REGIONAL SNAPSHOT
Mount Rogers Region, Virginia
Overview
Demography
Human capital
Labor force
Industry and occupation
01

overview

Mount Rogers Region, VA

What is a regional snapshot?
The Mount Rogers Region is comprised of six Virginia counties and two cities. Interstate I-81 passes through the central part of the region.

- Bland
- Carroll
- Grayson
- Smyth
- Washington
- Wythe Counties
- city of Bristol
- city of Galax
Overview

What is a regional snapshot?

What is the snapshot?
This snapshot is a demographic and economic assessment of the Mount Rogers Region in Virginia. Using county-level data, PCRD analyzed a number of indicators to gauge the overall economic performance of the Mount Rogers Region in comparison to the rest of the state.

What is its purpose?
The snapshot is intended to inform the region’s leaders, organizations and residents of the key attributes of the region’s population and economy. In particular, it takes stock of the region’s important assets and challenges. With such data in hand, regional leaders and organizations are in a better position to invest in the mix of strategies that will spur the growth of the economy and provide a higher quality of life for residents of the region.

What are its focus areas?
PCRD secured and analyzed recent data from both public and private sources to generate the snapshot. In order to build a more comprehensive picture of the region, the report presents information under four key categories.

- Demography
- Human Capital
- Labor Force
- Industry & Occupation

When appropriate or relevant, the report compares information on the region with data on the remainder of the state. By so doing, the region is better able to determine how well it is performing relative to the state on a variety of important metrics.
02 demography

Population change
Age structure
Income and poverty
## Demography

### Population change

#### Total population projections

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount Rogers Region</td>
<td>189,019</td>
<td>6,916,798</td>
<td>13.2%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Rest of Virginia</td>
<td>6,916,798</td>
<td>193,472</td>
<td>8,135,347</td>
<td>8,613,234</td>
</tr>
</tbody>
</table>

#### Questions:

- How does the region’s population trend compare to that of the state?
- What may be some of the elements driving the trends in the region? In the state?
- What strengths or challenges might these trends present?

Demography

Race

2000

White: 96.1%
Black: 2.8%
Asian: 0.2%
Two or More Races: 0.7%
American Indian & Alaska Native: 0.1%

2014

White: 95.7%
Black: 2.5%
Asian: 0.5%
Two or More Races: 1.1%
American Indian & Alaska Native: 0.2%

Ethnicity

Hispanics - 2000

Hispanics - 2014

Hispanics: 2.3%

Note: 0.01% in Native Hawaiian & Other Pacific Islander in the region.

Note: 0.04% in Native Hawaiian & Other Pacific Islander in the region.
Demography

Population Age Structure, 2000

A visual presentation of the age distribution of the population (in percent)

Source: 2000 Decennial Census, U.S. Census Bureau
Demography

Population Age Structure, 2014

A visual presentation of the age distribution of the population (in percent)

Questions:

• Is the region experiencing an aging of its population? How does this compare to the rest of the state?

• Is there a sizable number of people of prime working age (20-49 years of age) in the region?

• Is the youth population (under 20 years old) growing or declining?

• What are the implications of the region’s age structure for the economic development efforts of the region?

## Income and poverty

### Questions:

- Is the poverty rate for individuals in the county getting better or worse?
- Is poverty for minors in the county lower or higher than the overall poverty rate for all individuals? Why?
- Has real median income (adjusted for inflation) improved or worsened over the 2003 to 2013 time period? What may be reasons for these changes?

### Demography

#### Income and poverty

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2008</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population in Poverty</td>
<td>13.8%</td>
<td>16.1%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Minors (Age 0-17) in Poverty</td>
<td>21.5%</td>
<td>23.2%</td>
<td>25.3%</td>
</tr>
<tr>
<td>Real Median Household Income* ($ 2013)</td>
<td>$40,369</td>
<td>$39,902</td>
<td>$38,683</td>
</tr>
</tbody>
</table>

* Note: Regional Median Household income is the population-weighted average of median household income values across the Mount Rogers Virginia counties. Source: U.S. Census Bureau – Small Area Income and Poverty Estimates (SAIPE)
03 human capital

- Educational attainment
- Graduation rates
- Patents
Human capital

Educational attainment, 2013

Questions:

• What proportion of the adult population in the region has only a high school education?

• How many are college graduates (bachelors degree or higher)?

• How does the educational profile of the region compare to that of the rest of the state?

• What are the implications of the educational profile of the region in terms of the region’s economic opportunities or workforce challenges?

Source: 2009-2013 American Community Survey 5-Year Estimates
Human capital

Patents

Patenting trends are an important indicator of the level of innovation in a region. Commercializing this innovation can lead to long-term growth for regional economies.

Questions:

• How does the region’s patent rate compare to that of the rest of the state?
• How have rates changed over time?
• What might this data suggest for the future of the region?

Patents per 10,000 Jobs

2001-2013

From 2001 to 2013, Mount Rogers counties were issued patents at a rate of 1.59 per 10,000 jobs, while the remaining Virginia counties garnered 2.71 patents per 10,000 jobs.

Patents per 10,000 residents

2001-2013

From 2001 to 2013, 0.83 patents per 10,000 residents were issued in Mount Rogers counties. The rest of Virginia amassed 1.64 patents per 10,000 residents.

*Note: Patent origin is determined by the residence of the first-named inventor. Since a number of workers commute into the region, the number of patents produced in the Mount Rogers region could be high. However, among residents of the region, patent production is relatively low.
04

labor force

Unemployment rates

Earnings per worker

Source of labor for the region
Questions:

- How does the region’s unemployment rate compare to the rest of the state and nation?
- How does the region’s unemployment peak and post-2009 recovery compare to the state and nation?
- What might this suggest for the region’s economic future?
Earnings per worker in 2014

Questions:

• How does the region’s average earnings compare to that of the rest of the state?

• What might be some driving factors for the differences?

• Do these represent potential strengths or challenges for the region?

NOTE: Earnings include wages, salaries, supplements and earnings from partnerships and proprietorships.

Source: EMSI Class of Worker 2014.4 (QCEW, non-QCEW, self-employed and extended proprietors)
Labor force

Journey to Work

### In-Commuters
- Population: 75,499
  - Employed in Region: 74,228 (100.0%)
  - Employed in Region but Living Outside: 25,347 (34.1%)
  - Employed and Living in Region: 48,881 (65.9%)

### Same Work/Home
- Population: 26,618

### Out-Commuters
- Population: 75,499
  - Employed Outside Region but Living in Region: 26,618 (35.3%)
  - Employed and Living in Region: 48,881 (64.7%)

Questions:
- How many people employed in the region actually reside outside the region? How many who live in the region commute to jobs outside the region?
- What are the implications for the region’s economic development efforts?

Source: LEHD, OTM, U.S. Census Bureau
05 industry and occupation

Establishments
Employment by industry
Cluster analysis
Top occupations
STEM occupations
Industry and occupation

Establishments

Components of Change for Establishments 2000-2011

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishments Launched</td>
<td>14,037</td>
</tr>
<tr>
<td>Establishments Closed</td>
<td>7,575</td>
</tr>
<tr>
<td>Net Change</td>
<td>6,462</td>
</tr>
<tr>
<td>Net Migration (Establishments moving into minus establishments moving out of the region)</td>
<td>267</td>
</tr>
<tr>
<td>Total Change</td>
<td>6,729</td>
</tr>
<tr>
<td>Percent Change</td>
<td>83.7%</td>
</tr>
</tbody>
</table>

Note: In-migration and Out-migration includes movement within the Mount Rogers region.

An establishment is a physical business location. Branches, standalones and headquarters are all considered types of establishments.

Definition of Company Stages

- **0** Self-employed
- **1** 2-9 employees
- **2** 10-99 employees
- **3** 100-499 employees
- **4** 500+ employees

Source: National Establishment Time Series (NETS) – 2011 Database
## Establishments

### Number of Establishments by Company Stages

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 0</td>
<td>1,969</td>
<td>24.5%</td>
<td>4,340</td>
<td>29.4%</td>
</tr>
<tr>
<td>Stage 1</td>
<td>4,594</td>
<td>57.2%</td>
<td>8,874</td>
<td>60.1%</td>
</tr>
<tr>
<td>Stage 2</td>
<td>1,321</td>
<td>16.4%</td>
<td>1,405</td>
<td>9.5%</td>
</tr>
<tr>
<td>Stage 3</td>
<td>135</td>
<td>1.7%</td>
<td>136</td>
<td>0.9%</td>
</tr>
<tr>
<td>Stage 4</td>
<td>18</td>
<td>0.2%</td>
<td>11</td>
<td>0.1%</td>
</tr>
<tr>
<td>Total</td>
<td>8,037</td>
<td>100%</td>
<td>14,766</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Questions:

- What stage businesses have shaped the region’s economic growth in the last 10 years?
- Which ones are growing or declining the most?
- Which stage of establishments are likely to shape the region’s future economic growth?
Industry and occupation

Establishments

<table>
<thead>
<tr>
<th>Number of Jobs by Company Stages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
</tr>
<tr>
<td>Stage 0</td>
</tr>
<tr>
<td>Stage 1</td>
</tr>
<tr>
<td>Stage 2</td>
</tr>
<tr>
<td>Stage 3</td>
</tr>
<tr>
<td>Stage 4</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Sales ($ 2013) by Company Stages

| Year | 2000 | 2011 | % Change |
| Stage 0 | 225,789,198 | 292,057,777 | 29.3% |
| Stage 1 | 2,435,780,242 | 2,185,013,625 | -10.3% |
| Stage 2 | 3,756,403,934 | 3,162,230,055 | -15.8% |
| Stage 3 | 3,481,543,625 | 2,994,336,968 | -14.0% |
| Stage 4 | 2,368,702,860 | 1,485,804,652 | -37.3% |
| Total | 12,268,219,860 | 10,119,443,077 | -17.5% |

Questions:

- What establishments are the most numerous based on company stages?
- What stages have experienced the largest growth? The greatest decline?
- What company stage employs the largest number of people?
- What stage captures the most sales?
- Which ones have experienced the greatest percentage loss over the 2000-11 period?
## Industry and occupation

### Top ten industry sector employment growth

<table>
<thead>
<tr>
<th>NAICS</th>
<th>Description</th>
<th>2009 Jobs</th>
<th>2014 Jobs</th>
<th>Change</th>
<th>Change (%)</th>
<th>State Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>53</td>
<td>Real Estate and Rental and Leasing</td>
<td>2,439</td>
<td>2,970</td>
<td>531</td>
<td>22%</td>
<td>15.0%</td>
</tr>
<tr>
<td>52</td>
<td>Finance and Insurance</td>
<td>2,874</td>
<td>3,339</td>
<td>465</td>
<td>16%</td>
<td>14.2%</td>
</tr>
<tr>
<td>61</td>
<td>Educational Services</td>
<td>1,200</td>
<td>1,272</td>
<td>72</td>
<td>6%</td>
<td>13.4%</td>
</tr>
<tr>
<td>72</td>
<td>Accommodation and Food Services</td>
<td>7,084</td>
<td>7,299</td>
<td>215</td>
<td>3%</td>
<td>9.3%</td>
</tr>
<tr>
<td>54</td>
<td>Professional, Scientific, and Technical Services</td>
<td>2,327</td>
<td>2,394</td>
<td>67</td>
<td>3%</td>
<td>1.7%</td>
</tr>
<tr>
<td>31</td>
<td>Manufacturing</td>
<td>14,286</td>
<td>14,666</td>
<td>380</td>
<td>3%</td>
<td>-2.1%</td>
</tr>
<tr>
<td>62</td>
<td>Health Care and Social Assistance</td>
<td>9,152</td>
<td>9,290</td>
<td>138</td>
<td>2%</td>
<td>11.4%</td>
</tr>
<tr>
<td>90</td>
<td>Government</td>
<td>15,262</td>
<td>15,449</td>
<td>187</td>
<td>1%</td>
<td>-0.2%</td>
</tr>
</tbody>
</table>

### Questions:

- What regional industry sectors have seen the greatest growth?
- Did they grow at the same rate as the state?
- What factors are causing the growth?

Source: EMSI Class of Worker 2014.4 (QCEW, non-QCEW, self-employed and extended proprietors)
## Industry and occupation

### Top ten industry sector employment decline

<table>
<thead>
<tr>
<th>NAICS</th>
<th>Description</th>
<th>2009 Jobs</th>
<th>2014 Jobs</th>
<th>Change</th>
<th>Change (%)</th>
<th>State Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Utilities</td>
<td>217</td>
<td>113</td>
<td>-104</td>
<td>-48%</td>
<td>-7.0%</td>
</tr>
<tr>
<td>21</td>
<td>Mining, Quarrying, and Oil and Gas Extraction</td>
<td>739</td>
<td>553</td>
<td>-186</td>
<td>-25%</td>
<td>-3.6%</td>
</tr>
<tr>
<td>56</td>
<td>Administrative and Support and Waste Management and Remediation Services</td>
<td>4,259</td>
<td>3,474</td>
<td>-785</td>
<td>-18%</td>
<td>8.6%</td>
</tr>
<tr>
<td>23</td>
<td>Construction</td>
<td>5,361</td>
<td>4,526</td>
<td>-835</td>
<td>-16%</td>
<td>-6.9%</td>
</tr>
<tr>
<td>51</td>
<td>Information</td>
<td>819</td>
<td>749</td>
<td>-70</td>
<td>-9%</td>
<td>-9.6%</td>
</tr>
<tr>
<td>48</td>
<td>Transportation and Warehousing</td>
<td>2,747</td>
<td>2,558</td>
<td>-189</td>
<td>-7%</td>
<td>4.8%</td>
</tr>
<tr>
<td>42</td>
<td>Wholesale Trade</td>
<td>2,576</td>
<td>2,458</td>
<td>-118</td>
<td>-5%</td>
<td>-1.0%</td>
</tr>
<tr>
<td>81</td>
<td>Other Services (except Public Administration)</td>
<td>5,175</td>
<td>4,941</td>
<td>-234</td>
<td>-5%</td>
<td>8.5%</td>
</tr>
<tr>
<td>44</td>
<td>Retail Trade</td>
<td>12,275</td>
<td>11,774</td>
<td>-501</td>
<td>-4%</td>
<td>4.0%</td>
</tr>
<tr>
<td>55</td>
<td>Management of Companies and Enterprises</td>
<td>925</td>
<td>896</td>
<td>-29</td>
<td>-3%</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

**Questions:**
- How does the industry sector make-up of the region compare to the rest of the state?
- Which industry sectors are growing and declining the most in employment?
Industry cluster analysis

How to interpret cluster data results

The graph’s four quadrants tell a different story for each cluster.

Contains clusters that are more concentrated in the region but are declining (negative growth). These clusters typically fall into the lower quadrant as job losses cause a decline in concentration.

**Mature**
Top left
(strong but declining)

Contains clusters that are more concentrated in the region and are growing. These clusters are strengths that help a region stand out from the competition. Small, high-growth clusters can be expected to become more dominant over time.

**Stars**
Top right
(strong and advancing)

Contains clusters that are under-represented in the region (low concentration) and are also losing jobs. Clusters in this region may indicate a gap in the workforce pipeline if local industries anticipate a future need. In general, clusters in this quadrant show a lack of competitiveness.

**Transforming**
Bottom left
(weak and declining)

Contains clusters that are under-represented in the region but are growing, often quickly. If growth trends continue, these clusters will eventually move into the top right quadrant. Clusters in this quadrant are considered emerging strengths for the region.

**Emerging**
Bottom right
(weak but advancing)

Distribution of clusters in the Region by quadrants
## Industry cluster analysis

### Mature Clusters

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Level of Specialization</th>
<th>Percent Growth in Specialization</th>
<th>Jobs (2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Equip., App. &amp; Comp. Mfg.</td>
<td>5.56</td>
<td>5.56</td>
<td>1,110</td>
</tr>
<tr>
<td>Machinery Mfg.</td>
<td>2.99</td>
<td>2.99</td>
<td>1,826</td>
</tr>
<tr>
<td>Glass &amp; Ceramics</td>
<td>2.59</td>
<td>2.59</td>
<td>411</td>
</tr>
<tr>
<td>Forest &amp; Wood Products</td>
<td>1.92</td>
<td>1.92</td>
<td>2,537</td>
</tr>
<tr>
<td>Fabricated Metal Product Mfg.</td>
<td>1.46</td>
<td>1.46</td>
<td>1,100</td>
</tr>
<tr>
<td>Mining</td>
<td>1.12</td>
<td>1.12</td>
<td>308</td>
</tr>
</tbody>
</table>

### Star Clusters

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Level of Specialization</th>
<th>Percent Growth in Specialization</th>
<th>Jobs (2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation Equipment Mfg.</td>
<td>4.23</td>
<td>4.23</td>
<td>3,430</td>
</tr>
<tr>
<td>Manufacturing Supercluster</td>
<td>2.55</td>
<td>2.55</td>
<td>7,998</td>
</tr>
<tr>
<td>Agribusiness &amp; Food Processing</td>
<td>2.43</td>
<td>2.43</td>
<td>6,666</td>
</tr>
<tr>
<td>Apparel &amp; Textiles</td>
<td>2.38</td>
<td>2.38</td>
<td>1,621</td>
</tr>
<tr>
<td>Chemicals &amp; Chemical Based</td>
<td>2.24</td>
<td>2.24</td>
<td>2,518</td>
</tr>
<tr>
<td>Advanced Materials</td>
<td>1.22</td>
<td>1.22</td>
<td>3,350</td>
</tr>
<tr>
<td>Primary Metal Mfg.</td>
<td>1.03</td>
<td>1.03</td>
<td>217</td>
</tr>
</tbody>
</table>

### Transforming Clusters

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Level of Specialization</th>
<th>Percent Growth in Specialization</th>
<th>Jobs (2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (Fossil &amp; Renewable)</td>
<td>0.98</td>
<td>0.98</td>
<td>4,909</td>
</tr>
<tr>
<td>Transportation &amp; Logistics</td>
<td>0.88</td>
<td>0.88</td>
<td>2,585</td>
</tr>
<tr>
<td>Biomedical/Biotechnical</td>
<td>0.80</td>
<td>0.80</td>
<td>5,769</td>
</tr>
<tr>
<td>Arts &amp; Entertainment</td>
<td>0.7</td>
<td>0.7</td>
<td>2,653</td>
</tr>
<tr>
<td>Defense &amp; Security</td>
<td>0.53</td>
<td>0.53</td>
<td>2,081</td>
</tr>
<tr>
<td>Edu. &amp; Knowledge</td>
<td>0.53</td>
<td>0.53</td>
<td>1,138</td>
</tr>
<tr>
<td>IT &amp; Telecommunication</td>
<td>0.52</td>
<td>0.52</td>
<td>1,885</td>
</tr>
<tr>
<td>Printing &amp; Publishing</td>
<td>0.36</td>
<td>0.36</td>
<td>580</td>
</tr>
</tbody>
</table>

### Emerging Clusters

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Level of Specialization</th>
<th>Percent Growth in Specialization</th>
<th>Jobs (2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer &amp; Electron. Product Mfg.</td>
<td>0.57</td>
<td>0.57</td>
<td>315</td>
</tr>
<tr>
<td>Business &amp; Financial Service</td>
<td>0.49</td>
<td>0.49</td>
<td>6,000</td>
</tr>
</tbody>
</table>

### Notes

- The first number after each cluster represents its location quotient while the second number represents the number of total jobs (full and part time jobs by place of work) in that cluster in the region in 2014. The clusters are sorted in decreasing order by location quotient.
Industry Clusters: Leakages

Regional requirements, 2013

- Business & Finance
- Advanced Materials*
- Manufacturing Supercluster*
- Energy (Fossil & Renewable)
- Biomed/Biotechnical
- IT & Telecommunications
- Agribusiness & Food Processing*
- Chemicals*
- Defense & Security
- Transportation and Logistics
- Arts, Entertainment & Visitor Industries
- Transportation Equipment*
- Primary Metal*
- Forestry & Wood Products
- Fabricated Metal
- Printing & Publishing
- Education & Knowledge Creation
- Machinery Manufacturing
- Computer & Electronic Product
- Apparel & Textiles*
- Mining
- Electrical Equipment
- Glass & Ceramics
- Transportation Equipment*
- Defense & Security
- Agribusiness & Food Processing*
- Chemicals*
- Education & Knowledge Creation
- Machinery Manufacturing
- Computer & Electronic Product
- Apparel & Textiles*
- Mining
- Electrical Equipment
- Glass & Ceramics

Note: ** shows Star clusters

Source: EMSI 2014.4 (QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors); Industry cluster definitions by PCRD
Top five occupations in 2014

Questions:

• What are the education and skill requirements for these occupations?

• Do the emerging and star clusters align with the top occupations?

• What type salaries do these occupations typically provide?

Source: EMSI Class of Worker 2014.4 (QCEW, non-QCEW, self-employed and extended proprietors)
Industry and occupation

Science, Technology, Engineering & Math

Questions:

• How do STEM jobs compare to the state?
• What has been the trend of STEM jobs over time?
• How important are STEM jobs to the region’s Star and Emerging clusters?

*Note: STEM and STEM-related occupation definitions from BLS (2010)

Source: EMSI Class of Worker 2014.4 (QCEW, non-QCEW, self-employed and extended proprietors)
Report Contributors

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The Purdue Center for Regional Development (PCRD) seeks to pioneer new ideas and strategies that contribute to regional collaboration, innovation and prosperity.

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