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

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

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

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

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

- National and State Employment Trends
- Performance of Regional Labor Markets
- Employment Trends by Industry in the Cape & Islands and Massachusetts
Massachusetts is still far below its peak employment levels of the early 2000’s.
After experiencing strong employment growth to start the decade, the Cape & Islands was the hardest hit region in the Great Recession.

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

Employment Distribution by Supersector, Q4 2011

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

Employment Changes, Q1-2001 to Q1-2008

Management of Companies & Enterprises
Manufacturing
Utilities
Financial Activities
Information
Transportation & Warehousing
Retail Trade
Accommodation & Food Services
Professional & Technical Services
Educational Services
Government
Wholesale Trade
Other Services
Administrative & Support Services
Construction
Health Care & Social Assistance
Arts, Entertainment & Recreation

Sources: Massachusetts EOLWD, ES-202.
Health Care & Social Assistance continued to add jobs during the Great Recession.

Sources: Massachusetts EOLWD, ES-202.
In the recovery, half of the industries in the Cape & Islands have added jobs.

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

- Utilities
- Financial Activities
- Arts, Entertainment, & Recreation
- Information
- Manufacturing
- Retail Trade
- Government
- Educational Services
- Management of Companies & Enterprises
- Accommodation & Food Services
- Construction
- Health Care & Social Assistance
- Transportation & Warehousing
- Administrative & Support Services
- Professional & Technical Services
- Other Services
- Wholesale Trade

**Sources:** Massachusetts EOLWD, ES-202.
Labor Supply

- Residential Population Changes and Characteristics
- Nativity Status, Age, and Education of the Civilian Labor Force
- Trends and Characteristics of the Unemployed
- Commuting Patterns
Following modest population growth early in the decade, the Cape & Islands experienced a steep decline in population.

### Total Residential Population Growth

<table>
<thead>
<tr>
<th>Region</th>
<th>2000-2005 Growth Rate</th>
<th>2005-2007 to 2008-2010 Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cape &amp; Islands</td>
<td>-0.3%</td>
<td>-1.0%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>0.0%</td>
<td>0.5%</td>
</tr>
<tr>
<td>United States</td>
<td>1.0%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Berkshire</td>
<td>0.3%</td>
<td>-1.0%</td>
</tr>
<tr>
<td>Boston/Metro North</td>
<td>-1.0%</td>
<td></td>
</tr>
<tr>
<td>Central Mass</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Metro South/West</td>
<td>1.0%</td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>-0.5%</td>
<td></td>
</tr>
<tr>
<td>Pioneer Valley</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td>Southeast</td>
<td>0.5%</td>
<td></td>
</tr>
</tbody>
</table>

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

**Demographic Characteristics of the Cape & Islands**

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

*Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.*
Following strong growth in the immigrant labor, the Cape & Islands experienced a drop in immigrants in recent years.


Cape & Islands: 1.0% Native Born, 0.4% Immigrant, 7.8% Total
Massachusetts: 3.0% Native Born, 0.0% Immigrant, 6.0% Total
United States: 0.0% Native Born, 0.0% Immigrant, 9.0% Total

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

Cape & Islands: -0.8% Native Born, -0.6% Immigrant, -2.9% Total
Massachusetts: -2.9% Native Born, 0.0% Immigrant, -6.0% Total
United States: -3.0% Native Born, 0.0% Immigrant, -6.0% Total

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

Age Distribution of the Civilian Labor Force

Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.
The aging labor force was the result of a combination of strong growth among older cohorts and declines in younger cohorts.

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

Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.
The Cape & Islands labor force has larger shares with Bachelor’s Degrees, Associate’s Degrees, and Some college than the state.

### Educational Attainment of the Civilian Labor Force

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Master's degree or more</td>
<td>12.9%</td>
<td>14.4%</td>
<td>14.8%</td>
<td>16.8%</td>
<td>9.4%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td>21.5%</td>
<td>24.8%</td>
<td>22.3%</td>
<td>24.4%</td>
<td>17.2%</td>
<td>19.1%</td>
</tr>
<tr>
<td>Associate's degree</td>
<td>10.0%</td>
<td>9.1%</td>
<td>7.9%</td>
<td>7.9%</td>
<td>7.2%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Some College, no degree</td>
<td>22.0%</td>
<td>22.0%</td>
<td>19.1%</td>
<td>18.7%</td>
<td>23.9%</td>
<td>24.0%</td>
</tr>
<tr>
<td>High School</td>
<td>24.7%</td>
<td>24.5%</td>
<td>24.3%</td>
<td>23.5%</td>
<td>26.9%</td>
<td>26.3%</td>
</tr>
<tr>
<td>Less than High School</td>
<td>8.9%</td>
<td>5.3%</td>
<td>11.5%</td>
<td>8.7%</td>
<td>15.5%</td>
<td>11.8%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.
The Cape & Islands needs to attract more workers under age 45 in order to avoid potential shortfalls in the future.

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

- Master's Degree or more
- Bachelor's Degree
- Associate's Degree
- Some College
- High School
- Less than High School

Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.
As the Cape & Islands employment gains have trailed in the recovery, its unemployment rate has started to exceed the state average.

Unemployment Rates, 2000 to 2011

- United States
- Massachusetts
- Cape & Islands

The unemployed in the Cape & Islands are disproportionally younger and have lower levels of educational attainment.

**Age Distribution**

- Civilian Labor Force: 10.0% Age 65+; 20.3% Age 55-64; 26.3% Age 45-54; 13.3% Age 35-44; 8.4% Age 25-34
- Unemployed: 15.3% Age 65+; 17.2% Age 55-64; 23.7% Age 45-54; 18.4% Age 35-44; 7.1% Age 25-34

**Education Distribution**

- Civilian Labor Force: 5.3% Master's degree or more; 24.5% Bachelor's degree; 22.0% Associate's degree; 18.4% Some College, no degree; 10.0% High School; 14.4% Less than High School
- Unemployed: 12.8% Master's degree or more; 27.4% Bachelor's degree; 9.1% Associate's degree; 24.8% Some College, no degree; 17.2% High School; 11.0% Less than High School

Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.
The Cape & Islands has limited ties with other labor markets, with a substantial majority of the region’s workers also living in the region.

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

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

- Educational Attainment of Employed
- Educational Attainment and Composition of Industries and Occupations
More than two-thirds of the workers in the Cape & Islands have some form of post-secondary education.

Educational Attainment of Individuals Employed in the Region

Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.
A growing number of employees have a Bachelor's Degree or higher, while the number of employees with lower levels of education declined.

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

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Massachusetts</th>
<th>Cape &amp; Islands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master's degree or more</td>
<td>2.0%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td>1.5%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Associate's degree</td>
<td>0.5%</td>
<td>-1.2%</td>
</tr>
<tr>
<td>Some College, no degree</td>
<td>0.0%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>High School</td>
<td>-0.3%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Less than High School</td>
<td>-5.7%</td>
<td>-3.3%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.
Most industries in the region employ larger shares of workers with some form of post-secondary education relative to Massachusetts.

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

- **Health Care & Social Assistance**
  - High School Degree or Less: 19.5%
  - Some College or Associate's Degree: 39.6%
  - Bachelor's Degree or Higher: 41.0%

- **Retail Trade**
  - High School Degree or Less: 41.9%
  - Some College or Associate's Degree: 30.9%
  - Bachelor's Degree or Higher: 27.2%

- **Accommodation & Food Services**
  - High School Degree or Less: 37.0%
  - Some College or Associate's Degree: 27.6%
  - Bachelor's Degree or Higher: 35.4%

- **Construction**
  - High School Degree or Less: 51.1%
  - Some College or Associate's Degree: 31.9%
  - Bachelor's Degree or Higher: 17.0%

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

- **Health Care & Social Assistance**
  - High School Degree or Less: 23.0%
  - Some College or Associate's Degree: 33.2%
  - Bachelor's Degree or Higher: 43.8%

- **Retail Trade**
  - High School Degree or Less: 42.1%
  - Some College or Associate's Degree: 33.1%
  - Bachelor's Degree or Higher: 24.8%

- **Accommodation & Food Services**
  - High School Degree or Less: 52.9%
  - Some College or Associate's Degree: 30.4%
  - Bachelor's Degree or Higher: 16.7%

- **Construction**
  - High School Degree or Less: 56.5%
  - Some College or Associate's Degree: 27.6%
  - Bachelor's Degree or Higher: 16.0%

Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.
This pattern persists across occupations, although the difference in post-secondary educational attainment is not as large in some cases.

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

<table>
<thead>
<tr>
<th>Occupation</th>
<th>High School Degree or Less</th>
<th>Some College or Associate's Degree</th>
<th>Bachelor's Degree or Higher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare Practitioners &amp; Technical</td>
<td>6.2%</td>
<td>33.5%</td>
<td>60.3%</td>
</tr>
<tr>
<td>Sales</td>
<td>31.1%</td>
<td>31.0%</td>
<td>37.9%</td>
</tr>
<tr>
<td>Food Preparation &amp; Serving</td>
<td>44.6%</td>
<td>29.3%</td>
<td>26.1%</td>
</tr>
<tr>
<td>Construction &amp; Extraction</td>
<td>54.0%</td>
<td>32.1%</td>
<td>13.9%</td>
</tr>
</tbody>
</table>

Educational Attainment of Employees by Selected Occupation in Massachusetts

<table>
<thead>
<tr>
<th>Occupation</th>
<th>High School Degree or Less</th>
<th>Some College or Associate's Degree</th>
<th>Bachelor's Degree or Higher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare Practitioners &amp; Technical</td>
<td>6.4%</td>
<td>29.9%</td>
<td>63.8%</td>
</tr>
<tr>
<td>Sales</td>
<td>31.5%</td>
<td>31.0%</td>
<td>37.5%</td>
</tr>
<tr>
<td>Food Preparation &amp; Serving</td>
<td>57.9%</td>
<td>30.2%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Construction &amp; Extraction</td>
<td>64.0%</td>
<td>27.2%</td>
<td>8.8%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.
The Pipeline: Educational Supply of Post-Secondary Degrees

- Enrollment Patterns
- Degree Completions
- List of Institutions by Degree Type
- Major Fields of Study by Degree Type
Enrollment growth in the region was largely full-time and at two- and four-year institutions over the past decade.
The growth of certificate and degree completions in the Cape & Islands exceeded both state and national trends.

Annual Growth in Completions, 2000 to 2010

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

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

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

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

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

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

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

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

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

Summary

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

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