

Labor Market Trends in the **Cape & Islands Region**

December 2012

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

NEW ENGLAND PUBLIC POLICY CENTER AT THE FEDERAL RESERVE BANK OF BOSTON

The Federal Reserve Bank of Boston has a decades-long tradition of supporting the New England public policy community. In 2005, the Bank established the New England Public Policy Center to reinvigorate and institutionalize that support.

The Center promotes better public policy in New England by conducting and disseminating objective, high-quality research and analysis of strategically identified regional economic and policy issues and, when appropriate, works with regional and Bank partners to advance identified policy options.

The Center's research investigates policy issues that are important to New England's economy, focusing in two primary areas: demographic and labor markets trends and state and local public finance. For more information about the Center, visit our website, www.bostonfed.org/neppc.

This profile was developed by Robert Clifford, a policy analyst at the New England Public Policy Center.

COMMONWEALTH CORPORATION

Commonwealth Corporation strengthens the skills of Massachusetts youth and adults by investing in innovative partnerships with industry, education, and workforce organizations. We seek to meet the immediate and emerging needs of businesses and workers so they can thrive in our dynamic economy.

Through its work, Commonwealth Corporation is known for its expertise in: meeting the needs of workers and businesses; developing nationally recognized and innovative programming; creating multiple education and employment pathways for teens and young adults to succeed; and building the Commonwealth's workforce development capacity.

Commonwealth Corporation is a quasi-public organization within the Executive Office of Labor and Workforce Development. For more information about Commonwealth Corporation, visit our website, www.commcorp.org.

TABLE OF CONTENTS

OVERVIEW

- 3 Executive Summary
- 5 Geography of the Regional Labor Markets
- 6 The Cape & Islands Region
- 7 Employment Trends and Recessions
- SECTION I: Measuring Labor Supply—Demographic Trends of Residents Who Live in the Cape & Islands**
- 8 Population Growth Trends
- 9 Demographic Characteristics of the Resident Population of the Cape & Islands
- 10 Growth in the Working-Age Population by Nativity Status
- 11 Growth in Civilian Labor Force by Nativity Status
- 12 The Age Profile of the Working-Age Population
- 13 The Age Profile of the Civilian Labor Force
- 14 Educational Attainment of the Working-Age Population
- 15 Educational Attainment of the Civilian Labor Force
- 16 Educational Attainment by Age Group
- 17 Unemployment Rate Trends
- 18 The Unemployed: Age Distribution (2000 and 2008–2010)
- 19 The Unemployed: Educational Attainment (2000 and 2008–2010)
- 20 Commuting Patterns of Residents and Workers: the Cape & Islands (2008–2010)

SECTION II: Measuring Labor Demand—Employment Trends of Jobs and Workers in the Cape & Islands

- 21 Employment Trends
- 22 Demographic Characteristics of the Population Employed in the Cape & Islands
- 23 Distribution of Employment by Supersector (Q4 2010)
- 24 Changes in Employment During the Economic Downturn by Major Industry: the Cape & Islands
- 25 Changes in Employment During the Economic Downturn by Major Industry: Massachusetts
- 26 Industries Driving the Recovery: the Cape & Islands
- 27 Industries Driving the Recovery: Massachusetts
- 28 Educational Attainment of Employees by Major Industry in the Cape & Islands (2008–2010)
- 29 Educational Attainment of Employees by Major Industry in Massachusetts (2008–2010)
- 30 Employment by Major Occupation: the Cape & Islands (2008–2010)
- 31 Employment by Major Occupation: Massachusetts (2008–2010)
- 32 Distribution of Occupations Across Supersectors Outside Greater Boston (2008–2010)
- 34 Distribution of Occupations Within Supersectors Outside Greater Boston (2008–2010)
- 36 Educational Attainment of Employees by Major Occupation in the Cape & Islands (2000)
- 37 Educational Attainment of Employees by Major Occupation in the Cape & Islands (2008–2010)

TABLE OF CONTENTS

- 38 Educational Attainment of Employees by Major Occupation in Massachusetts (2008–2010)
- 39 Job Vacancies in the Great Recession and Recovery
- 40 Job Vacancies and Vacancy Rates by Major Occupation in the Cape & Islands (Q4 2010)
- 41 Job Vacancies and Vacancy Rates by Major Occupation in Massachusetts (Q4 2010)
- 42 Comparing Vacancy Rates and Educational Attainment: Peak Labor Market
- 43 Comparing Vacancy Rates and Educational Attainment: Recovering Labor Market
- SECTION III: Measuring the Pipeline—Educational Supply from Post-Secondary Degrees Granted by Institutions Located in the Cape & Islands**

- 44 Growth in Potential Supply of Educated Workers: Full-Time Enrollment Trends in the Past Decade
- 45 Number of Full-Time Enrollees by Type of Degree Granting Institution in the Cape & Islands (2000–2010)
- 46 Growth in Potential Supply of Educated Workers: Part-Time Enrollment Trends in the Past Decade
- 47 Number of Part-Time Enrollees by Type of Degree Granting Institution in the Cape & Islands (2000–2010)
- 48 Graduation Rates by Type of Degree (2009)
- 49 Crossing the Finish Line: Trends in Degree Completions Over the Past Decade (2000–2010)
- 50 Educational Institutions Awarding the Most Degrees in the Cape & Islands (2010)
- 51 Number of Degree Completions by Degree Type: the Cape & Islands (2000–2010)
- 52 Certificates Awarded by Major Field of Study (2000–2010)
- 53 Annual Completions by Top Five Certificate Majors in the Cape & Islands (2000–2010)
- 54 Associate’s Degrees Awarded by Major Field of Study (2000–2010)
- 55 Annual Completions by Top Five Associate’s Degree Majors in the Cape & Islands (2000–2010)
- 56 Bachelor’s Degrees Awarded by Major Field of Study (2000–2010)
- 57 Annual Completions by Top Five Bachelor’s Degree Majors in the Cape & Islands (2000–2010)

EXECUTIVE SUMMARY

Using the most recent data available, the Cape & Islands regional labor market profile provides a detailed picture of the region's current and future labor supply.¹ For context, it also provides detailed information on labor demand in the region over the past decade. This profile is designed to help guide workforce development professionals, policy makers, and civic, education, and business leaders as they make decisions about education and training opportunities.

The charts and analysis are divided into three sections:

1. Labor Supply: Demographic Trends of Residents Who Live in the Cape & Islands
2. Labor Demand: Employment Trends of Jobs and Workers in the Cape & Islands
3. The Pipeline: Educational Supply of Post-Secondary Degrees Granted by Institutions Located in the Cape & Islands

As a small labor market that is heavily reliant on tourism, the Cape & Islands faces somewhat different challenges from those facing Massachusetts as a whole. The Cape & Islands accounts for only 3.1 percent of the state's employment (98,000 jobs), and its labor market performance in the past decade differed from most other regional labor markets in the state. At the start of the decade, employment declined statewide with the bursting of the "technology bubble" resulting in a recession. But this had little effect on the Cape & Islands, which actually added jobs in this recession. As a result, employment in the region grew by 3.4 percent between the first quarters of 2001 and 2008 (compared with a loss of 2.1 percent statewide), the fastest of all the labor markets. But as the Great Recession hit, the region experienced more severe job losses than did the state. During the earliest stages of the labor market recovery, the Cape & Islands added jobs at the slowest pace of all the regional labor markets.

Along with having one of the smallest residential populations (accounting for only 3.8

percent of the state's total population in 2008–2010), the Cape & Islands was one of only two labor markets to decline in population in the past decade. A small and contracting population combined with a nearly stagnant working-age population and minimal growth in the civilian labor force raises demographic concerns for the Cape & Islands, particularly given the age of the region's residents and workers.

Both the region's residents and its workforce (which includes people who commute from other regions and other states) have fairly high levels of education. Massachusetts has one of the most highly educated populations in the nation, and the education level of the Cape & Islands is almost comparable with that of the state. Over the past decade, the level of education for both residents and workers in the region has increased. However, the 39.2 percent of the civilian labor force in the region that had a Bachelor's Degree or higher in 2008–2010 still slightly trailed the 41.2 percent of Massachusetts residents with a Bachelor's Degree or higher. At the same time, the share of the

¹This profile builds on the work of the 2008 regional labor market profiles completed by Paul Harrington and Neeta Fogg, formerly at Northeastern University's Center for Labor Market Studies. This work employs their methodology and includes expanded analysis of the educational attainment of the region's population, more detailed analysis of the distribution of occupations by industry, and reviews of trends over a longer time period.

region's civilian labor force with some post-secondary education (70.2 percent) actually exceeded the share in Massachusetts overall (67.8 percent) because of the region's strong concentration of individuals with Some College education (including Certificates) or an Associate's Degree.

Looking forward, the region faces the demographic challenges of an aging population and potential shortfalls in workers with the educational levels desired by employers. The Cape & Islands is the oldest region in the state. Compared with the population in 2000, the number of residents in the region who are 44 years old or younger has declined, while those who are 45 years and older has increased. As a result, in 2008–2010, more than half of the region's civilian labor force (56.4 percent) was 45 years of age or older, while less than one-quarter (23.4 percent) was 34 or younger. This suggests that the region's businesses may face a potential overall shortage of younger workers to replace baby boomers as they retire in the coming decades. The trend may be particularly troublesome given that 90.4 percent of the region's employees are also residents of the region.

To foster strong economic growth in the future, the Cape & Islands should strive to align the education of its labor force to meet the demands of the region's employers. The higher education institutions in the region can play a key role in influencing the future supply of workers with post-secondary degrees. This supply will be critical to help meet the demographic challenges posed by the aging workforce and the demand for educated workers. However, the post-secondary education sector in the Cape & Islands is relatively small: In 2010, the region had only five post-secondary educational institutions. Nearly 60 percent of full-time enrollees and almost all part-time enrollees attend the region's only public two-year institution, Cape Cod Community College. Growth in full-time student enrollment at less-than-two-year, two-year, and four-year institutions in the Cape & Islands has exceeded state and national trends, but part-time enrollment at each type of institution in the region has declined.

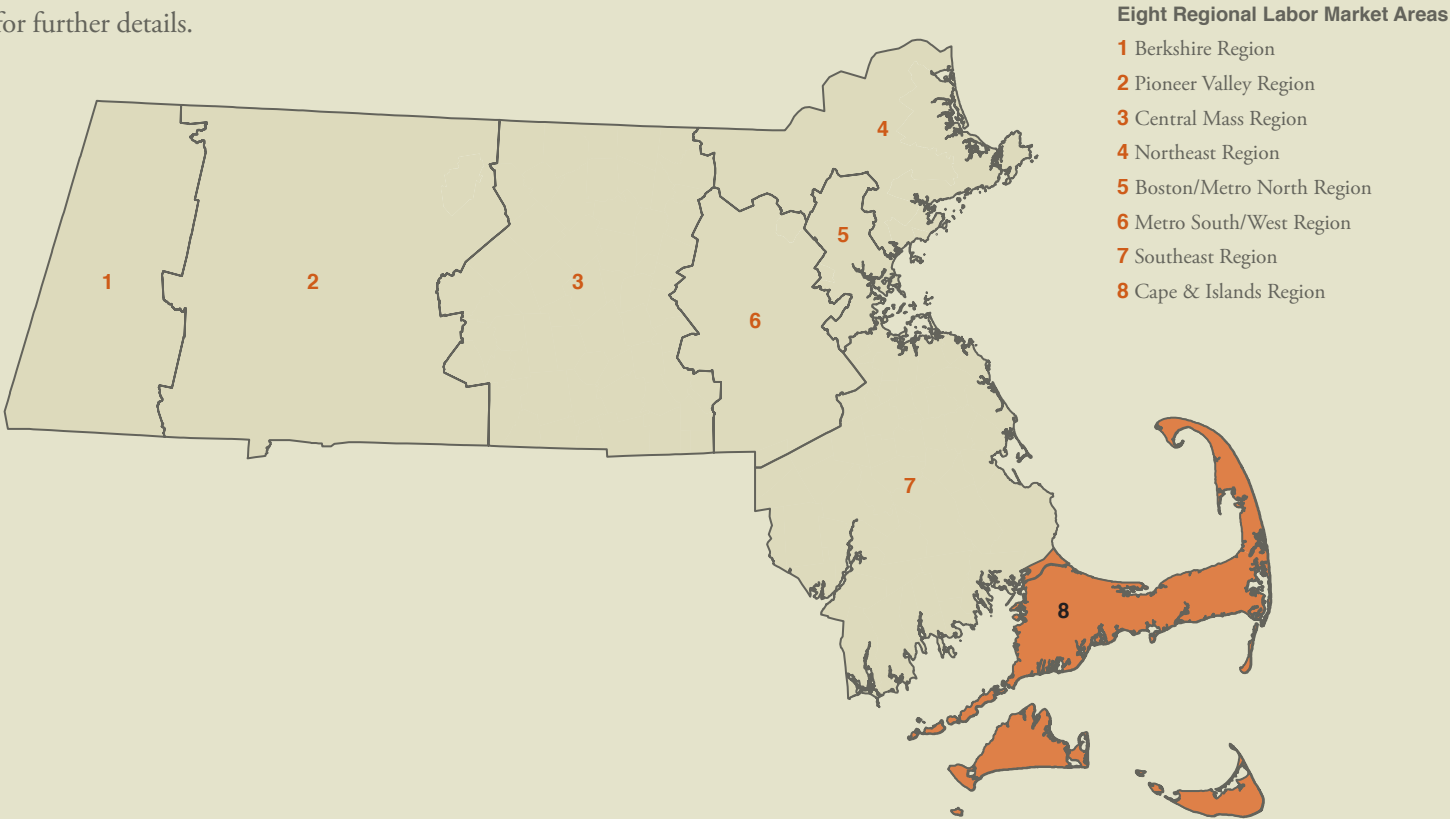
Growing full-time enrollment has translated into increased degree and program completions, mostly at the region's three public institutions. In fact, the strong growth in comple-

tions at public institutions in the region over the past decade resulted in the strongest growth in total completions in each of the three types of post-secondary degrees (Certificates, Associate's Degrees, and Bachelor's Degrees) of all regional labor markets, exceeding both state and national trends. The majority of Bachelor's Degrees in the Cape & Islands have been earned in Engineering & Computer Sciences, while Associate's Degrees in the region have been concentrated in Arts, Humanities, & Social Sciences. Certificate completions, on the other hand, have been more volatile in both number and composition, with Services and Health Sciences accounting for the largest shares.

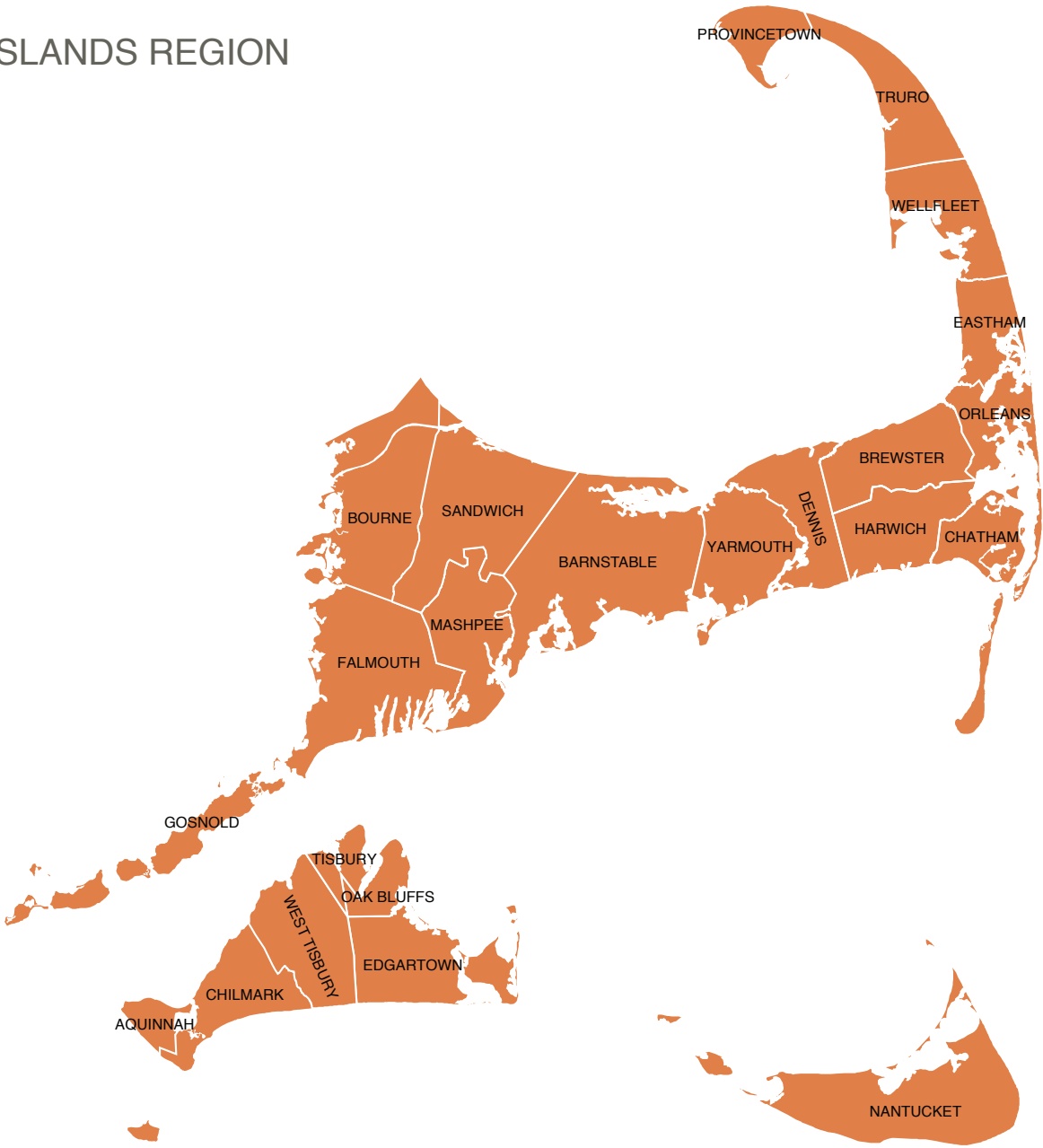
Please visit www.bostonfed.org/neppc for appendices describing geography and methodology, and for additional data.

GEOGRAPHY OF THE REGIONAL LABOR MARKETS

The Cape & Islands labor market borders the Southeast regional labor market. It is composed of the 23 Massachusetts cities and towns that make up Barnstable, Dukes, and Nantucket counties. Its larger cities and towns include Barnstable, Falmouth, Yarmouth, Sandwich, and Bourne. Because of data limitations, in certain aspects of our analysis (such as industry/occupational distributions), the Cape & Islands is combined with the Berkshire, Central Mass, Northeast, Pioneer Valley, and Southeast labor markets and is referred to as the region Outside Greater Boston. See the on-line Geographic Definition Appendix for further details.



THE CAPE & ISLANDS REGION



EMPLOYMENT TRENDS AND RECESSIONS

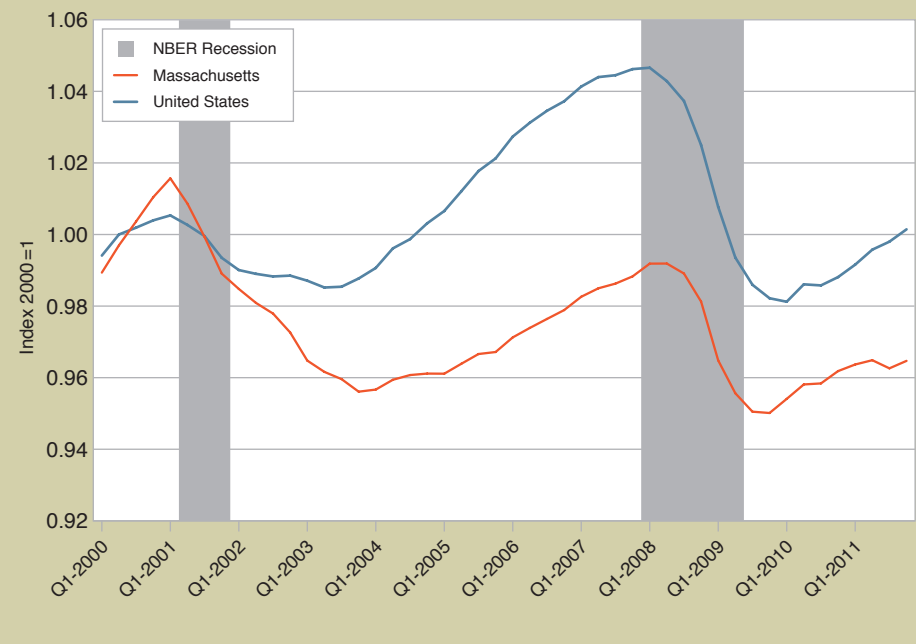
Massachusetts reached peak employment in 2001 and remained 5.0 percent below its peak (a loss of 169,800 jobs) at the end of 2011. Over the same period, total employment in the United States ended at only 0.4 percent below its 2001 peak (a loss of 513,700 jobs). One reason for the difference was that the short national recession at the beginning of the decade created a prolonged contraction and slow recovery in Massachusetts. By the start of the Great Recession, Massachusetts had still not recovered all of the jobs it had lost during the previous downturn. In contrast, the nation experienced a short labor market contraction in 2001, followed by a strong recovery that expanded employment up until the Great Recession. The Great Recession impacted the nation severely, while Massachusetts experienced a less pronounced downturn, with a slightly stronger recovery through 2010 followed by slower employment growth in 2011.

These differences between Massachusetts and the United States over the economic cycles are important to keep in mind when evaluating the performances of the eight regional labor markets. When possible, these labor market profiles will look at labor market information for the beginning of the millennium, the period preceding the Great Recession, and the decline in and recovery from the Great Recession.

Source: US Bureau of Labor Statistics.

Note: Shaded bars are National Bureau of Economic Research dated national recessions.

Non-Agricultural Employment for United States and Massachusetts, Q1 2000 to Q4 2011



POPULATION GROWTH TRENDS

The Cape & Islands is the second smallest region by residential population; it accounted for 3.8 percent of the state's population at the end of the decade. After experiencing the state's third fastest population growth (an annual rate of 0.3 percent) early in the decade, the Cape & Islands experienced the largest decline in population (an annual rate of 1.0 percent) of all regional labor markets between 2005–2007 and 2008–2010. As such, the region was one of only two labor markets to decline in residential population in the past decade. Berkshire was the only other region to register a decline, while Pioneer Valley's population was virtually unchanged and the other five regional labor markets experienced increases in their residential populations.

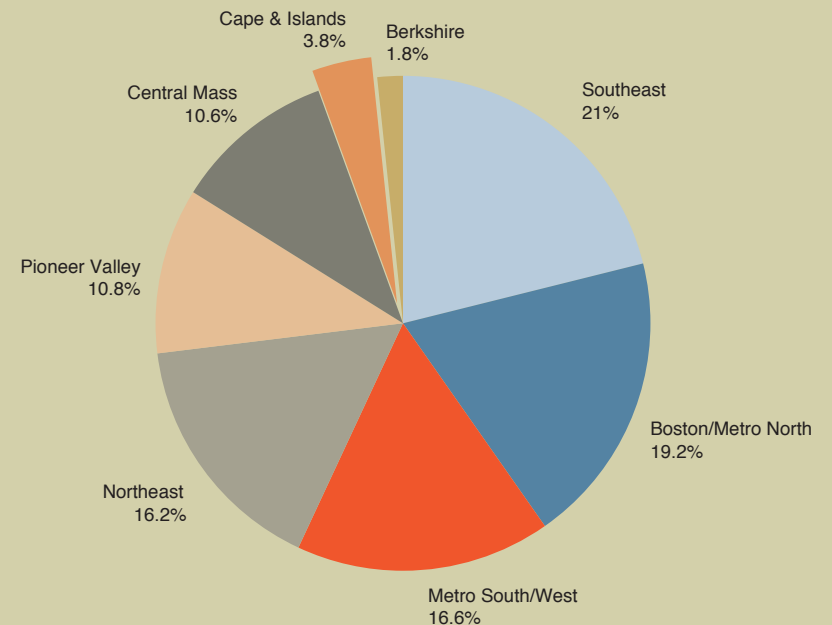
Source: US Census Bureau 2000 Decennial Census Public Use Microdata Samples (PUMS) data files, 2005–2007 and 2008–2010 American Community Survey Public Use Micro Sample (PUMS) data files.

Note: The use of the three-year American Community Survey was necessary to capture accurate sample size for the small geographic areas. The three-year sample is representative of the demographic and employment characteristics of the region over a 36-month period.

Annual Growth Rates



Massachusetts Population Distribution Across Regional Labor Markets, 2008–2010



DEMOGRAPHIC CHARACTERISTICS OF THE RESIDENT POPULATION OF THE CAPE & ISLANDS

While the total number of people living in the Cape & Islands declined over the past decade, certain demographic groups grew during this period. The small immigrant population in the region grew at an annual rate of 2.3 percent. The region also became more diverse over the past decade, with strong growth among minority populations; most notably, strong annual growth in Hispanic populations (4.8 percent). However, immigrants and racial minorities account for such small shares of the population in the Cape & Islands that their growth was more than offset by declines in native-born and White, non-Hispanic populations. The oldest regional labor market in the state in 2000, the Cape & Islands has remained older than all other regions as baby boomers (born between 1946 and 1964) approached traditional retirement ages by the end of the decade. In particular, the fastest growing age cohort over the past decade was 55–64-year-olds, with an annual rate of growth of 3.9 percent. Residents aged 65 or older grew at a more modest annual rate of 0.6 percent over the past decade but remained the largest of all age groups in the region. The region experienced modest annual growth (1.1 percent) in 16–24-year-olds but large declines in people under 16 and those between the ages of 25 and 44.

Source: US Census Bureau 2000 Decennial Census PUMS data files and 2008–2010 American Community Survey PUMS data files.

Note: Further data for racial/ethnic and gender characteristics for the residential population, as well as the working-age, civilian labor force, unemployed, and employed populations, are available in the on-line Data Appendix.

	2000	2008–2010	Absolute Change	Annual Growth Rate (Percent)
Resident Population	240,708	237,569	–3,139	–0.1
Gender				
Male	115,145	113,209	–1,936	–0.2
Female	125,563	124,360	–1,203	–0.1
Nativity				
Native Born	226,143	219,684	–6,459	–0.3
Immigrant	14,565	17,885	3,320	2.3
Race/Ethnicity				
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
Age				
Less than age 16	44,101	37,511	–6,590	–1.8
Age 16–24	18,170	19,971	1,801	1.1
Age 25–34	24,537	19,119	–5,418	–2.7
Age 35–44	37,311	28,271	–9,040	–3.0
Age 45–54	36,297	38,079	1,782	0.5
Age 55–64	27,589	38,790	11,201	3.9
Age 65+	52,703	55,828	3,125	0.6

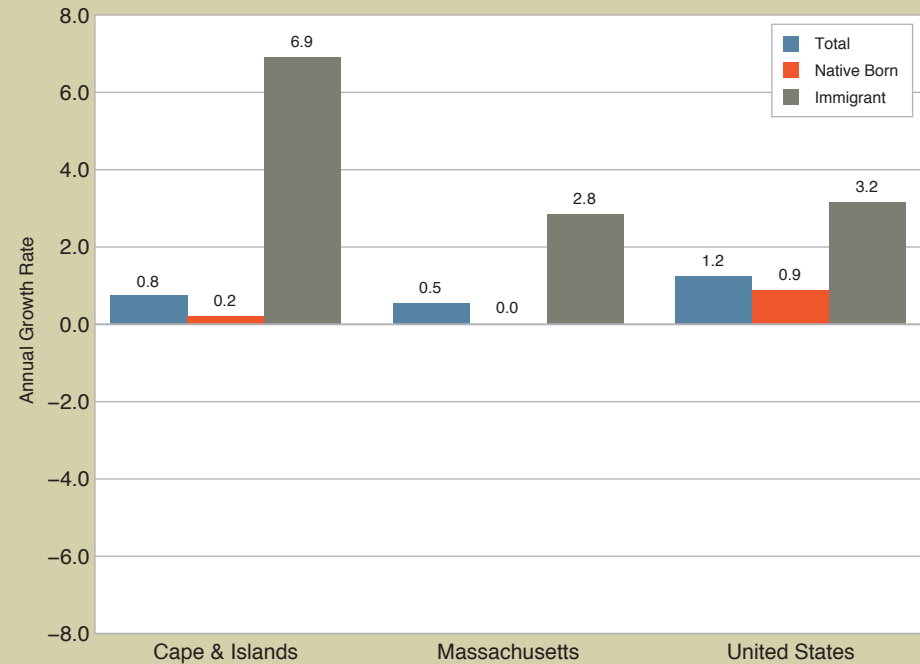
GROWTH IN WORKING-AGE POPULATION BY NATIVITY STATUS

Although the region's total population declined over the past decade, its working-age population (the potential labor supply, typically defined as people 16 years of age or older) grew slightly. Between 2000 and 2005–2007, the number of working-age immigrants in the region grew at a strong annual rate of 6.9 percent, while the working-age native-born population increased by 0.2 percent annually. As a result, the region's total working-age population grew at an annual rate of 0.8 percent. Between 2005–2007 and 2008–2010, the region's working-age native-born population reversed course and declined at an annual rate of 0.4 percent. More surprisingly, the working-age immigrant population in the Cape & Islands declined at an annual rate of 6.1 percent; it was the only regional labor market to see a decline in its immigrant population during this period. As a result, the region's working-age population declined at an annual rate of 0.9 percent between 2005–2007 and 2008–2010, in contrast to growth at the state and national levels. However, such losses were not enough to offset the earlier growth, and the working-age population in the region increased at an annual rate of 0.2 percent over the entire decade.

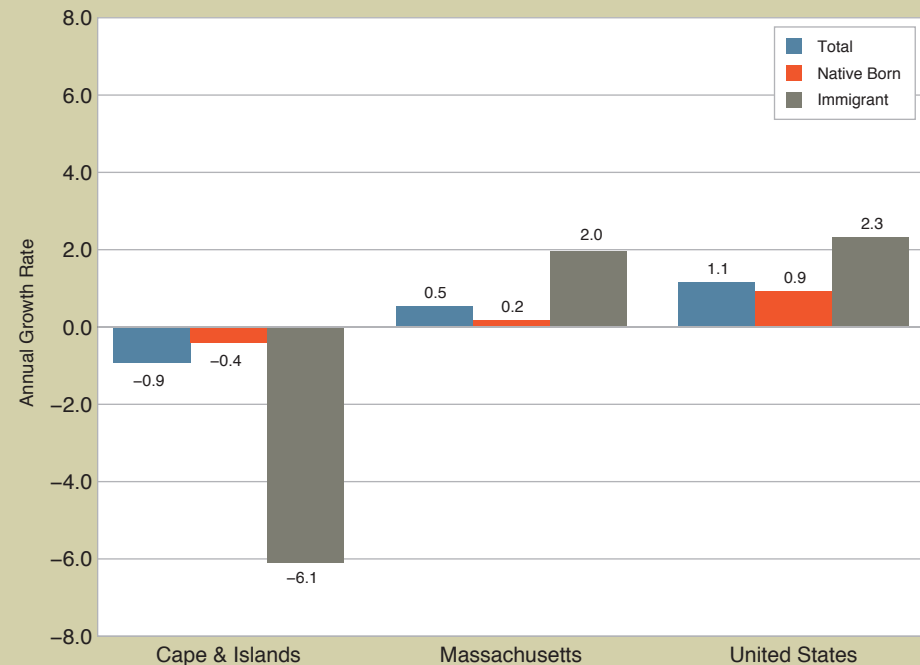
Source: US Census Bureau 2000 Decennial Census PUMS data files, 2005–2007 and 2008–2010 American Community Survey PUMS data files.

Note: The working-age population is defined as individuals 16 years of age or older, excluding institutionalized populations. Immigrants are individuals born outside the country.

Annual Growth Rate, 2000 to 2005–2007



Annual Growth Rate, 2005–2007 to 2008–2010



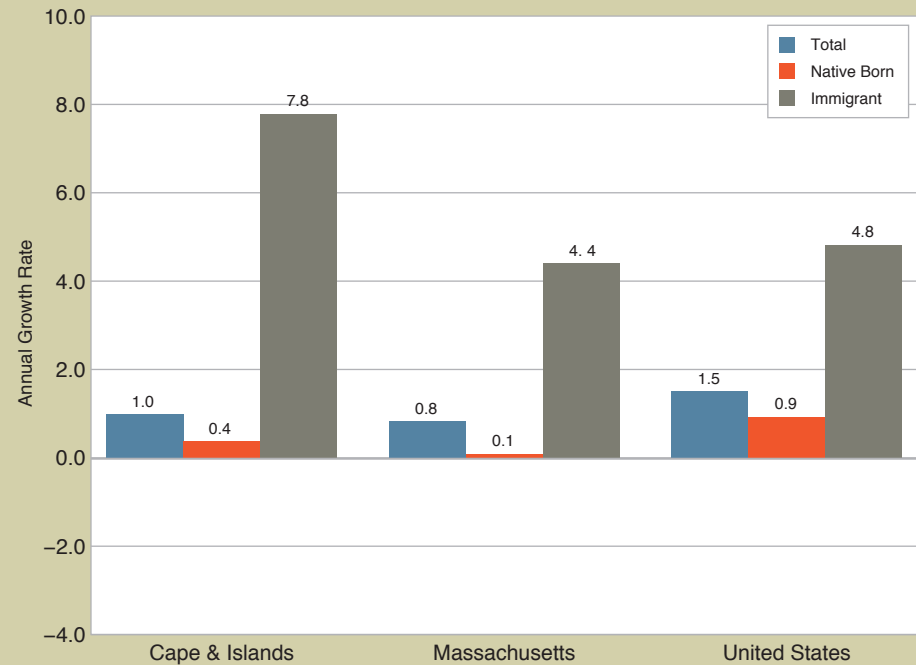
GROWTH IN THE CIVILIAN LABOR FORCE BY NATIVITY STATUS

The civilian labor force consists of residents 16 years of age or older who are either working or unemployed but actively looking for work (a region's actual labor supply). With growth among both native-born and immigrant populations between 2000 and 2005–2007, the civilian labor force grew at an annual rate of 1.0 percent, exceeding the growth in Massachusetts but trailing that in the United States. However, between 2005–2007 and 2008–2010, the native-born civilian labor force declined at an annual rate of 0.6 percent. At the same time, the number of immigrants in the civilian labor force in the Cape & Islands declined at an annual rate of 2.9 percent; it was the only regional labor market to see such a decline in the latter part of the decade. As a result, the region's civilian labor force declined at an annual rate of 0.8 percent between 2005–2007 and 2008–2010, in contrast to growth at both the state and national levels. However, the growth of earlier years was enough to result in an annual civilian labor force growth of 0.4 percent over the course of the entire decade.

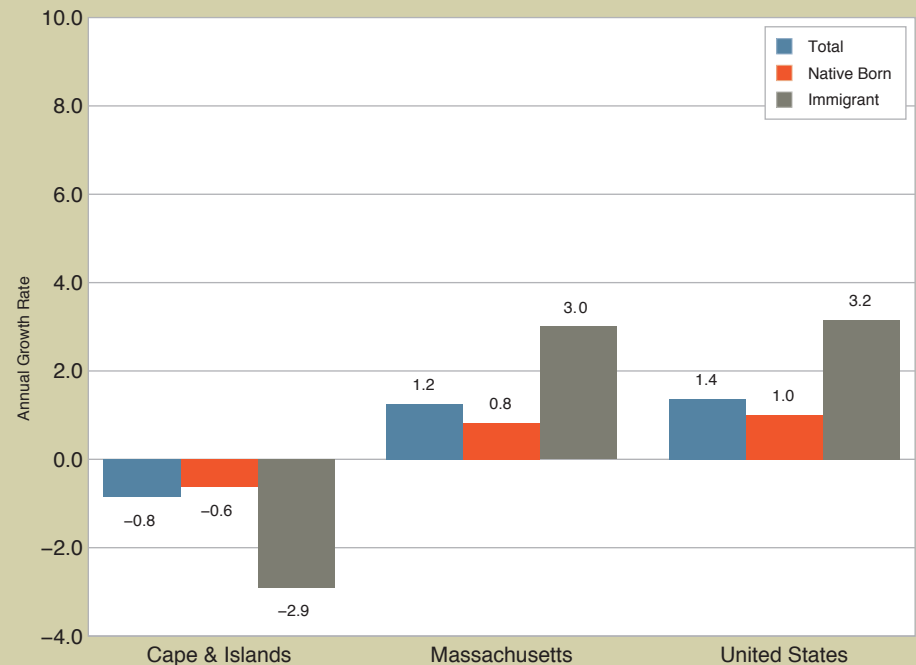
Source: US Census Bureau 2000 Decennial Census PUMS data files, 2005–2007 and 2008–2010 American Community Survey PUMS data files.

Note: The civilian labor force consists of all individuals 16 years of age or older who are classified as employed or unemployed and actively looking for work. Immigrants are individuals born outside the country.

Annual Growth Rate, 2000 to 2005–2007



Annual Growth Rate, 2005–2007 to 2008–2010

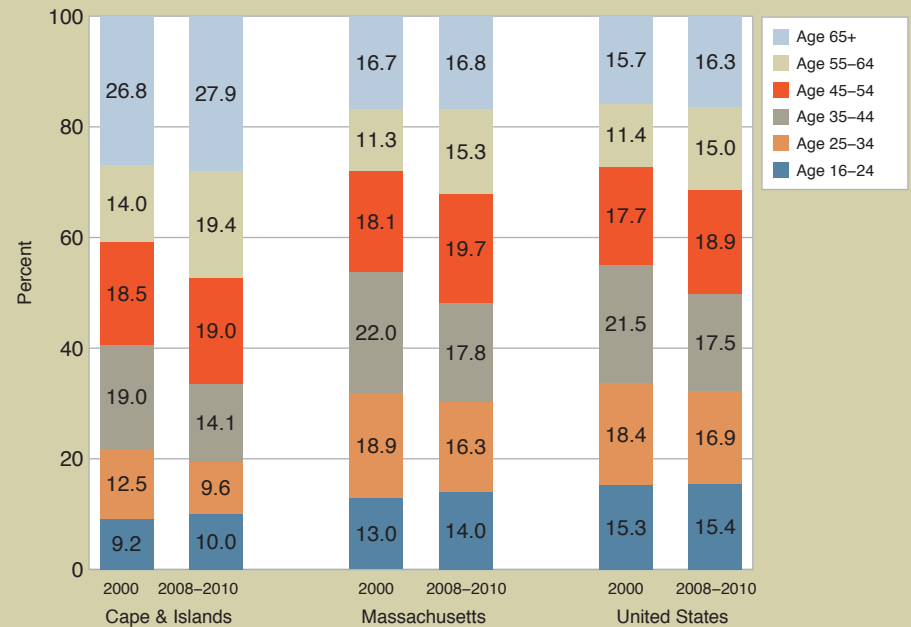


THE AGE PROFILE OF THE WORKING-AGE POPULATION

Massachusetts is one of the older states in the country, and the Cape & Islands is the oldest regional labor market in the state. In 2008–2010, 66.3 percent of the region’s working-age population was 45 years of age or older, up from 59.3 percent at the beginning of the decade. The largest share of the working-age population in the Cape & Islands was 65 years of age or older (27.9 percent). In Massachusetts and the United States, the largest age group was 45–54-year-olds. The 2008–2010 share of the working-age population between the ages of 16 and 34 was also particularly small in the Cape & Islands; at 19.6 percent, it was much smaller than it was statewide (30.3 percent) or nationally (32.3 percent), indicating potential workforce pipeline challenges.

Source: US Census Bureau 2000 Decennial Census PUMS data files and 2008–2010 American Community Survey PUMS data files.

Age Distribution of the Working-Age Population, 2000 and 2008–2010



Growth of Working-Age Population by Age in the Cape & Islands

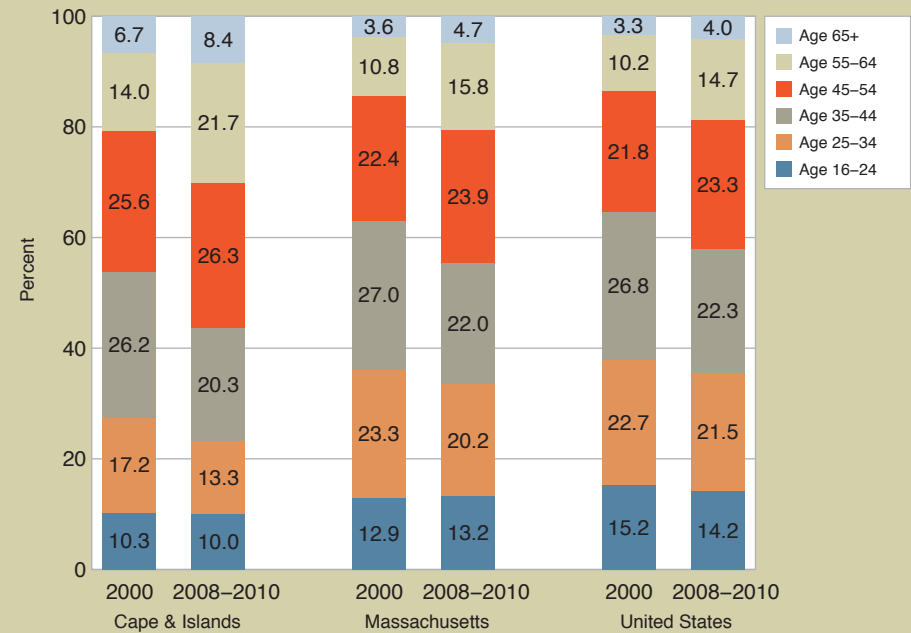
	2000	2008–2010	Absolute Change	Annual Growth Rate (Percent)
Age 16–24	18,170	19,971	1,801	1.1
Age 25–34	24,537	19,119	–5,418	–2.7
Age 35–44	37,311	28,271	–9,040	–3.0
Age 45–54	36,297	38,079	1,782	0.5
Age 55–64	27,589	38,790	11,201	3.9
Age 65+	52,703	55,828	3,125	0.6

THE AGE PROFILE OF THE CIVILIAN LABOR FORCE

Given the age of the region's population, it is not surprising that the civilian labor force in the Cape & Islands is also older than in all other regional labor markets. In 2008–2010, 56.4 percent of the labor force in the region was 45 years or older, making it the only region to have over 50 percent of its labor force at such ages and far exceeding the share in Massachusetts (44.4 percent) and the United States (42.0 percent). In the past decade, there was particularly strong growth in the number and share of people in the civilian labor force who were 55 years or older. At the same time, there were a declining number of labor force participants between the ages of 25 and 44, and almost no change in the number of 16–24-year-olds. All of these trends add up to the fact that the civilian labor force of the Cape & Islands continues to be much older than that of the other regional labor markets, Massachusetts, and the United States.

Source: US Census Bureau 2000 Decennial Census PUMS data files and 2008–2010 American Community Survey PUMS data files.

Age Distribution of the Civilian Labor Force, 2000 and 2008–2010



Growth of Civilian Labor Force Population by Age in the Cape & Islands

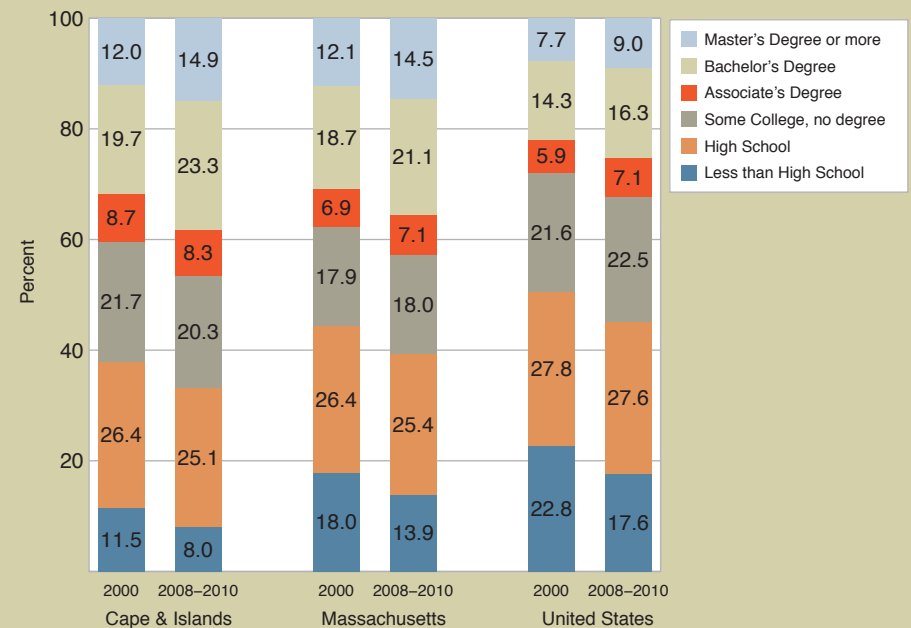
	2000	2008–2010	Absolute Change	Annual Growth Rate (Percent)
Age 16–24	12,402	12,438	36	0.0
Age 25–34	20,663	16,562	–4,101	–2.4
Age 35–44	31,541	25,245	–6,296	–2.4
Age 45–54	30,757	32,681	1,924	0.7
Age 55–64	16,838	26,906	10,068	5.3
Age 65+	8,009	10,443	2,434	3.0

EDUCATIONAL ATTAINMENT OF THE WORKING-AGE POPULATION

Of the eight regional labor markets in Massachusetts, the Cape & Islands has the third highest share of working-age residents with a college degree. By 2008–2010, 38.1 percent of the working-age population had a Bachelor’s Degree or higher. The region’s educational attainment even exceeded the average for Massachusetts, which has one of the highest rates of residents with a college degree in the country. However, nearly a third of the region’s population with a Bachelor’s Degree or higher was 65 years of age or older, a large share of whom were retired. Over the past decade, the share and number of working-age individuals in the Cape & Islands with a Bachelor’s Degree or higher increased, while those with a High School Degree or less declined. In fact, since the region’s largest population decline occurred among those with less than a High School Degree, the share of the region’s working-age population with such an education (8.0 percent) fell far below that of the state (13.9 percent) and the nation (17.6 percent), and was the lowest among all regional labor markets by the end of the decade.

Source: US Census Bureau 2000 Decennial Census PUMS data files and 2008–2010 American Community Survey PUMS data files.

Educational Distribution of the Working-Age Population, 2000 and 2008–2010



Growth of Working-Age Population by Educational Attainment in the Cape & Islands

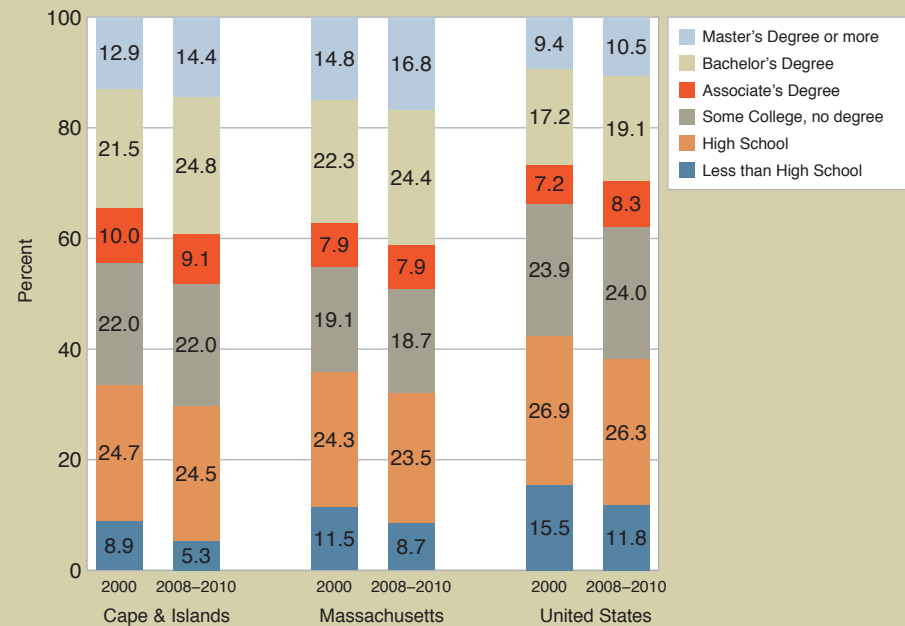
	2000	2008–2010	Absolute Change	Annual Growth Rate (Percent)
Less than High School	22,578	15,999	–6,579	–3.8
High School Graduate	51,914	50,258	–1,656	–0.4
Some College, no degree	42,661	40,704	–1,957	–0.5
Associate's Degree	17,202	16,689	–513	–0.3
Bachelor's Degree	38,756	46,594	7,838	2.1
Master's Degree or more	23,496	29,814	6,318	2.7

EDUCATIONAL ATTAINMENT OF THE CIVILIAN LABOR FORCE

When looking only at those people who are participating in the labor force (either working or actively looking for work), we see even higher levels of educational attainment. In 2008–2010, 39.2 percent of the labor force of the Cape & Islands had a Bachelor’s Degree or higher. However, in contrast to the working-age population, this figure trailed the 41.2 percent share in Massachusetts, likely due to the high number of retired residents with a Bachelor’s Degree or higher not participating in the labor force. However, 70.3 percent of the civilian labor force in the region had completed at least some post-secondary education (Some College or higher), exceeding the shares statewide (67.8 percent) and nationally (61.9 percent). Further, the most common level of educational attainment among the civilian labor force in the Cape & Islands switched from a High School Degree in 2000 to a Bachelor’s Degree in 2008–2010. And while the region’s labor force in 2008–2010 had a slightly larger share with a High School Degree than did Massachusetts (24.5 percent versus 23.5 percent), the Cape & Islands labor force had a much smaller share with less than a High School Degree (5.3 percent versus 8.7 percent.)

Source: US Census Bureau 2000 Decennial Census PUMS data files and 2008–2010 American Community Survey PUMS data files.

Educational Distribution of the Civilian Labor Force, 2000 and 2008–2010



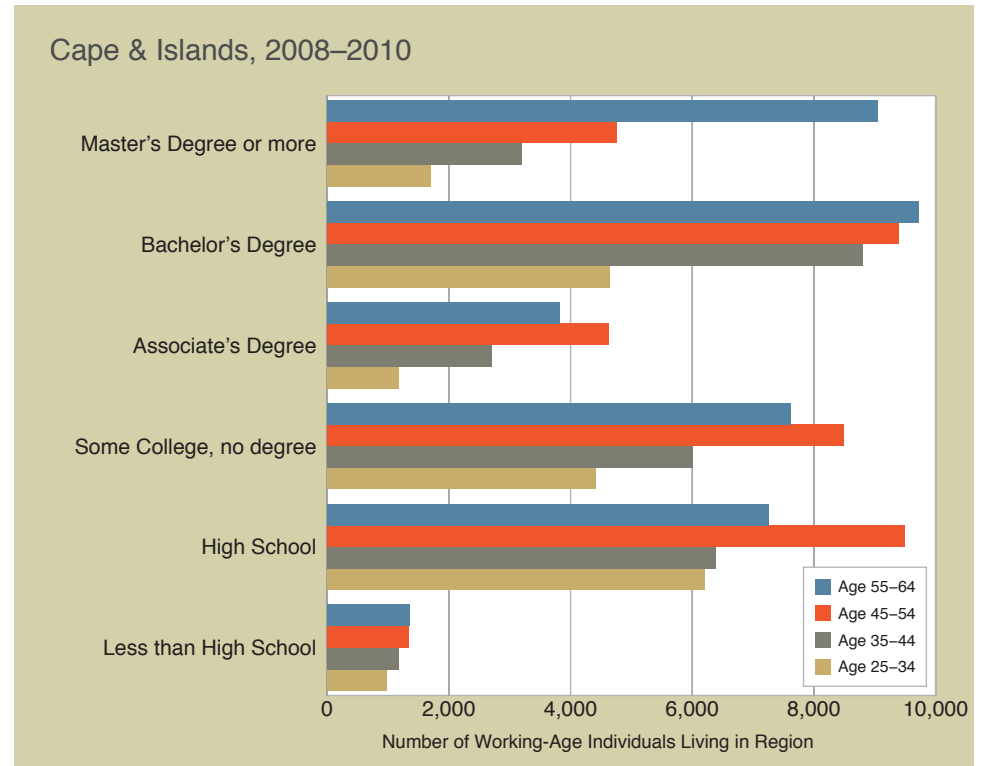
Growth of Civilian Labor Force Population by Educational Attainment in the Cape & Islands

	2000	2008–2010	Absolute Change	Annual Growth Rate (Percent)
Less than High School	10,705	6,529	–4,176	–5.3
High School Graduate	29,662	30,492	830	0.3
Some College, no degree	26,493	27,302	809	0.3
Associate's Degree	11,984	11,293	–691	–0.7
Bachelor's Degree	25,842	30,800	4,958	2.0
Master's Degree or more	15,524	17,859	2,335	1.6

EDUCATIONAL ATTAINMENT BY AGE GROUP

If we look at the population of the Cape & Islands by both age and education, we get an understanding of the workers who will be replacing the baby boomers. As the baby boomers have aged, 45–54-year-olds and 55–64-year-olds have become the largest age cohort in all six educational attainment groups. As the boomers continue to near retirement age and, over time, leave the labor force, nearly every educational category faces a potential shortfall of workers. For example, in 2008–2010, there were more than 4,600 people with an Associate’s Degree between the ages of 45 and 54 in the Cape & Islands but only 1,200 between the ages of 25 and 34 with such a degree. The difference of more than 3,400 individuals is equivalent to 74.5 percent of the 45–54-year-olds who may need to be replaced as they leave the workforce. Similarly large potential shortfalls of working-age individuals exist for people with Some College education (4,078, or 48.1 percent) and a Bachelor’s Degree (4,747, or 50.5 percent). However, these gaps may actually be smaller since the educational requirements for most industries and occupations have been increasing, and some positions traditionally filled by people with a High School or Associate’s Degree are now held by those with a Bachelor’s Degree or higher.

Source: US Census Bureau 2008–2010 American Community Survey PUMS data files.



UNEMPLOYMENT RATE TRENDS

At 3.3 percent, the Cape & Islands had the highest unemployment rate of all regional labor markets in 2000. As unemployment rose during the recession in the early 2000s, the statewide unemployment rate jumped to 5.8 percent in 2003, while the region's unemployment rate increased at a more moderate pace and reached only 5.0 percent (second lowest of all regional labor markets in 2003). Thereafter, the unemployment rate in the Cape & Islands dropped to 4.5 percent in 2007, nearly the same as the rate statewide. But in the Great Recession, the region's unemployment rate exceeded the statewide rate (8.5 percent) and reached 9.0 percent in 2010, but was in the middle of the pack among the regional labor markets.

Source: US Bureau of Labor Statistics and Massachusetts Executive Office of Labor and Workforce Development.

Note: The annual unemployment rate is a 12-month average of the non-seasonally-adjusted unemployment rate.

Unemployment Rate, 2000 to 2010



Cape & Islands Unemployment

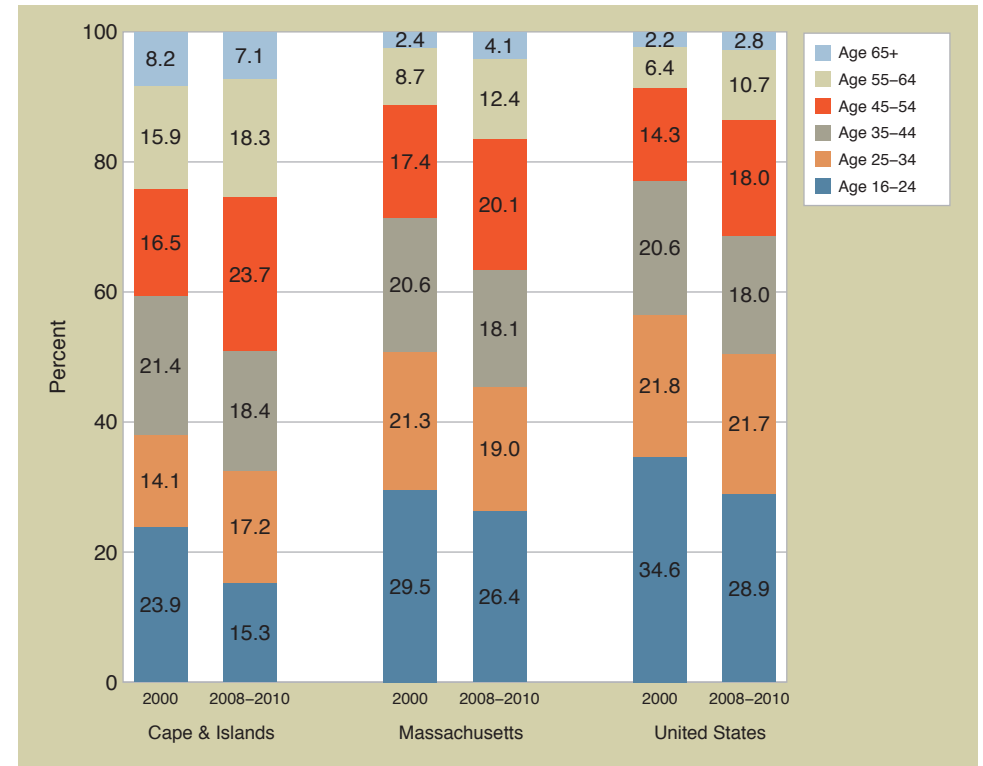
	2000	2010	Relative Change	Annual Growth Rate (Percent)
Unemployed	4,307	12,796	8,489	11.5
Employed	126,538	129,721	3,183	0.2
Civilian Labor Force	130,845	142,518	11,673	0.9
Unemployment Rate	3.3	9.0	-	-

THE UNEMPLOYED: AGE DISTRIBUTION (2000 AND 2008–2010)

Compared with Massachusetts and the United States, larger shares of the unemployed in the Cape & Islands are over the age of 45. This is a consequence of the region's older population. At the beginning of the decade, when the unemployment rate was at 3.3 percent, the age of the unemployed population was more evenly distributed. As the region's population increased in age over the decade and the Great Recession took hold, the share of the unemployed age 45 or older grew to nearly 50 percent. In comparison, only 36.6 percent of the unemployed in Massachusetts were age 45 or older in 2008–2010. Nationwide, the situation was reversed, with 50.6 percent of the unemployed age 34 or younger. However, in 2008–2010, people in the Cape & Islands between the ages of 16 and 34 still accounted for a disproportional share of the unemployed (32.5 percent), when compared with their share of the civilian labor force (23.3 percent).

Source: US Census Bureau 2000 Decennial Census PUMS data files and 2008–2010 American Community Survey PUMS data files.

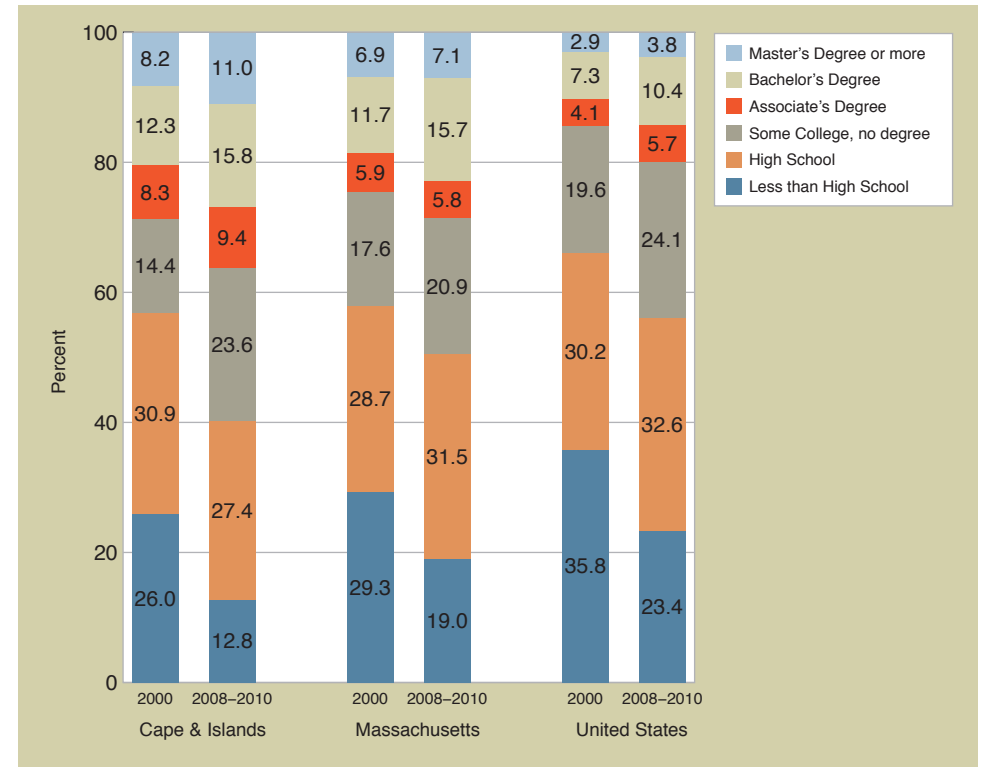
Note: Unemployed are individuals age 16 or older not employed and actively looking for work.



THE UNEMPLOYED: EDUCATIONAL ATTAINMENT (2000 AND 2008–2010)

A majority of the unemployed in the Cape & Islands had some post-secondary education (59.8 percent) in 2008–2010, in contrast to the state (49.5 percent) and nation (44.0 percent). While a relatively large share of the civilian labor force in the region had a Bachelor's Degree, the region mostly differed from the state in its large share of the unemployed who have Some College education or an Associate's Degree. In 2000, the share of the unemployed in the Cape & Islands who had Some College or an Associate's Degree was 22.7 percent, actually lower than the share in Massachusetts. By the end of the decade that figure had grown to 33.0 percent in the region, exceeding the shares statewide (26.7 percent) and nationally (29.8 percent). However, lower educational attainment cohorts tend to be disproportionately represented among the unemployed. For example, in 2008–2010, those with less than a High School Degree accounted for 12.8 percent of the unemployed in the Cape & Islands but were only 5.3 percent of the civilian labor force.

Source: US Census Bureau 2000 Decennial Census PUMS data files and 2008–2010 American Community Survey PUMS data files.



COMMUTING PATTERNS OF RESIDENTS AND WORKERS IN THE CAPE & ISLANDS (2008–2010)

An overwhelming majority (86.8 percent) of the employed residents of the Cape & Islands work in the region, making it one of the least commuter-oriented labor markets in the state. Among the small number of residents commuting to other regions and states, the Southeast region is the most common destination (6.0 percent of all workers who live in the Cape & Islands), while a smaller share (4.4 percent) commutes to the Greater Boston area (Boston/Metro North and Metro South/West). Even smaller shares of workers commute into the Cape & Islands, with 90.4 percent of employees also being residents of the region. Nearly 70 percent of the inbound commuters come from the Southeast (6.7 percent of all workers in the region), with the second largest number of workers in the region coming from places other than Massachusetts and Rhode Island (1.3 percent). As a result, the Cape & Islands is a net exporter of workers, with nearly 4,500 more residents commuting out of the region every day than commuting into it.

Source: US Census Bureau 2008–2010 American Community Survey PUMS data files.

	Number	Percent of Total
Total number of employed persons living in the Cape & Islands...	112,526	100.0
...who work in:		
Cape & Islands	97,705	86.8
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
Total number of persons working in the Cape & Islands...	108,074	100.0
...who live in:		
Cape & Islands	97,705	90.4
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
Net in-commuting (Number of Persons Employed in Region minus Number of Persons Living in Region)	-4,452	-

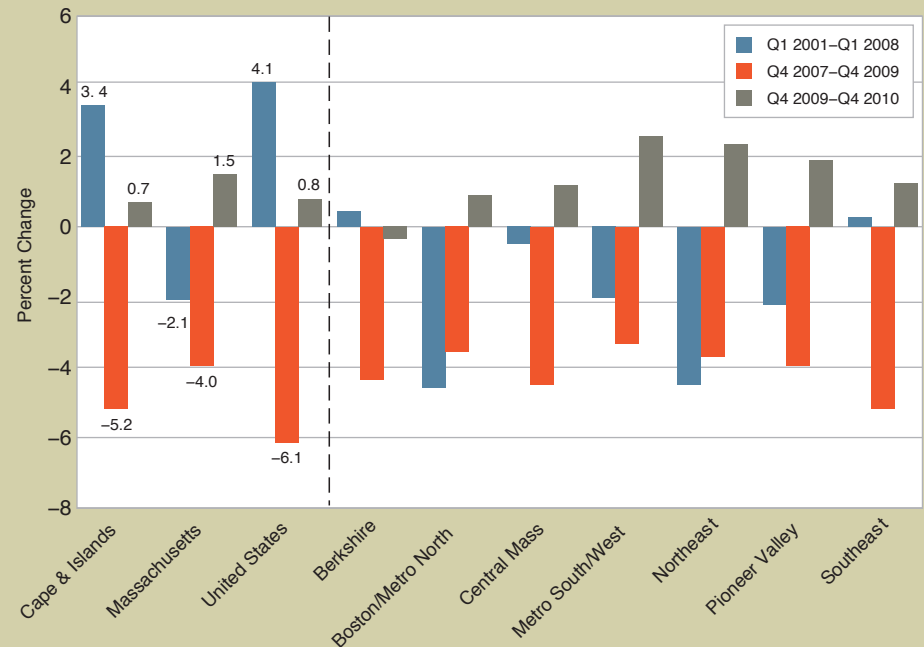
EMPLOYMENT TRENDS

Along with being the second smallest regional labor market by share of the state’s residential population (3.8 percent), the Cape & Islands also accounts for second smallest share of the state’s employment: 3.1 percent, or roughly 98,000 jobs. Over the past decade, the region’s employment situation has been markedly different from that of Massachusetts. At the start of the decade, employment declined statewide, with the bursting of the “technology bubble” in the early 2000s resulting in large job losses in the Information sector. The Cape & Islands was nearly immune to such losses and actually added jobs in the 2001–2002 recession. As a result employment in the region grew by 3.4 percent between the first quarters of 2001 and 2008 (compared with a loss of 2.1 percent statewide), the fastest among all labor markets. During the Great Recession, the region’s employment losses were greater than those of the United States (5.2 percent versus 4.0 percent), but more modest than those of the United States. In the first year of recovery (Q4 2009 to Q4 2010), the Cape & Islands saw employment increase by only 0.7 percent, trailing the gains in Massachusetts (1.5 percent) and United States (0.8 percent).

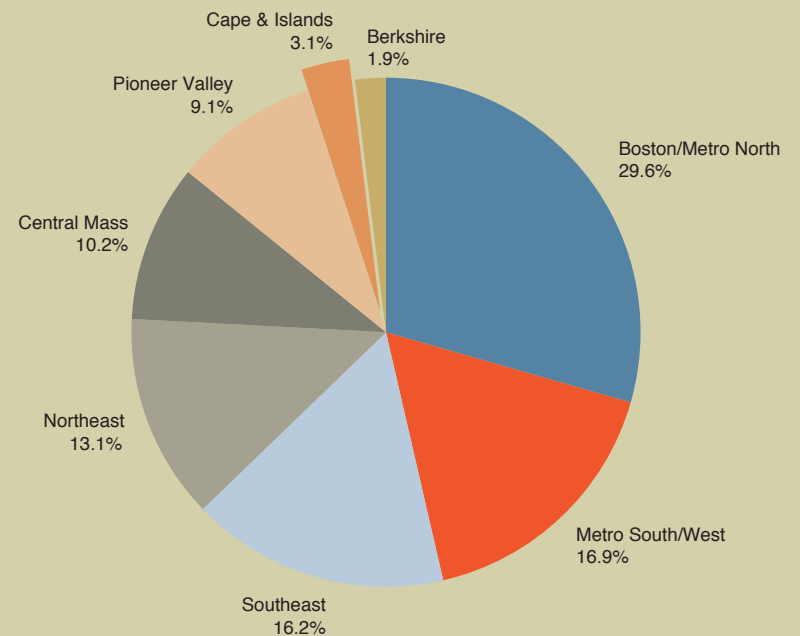
Source: US Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW) and Massachusetts Executive Office of Labor and Workforce Development ES-202.

Note: ES-202 and QCEW are not seasonally adjusted. Therefore, comparisons need to be made across consistent time periods, such as the first quarter of one year to the first quarter of another. Comparisons between different quarters will be distorted, as seasonal employment in industries such as Retail Trade and Leisure & Hospitality vary considerably across regions and over time.

Changes in Total Employment



Distribution of Employment Across Regional Labor Markets, Q4 2010



DEMOGRAPHIC CHARACTERISTICS OF THE POPULATION EMPLOYED IN THE CAPE & ISLANDS

Because the employed residential population of the Cape & Islands makes up 90.4 percent of the region's workforce, the demographic characteristics of the two groups are very similar. Over the past decade, the number of immigrant employees in the region increased, while the number of native-born employees declined. The region's workers also became more diverse, with growth in Black and Hispanic employees, and the number of Hispanic employees nearly doubled in the past decade. The Cape & Islands has the oldest workforce of all regional labor markets, with nearly 55 percent 45 years of age or older. The region has also seen increasingly higher levels of educational attainment among employees. While a Bachelor's Degree has become the most common level of educational attainment among the region's labor force, a High School Degree continues to be the most common level of educational attainment among the employed.

Source: US Census Bureau 2000 Decennial Census PUMS data files and 2008–2010 American Community Survey PUMS data files.

Note: Further data for racial/ethnic and gender characteristics for total, working-age, and civilian labor force population are available in the on-line Data Appendix.

	2000	2008–2010	Absolute Change	Annual Growth Rate (Percent)
Employed Population	106,447	108,074	1,627	0.2
Gender				
Male	54,505	54,100	–405	–0.1
Female	51,942	53,974	2,032	0.4
Nativity				
Native Born	98,258	97,577	–681	–0.1
Immigrant	8,189	10,497	2,308	2.8
Race/Ethnicity				
White, non-Hispanic	98,438	98,941	503	0.1
Black, non-Hispanic	1,630	2,096	466	2.8
Asian, non-Hispanic	1,193	1,225	32	0.3
Hispanic	1,443	2,817	1,374	7.7
Other race, non-Hispanic	3,743	2,995	–748	–2.4
Age				
Age 16–24	11,210	11,008	–202	–0.2
Age 25–34	19,355	15,399	–3,956	–2.5
Age 35–44	28,989	22,419	–6,570	–2.8
Age 45–54	27,154	28,643	1,489	0.6
Age 55–64	13,390	21,898	8,508	5.6
Age 65+	6,349	8,707	2,358	3.6
Educational Attainment				
Less than high school	9,754	5,744	–4,010	–5.7
High school graduate	27,446	27,707	261	0.1
Some College, no degree	24,293	23,553	–740	–0.3
Associate's degree	10,683	9,540	–1,143	–1.2
Bachelor's degree	21,980	27,256	5,276	2.4
Master's degree or more	12,291	14,274	1,983	1.7

DISTRIBUTION OF EMPLOYMENT BY SUPERSECTOR (Q4 2010)

The largest supersector of employment in the Cape & Islands is Education & Health Services. Accounting for 25.7 percent of the jobs in the region, the industry's share of employment is somewhat smaller than in Massachusetts but slightly higher than the share of employment nationwide. The region's employment is more concentrated in the Trade, Transportation, & Utilities supersector (22.1 percent) than is the case in Massachusetts and the United States, due to its large Retail Trade industry. As a major tourist destination, the Cape & Islands also has a particularly strong concentration of employment in Leisure & Hospitality (17.8 percent), far exceeding the supersectors share of employment statewide and nationally. The Cape & Islands also has higher employment concentrations than the state and the nation in Construction and Government. In comparison with Massachusetts, the region has much smaller employment concentrations in Information, Financial Activities, and Professional & Business Services. Employment in these industries tends to be concentrated in the Greater Boston regional labor markets. The Manufacturing supersector in the region is also extremely small (2.1 percent), accounting for only about one-fourth the share statewide.

Source: US Bureau of Labor Statistics QCEW and Massachusetts Executive Office of Labor and Workforce Development ES-202.

Note: Supersectors are groupings of major industry categories. See the on-line Data Appendix for the major industries that make up supersectors.



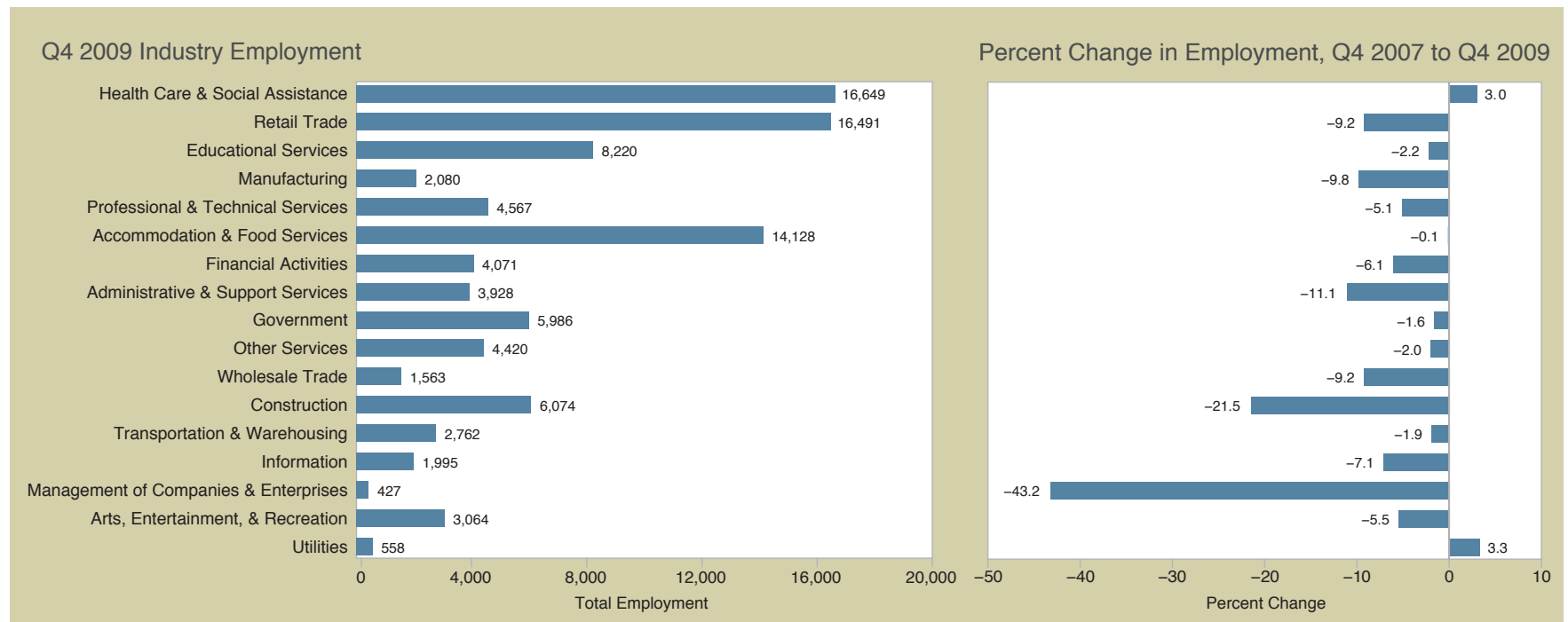
CHANGES IN EMPLOYMENT DURING THE ECONOMIC DOWNTURN BY MAJOR INDUSTRY: THE CAPE & ISLANDS

While the Cape & Islands lost jobs in a number of industries between the fourth quarters of 2007 and 2009, two industries were able to avoid losses. The largest employment gains came from Health Care & Social Assistance, which added nearly 500 jobs to increase employment by 3.0 percent. This gain came mostly from the sub-industries of Home Health Care Services (189 jobs) and Nursing Care Facilities (224 jobs). The only other job gains came from the small Utilities industry, increasing by 3.3 percent (18 jobs). But these gains were more than offset by the 3,300-plus jobs lost in the industries hit hardest by the Great Recession: Retail Trade (-9.2 percent) and Construction (-21.5 percent). Further

job losses were spread across a number of industries, including Wholesale Trade (-9.2 percent), Manufacturing (-9.8 percent), Administrative & Support Services (-11.1 percent), and Management of Companies & Enterprises (-43.2 percent). In total, the region lost more than 5,300 jobs between 2007 and 2009, a 5.2 percent decline in employment.

Source: Massachusetts Executive Office of Labor and Workforce Development ES-202.

Note: Industries are sorted by size in Massachusetts in Q4 2009. See the on-line Data Appendix for supersector and major industry employment trends.



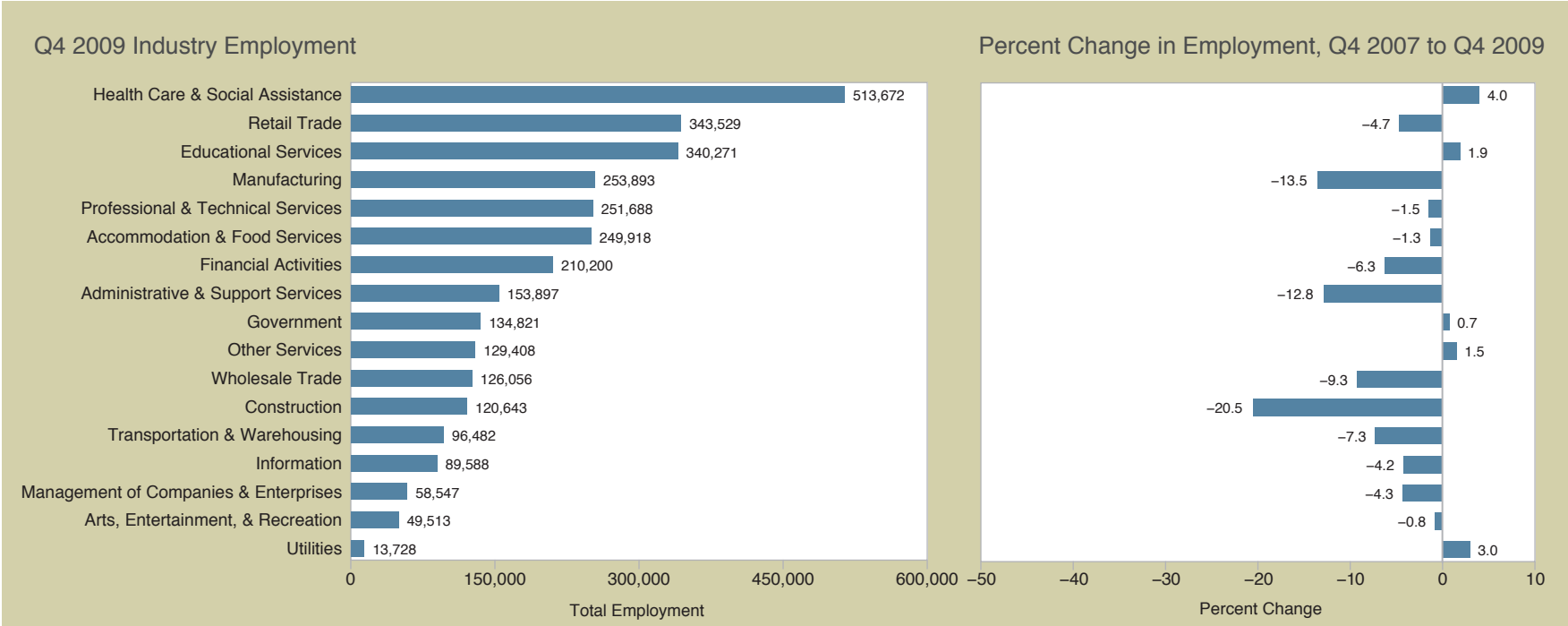
CHANGES IN EMPLOYMENT DURING THE ECONOMIC DOWNTURN BY MAJOR INDUSTRY: MASSACHUSETTS

Massachusetts fared slightly better in the Great Recession than did the Cape & Islands region. The state's strongest employment gains between the fourth quarters of 2007 and 2009 came in the Health Care & Social Assistance industry (4.0 percent), as a result of strong growth in the sub-industry of Ambulatory Health Care Services (7.7 percent). Further gains in Educational Services (1.9 percent) were offset by significant losses in Administrative & Support Services (-12.8 percent), Manufacturing (-13.5 percent), and Construction (-20.5 percent). Within the Trade, Transportation, & Utilities supersector, the state experienced large losses in two major industries: Retail Trade (-4.7 percent) and Wholesale

Trade (-9.3 percent). However, Massachusetts industries did not experience job losses as steep as their Cape & Islands counterparts and tended to have stronger gains in the few industries that expanded employment. As a result, employment losses statewide (-4.0 percent, or nearly -130,000 jobs) were less severe than in the Cape & Islands (-5.2 percent) in the downturn between 2007 and 2009.

Source: Massachusetts Executive Office of Labor and Workforce Development ES-202.

Note: Industries are sorted by size in Massachusetts in Q4 2009.



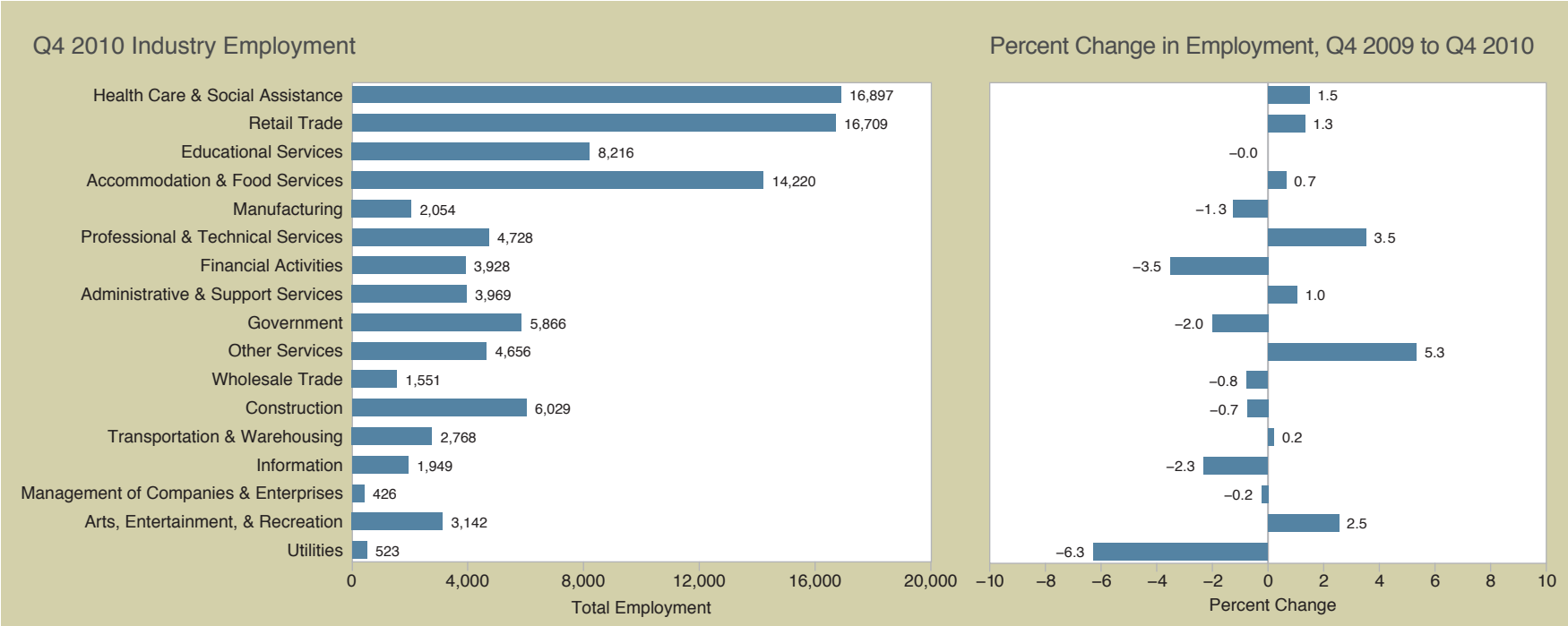
INDUSTRIES DRIVING THE RECOVERY: THE CAPE & ISLANDS

Since the trough of the downturn, the Cape & Islands has experienced mixed employment growth across industries. Eight industries lost jobs between the fourth quarters of 2009 and 2010, with the largest declines coming from Government (-120 jobs, or -2.0 percent) and Financial Activities (-143 jobs, or -3.5 percent), with the other industries each shedding fewer than 100 jobs. Another eight industries gained jobs over this time period, with the largest increase in Health Care & Social Assistance (248 jobs) and the largest percent gain in employment in Other Services (5.3 percent), which includes sub-industries such as Laundry, Maintenance, and Membership Organizations Services. Even industries hit hardest by the recession showed signs of recovery, with Retail Trade adding 218 jobs and growing 1.3 percent. Although the region experienced a mix of job gains and losses across industries between the fourth quarters of 2009 and 2010, the gains were enough to outweigh the losses, with employment growing by 0.7 percent, or 669 jobs.

Since the trough of the downturn, the Cape & Islands has experienced mixed employment growth across industries. Eight industries lost jobs between the fourth quarters of 2009 and 2010, with the largest declines coming from Government (-120 jobs, or -2.0 percent) and Financial Activities (-143 jobs, or -3.5 percent), with the other industries each shedding fewer than 100 jobs. Another eight industries gained jobs over this time period, with the largest increase in Health Care & Social Assistance (248 jobs) and the largest percent gain in employment in Other Services (5.3 percent), which includes sub-industries such as Laundry, Maintenance, and Membership Organizations Services. Even industries hit hardest by the recession showed signs of recovery, with Retail Trade adding 218 jobs and growing 1.3 percent. Although the region experienced a mix of job gains and losses across industries between the fourth quarters of 2009 and 2010, the gains were enough to outweigh the losses, with employment growing by 0.7 percent, or 669 jobs.

Source: Massachusetts Executive Office of Labor and Workforce Development ES-202.

Note: Industries are sorted by size in Massachusetts in Q4 2010.



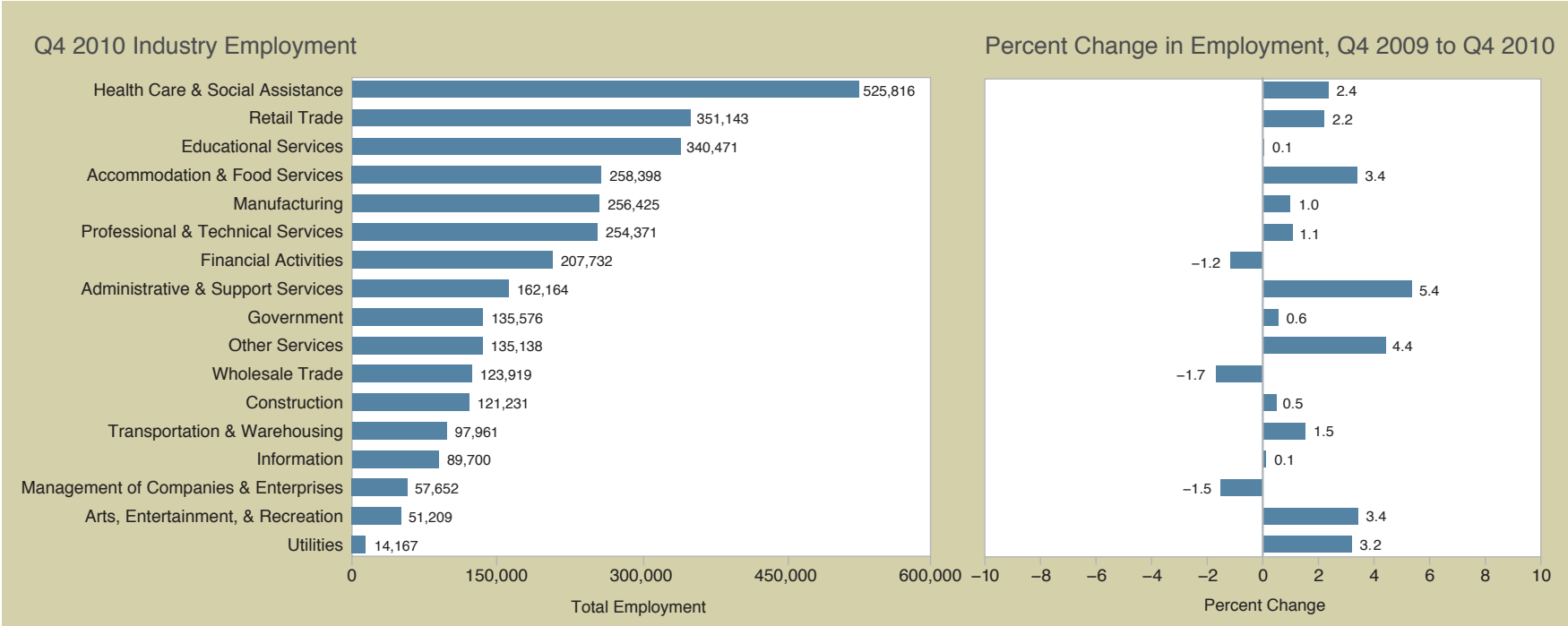
INDUSTRIES DRIVING THE RECOVERY: MASSACHUSETTS

Massachusetts as a whole has had a broad-based recovery across industries. Between the fourth quarters of 2009 and 2010, the state saw employment increases ranging from 0.1 percent in Information and Educational Services to 5.4 percent in Administrative & Support Services. The Health Care & Social Assistance industry added the most new jobs—more than 12,000 positions—experiencing growth of 2.4 percent. Job growth was spread across a number of the sub-industries that make up Health Care & Social Assistance, including Social Assistance (3,200 jobs), Ambulatory Health Care Services (3,400 jobs), and Hospitals (5,700

jobs). During the earliest stages of the recovery, the state experienced slight declines in only three industries: Financial Activities, Wholesale Trade, and Management of Companies & Enterprises. As a result, employment growth between the fourth quarters of 2009 and 2010 was 1.5 percent (47,100 jobs), or double the rate of growth in the Cape & Islands.

Source: Massachusetts Executive Office of Labor and Workforce Development ES-202.

Note: Industries are sorted by size in Massachusetts in Q4 2010.

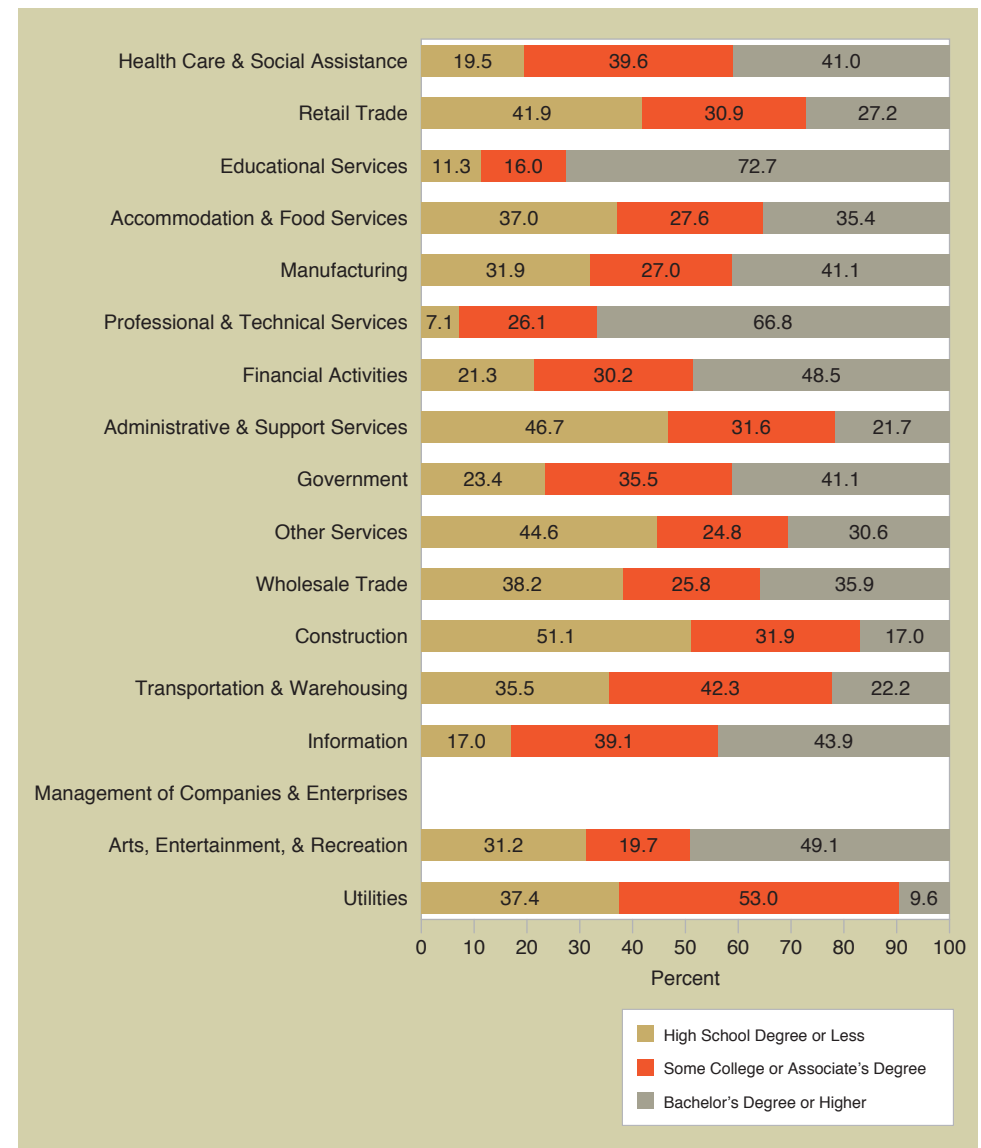


EDUCATIONAL ATTAINMENT OF EMPLOYEES BY MAJOR INDUSTRY IN THE CAPE & ISLANDS (2008–2010)

While the Cape & Islands employed more workers with a Bachelor's Degree or higher over the past decade, the most common level of educational attainment among the region's employees remains a High School Degree. However, when looking at educational attainment of employees by industry we find many of the region's industries employ large shares of workers with a Bachelor's Degree or higher. In 2008–2010, eight of the 16 major industries in the region had a workforce where the largest share of employees had a Bachelor's Degree or higher. Only six industries in the Cape & Islands had a High School Degree or less as the largest category. Construction was the only industry where a majority of employees had a High School Degree or less (51.1 percent), and there were only two industries where a majority of employees had a Bachelor's Degree or higher (Educational Services, at 72.7 percent, and Professional & Technical Services, at 66.8 percent). In most industries, the educational attainment of employees was somewhat more evenly distributed, with 13 industries having at least 25 percent of employees with Some College education or an Associate's Degree.

Source: US Census Bureau 2008–2010 American Community Survey PUMS data files.

Note: Industries are sorted by size in Massachusetts in Q4 2010. Responses to the 2000 Census and 2008–2010 American Community Survey are used to gauge educational attainment of employees by industry; an adequate sample size of survey responses within an industry is required to report a distribution. Management of Companies & Enterprises is the smallest industry in the Cape & Islands, with just over 400 employees in Q4 2010. Due to the limited number of survey responses, it is not possible to calculate any educational distribution for the industry.

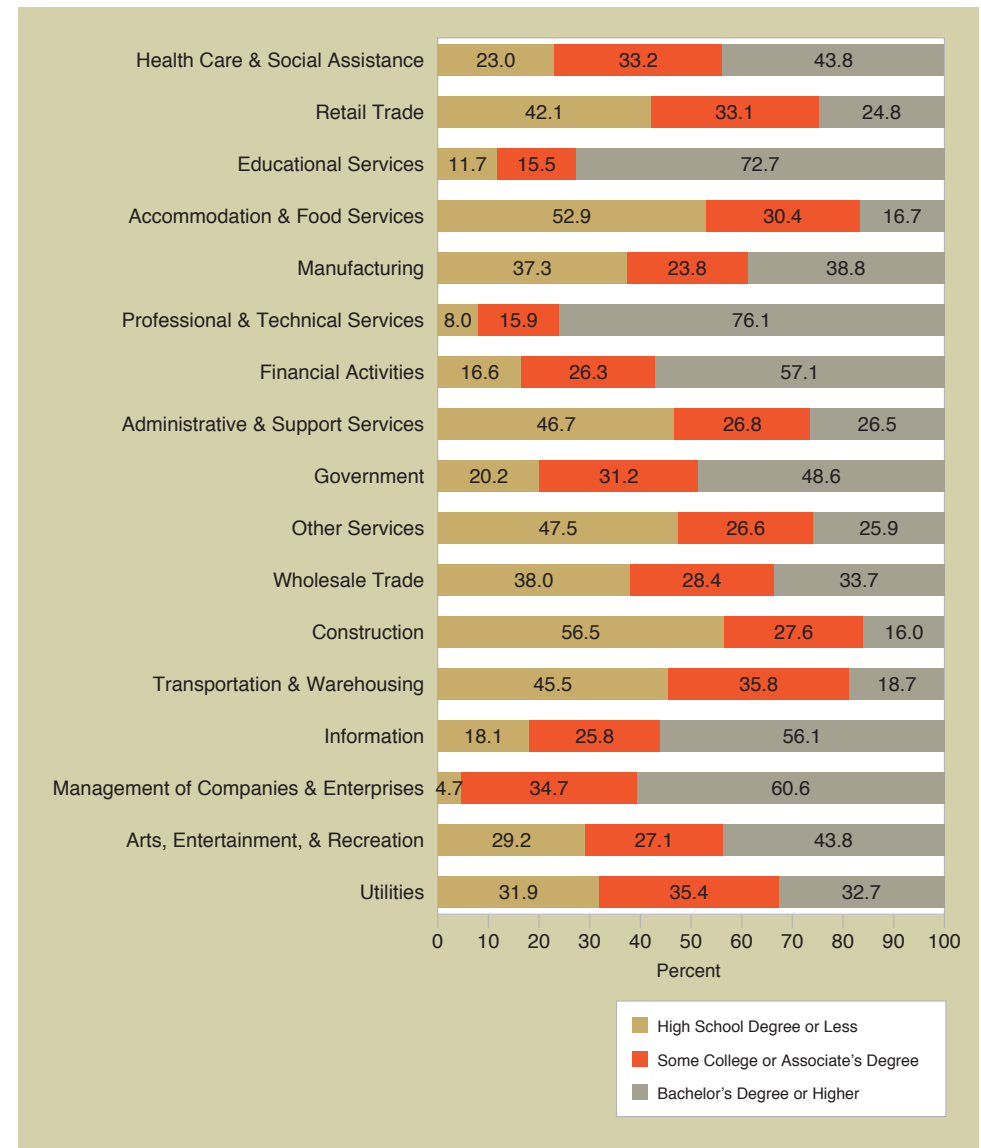


EDUCATIONAL ATTAINMENT OF EMPLOYEES BY MAJOR INDUSTRY IN MASSACHUSETTS (2008–2010)

The educational attainment of employees in industries in Massachusetts differed substantially from their counterparts in the Cape & Islands in 2008–2010. In Massachusetts, nine of the 17 major industries had a workforce where the largest share of employees had a Bachelor’s Degree or higher. However, in only eight of the 16 major industries was the share of employees with a Bachelor’s Degree or higher greater statewide than in the Cape & Islands. Most notably, industries that typically have large shares of employees with a High School Degrees or less statewide, such as Manufacturing, Other Services, Construction, and Transportation & Warehousing, employed larger shares with a Bachelor’s Degree or higher in the Cape & Islands. The largest difference was in Accommodation & Food Services, where only 16.7 percent of employees statewide had a Bachelor’s Degree or higher, compared with 35.4 percent in the Cape & Islands. However, the share of employees with any post-secondary education (Some College or higher) in Massachusetts was lower than in the Cape & Islands in 11 of the 16 major industries, due to the higher shares of those with a High School Degree or less in most major industries statewide.

Source: US Census Bureau 2008–2010 American Community Survey PUMS data files.

Note: Industries are sorted by size in Massachusetts in Q4 2010. Comparisons between Massachusetts and the Cape & Islands can be made across only 16 industries due to a lack of educational attainment information for Management of Companies & Enterprises in the Cape & Islands.

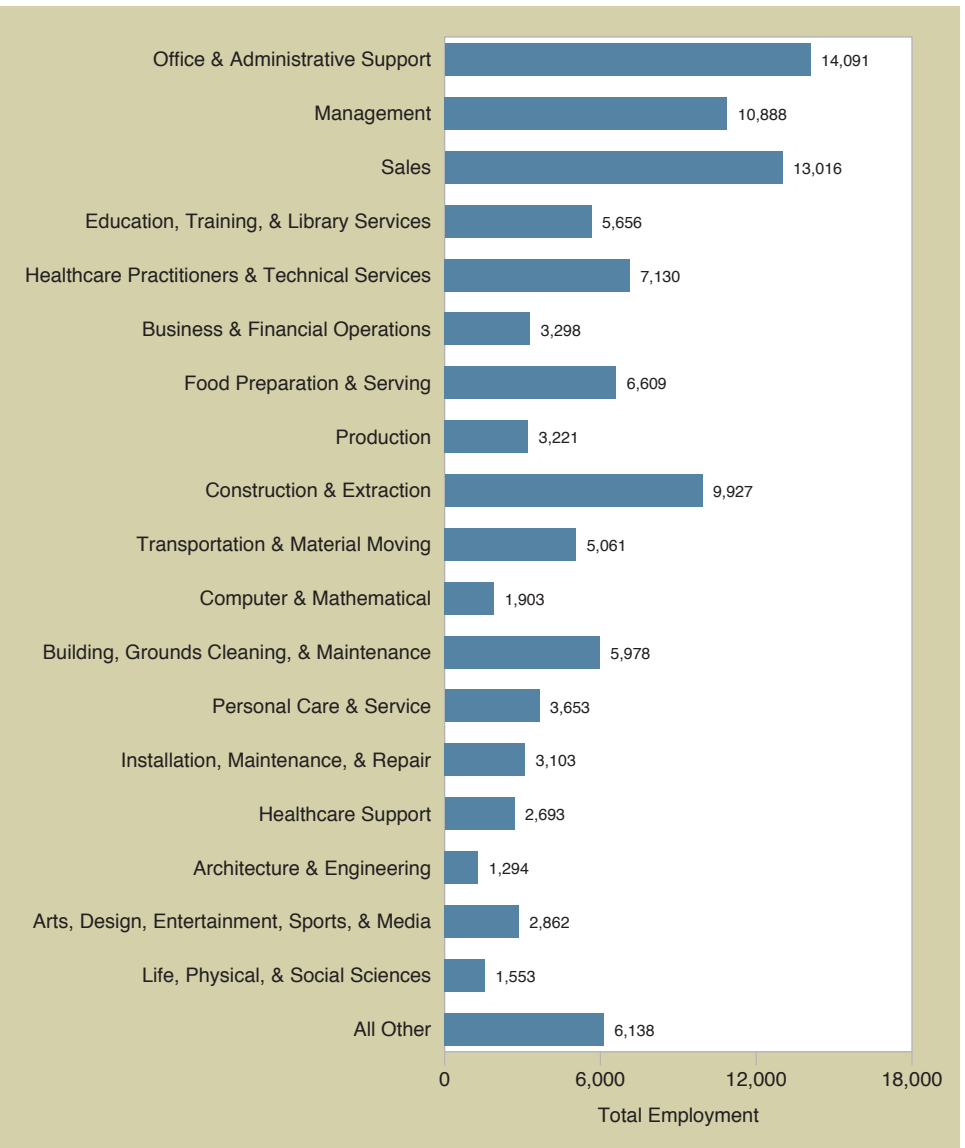


EMPLOYMENT BY MAJOR OCCUPATION: THE CAPE & ISLANDS (2008–2010)

Industries are where people work, and occupations are what people do. Looking at the occupational composition of the Cape & Islands helps to reveal what types of workers are in demand by businesses. In the Cape & Islands, Office & Administrative Support is the largest occupational group, accounting for 13.0 percent of the region's jobs in 2008–2010. However, the number of jobs in this occupation was actually fewer than in 2000. The number of jobs in Sales, the second largest occupational group in the region, also decreased over the course of the decade. But Management, the third largest occupation, was one of the faster growing occupations in the Cape & Islands during the same period. Occupations that are closely associated with growing industries have increased; one example is Healthcare Practitioners & Technical Services, which has high employment concentrations in the Health Care & Social Assistance sector. Similarly, some occupations that are strongly concentrated in declining industries have contracted, such as Construction & Extraction occupations in the Construction sector.

Source: US Census Bureau 2008–2010 American Community Survey PUMS data files.

Note: All Other occupations are composed of Community & Social Services, Legal, Protective Services, Farming, Fishing, & Forestry, and Military Specific. Occupations are sorted largest to smallest by size in Massachusetts in 2008–2010. See the on-line Data Appendix for occupational employment trends.

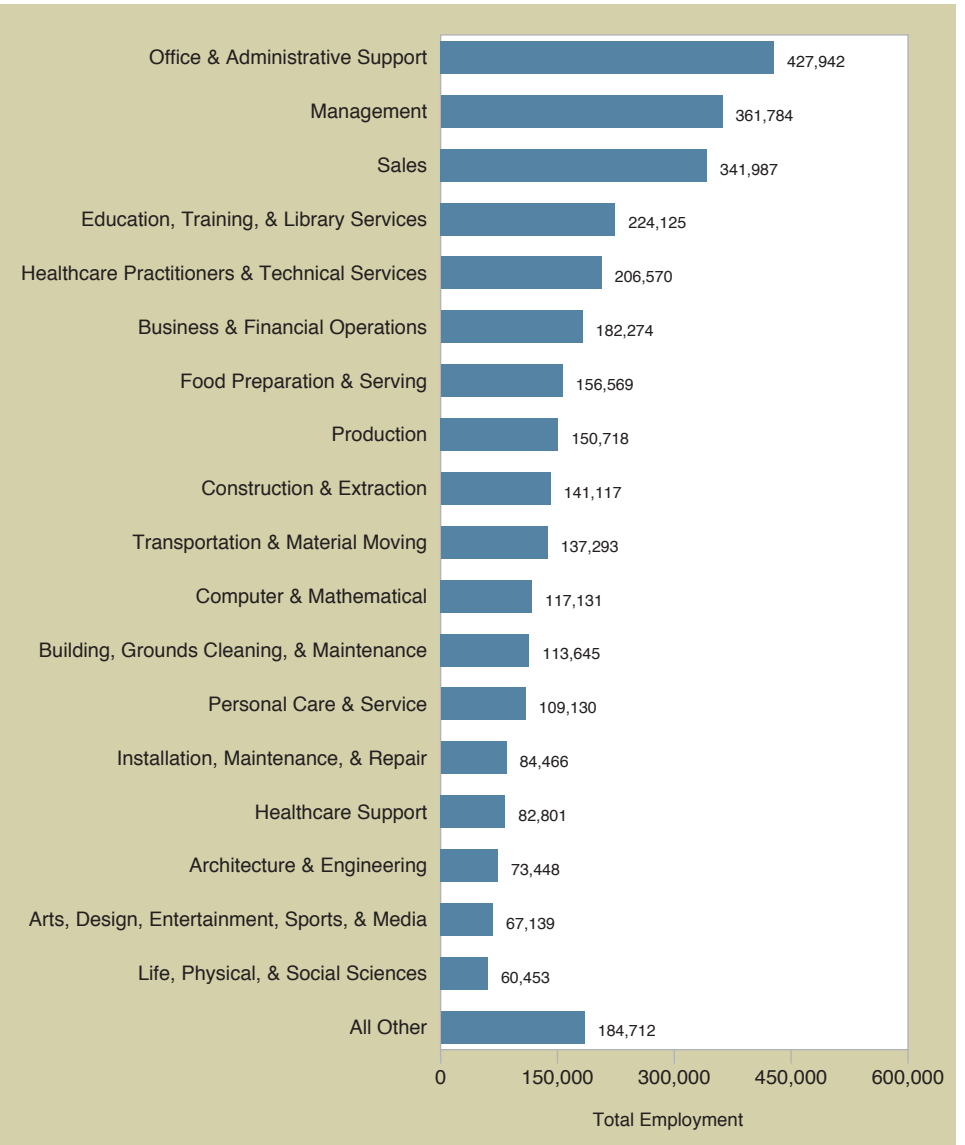


EMPLOYMENT BY MAJOR OCCUPATION: MASSACHUSETTS (2008–2010)

Massachusetts's occupational composition, much like its industrial composition, is somewhat different from that of the Cape & Islands. Office & Administrative Support is the largest occupation group, as in the Cape & Islands, and accounted for more than 13 percent of employment statewide in 2008–2010. However, the state has much stronger employment concentrations in Management, Business & Financial Operations, and Computer & Mathematical occupations. The Cape & Islands has stronger concentrations in Sales, Food Preparation & Serving, and Building, Grounds Cleaning, & Maintenance. Occupational employment trends over the past decade were quite different in the Cape & Islands and in Massachusetts. For example, in the Cape & Islands only eight of the 19 occupational groups increased employment over the decade, while 11 of them expanded in Massachusetts. Comparing occupational growth across geographies, we see that 11 of the 19 occupations in Massachusetts experienced stronger growth or slower declines than their occupational counterparts in the Cape & Islands between 2000 and 2008–2010.

Source: US Census Bureau 2008–2010 American Community Survey PUMS data files.

Note: All Other occupations are composed of Community & Social Services, Legal, Protective Services, Farming, Fishing, & Forestry, and Military Specific. Occupations are sorted largest to smallest by size in Massachusetts in 2008–2010. See the on-line Data Appendix for occupational employment trends.



DISTRIBUTION OF OCCUPATIONS ACROSS SUPERSECTORS OUTSIDE GREATER BOSTON (2008–2010)

Because changes in industries and occupations can impact each other, it is important to see how occupations are distributed across industries. Unfortunately, data limitations make this difficult to do for small geographic areas. Due to the different labor market compositions of Metro South/West and Boston/Metro North relative to the other labor markets, we have split Massachusetts into two labor markets: Greater Boston (Metro South/West and Boston/Metro North) and Outside Greater Boston (the other six labor markets, including the Cape & Islands). In the Outside Greater Boston labor market, some occupations are concentrated in one or two industries, while other occupations are spread across a number of industries. Consider that nearly 95 percent of Education, Training, & Library Services jobs are in the Education & Health Services supersector. In contrast, Management occupations account for at least 10 percent of employment in nearly every supersector.

Source: US Census Bureau 2008–2010 American Community Survey PUMS data files.

Note: Due to sample size limitations in the Census and American Community Survey, it is not possible to provide an occupational distribution across industries for small geographic areas. Therefore, Metro South/West and Boston/Metro North were grouped to increase observations and provide an occupation/industry distribution for Greater Boston. With relatively strong concentrations in the occupational categories of Management and Business & Financial Operations, and in the supersectors of Professional & Technical Services and Financial Activities, the labor market compositions of Metro South/West and Boston/Metro North are fairly similar. When combined, these two regions account for 46.4 percent of the state's employment. In comparison, the labor markets outside of the Greater Boston region (Berkshire, Pioneer Valley, Central Mass, Northeast, Southeast, and the Cape & Islands) tend to have stronger concentrations in the supersectors of Trade, Transportation, & Utilities, Leisure & Hospitality, and/or Manufacturing, and in the occupational categories of Sales, Office & Administrative Support, and Production. While there are differences among the regional labor markets exclusive of Greater Boston, industrial and occupational concentrations are likely similar enough to approximate their distributions for these labor markets.

DISTRIBUTION OF OCCUPATIONS ACROSS SUPERSECTORS OUTSIDE GREATER BOSTON (2008–2010)

	Education & Health Services	Trade, Transportation, & Utilities	Professional & Business Services	Manufacturing	Leisure & Hospitality	Financial Activities	Construction	Other	All Industries
Office & Administrative Support	22.4	26.1	10.3	9.4	3.5	13.6	2.6	12.1	100.0
Management	19.6	10.7	10.5	17.3	10.2	11.2	8.7	11.8	100.0
Sales	0.9	68.5	3.7	5.7	4.5	11.2	0.6	5.0	100.0
Education, Training, & Library Services	94.8	0.2	0.4	0.2	1.1	0.2	0.0	3.1	100.0
Healthcare Practitioners & Technical Services	86.4	6.5	4.0	0.2	0.1	0.4	0.1	2.3	100.0
Business & Financial Operations	10.0	12.1	22.4	12.7	1.4	27.9	2.7	10.8	100.0
Food Preparation & Serving	11.9	5.5	0.2	0.5	80.0	0.4	0.0	1.4	100.0
Production	3.1	11.3	3.5	73.2	1.0	0.2	0.8	6.9	100.0
Construction & Extraction	2.2	3.0	1.7	2.7	0.1	0.9	88.3	1.1	100.0
Transportation & Material Moving	4.4	62.1	4.8	13.7	4.8	1.2	3.0	6.1	100.0
Computer & Mathematical	9.8	7.5	38.4	20.7	0.8	12.4	0.1	10.5	100.0
Building, Grounds Cleaning, & Maintenance	26.9	5.1	37.0	2.4	10.8	4.0	0.5	13.3	100.0
Personal Care & Service	40.2	2.4	1.6	0.0	14.5	0.3	0.1	41.0	100.0
Installation, Maintenance, & Repair	3.3	26.3	4.6	13.5	2.5	2.6	8.4	38.7	100.0
Healthcare Support	92.6	1.0	1.4	0.1	0.6	0.2	0.0	4.1	100.0
Architecture & Engineering	2.5	5.8	31.8	50.6	0.2	0.4	3.6	5.2	100.0
Arts, Design, Entertainment, Sports, & Media	12.0	11.6	22.6	8.6	20.4	1.4	0.5	22.9	100.0
Life, Physical, & Social Sciences	36.7	2.8	28.5	18.2	0.9	1.9	0.3	10.6	100.0
All Other	28.9	3.4	17.4	0.8	3.6	1.9	0.1	43.7	100.0
All Occupations	26.8	19.4	9.4	11.9	8.3	6.3	6.1	11.6	100.0

DISTRIBUTION OF OCCUPATIONS WITHIN SUPERSECTORS OUTSIDE GREATER BOSTON (2008–2010)

We can also consider what the distribution of occupations within a given supersector looks like. Certain occupations account for the majority of employment within a supersector. For example, in the Outside Greater Boston region nearly 45 percent of employment in the Education & Health Services supersector comes from two occupations: Education, Training, & Library Services and Healthcare Practitioners & Technical Services. Further, the Construction supersector has more than two-thirds of its employment in Construction & Extraction occupations. While some occupations account for an overwhelming majority of the employment in a given supersector, others consistently account for a large share of employment in each supersector. In fact, the two largest occupational groups, Office & Administrative Support and Management, together account for a sizable share of jobs within every supersector (ranging from 18.0 percent in Leisure & Hospitality to 47.7 percent in Financial Activities).

Source: US Census Bureau 2008–2010 American Community Survey PUMS data files.

Note: Due to sample size limitations in the Census and American Community Survey, it is not possible to provide an occupational distribution across industries for small geographic areas. Therefore, Metro South/West and Boston/Metro North were grouped to increase observations and provide an occupation/industry distribution for Greater Boston. With relatively strong concentrations in the occupational categories of Management and Business & Financial Operations, and in the supersectors of Professional & Technical Services and Financial Activities, the labor market compositions of Metro South/West and Boston/Metro North are fairly similar. When combined, these two regions account for 46.4 percent of the state's employment. In comparison, the labor markets outside of the Greater Boston region (Berkshire, Pioneer Valley, Central Mass, Northeast, Southeast, and the Cape & Islands) tend to have stronger concentrations in the supersectors of Trade, Transportation, & Utilities, Leisure & Hospitality, and/or Manufacturing, and in the occupational categories of Sales, Office & Administrative Support, and Production. While there are differences among the regional labor markets exclusive of Greater Boston, industrial and occupational concentrations are likely similar enough to approximate their distributions for these labor markets.

DISTRIBUTION OF OCCUPATIONS WITHIN SUPERSECTORS OUTSIDE GREATER BOSTON (2008–2010)

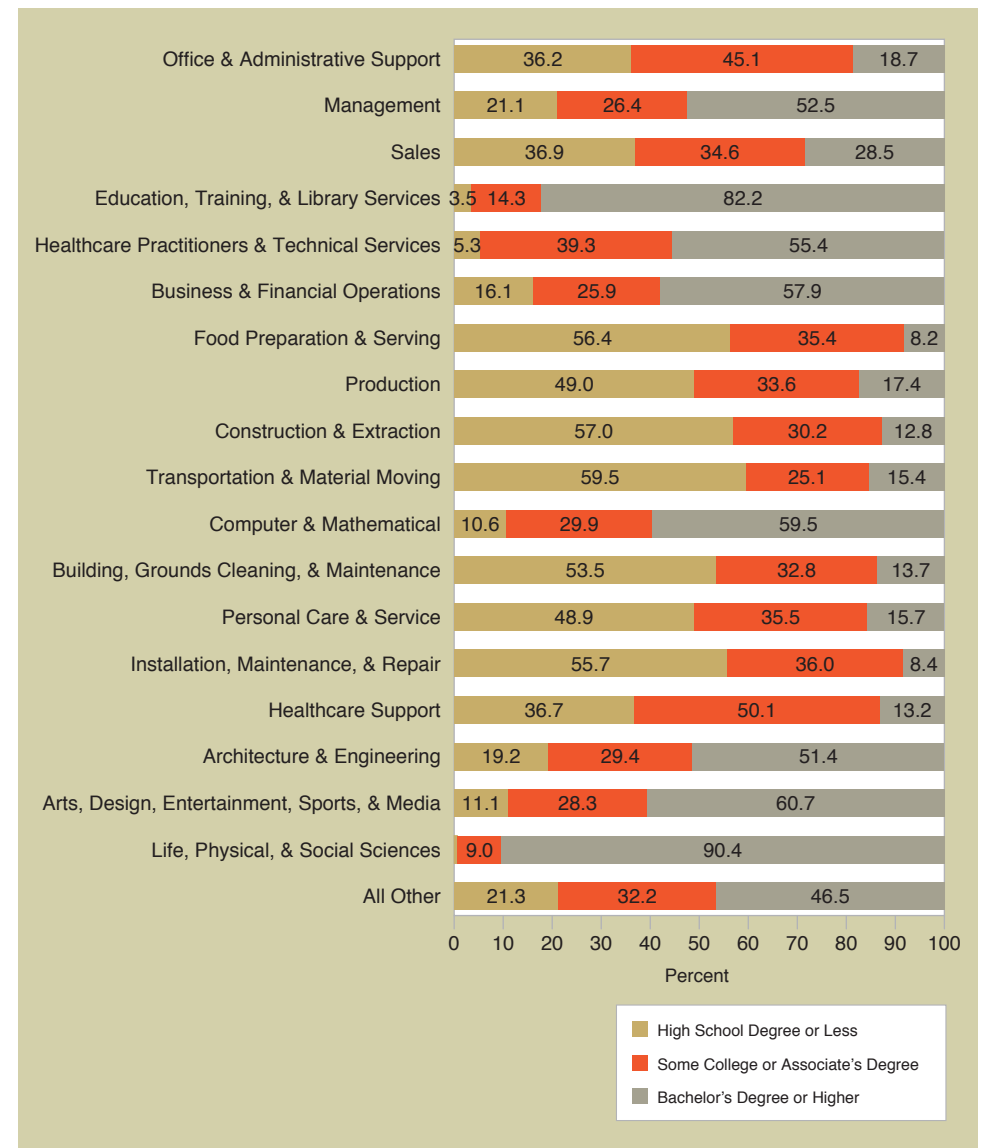
	Education & Health Services	Trade, Transportation, & Utilities	Professional & Business Services	Manufacturing	Leisure & Hospitality	Financial Activities	Construction	Other	All Industries
Office & Administrative Support	11.7	18.9	15.3	11.1	5.9	30.2	5.9	14.7	14.0
Management	7.2	5.4	11.0	14.3	12.1	17.5	14.0	10.1	9.9
Sales	0.4	40.0	4.5	5.4	6.1	20.0	1.0	4.9	11.3
Education, Training, & Library Services	24.7	0.1	0.3	0.1	0.9	0.2	0.0	1.9	7.0
Healthcare Practitioners & Technical Services	20.2	2.1	2.7	0.1	0.1	0.4	0.1	1.3	6.3
Business & Financial Operations	1.6	2.6	10.1	4.5	0.7	18.7	1.8	3.9	4.2
Food Preparation & Serving	2.4	1.5	0.1	0.2	51.6	0.3	0.0	0.7	5.4
Production	0.7	3.5	2.3	37.4	0.7	0.2	0.8	3.6	6.1
Construction & Extraction	0.4	0.7	0.8	1.1	0.0	0.7	68.1	0.5	4.7
Transportation & Material Moving	0.8	15.9	2.5	5.7	2.8	0.9	2.5	2.6	5.0
Computer & Mathematical	0.9	0.9	9.6	4.1	0.2	4.6	0.0	2.1	2.4
Building, Grounds Cleaning, & Maintenance	3.6	1.0	14.3	0.7	4.7	2.3	0.3	4.2	3.6
Personal Care & Service	5.6	0.5	0.6	0.0	6.5	0.1	0.0	13.2	3.7
Installation, Maintenance, & Repair	0.4	4.0	1.5	3.4	0.9	1.2	4.0	9.8	3.0
Healthcare Support	11.3	0.2	0.5	0.0	0.2	0.1	0.0	1.2	3.3
Architecture & Engineering	0.2	0.6	6.8	8.5	0.0	0.1	1.2	0.9	2.0
Arts, Design, Entertainment, Sports, & Media	0.7	1.0	3.9	1.2	4.0	0.4	0.1	3.2	1.6
Life, Physical, & Social Sciences	1.5	0.2	3.3	1.6	0.1	0.3	0.1	1.0	1.1
All Other	5.8	1.0	10.0	0.4	2.3	1.7	0.1	20.4	5.4
All Occupations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

EDUCATIONAL ATTAINMENT OF EMPLOYEES BY MAJOR OCCUPATION IN THE CAPE & ISLANDS (2000)

By looking at the educational attainment of an occupational group, we better understand the education typically required in that field of employment. In 2000, 45.1 percent of employees in Office & Administrative Support occupations in the Cape & Islands had Some College education or an Associate's Degree, and a smaller percentage (36.2 percent) had a High School Degree or less. By comparison, 82.2 percent of employees in Education, Training, & Library Services had a Bachelor's Degree or higher, while 59.5 percent of employees in Transportation & Material Moving had a High School Degree or less. While educational attainment gives some indication of skill requirements, it is not a perfect proxy for skill. Some occupations require significant training or other prerequisites. For example, in Installation, Maintenance, & Repair occupations, 55.7 percent of employees had a High School Degree or less, but these occupations often require apprenticeships, professional certifications, or significant on-the-job training.

Source: US Census Bureau 2000 Decennial Census PUMS data files.

Note: Occupations are sorted by size in Massachusetts in 2008–2010 American Community Survey PUMS data files.

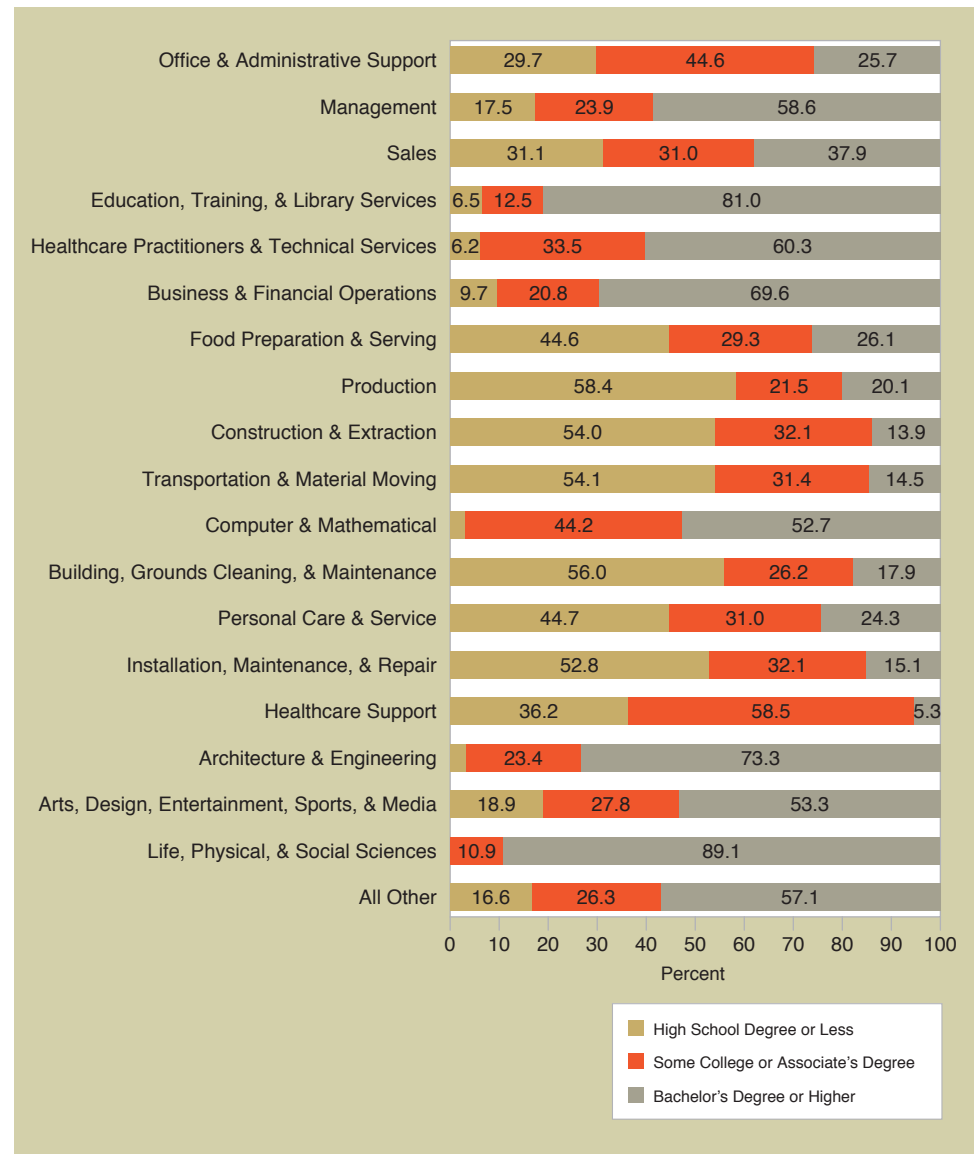


EDUCATIONAL ATTAINMENT OF EMPLOYEES BY MAJOR OCCUPATION IN THE CAPE & ISLANDS (2008–2010)

Over the past decade, the share of employees with a Bachelor’s Degree or higher increased in 13 of the 19 major occupations in the Cape & Islands. For example, the share of Business & Financial Operations employees with a Bachelor’s Degree or higher grew by more than 11 percentage points to reach 69.6 percent in 2008–2010. Occupations with a mix of educational levels, such as Office & Administrative Support, saw declines in the share of employees with a High School Degree or less and growth in the share of employees with a Bachelor’s Degree or higher. The educational attainment of employees even increased in occupations where workers traditionally have less education, such as Food Preparation & Serving. As such, nine occupations in the region had a majority of employees with a Bachelor’s Degree or higher in 2008–2010, while only five occupations had a majority of employees with a High School Degree or less. The Cape & Islands also employs a large number of workers with Some College education or an Associate’s Degree; at least one-quarter of employees in 13 of the 19 occupations in the region had such educational levels in 2008–2010.

Source: US Census Bureau 2008–2010 American Community Survey PUMS data files.

Note: Occupations are sorted by size in Massachusetts in 2008–2010 American Community Survey PUMS data files.

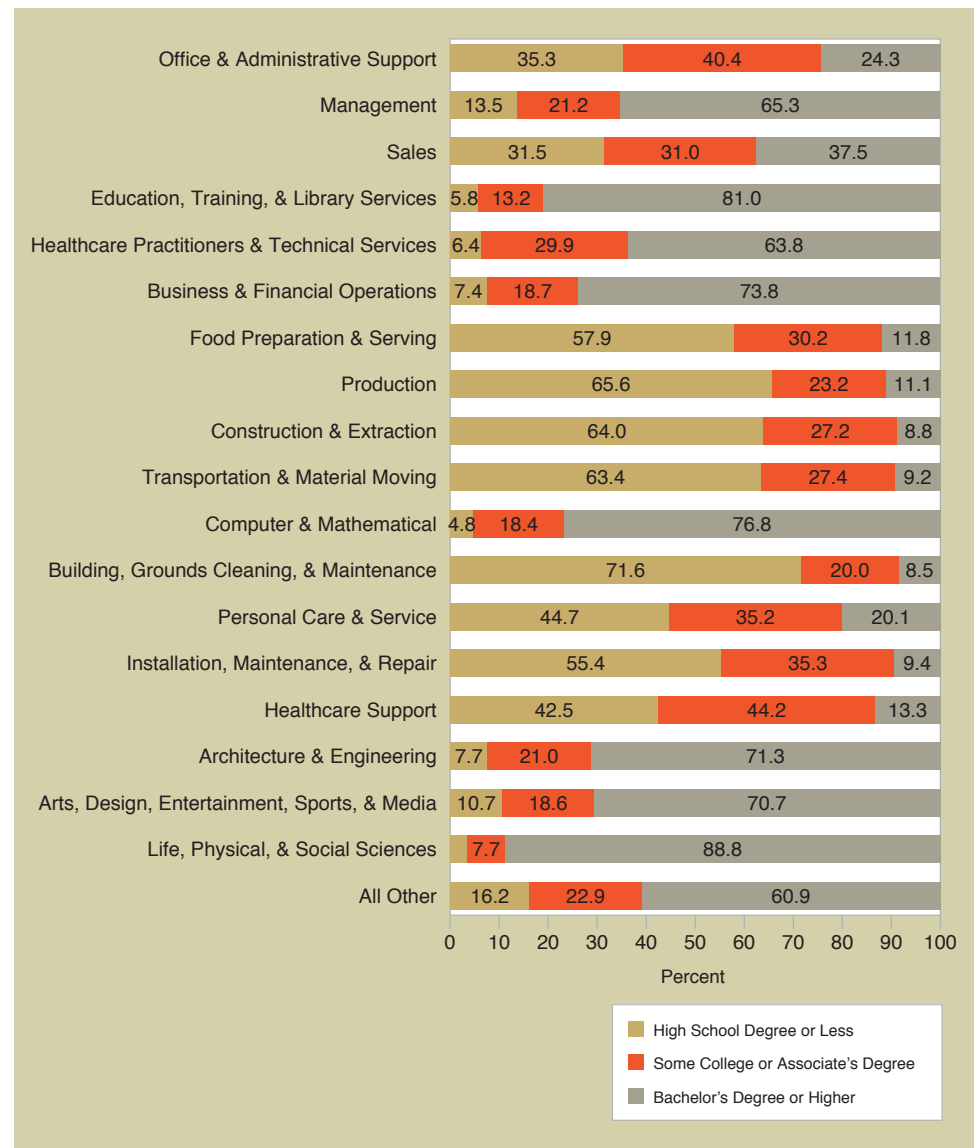


EDUCATIONAL ATTAINMENT OF EMPLOYEES BY MAJOR OCCUPATION IN MASSACHUSETTS (2008–2010)

The high levels of educational attainment in different occupations in the Cape & Islands stands out when compared with education levels in Massachusetts. Of the 19 major occupation groups in Massachusetts, only seven have greater shares of employees with a Bachelor's Degree or higher compared with those in the Cape & Islands. These are mostly occupations where the majority of employees have a Bachelor's Degree or higher, such as Management and Business & Financial Operations, with the largest difference in Computer & Mathematical occupations (76.8 percent in Massachusetts versus 52.7 percent in the Cape & Islands). However, the state has smaller shares of such workers in occupations with mixed educational attainment levels (e.g., Office & Administrative Support and Sales) and predominantly lower education levels (e.g., Production) with the largest difference in Food Preparation & Serving occupations (11.8 percent in Massachusetts versus 26.1 percent in the Cape & Islands). Statewide, there are also smaller concentrations of employees with Some College or an Associate's Degree in 13 occupations, with only five occupations in Massachusetts having higher shares of employees with at least some post-secondary education (Some College or higher) than their occupational counterparts in the Cape & Islands.

Source: US Census Bureau 2008–2010 American Community Survey PUMS data files.

Note: Occupations are sorted by size in Massachusetts in 2008–2010 American Community Survey PUMS data files.



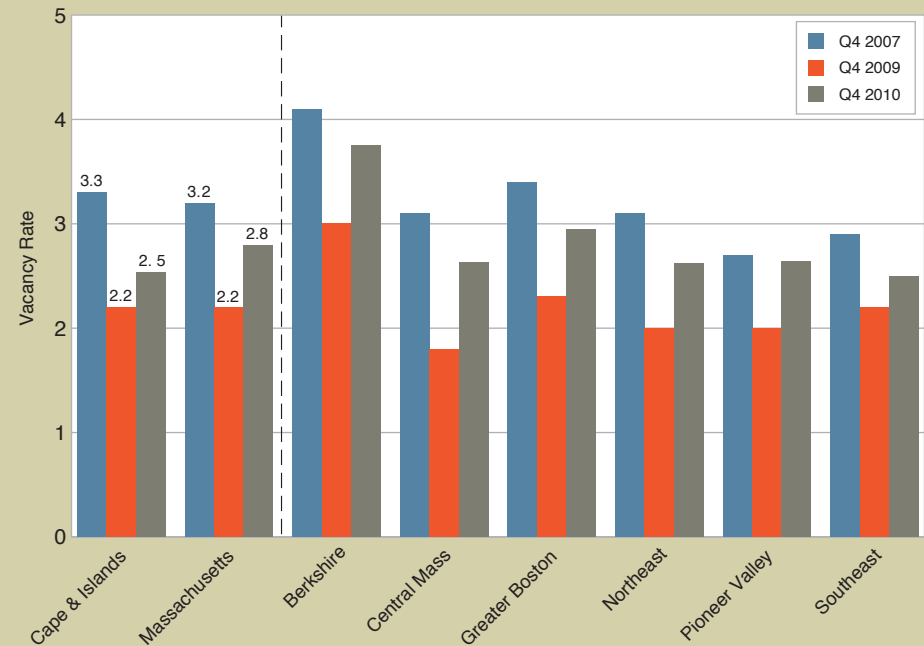
JOB VACANCIES IN THE GREAT RECESSION AND RECOVERY

Job vacancies exist even in a healthy labor market due to turnover and constant flux in the labor market. As businesses expand, they need to hire individuals who meet specific skill requirements, and employees with skills that are in demand leave jobs for better positions. As the economy enters a downturn, job vacancies decline due to an overall decline in labor demand, there is an increase in the number of applicants available to fill positions, and there is lower turnover as employees stay longer in jobs. At the end of 2007, the job vacancy rate in the Cape & Islands was 3.3 percent, the third highest of all regional labor markets. Because of the Great Recession, the rate dropped by more than a full percentage point, hitting 2.2 percent by the end of 2009. As the economy started to recover, the vacancy rate rose slightly to reach 2.5 percent by the end of 2010, but this was the second lowest rate among all regional labor markets. As of the fourth quarter of 2010, the Cape & Islands accounted for 3.1 percent of the state's employment but just 2.7 percent of the job vacancies.

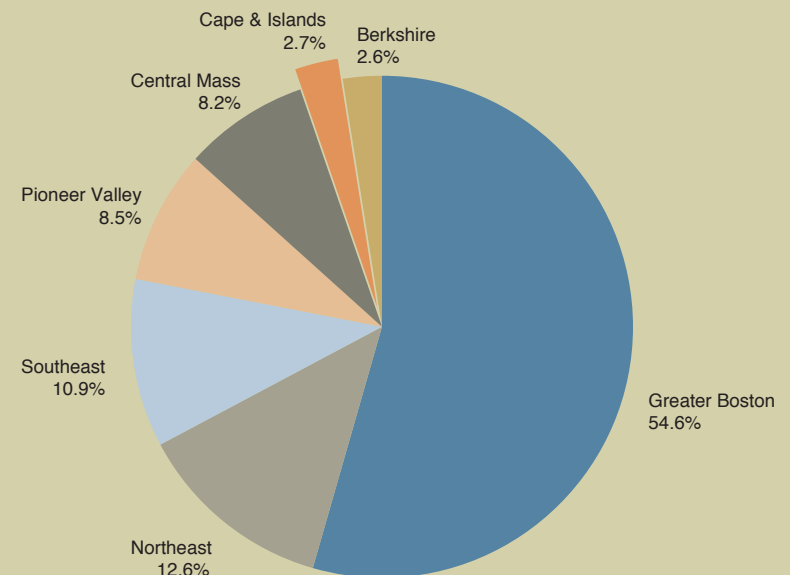
Source: Massachusetts Executive Office of Labor and Workforce Development Job Vacancy Survey.

Note: The Massachusetts Job Vacancy Survey is collected for seven regions in the state. Vacancy rates are calculated by taking the total number of job vacancies and dividing by the total number employed in the region. The Greater Boston region covers portions of the Northeast, Metro South/West, Central Mass, and Southeast regions of the regional labor market profiles. The vacancy information for the Greater Boston region is used as an approximation of the vacancies trends experienced in the Metro South/West and Boston/Metro North regions. The use of Q4 data understates the number of vacancies and vacancy rates in the Cape & Islands due to the seasonal nature of the region's sizable employment related to summer tourism activities.

Job Vacancy Rates



Distribution of Job Vacancies Across Regional Labor Markets, Q4 2010



JOB VACANCIES AND VACANCY RATES BY MAJOR OCCUPATION IN THE CAPE & ISLANDS (Q4 2010)

At the end of 2010, 68.3 percent of the job vacancies in the Cape & Islands were concentrated in five occupations (Sales, Office & Administrative Support, Food Preparation & Serving, Healthcare Practitioners & Technical, and Healthcare Support). Sales positions accounted for the largest share of vacancies (25.4 percent) but had the third highest occupational vacancy rate (4.2 percent). However, some Sales positions, especially in retail, are seasonal in nature. Other occupations with a large number of vacancies and above-average vacancy rates included Healthcare Practitioners & Technical and Healthcare Support occupations. Some occupational groups such as Office & Administrative Support accounted for a large number of vacancies (9.8 percent of the region's total) but had a relatively low vacancy rate (1.3 percent), while others such as Computer & Mathematical occupations accounted for a small share of regional vacancies (2.9 percent) but a high vacancy rate (7.3 percent). Not surprisingly, the vacancy rates in occupations hit hardest by the Great Recession, such as Construction & Extraction (0.7 percent), were low in the Cape & Islands.

Source: Massachusetts Executive Office of Labor and Workforce Development Job Vacancy Survey.

Note: Vacancy rates are calculated by taking the total number of job vacancies and dividing by the total number employed in the occupation. An asterisk (*) indicates there were vacancies in the occupation that were suppressed due to disclosure issues.

	Number of Vacancies	Share of Vacancy (Percent)	Job Vacancy Rate (Percent)
Total	2,117	100.0	2.5
Sales	538	25.4	4.2
Office & Administrative Support	207	9.8	1.3
Food Preparation & Serving Related	217	10.3	1.5
Business & Financial Operations	11	0.5	0.4
Healthcare Practitioner & Technical	258	12.2	4.1
Computer & Mathematical	61	2.9	7.3
Management	58	2.7	1.5
Healthcare Support	226	10.7	5.9
Transportation & Material Moving	23	1.1	0.5
Education, Training & Library	129	6.1	2.0
Personal Care & Service	101	4.8	3.4
Production	21	1.0	1.0
Architecture & Engineering	*	-	2.2
Building, Grounds Cleaning, & Maintenance	72	3.4	1.2
Arts, Design, Entertainment, Sports & Media	15	0.7	1.1
Community & Social Services	33	1.6	1.8
Life, Physical, & Social Services	*	-	2.3
Installation, Maintenance & Repair	25	1.2	0.7
Protective Service	34	1.6	1.4
Construction & Extraction	*	-	0.7

JOB VACANCIES AND VACANCY RATES BY MAJOR OCCUPATION IN MASSACHUSETTS (Q4 2010)

Similar to the Cape & Islands, the largest number of job vacancies in Massachusetts is concentrated in Sales occupations. However, Massachusetts has a higher vacancy rate (but also a lower share of vacancies) coming from Sales occupations than does the Cape & Islands. At the state level, there were notably higher concentrations of vacancies in the Business & Financial Operations, Computer & Mathematical, and Management fields at the end of 2010, and lower concentrations in Healthcare Support and Healthcare Practitioners & Technical occupations. However, relative to the region, Massachusetts tends to have much higher vacancy rates in Business & Financial Operations, Food Preparation & Serving, and Transportation & Moving occupations, with lower vacancy rates in Healthcare Practitioners & Technical, Healthcare Support, and Computer & Mathematical occupations. Notably, the Cape & Islands has much higher vacancy rates and concentrations of vacancies in the Healthcare-related occupations of Healthcare Practitioners & Technical and Healthcare Support.

Source: Massachusetts Executive Office of Labor and Workforce Development Job Vacancy Survey.

Note: Vacancy rates are calculated by taking the total number of job vacancies and dividing by the total number employed in the occupation.

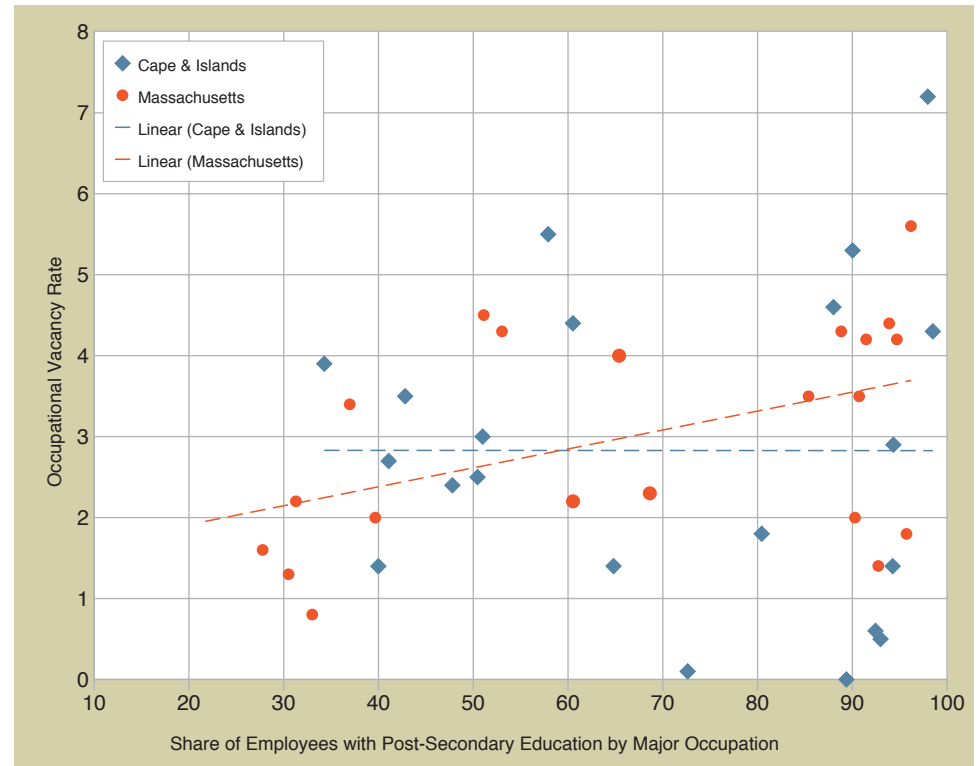
	Number of Vacancies	Share of Vacancy (Percent)	Job Vacancy Rate (Percent)
Total	78,589	100.0	2.8
Sales	16,584	21.1	5.2
Office & Administrative Support	8,650	11.0	1.6
Food Preparation & Serving Related	8,195	10.4	3.1
Business & Financial Operations	6,079	7.7	3.6
Healthcare Practitioner & Technical	5,249	6.7	2.3
Computer & Mathematical	4,950	6.3	4.0
Management	4,595	5.8	2.5
Healthcare Support	3,634	4.6	3.8
Transportation & Material Moving	3,214	4.1	2.1
Education, Training & Library	2,895	3.7	1.3
Personal Care & Service	2,055	2.6	2.4
Production	1,774	2.3	1.1
Architecture & Engineering	1,734	2.2	2.3
Building, Grounds Cleaning, & Maintenance	1,555	2.0	1.5
Arts, Design, Entertainment, Sports & Media	1,421	1.8	2.7
Community & Social Services	1,411	1.8	2.2
Life, Physical, & Social Services	1,398	1.8	2.6
Installation, Maintenance & Repair	1,160	1.5	1.2
Protective Service	1,124	1.4	1.5
Construction & Extraction	583	0.7	0.6
Legal	244	0.3	1.0

COMPARING VACANCY RATES AND EDUCATIONAL ATTAINMENT: PEAK LABOR MARKET

Before the Great Recession, there was a positive correlation between educational attainment and job vacancies in Massachusetts. That is, occupations with workers who had higher levels of educational attainment had higher vacancy rates. This is not surprising, as some occupations that have larger shares of employees with a High School Degree or less can sometimes be filled by a number of individuals with little training and at low cost to employers. In contrast, jobs in highly specialized occupations that require specific educational requirements face competition both regionally and globally for the limited number of individuals who can fill such positions. Further, strong growth in industries that employ large shares of individuals with high levels of educational attainment, such as Health Care & Social Assistance and Professional & Technical Services, can lead to increased vacancies and demand for employees that can fill such positions. However, the relationship between post-secondary educational attainment and vacancies was fairly weak in the Cape & Islands entering the Great Recession, as the region experienced strong employment growth in industries with large concentrations of employees with lower levels of educational attainment (such as Construction and Other Services), resulting in higher vacancy rates in the low-educational-attainment occupations that are in such industries.

Source: Massachusetts Executive Office of Labor and Workforce Development Job Vacancy Survey and US Census Bureau 2005–2007 American Community Survey.

Note: Occupational vacancy rates for the Cape & Islands in Q4 2007 proxy vacancy rates in a peak labor market and educational attainment data by occupation in the Cape & Islands from the 2005–2007 American Community Survey proxy share of employees with a post-secondary education in a peak labor market. Workers have attained a post-secondary education if they have attended Some College or obtained an Associate's Degree, Bachelor's Degree, or Master's Degree or higher.

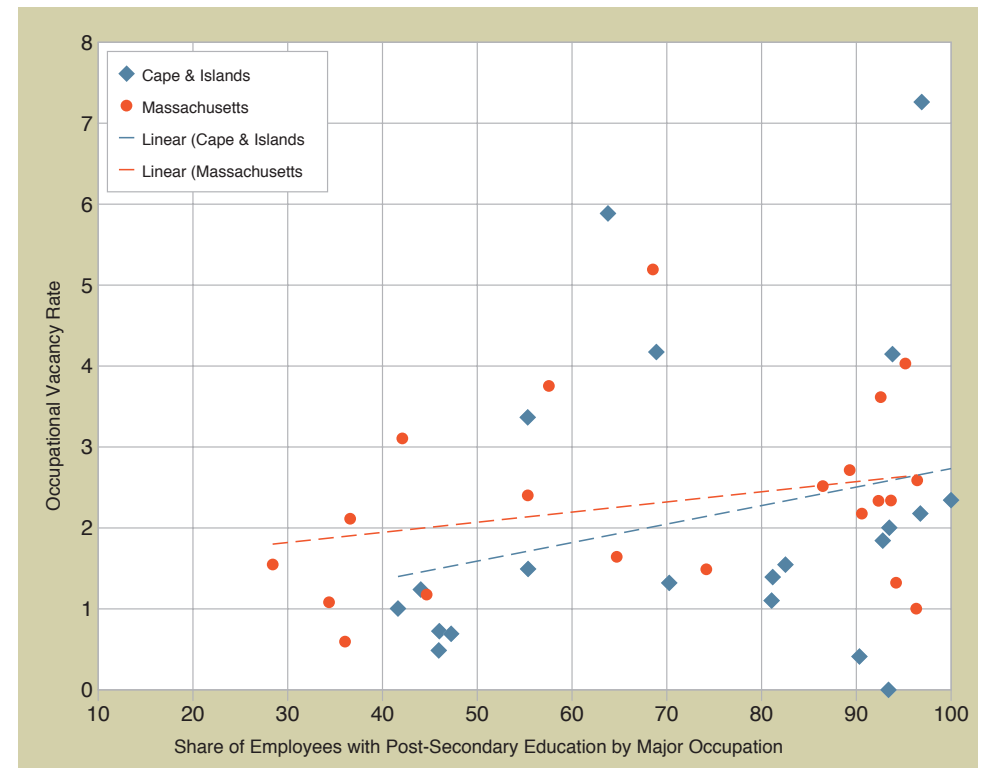


COMPARING VACANCY RATES AND EDUCATIONAL ATTAINMENT: RECOVERING LABOR MARKET

During the Great Recession, the relationship between post-secondary educational attainment and vacancies weakened somewhat statewide while strengthening in the Cape & Islands. In Massachusetts, the relationship weakened as vacancy rates for occupations with large shares of post-secondary-educated workers bounced back modestly in the early stages of the recovery. However, a number of the occupations that employ a lower share of post-secondary-educated labor have continued to see vacancy rates at about 2.0 percent pre- and post-recession, indicating that the statewide labor market is continuing to demand more post-secondary educated labor in the recovery. In the Cape & Islands, a slow recovery has resulted in only limited demand for labor across industries. In particular, industries that employ a large share of employees with less-than a post-secondary education, such as Construction and Manufacturing, have continued to shed jobs as other industries have recovered. As a result, the vacancy rates for occupations closely associated with such industries (e.g., Construction & Extraction and Production) have remained extremely low. In fact, the five largest occupations by share of employees with a High School Degree or less had vacancy rates near 1.0 percent at the end of 2010. So while the vacancy rates started to rise in some of the occupations that employ larger shares of employees with a post-secondary education, the strengthening relationship between vacancies and education in the region has largely occurred due to weakening demand for less educated labor.

Source: Massachusetts Executive Office of Labor and Workforce Development Job Vacancy Survey and US Census Bureau 2008–2010 American Community Survey.

Note: Occupational vacancy rates for the Cape & Islands in Q4 2010 proxy vacancy rates in a recovering labor market, and educational attainment data by occupation in the Cape & Islands from the 2008–2010 American Community Survey proxy share of employees with a post-secondary education in a recovering labor market.



GROWTH IN POTENTIAL SUPPLY OF EDUCATED WORKERS: FULL-TIME ENROLLMENT TRENDS IN THE PAST DECADE

Between 2000 and 2010, the number of full-time students enrolled at less-than-two-, two-, and four-year institutions increased in the Cape & Islands, Massachusetts, and the United States. In fact, enrollment growth at two- and four-year institutions in the region exceeded that in both the state and nation. Cape Cod Community College is the only two-year institution in the Cape & Islands; the region has no private two-year institutions. Growing enrollment at four-year institutions was largely the result of increasing enrollments at Massachusetts Maritime Academy (4.5 percent annually between 2000 and 2010), the region's only public four year institution, far exceeding the growth experienced at such institutions both statewide (2.4 percent) and nationally (2.8

percent). However, full-time enrollment in less-than-two-year institutions in the Cape & Islands has grown at a slow annual rate of 0.7 percent in the past decade, far behind the growth in both Massachusetts and the United States.

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

Note: Enrollment data are from the fall semester of the academic year. For example, 2010 enrollment is from the fall of 2009 of the 2009–2010 academic year. Enrollment data are provided by the type of institution. Students can earn different types of degrees within an institution. For example, the enrollment at a community college would be categorized as being in a two-year institution for all students enrolled that year. However, students at community colleges complete different type of programs, such as Certificates and Associate's Degrees.

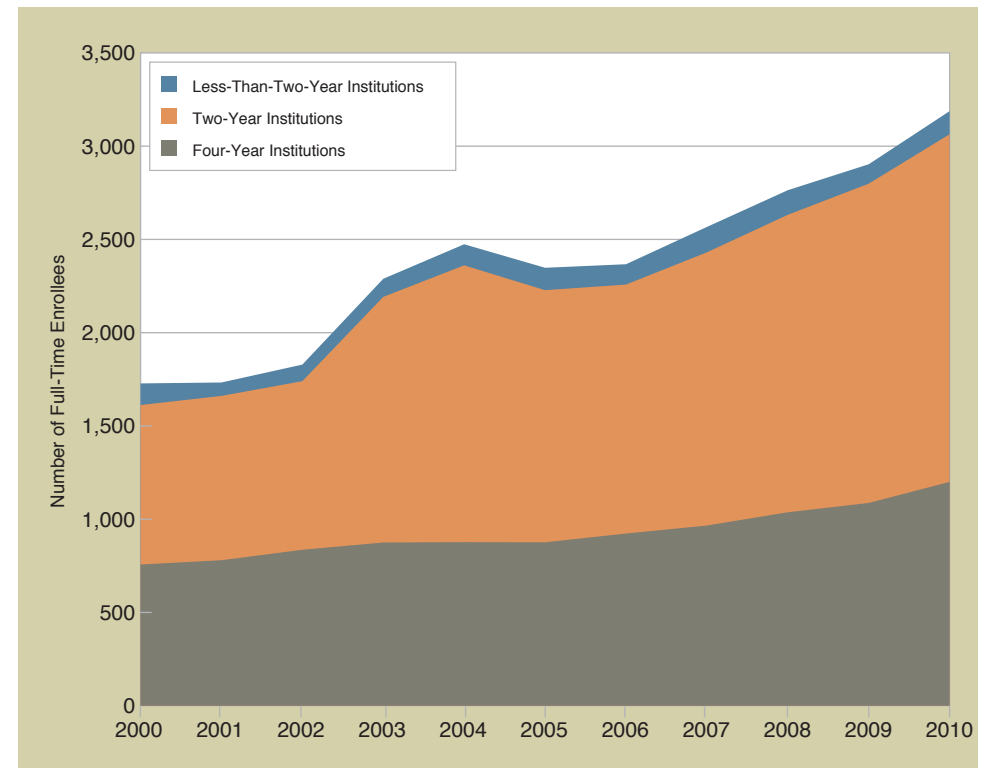
		Less-than-Two-Year Institutions			Two-Year Institutions			Four-Year Institutions		
		Cape & Islands	MA	US	Cape & Islands	MA	US	Cape & Islands	MA	US
Public	Enrollment 2000	30	382	43,504	855	31,002	2,008,336	757	58,489	3,733,341
	Enrollment 2010	59	316	42,117	1,864	44,278	2,922,622	1,177	73,940	4,904,272
	Absolute Change	29	-66	-1,387	1,009	13,276	914,286	420	15,451	1,170,931
	<i>Annual Growth Rate (Percent)</i>	<i>7.0</i>	<i>-1.9</i>	<i>-0.3</i>	<i>8.1</i>	<i>3.6</i>	<i>3.8</i>	<i>4.5</i>	<i>2.4</i>	<i>2.8</i>
Private	Enrollment 2000	86	3,427	138,260	0	5,796	259,071	0	125,640	1,863,471
	Enrollment 2010	65	9,609	277,341	0	5,457	457,134	23	153,139	3,000,813
	Absolute Change	-21	6,182	139,081	0	-339	198,063	23	27,499	1,137,342
	<i>Annual Growth Rate (Percent)</i>	<i>-2.8</i>	<i>10.9</i>	<i>7.2</i>	<i>NA</i>	<i>-0.6</i>	<i>5.8</i>	<i>NA</i>	<i>2.0</i>	<i>4.9</i>
Total	Enrollment 2000	116	3,809	181,764	855	36,798	2,267,407	757	184,129	5,596,812
	Enrollment 2010	124	9,925	319,458	1,864	49,735	3,379,756	1,200	227,079	7,905,085
	Absolute Change	8	6,116	137,694	1,009	12,937	1,112,349	443	42,950	2,308,273
	<i>Annual Growth Rate (Percent)</i>	<i>0.7</i>	<i>10.1</i>	<i>5.8</i>	<i>8.1</i>	<i>3.1</i>	<i>4.1</i>	<i>4.7</i>	<i>2.1</i>	<i>3.5</i>

NUMBER OF FULL-TIME ENROLLEES BY TYPE OF DEGREE GRANTING INSTITUTION IN THE CAPE & ISLANDS (2000–2010)

Cape Cod Community College accounts for the majority of the full-time enrollees in post-secondary institutions in the Cape & Islands (58.5 percent in 2010). The Cape & Islands was the only regional labor market not to have a majority of its full-time enrollments at four-year institutions. Enrollment at the community college, the only two-year institution in the region, grew quickly through most of the first half of the decade, before declining at an annual rate of 5.1 percent between 2004 and 2006. Thereafter, enrollment at the institution grew at a consistent pace, increasing 8.7 percent annually between 2006 and 2010. Enrollment at four-year institutions grew at a moderate annual pace between 2000 and 2005 (3.0 percent), before increasing more rapidly through the end of the decade (6.5 percent). Enrollment at less-than-two-year institutions, on the other hand, declined early in the decade to a low of 72 in 2001 before growing to a peak of 132 in 2008, followed by a drop to 124 in 2010.

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

Note: In the above stacked-area chart, the different areas represent the number of enrollees by institution type. For example, enrollment in less-than-two-year Institutions was 124 in 2010, compared with more than 1,800 at two-year institutions that year. All three areas combined represent the total number of enrollees in post-secondary educational institutions in the Cape & Islands, of which there were nearly 3,200 in 2010. The areas are stacked in order of size in 2010, with enrollment at four-year institutions, the largest enrollment group statewide, on the bottom and enrollment at less-than-two-year institutions, the smallest group, at the top.



GROWTH IN POTENTIAL SUPPLY OF EDUCATED WORKERS: PART-TIME ENROLLMENT TRENDS IN THE PAST DECADE

Virtually all students enrolled part-time at post-secondary educational institutions in the region are at Cape Cod Community College (98.5 percent in 2010). However, unlike full-time enrollment, part-time enrollment in the region has declined at both two- and four-year institutions. In the Cape & Islands, part-time enrollment at Cape Cod Community College declined at an annual rate of 0.5 percent between 2000 and 2010, while growing at such institutions statewide and nationally. Part-time enrollments in the region's public four-year institution Massachusetts Maritime Academy at the end of the decade were half the levels com-

pared to enrollments 2000; there were no enrollments at private four-year institutions in the Cape & Islands in 2000. Statewide part-time enrollment in both public and private four-year institutions declined over the past decade, while growing nationwide.

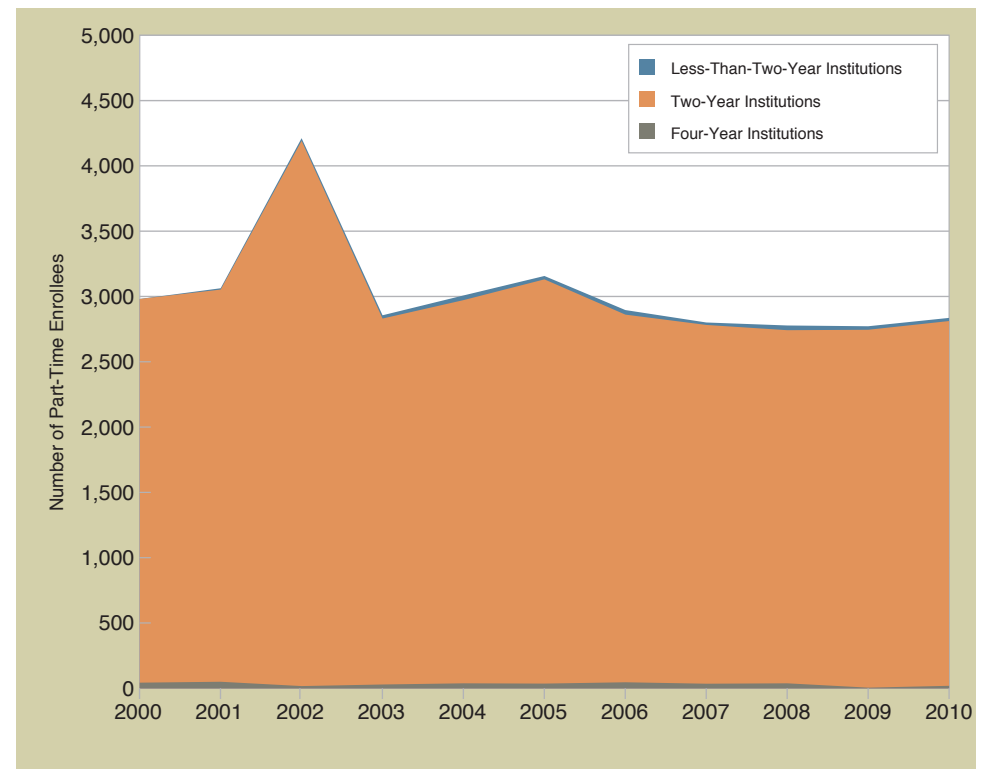
Source: National Center for Education Statistics, Integrated Post Secondary Education Data System.

		Less-than-Two-Year Institutions			Two-Year Institutions			Four-Year Institutions		
		Cape & Islands	MA	US	Cape & Islands	MA	US	Cape & Islands	MA	US
Public	Enrollment 2000	0	25	31,407	2,938	48,506	3,509,639	43	22,160	1,045,388
	Enrollment 2010	0	65	27,264	2,793	58,043	4,247,674	19	16,120	1,380,877
	Absolute Change	0	40	-4,143	-145	9,537	738,035	-24	-6,040	335,489
	<i>Annual Growth Rate (Percent)</i>	NA	10.0	-1.4	-0.5	1.8	1.9	-7.8	-3.1	2.8
Private	Enrollment 2000	0	1,522	31,827	0	3,536	66,870	0	27,425	476,690
	Enrollment 2010	24	2,633	44,382	0	1,554	61,006	0	19,155	775,694
	Absolute Change	24	1,111	12,555	0	-1,982	-5,864	0	-8,270	299,004
	<i>Annual Growth Rate (Percent)</i>	NA	5.6	3.4	NA	-7.9	-0.9	NA	-3.5	5.0
Total	Enrollment 2000	0	1,547	63,234	2,938	52,042	3,576,509	43	49,585	1,522,078
	Enrollment 2010	24	2,698	71,646	2,793	59,597	4,308,680	19	35,275	2,156,571
	Absolute Change	24	1,151	8,412	-145	7,555	732,171	-24	-14,310	634,493
	<i>Annual Growth Rate (Percent)</i>	NA	5.7	1.3	-0.5	1.4	1.9	-7.8	-3.3	3.5

NUMBER OF PART-TIME ENROLLEES BY TYPE OF DEGREE GRANTING INSTITUTION IN THE CAPE & ISLANDS (2000–2010)

With nearly all part-time enrollment in the Cape & Islands at Cape Cod Community College (98.5 percent in 2010), the regional enrollment trend over the past decade is nearly identical with the trend at that institution. Early in the decade, part-time enrollment at the community college jumped, growing from slightly over 2,900 in 2000 to nearly 4,200 in 2002. Thereafter, part-time enrollment dropped to about 3,000 per year, ending the decade at nearly 2,800. In comparison, the small number of part-time enrollees at four-year institutions oscillated over the years, reaching a high of 50 in 2001 and a low of five in 2009. Part-time enrollment at less-than-two-year institutions, of which there were none in 2000, similarly fluctuated, reaching a high of 36 in 2004 and 2008, then finishing the decade with 24 in 2010.

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

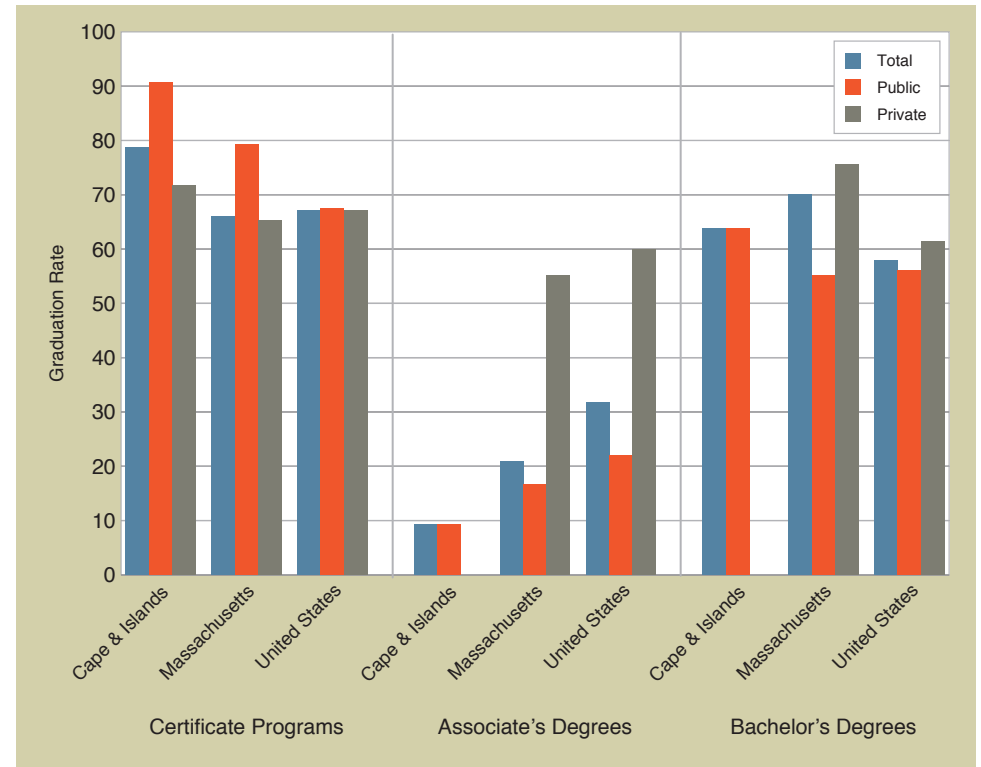


GRADUATION RATES BY TYPE OF DEGREE (2009)

Enrollment figures indicate a potential supply of post-secondary-educated labor, but the actual supply depends on how many students complete their programs and earn a degree or a certificate. In 2009, 63.9 percent of the first-time full-time students in the Cape & Islands who enrolled in Bachelor's Degree programs in 2003 had earned that degree within six years. The rate reflected only public institutions and exceeded both the statewide and national graduation rates at public institutions. In contrast, the three-year Associate's Degree graduation rate from public institutions (9.2 percent) was much lower than the rate in Massachusetts (16.6 percent) and the United States (22.1 percent). The Certificate program graduation rate in the Cape & Islands (78.8 percent) exceeded both state and national rates, with higher graduation rates from both private and public institutions.

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

Note: Graduation rates reflect the number of first-time full-time students who completed their degree/program within 150 percent of the time expected to complete the degree/program as a share of the number of first-time full-time students that started the degree/program (e.g., a Bachelor's Degree is considered to have been earned on time if it is completed within six years or less, or 150 percent of four years). Comparisons of graduation rates to enrollees or degree completions can be misleading as the first-time full-time students are a small subset of the student population, particularly for certain degrees/programs. Graduation rates do not include part-time students and are excluded when there is an inadequate sample size of first-time full-time entrants for the degree/program to calculate a graduation rate. See the on-line Methodological Appendix for further details.



CROSSING THE FINISH LINE: TRENDS IN DEGREE COMPLETIONS OVER THE PAST DECADE (2000–2010)

Total annual completions show the number of people who have earned a degree or Certificate in a given year. From 2000 to 2010, the number of people earning Certificates, Associate's Degrees, and Bachelor's Degrees increased in the Cape & Islands, Massachusetts, and the United States. In the region, the strongest annual growth (19.2 percent) over the course of the decade came from the number of students earning Certificates at public institutions, far exceeding state (4.8 percent) and national (4.4 percent) growth. Public institutions in the Cape & Islands also outpaced the state and nation in the growth of both Associate's and Bachelor's degree completions over the course of the decade; the region's annual growth in these categories was 4.4 percent and 3.1 percent,

respectively. In fact, the strong growth in completions at public institutions in the region resulted in the strongest growth in total completions in each of the three post-secondary degrees (Certificates, Associate's Degrees, and Bachelor's Degrees) among all the regional labor markets.

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

Note: Degree completions are for those students who completed degrees at institutions within the defined geography. The students may not actually live in the region. Completion totals are based on degrees completed in an academic year. For example, 2010 completions represent degrees completed in the 2009–2010 academic year.

		Certificates			Associate's Degrees			Bachelor's Degrees		
		Cape & Islands	MA	US	Cape & Islands	MA	US	Cape & Islands	MA	US
Public	Completions 2000	27	2,273	298,282	281	7,487	471,339	136	12,718	811,076
	Completions 2010	157	3,618	460,865	432	9,831	670,395	185	16,251	1,049,058
	Absolute Change	130	1,345	162,583	151	2,344	199,056	49	3,533	237,982
	Annual Growth Rate (Percent)	19.2	4.8	4.4	4.4	2.8	3.6	3.1	2.5	2.6
Private	Completions 2000	36	5,221	258,503	0	3,812	135,604	0	29,658	431,412
	Completions 2010	102	8,195	430,685	0	4,366	249,258	8	35,972	603,141
	Absolute Change	66	2,974	172,182	0	554	113,654	8	6,314	171,729
	Annual Growth Rate (Percent)	11.0	4.6	5.2	NA	1.4	6.3	NA	1.9	3.4
Total	Completions 2000	63	7,494	556,785	281	11,299	606,943	136	42,376	1,242,488
	Completions 2010	259	11,813	891,550	432	14,197	919,653	193	52,223	1,652,199
	Absolute Change	196	4,319	334,765	151	2,898	312,710	57	9,847	409,711
	Annual Growth Rate (Percent)	15.2	4.7	4.8	4.4	2.3	4.2	3.6	2.1	2.9

EDUCATIONAL INSTITUTIONS AWARDING THE MOST DEGREE'S IN THE CAPE & ISLANDS (2010)

Three public institutions and two private institutions in the Cape & Islands granted post-secondary degrees in 2010. Nearly 40 percent of the region's Certificates came from the private Empire Beauty School–Hyannis, and slightly over 60 percent were granted by public institutions in the region, led by Cape Cod Community College (37.5 percent). Cape Cod Community College was the source of all Associate's Degrees completed. The Massachusetts Maritime Academy, the only public Bachelor's Degree granting institution in the Cape & Islands, accounted for the nearly all of the Bachelor's Degrees (95.9 percent) completed in the region, with a small number coming from the private National Graduate School of Quality Management.

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

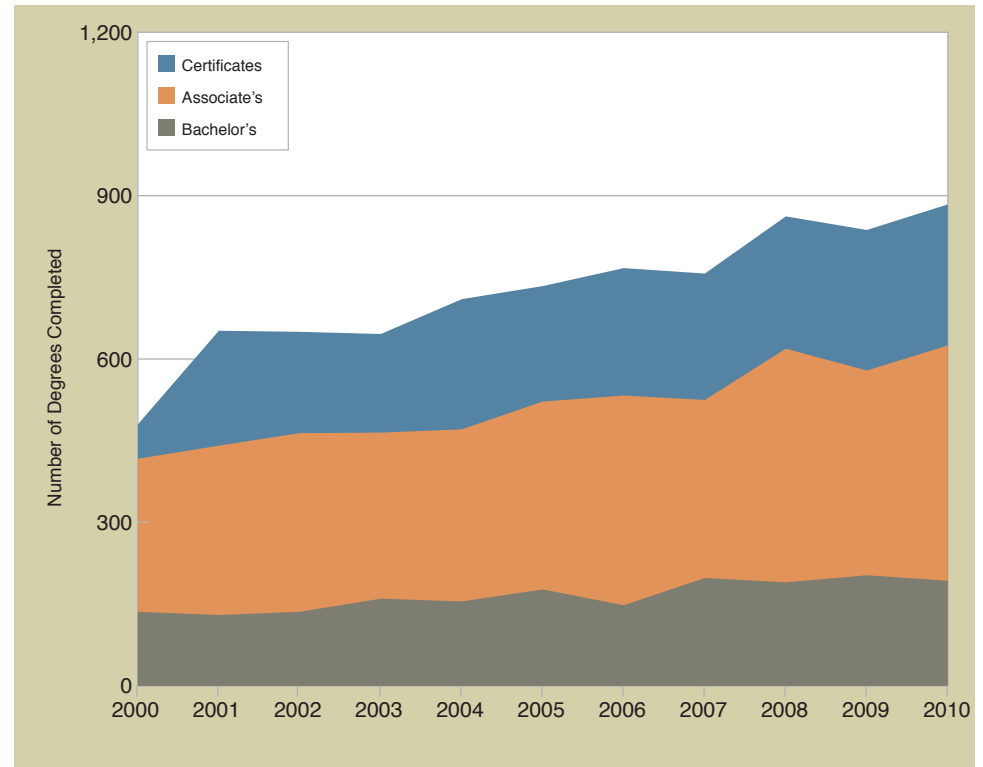
Note: See the on-line Data Appendix for a full list of degree completions by institution.

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

NUMBER OF DEGREE COMPLETIONS BY DEGREE TYPE: THE CAPE & ISLANDS (2000–2010)

Adding up Bachelor's and Associate's Degrees and Certificates, the total number of people awarded a post-secondary degree by institutions in the Cape & Islands increased at an annual rate of 6.3 percent between 2000 and 2010. In comparison, post-secondary completions increased at an annual rate of 2.5 percent in Massachusetts and 3.7 percent in the United States. While Associate's Degree completions increased at an annual rate of 4.4 percent between 2000 and 2010, this figure went through fits and starts over much of that time: growing between 2000 and 2002, followed by fewer completions in 2003, then growing through 2006 and reaching a decade high of 432 completions in 2010. The growth in Bachelor's Degree completions was similarly volatile, with a low of 130 completions in 2001 and a high of 203 in 2009. The strong annual growth of Certificate completions over the course of the decade was largely due to Cape Cod Community College not granting any Certificates until 2001. The annual growth in Certificate completions from 2001 to 2010 (2.3 percent) trailed both state (6.8 percent) and national (5.8 percent) trends.

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



CERTIFICATES AWARDED BY MAJOR FIELD OF STUDY (2000–2010)

Because Cape Cod Community College did not grant Certificates until 2001, the region's Certificates at beginning of the decade were focused in only two major fields of study at two institutions: Services (Cosmetology at Empire Beauty School–Hyannis) and Health Sciences (Nursing at Upper Cape Cod Regional Vocational Technical School). While these two institutions continued to increase the number of Certificates granted in these fields over the course of the decade, the mix of fields changed when Cape Cod Community College started granting Certificates. By 2010, the Cape & Islands was producing graduates in every major field of study, though the largest was Services (43.6 percent of all Certificates in 2010). Services Certificates include a large range of ar-

eas of specialization, including Cosmetology, Law Enforcement, Construction Trades, Sports & Fitness Studies, Library Sciences, Social Work, Appliance Installation & Repair, Welding Technology, and Construction Equipment Operations. In the Cape & Islands, 102 of the 113 Services Certificates were completed in Cosmetology at Empire Beauty School–Hyannis. In every other major field, however, the majority of Certificates were completed at Cape Cod Community College.

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

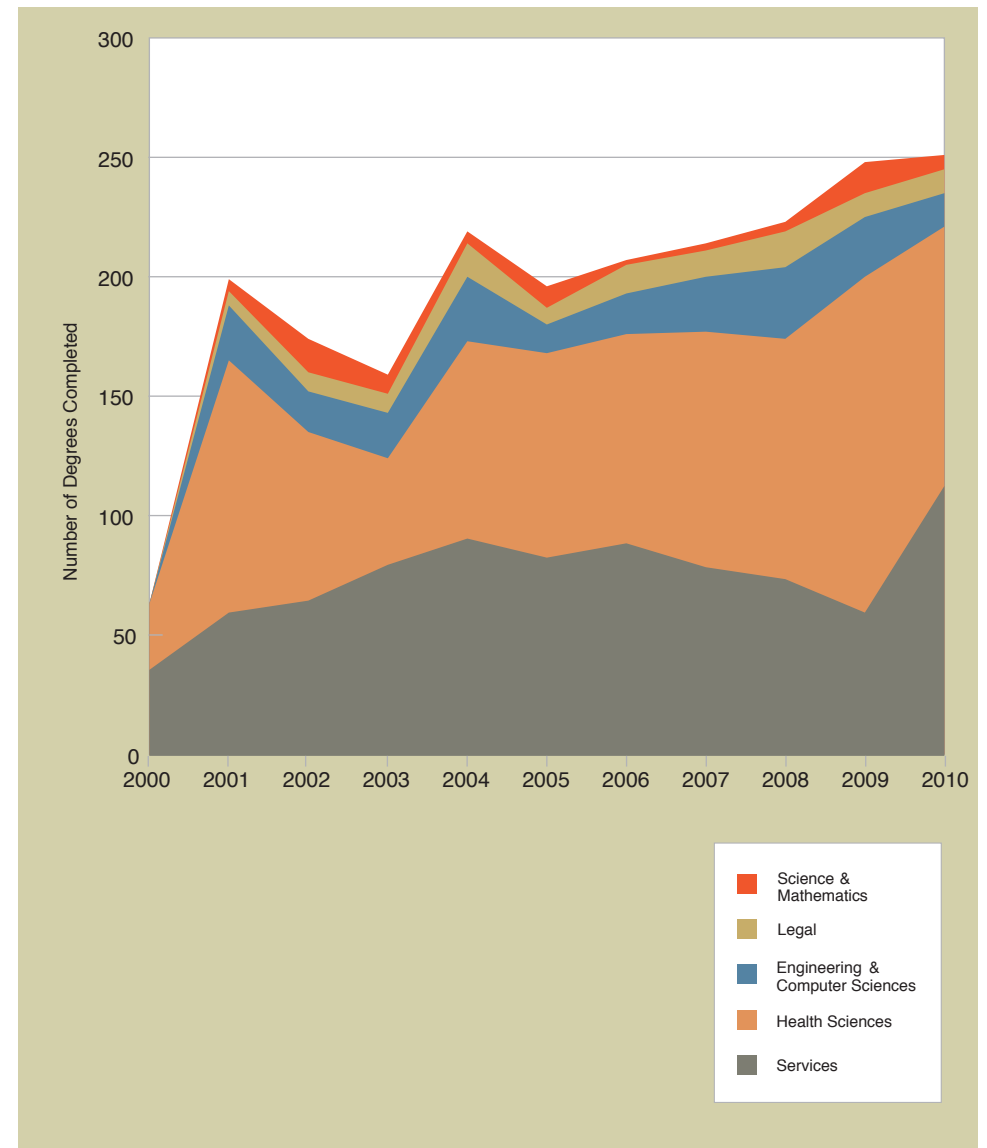
Note: For major fields of study by degree type for the United States, see the on-line Data Appendix.

Major Field of Study	Cape & Islands				Massachusetts			
	2000		2010		2000		2010	
	Certificates Completed	Major's Share of Total (Percent)	Certificates Completed	Major's Share of Total (Percent)	Certificates Completed	Major's Share of Total (Percent)	Certificates Completed	Major's Share of Total (Percent)
Health Sciences	27	42.9	108	41.7	2,080	27.8	5,638	47.7
Services	36	57.1	113	43.6	2,479	33.1	3,984	33.7
Engineering & Computer Sciences	0	0.0	14	5.4	1,013	13.5	752	6.4
Business	0	0.0	2	0.8	709	9.5	513	4.3
Arts, Humanities, & Social Sciences	0	0.0	2	0.8	271	3.6	424	3.6
Legal	0	0.0	10	3.9	132	1.8	189	1.6
Education	0	0.0	4	1.5	129	1.7	87	0.7
Science & Mathematics	0	0.0	6	2.3	248	3.3	80	0.7
Other	0	0.0	0	0.0	81	1.1	146	1.2
Total	63	100.0	259	100.0	7,494	100.0	11,813	100.0

ANNUAL COMPLETIONS BY TOP FIVE CERTIFICATE MAJORS IN THE CAPE & ISLANDS (2000–2010)

While Services was the most common field for Certificates at the beginning and end of the decade, Health Sciences was actually the largest field of study for most of the decade. When Cape Cod Community College began awarding Certificates in 2001, the number of Health Sciences Certificates completed in the region nearly quadrupled in just one year. As such, the number of completions in the major surpassed those in Services in 2001 and 2002. However, growing completions in Services overtook those in Health Sciences in 2003, 2004, and 2006. Thereafter, completions in the Services field declined through 2009. Between 2009 and 2010, the number of completed Services Certificates nearly doubled, to reach a decade high of 113, slightly exceeding the 108 in Health Sciences in 2010. Over the course of the decade, we can see the emergence of Engineering & Computer Sciences, Legal, and Science & Mathematics in the top five majors as Cape Cod Community College starts to offer Certificates in these fields.

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



ASSOCIATE'S DEGREES AWARDED BY MAJOR FIELD OF STUDY (2000–2010)

The region's strong growth in Associate's Degree completions over the past decade has translated into increased completions in nearly every major field of study. Completions of Arts, Humanities, & Social Sciences degrees, the largest field of study, increased at an annual rate of 3.5 percent between 2000 and 2010, outpacing the statewide growth of Associate's Degrees in the field (2.0 percent). However, the major's share of Associate's Degree completions in the Cape & Islands fell from 37.7 percent in 2000 to 34.5 percent because of stronger growth in other major fields of study. The largest total increase in Associate's Degree completions between 2000

and 2010 came in Health Sciences (up from 78 to 123 degrees), while the largest annual rate of growth occurred in Business (7.4 percent). The region's small number of completions in the Science, Engineering, Technology, and Mathematics (STEM) fields of Engineering & Computer Sciences and Science & Mathematics doubled over the course of the decade while declining statewide.

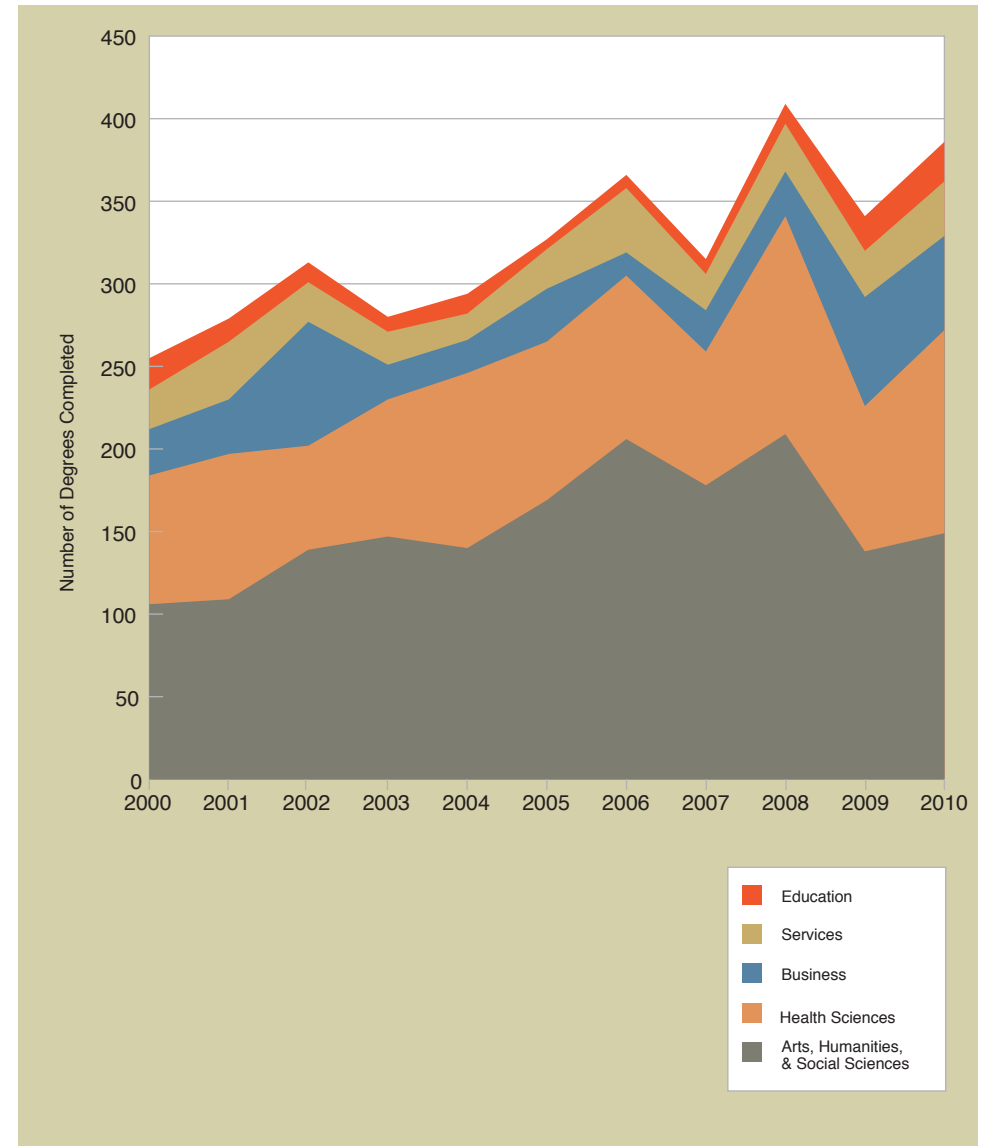
Source: National Center for Education Statistics, Integrated Post Secondary Education Data System.

Major Field of Study	Cape & Islands				Massachusetts			
	2000		2010		2000		2010	
	Associate's Completed	Major's Share of Total (Percent)	Associate's Completed	Major's Share of Total (Percent)	Associate's Completed	Major's Share of Total (Percent)	Associate's Completed	Major's Share of Total (Percent)
Arts, Humanities, & Social Sciences	106	37.7	149	34.5	3,130	27.7	3,833	27.0
Health Sciences	78	27.8	123	28.5	2,302	20.4	3,559	25.1
Services	24	8.5	33	7.6	1,216	10.8	2,389	16.8
Business	28	10.0	57	13.2	2,198	19.5	2,250	15.8
Engineering & Computer Sciences	11	3.9	21	4.9	1,561	13.8	1,162	8.2
Education	19	6.8	24	5.6	293	2.6	442	3.1
Science & Mathematics	1	0.4	7	1.6	231	2.0	260	1.8
Legal	1	0.4	0	0.0	189	1.7	117	0.8
Other	13	4.6	18	4.2	179	1.6	185	1.3
Total	281	100.0	432	100.0	11,299	100.0	14,197	100.0

ANNUAL COMPLETIONS BY TOP FIVE ASSOCIATE'S DEGREE MAJORS IN THE CAPE & ISLANDS (2000–2010)

As with Certificates, the number of students earning Associate's Degrees in the largest majors has been volatile in the Cape & Islands. For example, completions in Arts, Humanities, & Social Sciences rose fairly steadily through 2006, followed by a small decline before reaching a peak of 209 in 2008. However, in 2009 and 2010 the number of completions returned to similar levels experienced earlier in the decade. Health Sciences completions were even more volatile, oscillating from year-to-year and reaching a peak in 2008 (132 degrees). Completions in 2009 dropped to the same number as in 2001 before rising at the end of the decade. Associate's Degree completions in Business went from just 28 in 2000 to a decade high of 75 in 2002, then to a low of 14 in 2006 before ending the decade with nearly continuous year-over-year growth.

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



BACHELOR'S DEGREES AWARDED BY MAJOR FIELD OF STUDY (2000–2010)

With only two institutions granting Bachelor's Degrees in the Cape & Islands, the region's completions by degree are quite different from those statewide. Most notably, the region's STEM fields account for a majority of the Bachelor's Degree completions in the region (51.9 percent in 2010), a much larger share than statewide (17.4 percent in 2010). However, with only slight growth in Engineering & Computer Sciences degrees and a 50 percent drop in Science & Mathematics degrees, the share of degrees in the STEM fields has fallen over the course of the decade. The fastest growing major in the Cape & Islands has been Services (largely for Merchant Marine Officers), which more than doubled between 2000

and 2010. As such, Services degrees accounted for 35.8 percent of the Bachelor's Degrees in the region in 2010, making it much larger than the field statewide (6.1 percent). The emergence of Business as a field of study in the region has also helped to diminish the STEM fields' share of Bachelor's Degree completions. With only 24 degree completions in 2010, Business accounted for 12.4 percent of the region's degrees, making it the third largest major (ahead of Science & Mathematics).

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

Major Field of Study	Cape & Islands				Massachusetts			
	2000		2010		2000		2010	
	Bachelor's Completed	Major's Share of Total (Percent)	Bachelor's Completed	Major's Share of Total (Percent)	Bachelor's Completed	Major's Share of Total (Percent)	Bachelor's Completed	Major's Share of Total (Percent)
Arts, Humanities, & Social Sciences	0	0.0	0	0.0	18,891	44.6	23,405	44.8
Business	0	0.0	24	12.4	7,596	17.9	9,990	19.1
Science & Mathematics	28	20.6	14	7.3	3,818	9.0	5,054	9.7
Engineering & Computer Sciences	80	58.8	86	44.6	3,726	8.8	3,997	7.7
Health Sciences	0	0.0	0	0.0	2,938	6.9	3,589	6.9
Services	28	20.6	69	35.8	2,495	5.9	3,170	6.1
Education	0	0.0	0	0.0	1,922	4.5	1,362	2.6
Legal	0	0.0	0	0.0	176	0.4	190	0.4
Other	0	0.0	0	0.0	797	1.9	1,466	2.8
Total	136	100.0	193	100.0	42,376	100.0	52,223	100.0

ANNUAL COMPLETIONS BY TOP FIVE BACHELOR'S DEGREE MAJORS IN THE CAPE & ISLANDS (2000–2010)

With Bachelor's Degrees in the Cape & Islands concentrated in only four major fields of study, it was the only regional labor market not to award degrees in at least five major fields. In Engineering & Computer Sciences, the largest field of study, completions went up and down, reaching a decade high of 104 degrees in 2009 before dropping back to 86 in 2010. Completions of Bachelor's Degrees in Services also fluctuated but recorded its largest number of completions in the decade in 2010 (69 degrees). Students in the region did not start earning degrees in Business until 2003, but the major's growing popularity made it the third largest field of study in 2010. Science & Mathematics was actually the second largest field of study for several years over the course of the decade, reaching a peak of 38 completions in 2007, but it declined at the end of the decade to a reach a decade low of 14 completions in 2010.

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

Note: Bachelor's Degree completions in the Cape & Islands fell into only four major fields of study.

