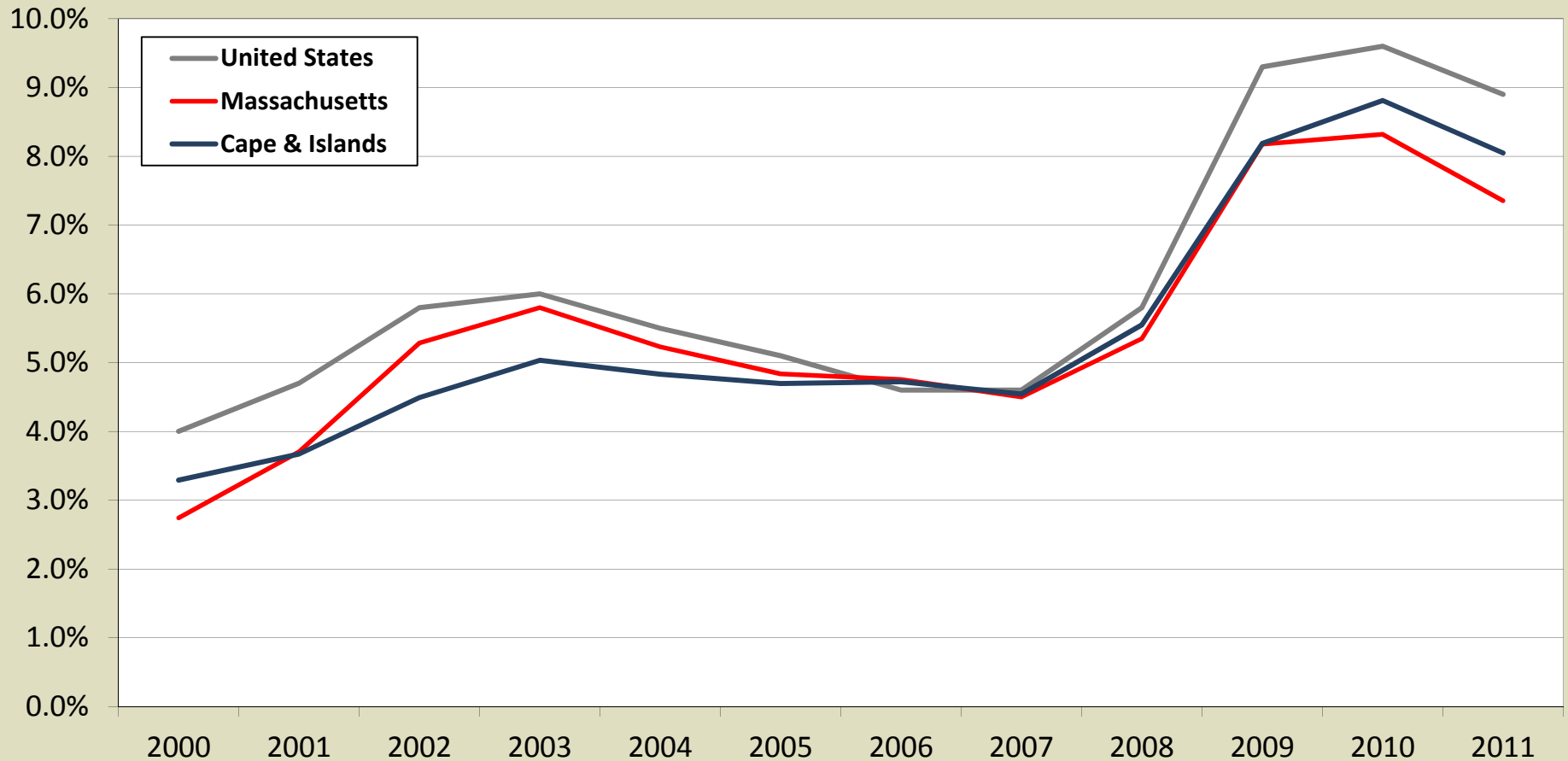
### Educational Attainment of the Civilian Labor Force Population in the Cape & Islands



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

As the Cape & Islands employment gains have trailed in the recovery, its unemployment rate has started to exceed the state average.

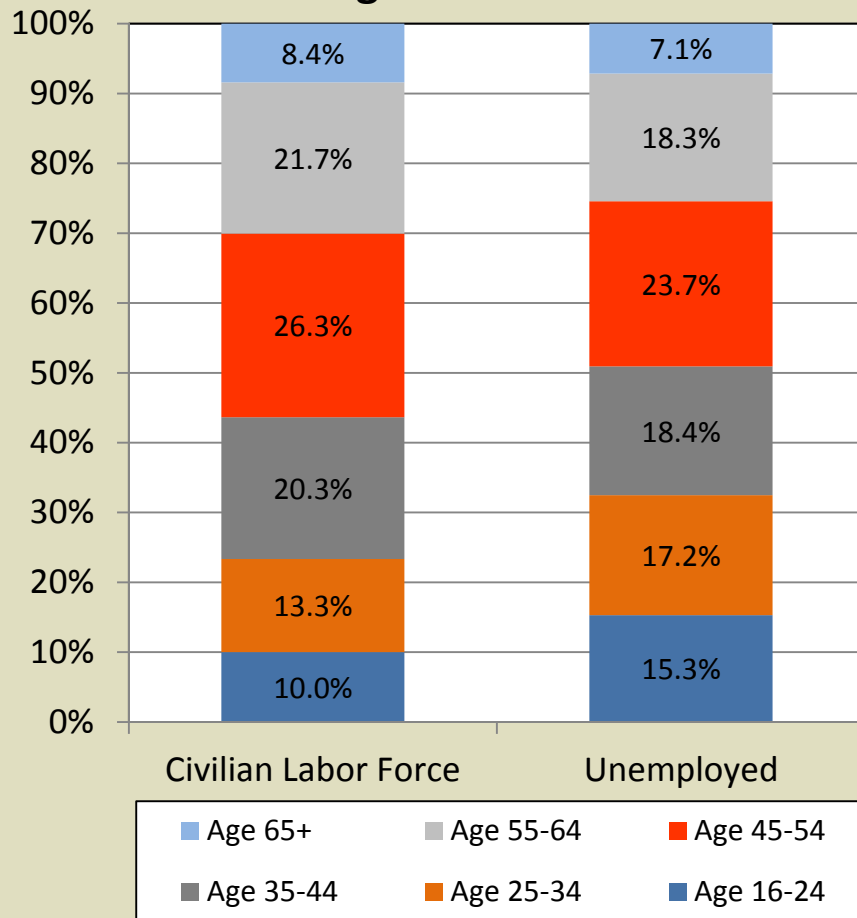
### Unemployment Rates, 2000 to 2011



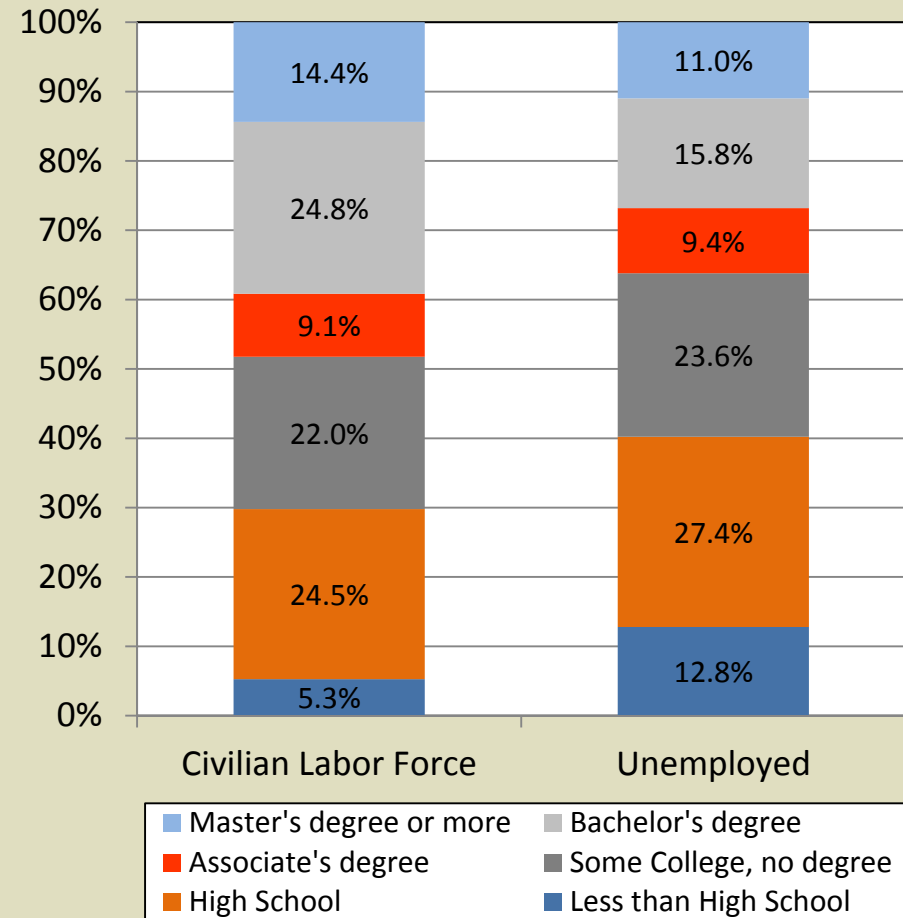
Source: U.S. Bureau of Labor Statistics, Current Population Survey and Massachusetts EOLWD, Labor Force and Unemployment Rates.

The unemployed in the Cape & Islands 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.

The Cape & Islands has limited ties with other labor markets, with a substantial majority of the region's workers also living in the region.

	Number	Percent of Total
<b>Total number of employed persons living in Cape &amp; Islands...</b>	<b>112,526</b>	<b>100.0%</b>
...that work in:		
<b>Cape &amp; Islands</b>	<b>97,705</b>	<b>86.8%</b>
Southeast	6,770	6.0%
Boston/Metro North	3,063	2.7%
Metro South/West	1,922	1.7%
Other parts of Massachusetts	837	0.7%
Rhode Island	507	0.5%
Other places outside Massachusetts	1,722	1.5%
<b>Total number of persons working in Cape &amp; Islands...</b>	<b>108,074</b>	<b>100.0%</b>
...that live in:		
<b>Cape &amp; Islands</b>	<b>97,705</b>	<b>90.4%</b>
Southeast	7,195	6.7%
Boston/Metro North	357	0.3%
Metro South/West	605	0.6%
Other parts of Massachusetts	501	0.5%
Rhode Island	357	0.3%
Other places outside Massachusetts	1,354	1.3%
<b>Net in-commuting</b>	<b>-4,452</b>	<b>-</b>

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

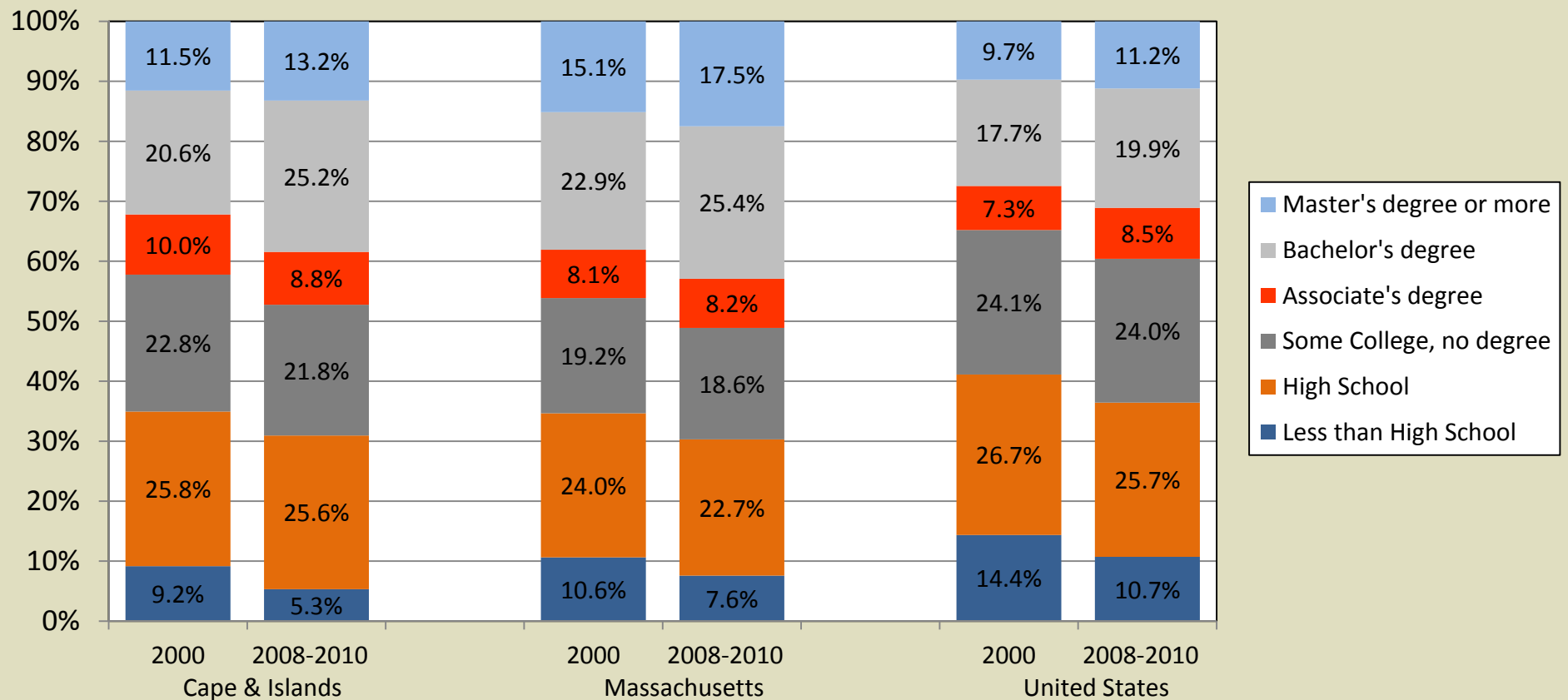
# Labor Demand

- Educational Attainment of Employed
- Educational Attainment and Composition of Industries and Occupations



More than two-thirds of the workers in the Cape & Islands have some form of post-secondary education.

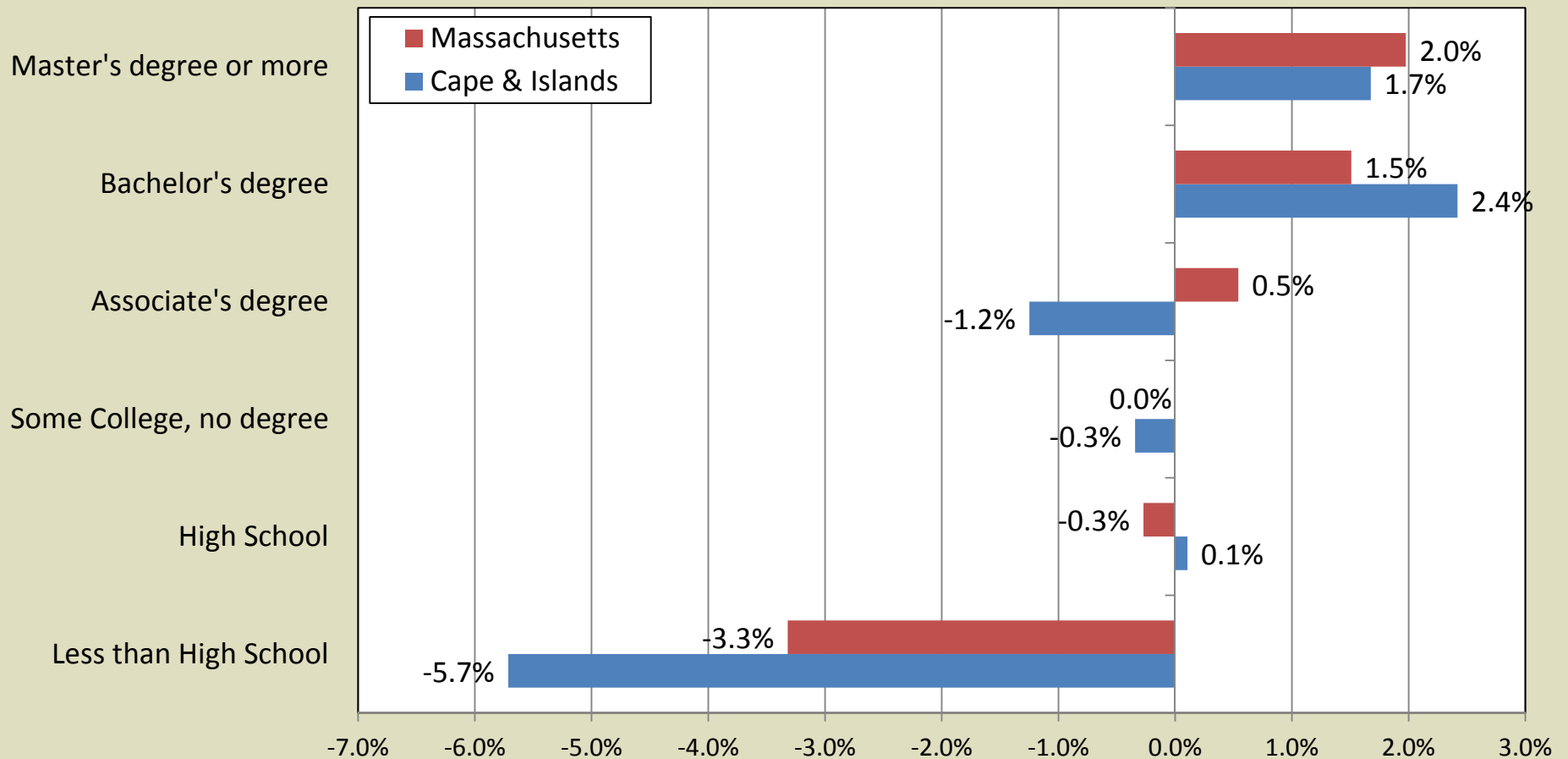
### Educational Attainment of Individuals Employed in the Region



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

A growing number of employees have a Bachelor's Degree or higher, while the number of employees with lower levels of education declined.

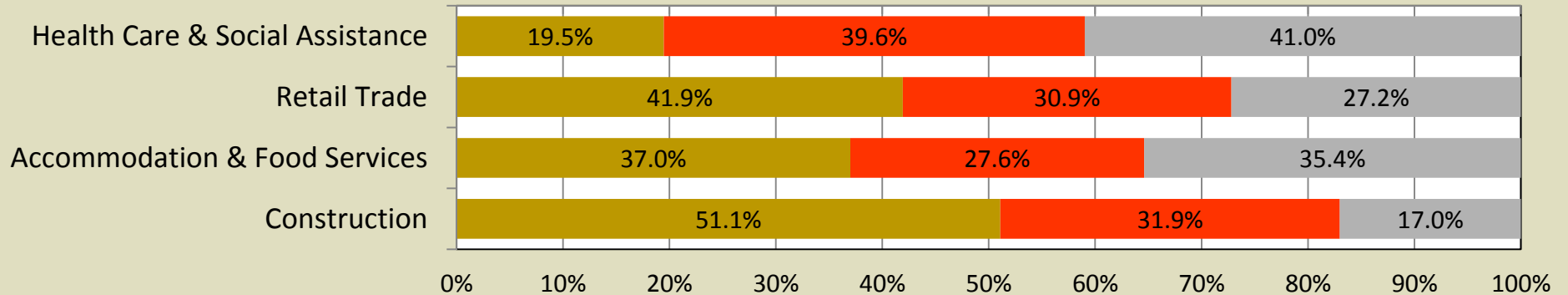
### Annual Growth in the Employed by Education, 2000 to 2008-2010



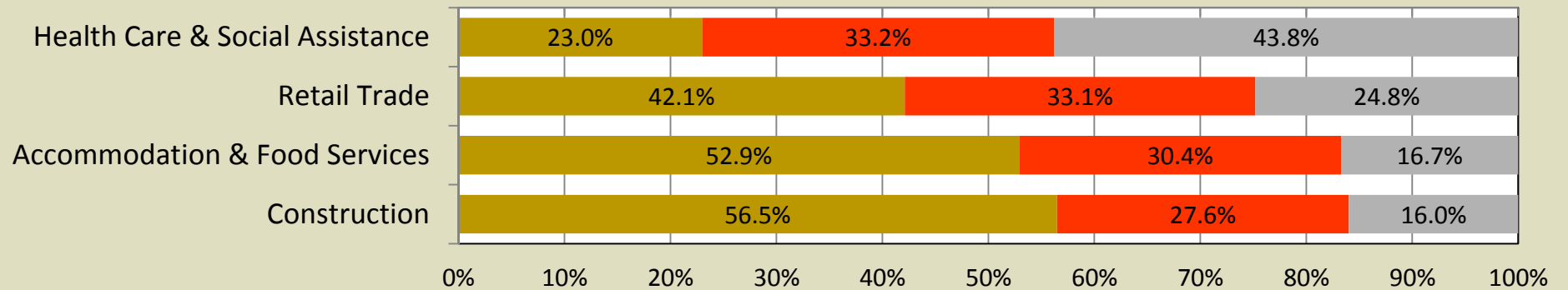
Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.

Most industries in the region employ larger shares of workers with some form of post-secondary education relative to Massachusetts.

**Educational Attainment of Employees by Selected Major Industries in the Cape & Islands**



**Educational Attainment of Employees by Selected Major Industries in Massachusetts**

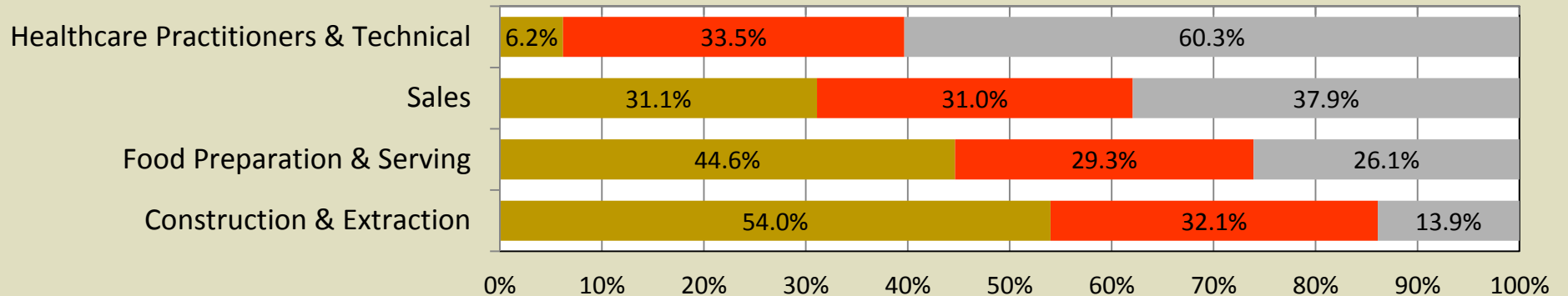


■ High School Degree or Less    ■ Some College or Associate's Degree    ■ Bachelor's Degree or Higher

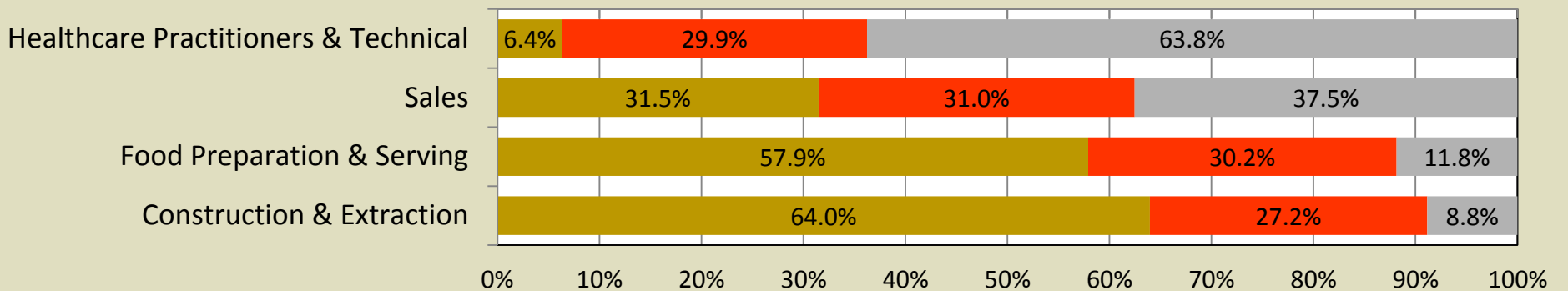
Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.

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

### Educational Attainment of Employees by Selected Occupations in the Cape & Islands



### 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

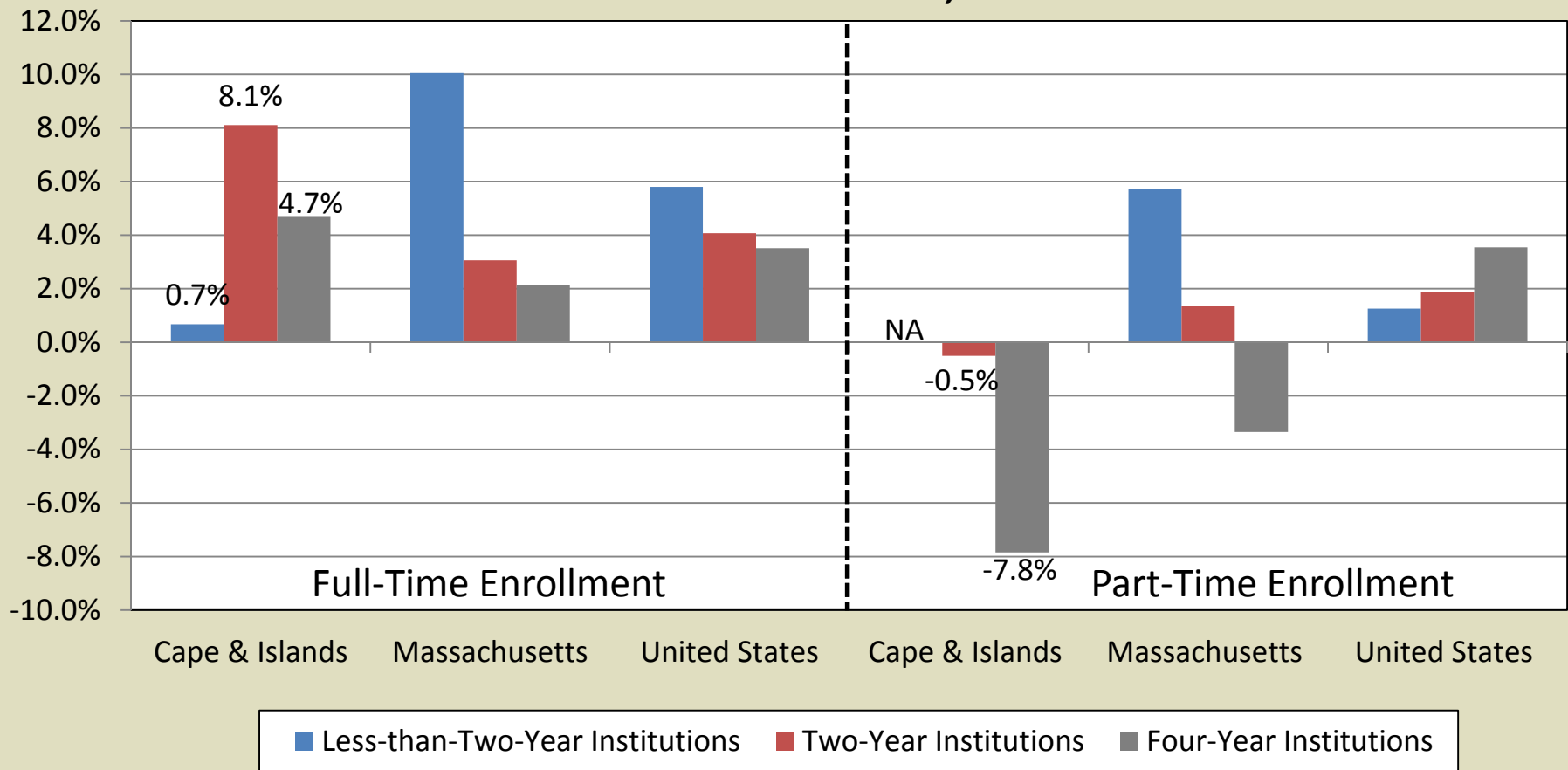
Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.

# The Pipeline: Educational Supply of Post-Secondary Degrees

- Enrollment Patterns
- Degree Completions
- List of Institutions by Degree Type
- Major Fields of Study by Degree Type

Enrollment growth in the region was largely full-time and at two- and four-year institutions over the past decade.

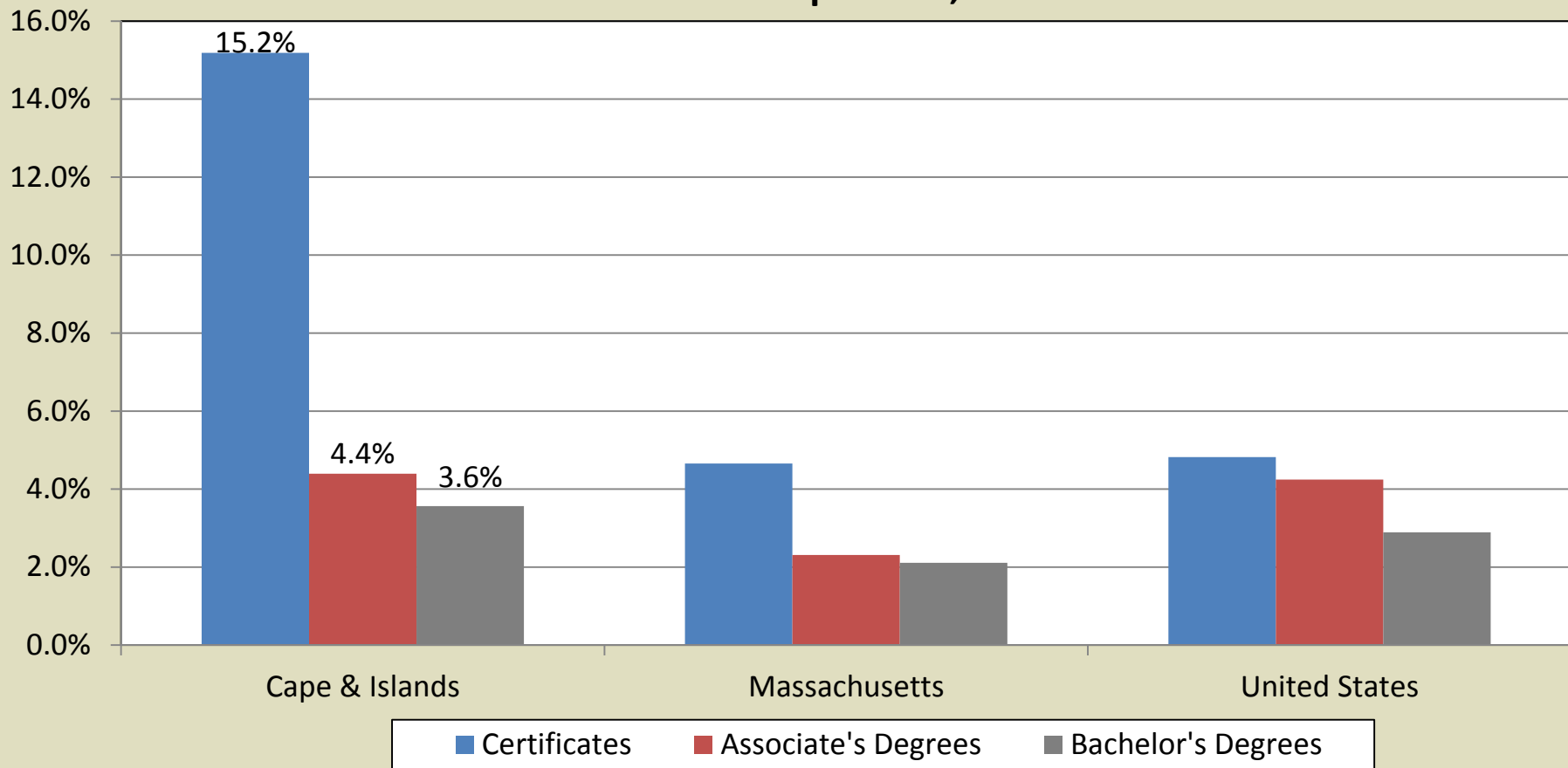
**Annual Growth in Enrollments, 2000 to 2010**



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

The growth of certificate and degree completions in the Cape & Islands exceeded both state and national trends.

**Annual Growth in Completions, 2000 to 2010**



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

There were only five higher education institutions granting certificates and degrees in the Cape & Islands in 2010.

### Top Institutions Granting Certificates and Degrees in the Cape & Islands in 2010

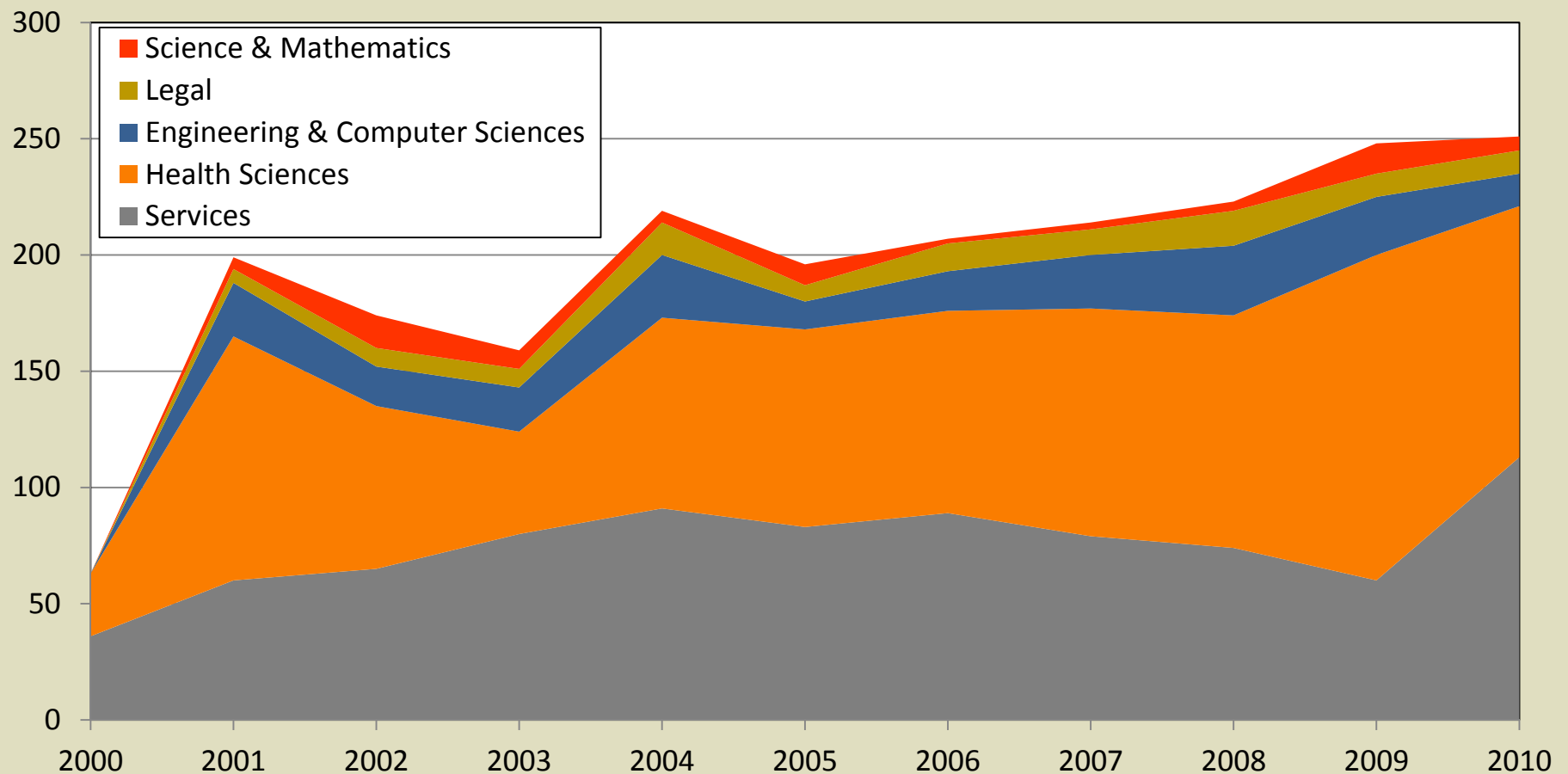
	Institution	Type	Public or Private	Degrees Awarded	Share of Degree Type Completed in Region
Certificates	Empire Beauty School-Hyannis	< Two Years	Private	102	39.4%
	Cape Cod Community College	Two Year	Public	97	37.5%
	Upper Cape Cod Regional Vocational Technical School	<Two Years	Public	50	19.3%
Associate's	Cape Cod Community College	Two Year	Public	432	100.0%
	-	-	-	-	-
	-	-	-	-	-
Bachelor's	Massachusetts Maritime Academy	Four Year	Public	185	95.9%
	National Graduate School of Quality Management	Four Year	Private	8	4.1%
	-	-	-	-	-

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



Services and Health Sciences have consistently accounted for the two largest fields of study for Certificate completions.

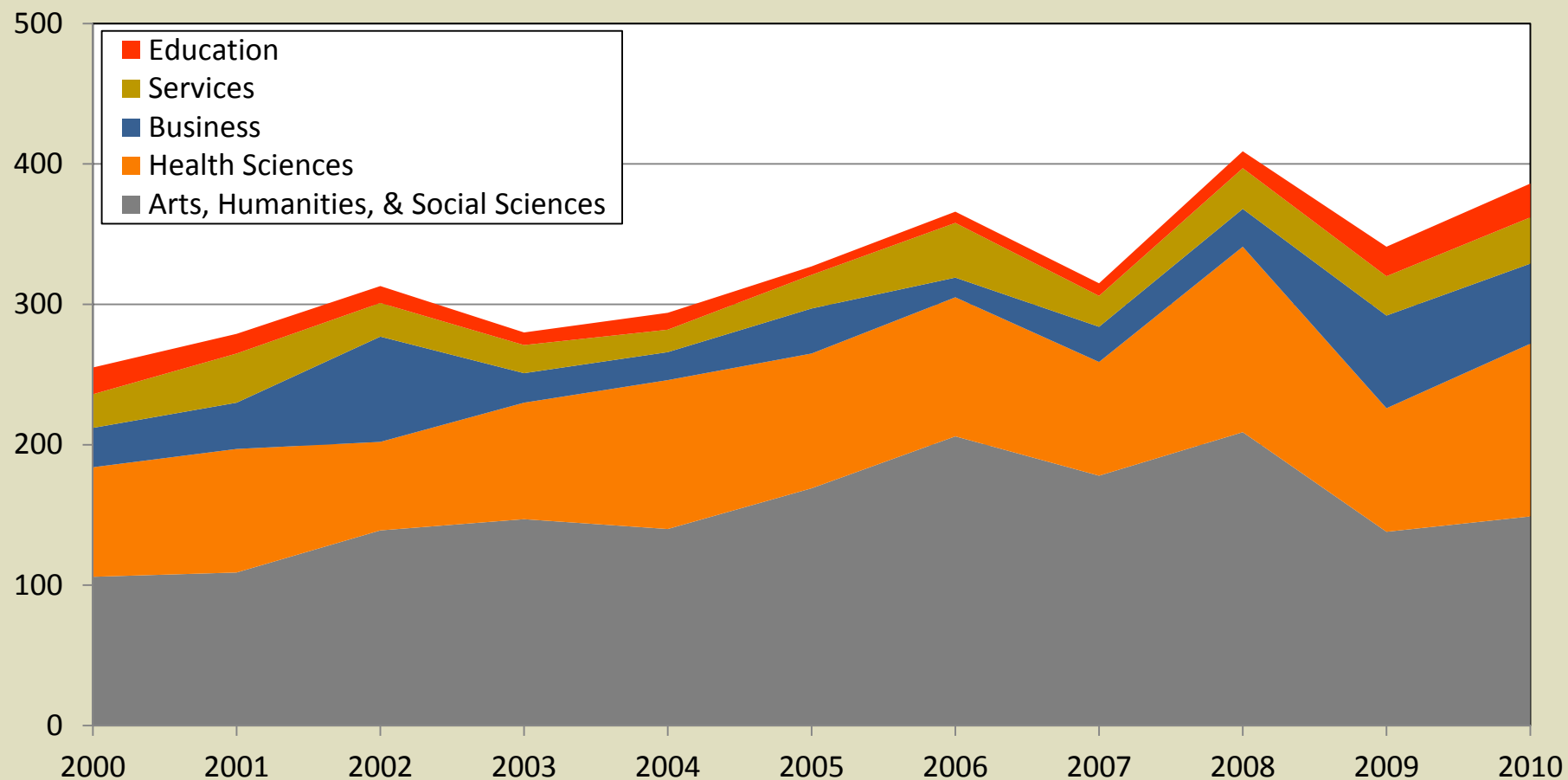
**Annual Certificate Completions by Top Majors in the Cape & Islands, 2000 to 2010**



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

Arts, Humanities, & Social Sciences is the most common major for Associate's Degree, though it has declined in recent years.

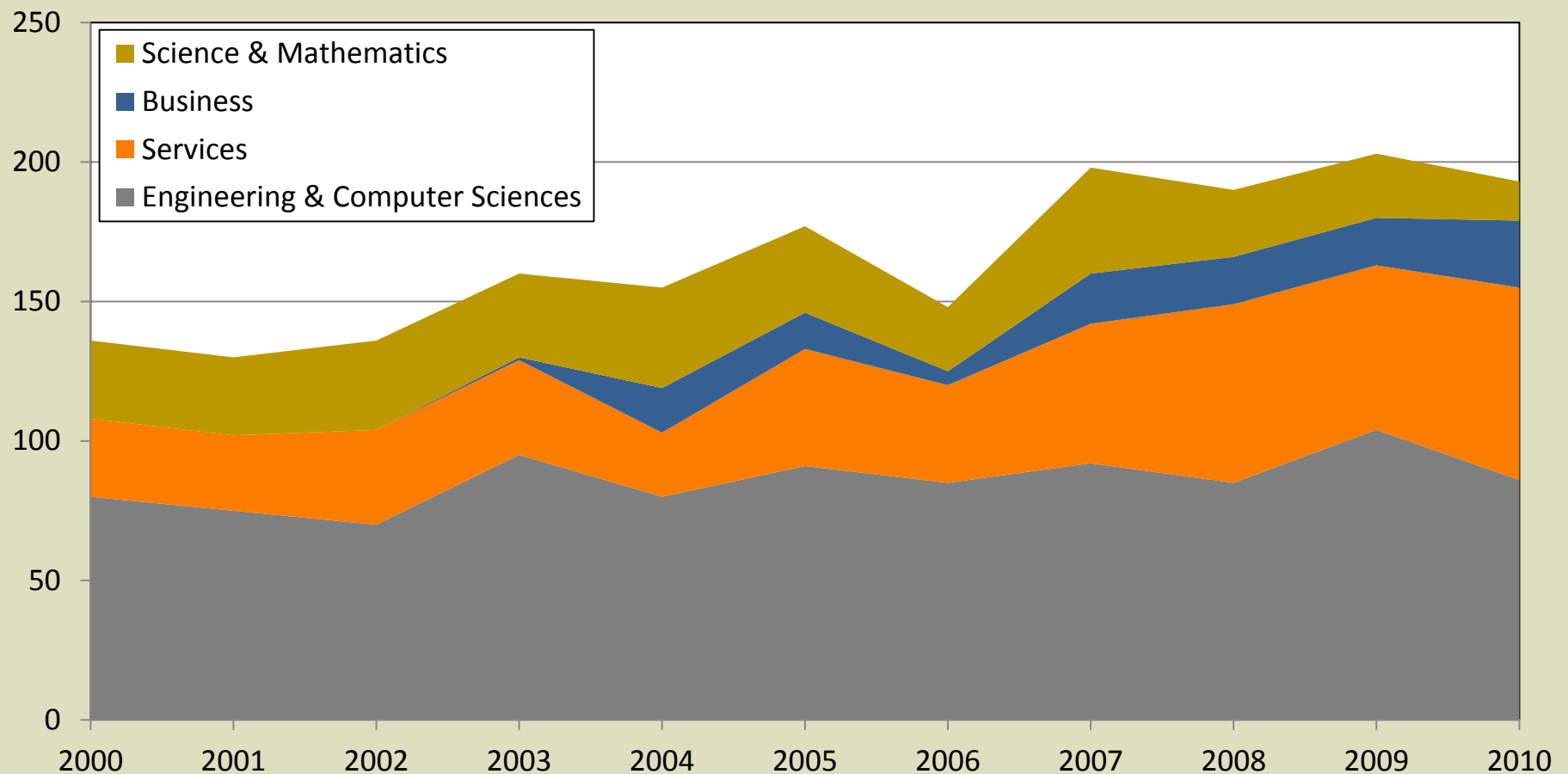
**Annual Associate's Degree Completions by Top Majors in the Cape & Islands. 2000 to 2010**



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

Engineering & Computer Sciences is the largest field of study for Bachelor's Degrees in the region; mostly in Marine Engineering.

**Annual Bachelor's Degree Completions by Top Majors in the Cape & Islands, 2000 to 2010**



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

# Summary

- The Great Recession hit the Cape & Islands harder than any other regional labor market and it has been slow to recover.
- A shrinking population, an aging workforce, and the continued loss of younger workers will force the region to confront demographic challenges sooner than other regions.
- With a limited number of higher education institutions to meet the region's demand for educated labor the Cape & Islands will need to find a way to attract and retain workers.
- Given such trends, what should be done to ensure the future economic vitality of the Cape & Islands moving forward?

# Thank You



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