Labor Market Trends in the Berkshire 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

- 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 development work of Harrington and Fogg (2008) and the demographics research of Sasser Modestino (2009, 2010).
Summary

- Berkshire has been slower to recover from the Great Recession than most other regional labor markets.

- An aging workforce, declines in younger workers, and a shrinking population will force the region to confront demographic challenges sooner than other regions.

- Despite having smaller shares of residents and workers with a Bachelor’s Degree, Berkshire has post-secondary educational attainment levels that are comparable to the state.

- Slow enrollment growth and declining degree completions may hamper the regional supply of 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 Berkshire and Massachusetts
Massachusetts is still far below its peak employment levels of the early 2000’s.
Berkshire’s employment situation has differed somewhat from that of Massachusetts in the past decade.

Over 50 percent of the region’s employment is concentrated in just two supersectors.

**Employment Distribution by Supersector, Q4 2011**

<table>
<thead>
<tr>
<th>Supersector</th>
<th>Berkshire</th>
<th>Massachusetts</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td>1.6%</td>
<td>2.8%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Construction</td>
<td>4.8%</td>
<td>3.9%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Other services</td>
<td>5.1%</td>
<td>4.3%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Government</td>
<td>4.2%</td>
<td>4.1%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>4.1%</td>
<td>6.5%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>7.5%</td>
<td>7.9%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Professional &amp; Business</td>
<td>13.8%</td>
<td>9.8%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leisure &amp; Hospitality</td>
<td>8.2%</td>
<td>15.2%</td>
<td>13.6%</td>
</tr>
<tr>
<td>Trade, Transportation &amp;</td>
<td>19.0%</td>
<td>18.3%</td>
<td>20.7%</td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education &amp; Health Services</td>
<td>31.7%</td>
<td>27.2%</td>
<td>24.3%</td>
</tr>
</tbody>
</table>

Between recessions, Berkshire expanded employment in some industries that were flat or declining statewide.

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

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

**Sources:** Massachusetts EOLWD, ES-202.
The Great Recession hit a number of the region’s industries harder than their counterparts statewide.

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

- Management of Companies & Enterprises: -63.7%
- Wholesale Trade
- Construction
- Manufacturing
- Information
- Accommodation & Food Services
- Financial Activities
- Administrative & Support Services
- Transportation & Warehousing
- Retail Trade
- Arts, Entertainment & Recreation
- Other Services
- Professional & Technical Services
- Health Care & Social Assistance
- Utilities
- Government
- Educational Services

**Sources:** Massachusetts EOLWD, ES-202.
In the recovery to date, the region has continued to lose jobs in some industries and trail statewide employment gains in others.

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

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

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

- Residential Population Changes and Characteristics
- Age and Education of the Civilian Labor Force
- Trends and Characteristics of the Unemployed
- Commuting Patterns
Berkshire was the only regional labor market to persistently decline in population over the course of the decade.

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

### Demographic Characteristics of Berkshire

<table>
<thead>
<tr>
<th>Demographic Characteristic</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>114,409</td>
<td>110,614</td>
<td>-3,795</td>
<td>-0.4%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>53,993</td>
<td>52,561</td>
<td>-1,432</td>
<td>-0.3%</td>
</tr>
<tr>
<td>Female</td>
<td>60,416</td>
<td>58,053</td>
<td>-2,363</td>
<td>-0.4%</td>
</tr>
<tr>
<td><strong>Nativity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native Born</td>
<td>110,266</td>
<td>104,058</td>
<td>-6,208</td>
<td>-0.6%</td>
</tr>
<tr>
<td>Immigrant</td>
<td>4,143</td>
<td>6,556</td>
<td>2,413</td>
<td>5.2%</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>108,671</td>
<td>100,238</td>
<td>-8,433</td>
<td>-0.9%</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>1,887</td>
<td>2,591</td>
<td>704</td>
<td>3.6%</td>
</tr>
<tr>
<td>Asian, non-Hispanic</td>
<td>744</td>
<td>1,334</td>
<td>590</td>
<td>6.7%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1,722</td>
<td>3,870</td>
<td>2,148</td>
<td>9.4%</td>
</tr>
<tr>
<td>Other race, non-Hispanic</td>
<td>1,385</td>
<td>2,581</td>
<td>1,196</td>
<td>7.2%</td>
</tr>
</tbody>
</table>

**Source:** U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.
With nearly 50 percent of the labor force age 45 or older, Berkshire is one of the oldest labor forces in the state.

Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.
This was the result of rapid declines in younger age cohorts combined with fast growth among older cohorts in the region.

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

- **Age 65+**
  - Massachusetts: 3.9%
  - Berkshire: 3.6%
  - Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.

- **Age 55-64**
  - Massachusetts: 5.4%
  - Berkshire: 4.2%

- **Age 45-54**
  - Massachusetts: 1.7%
  - Berkshire: 0.6%

- **Age 35-44**
  - Massachusetts: -3.1%
  - Berkshire: -1.3%

- **Age 25-34**
  - Massachusetts: -1.3%
  - Berkshire: -0.6%

- **Age 16-24**
  - Massachusetts: 1.9%
  - Berkshire: 1.3%
Education levels have risen in the past decade, but high school remains the most common level in attainment in Berkshire.

### Educational Attainment of the Civilian Labor Force

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Master's degree or more</td>
<td>10.9%</td>
<td>12.2%</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>16.1%</td>
<td>18.0%</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>8.5%</td>
<td>7.8%</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>22.3%</td>
<td>23.9%</td>
<td>19.1%</td>
<td>18.7%</td>
<td>23.9%</td>
<td>24.0%</td>
</tr>
<tr>
<td>High School</td>
<td>31.6%</td>
<td>30.7%</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>10.6%</td>
<td>7.3%</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 trends in educational attainment and aging leave the region with potential shortfalls of workers in nearly every category.

Educational Attainment of the Working-Age Population (16+) in Berkshire

Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.
As Berkshire’s employment gains have trailed the state, the region’s unemployment rate has come closer to the state average.

Unemployment Rates, 2000 to 2011

The unemployed in Berkshire are disproportionally younger and have lower levels of educational attainment.

Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.
Though a large majority of those employed in the region are residents, Berkshire has a net in-flow of commuters.

<table>
<thead>
<tr>
<th>Number</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total number of employed persons living in Berkshire...</strong></td>
<td>53,061</td>
</tr>
<tr>
<td>...that work in:</td>
<td></td>
</tr>
<tr>
<td>Berkshire</td>
<td>48,167</td>
</tr>
<tr>
<td>Pioneer Valley</td>
<td>2,762</td>
</tr>
<tr>
<td>Other parts of Massachusetts</td>
<td>224</td>
</tr>
<tr>
<td>New York</td>
<td>958</td>
</tr>
<tr>
<td>Vermont</td>
<td>338</td>
</tr>
<tr>
<td>Connecticut</td>
<td>335</td>
</tr>
<tr>
<td>Other places outside Massachusetts</td>
<td>277</td>
</tr>
<tr>
<td><strong>Total number of persons working in Berkshire...</strong></td>
<td>57,834</td>
</tr>
<tr>
<td>...that live in:</td>
<td></td>
</tr>
<tr>
<td>Berkshire</td>
<td>48,167</td>
</tr>
<tr>
<td>Pioneer Valley</td>
<td>5,431</td>
</tr>
<tr>
<td>Other parts of Massachusetts</td>
<td>282</td>
</tr>
<tr>
<td>New York</td>
<td>2,681</td>
</tr>
<tr>
<td>Vermont</td>
<td>764</td>
</tr>
<tr>
<td>Connecticut</td>
<td>255</td>
</tr>
<tr>
<td>Other places outside Massachusetts</td>
<td>254</td>
</tr>
<tr>
<td><strong>Net in-commuting</strong></td>
<td>4,773</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.
Berkshire is one of only three regional labor markets in the state that has a net in-flow of workers.

![Commuting Patterns by Regional Labor Market](chart)

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
Nearly two-thirds of the region’s workers have some form of post-secondary education.

Source: U.S. Census Bureau 2000 Decennial Census PUMS data files and 2008-2010 ACS PUMS data files.
Berkshire industries have small shares of employees with a Bachelor’s Degree or Higher, but large shares of “middle-skill” workers.

Educational Attainment of Employees by Selected Major Industries in Berkshire

<table>
<thead>
<tr>
<th>Industry</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>Health Care &amp; Social Assistance</td>
<td>26.0%</td>
<td>41.2%</td>
<td>32.8%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>41.6%</td>
<td>44.5%</td>
<td>13.9%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>39.5%</td>
<td>33.4%</td>
<td>27.1%</td>
</tr>
</tbody>
</table>

Educational Attainment of Employees by Selected Major Industries in Massachusetts

<table>
<thead>
<tr>
<th>Industry</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>Health Care &amp; Social Assistance</td>
<td>23.0%</td>
<td>33.2%</td>
<td>43.8%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>42.1%</td>
<td>33.1%</td>
<td>24.8%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>37.3%</td>
<td>23.8%</td>
<td>38.8%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau 2008-2010 ACS PUMS data files.
As a result post-secondary education levels of employees in Berkshire are much closer to their statewide counterparts.

**Educational Attainment of Employees by Selected Occupations in Berkshire**

- **Office & Administrative Support**: 36.9% High School Degree or Less, 41.1% Some College or Associate's Degree, 22.0% Bachelor's Degree or Higher
- **Healthcare Practitioners & Technical**: 8.0% High School Degree or Less, 39.0% Some College or Associate's Degree, 53.0% Bachelor's Degree or Higher
- **Sales & Related**: 37.9% High School Degree or Less, 39.9% Some College or Associate's Degree, 22.2% Bachelor's Degree or Higher
- **Production**: 60.3% High School Degree or Less, 32.5% Some College or Associate's Degree, 7.1% Bachelor's Degree or Higher

**Educational Attainment of Employees by Selected Occupation in Massachusetts**

- **Office & Administrative Support**: 35.3% High School Degree or Less, 40.4% Some College or Associate's Degree, 24.3% Bachelor's Degree or Higher
- **Healthcare Practitioners & Technical**: 6.4% High School Degree or Less, 29.9% Some College or Associate's Degree, 63.8% Bachelor's Degree or Higher
- **Sales**: 31.5% High School Degree or Less, 31.0% Some College or Associate's Degree, 37.5% Bachelor's Degree or Higher
- **Production**: 65.6% High School Degree or Less, 23.2% Some College or Associate's Degree, 11.1% Bachelor's Degree or Higher

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

- Enrollment Patterns
- Degree Completions
- List of Institutions by Degree Type
- Major Fields of Study by Degree Type
Enrollments at institutions in Berkshire have trailed both state and national trends in the past decade.

Annual Growth in Enrollments, 2000 to 2010

Berkshire was the only regional labor market seeing a decline in post-secondary degree or program.

There were only five higher education institutions granting certificates and degrees in 2010.

### Top Institutions Granting Degrees in Berkshire, 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>Mildred Elley School Inc.</td>
<td>Less than Two Year</td>
<td>Private</td>
<td>127</td>
<td>64.8%</td>
</tr>
<tr>
<td>Berkshire Community College</td>
<td>Two Year</td>
<td>Public</td>
<td>69</td>
<td>35.2%</td>
</tr>
<tr>
<td>NA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Associate's</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berkshire Community College</td>
<td>Two Year</td>
<td>Public</td>
<td>221</td>
<td>63.9%</td>
</tr>
<tr>
<td>Bard College at Simon's Rock</td>
<td>Four Year</td>
<td>Private</td>
<td>125</td>
<td>36.1%</td>
</tr>
<tr>
<td>NA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bachelor's</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Williams College</td>
<td>Four Year</td>
<td>Private</td>
<td>525</td>
<td>58.9%</td>
</tr>
<tr>
<td>Massachusetts College of Liberal Arts</td>
<td>Four Year</td>
<td>Public</td>
<td>315</td>
<td>35.3%</td>
</tr>
<tr>
<td>Bard College at Simon's Rock</td>
<td>Four Year</td>
<td>Private</td>
<td>52</td>
<td>5.8%</td>
</tr>
</tbody>
</table>

While Certificate completions are volatile, Health Sciences was consistently the most common field of study in the past decade.

Annual Certificate Completions by Major in Berkshire, 2000 to 2010

Arts, Humanities, & Social Sciences accounted for over 50 percent of Associate’s Degrees completed in most years.

Annual Associate’s Degree Completions by Major in Berkshire, 2000 to 2010

A large majority of the Bachelor’s Degrees completed in Berkshire are in Arts, Humanities, & Social Sciences.

Annual Bachelor’s Degree Completions by Major in Berkshire, 2000 to 2010

The Great Recession continues to weigh on the region with slow employment growth and elevated unemployment.

While Berkshire has a lower share of residents and workers with a Bachelor’s Degree, the region has a larger share of workers with “middle-skills” relative to Massachusetts.

With one of the oldest labor forces in the state, large declines of younger workers, and little change in the regional supply of post-secondary educated labor, demographics present a challenge for the Berkshire regional labor market.

Given such trends, what should be done to ensure the future economic vitality of the Berkshire region moving forward?
Thank You

Robert.Clifford@bos.frb.org

www.bostonfed.org/neppc
Key Industries in the “Innovation Economy”: Information and Professional & Technical Services

![Graph showing Innovation Industries Share of Employment]

- Berkshire: 94.2% Other Industries, 11.0% Innovation Industries
- Massachusetts: 89.0% Other Industries, 10.2% Innovation Industries

![Bar chart showing Changes in Employment in Innovation Industries]

- Q4 2007-Q4 2009: -3.7%
- Q4 2009-Q4 2011: -2.2%, 3.9%

![Bar chart showing Educational Attainment of Employees by in the Innovation Industries]

- Berkshire: 23.9% High School Degree or Less, 24.7% Some College or Associate's Degree, 51.4% Bachelor's Degree or Higher
- Massachusetts: 10.2% High School Degree or Less, 18.1% Some College or Associate's Degree, 71.7% Bachelor's Degree or Higher

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