Roanoke Regional Economic Update

Terry Rephann
Roanoke Regional Chamber of Commerce
Meeting
Roanoke, Virginia
May 13, 2015
Roanoke Metro Area, Aging, 2000 and 2010

Fewer younger adults . . .
more middle aged.

Source: U.S. Census Bureau
Roanoke Metro Area, Aging, 2000 and 2010

Fewer younger adults . . . more middle aged.

Source: U.S. Census Bureau
Roanoke Metro Area, Aging, 2000 and 2010

Fewer younger adults . . .
more middle aged.

Source: U.S. Census Bureau
Roanoke Metro Area, Aging, 2000 and 2010

Fewer younger adults . . . more middle aged.

Source: U.S. Census Bureau
WHEN THE LAW BECAME CORRUPT, OUTLAW'S BECAME HEROES.

LAWLESS
BASED ON A TRUE STORY

AUGUST 29
If you’ve got a business—you didn’t build that. Someone else made that happen.
Presentation Outline

- A Brief Overview of the National Economy
- The Roanoke Metropolitan Area Economy in the Current Business Cycle
  - Output, Employment and Unemployment
  - Population
  - Consumption (i.e., Retail Sales)
  - Residential Investment
  - Exports
- Roanoke Metropolitan Area Innovation and Entrepreneurship
  - Economic Dynamism
  - Research and Development
  - Talent Pipeline
  - High Tech Economy
Presentation Outline

- A Brief Overview of the National Economy
- The Roanoke Metropolitan Area Economy in the Current Business Cycle
  - Output, Employment and Unemployment
  - Population
  - Consumption (i.e., Retail Sales)
  - Residential Investment
  - Exports
  - 85% of GDP
- Roanoke Metropolitan Area Innovation and Entrepreneurship
  - Economic Dynamism
  - Research and Development
  - Talent Pipeline
  - High Tech Economy
A Brief Overview of the National Economy
GDP Growth

Source: Bureau of Economic Analysis
GDP Growth

Source: Bureau of Economic Analysis
GDP Growth

Source: Bureau of Economic Analysis

Rough.
Atlanta Fed GDP Now

Evolution of Atlanta Fed GDPNow real GDP forecast for 2015: Q2
Quarterly percent change (SAAR)

Sources: Blue Chip Economic Indicators and Blue Chip Financial Forecasts
Atlanta Fed GDP Now

Someone else made that happen.
The Roanoke Metropolitan Area in the Current Business Cycle
Annual GDP Growth

Roanoke MSA has lagged the nation . . .

Source: Bureau of Economic Analysis
Employment Growth, 1969-2013

% change

Roanoke MSA has lagged the state and nation

Source: Bureau of Economic Analysis
Employment Growth

Is Roanoke decoupling?

Unemployment Rate Graph

Roanoke MSA unemployment rate spread with Virginia has shrunk in recovery.

Source: Bureau of Labor Statistics, LAUS and CPS (last point in March 2015)
Population Growth, 1970-2014

Population growth has slowed

Source: Bureau of Economic Analysis and U.S. Census Bureau
Components of Roanoke MSA
Population Change, 2005-2014

Natural decrease is approaching
Components of Roanoke Metropolitan Population Change, 2005-2014

Births
Deaths
International Migration
Domestic Migration

Immigration exceeds domestic migration
Retail Sales

Retail sales have rebounded.

Source: Virginia Department of Taxation (VA) and U.S. Census Bureau
Housing Permits, 6 Month Moving Average

% of 2000 Census housing units

Housing recovery has been slow . . .

Source: U.S. Census Bureau
Housing Permits, 6 Month Moving Average

% of 2000 Census housing units

Source: U.S. Census Bureau

Even more so in Roanoke MSA

United States
Virginia
Roanoke MSA

You didn’t build.
Housing prices are on the rise but lag state and nation.
Exports

Source: International Trade Administration
Roanoke Employment Change, 2007-2014

Source: Virginia Employment Commission (2014 is 2\textsuperscript{nd} quarter)

Source: Bureau of Economic Analysis  *Size represents total employment
Roanoke Employment Change, 2007-2014

Source: Virginia Employment Commission (2014 is 2nd quarter)

Source: Bureau of Economic Analysis

*Size represents total employment
Roanoke Employment Change, 2007-2014

Source: Virginia Employment Commission (2014 is 2nd quarter)

Source: Bureau of Economic Analysis

*Size represents total employment
Roanoke Employment Change, 2007-2014

Source: Virginia Employment Commission (2014 is 2nd quarter)

Source: Bureau of Economic Analysis  *Size represents total employment
Roanoke MSA Innovation and Entrepreneurship Measures
Establishment Births as Percentage of All Establishments

Source: U.S. Census Bureau, Statistics of U.S. Businesses
Establishment Births as Percentage of All Establishments

Source: U.S. Census Bureau, Statistics of U.S. Businesses

You didn’t build enough of that.
“Innovation matters not only for the well educated workers who are directly employed by high-tech firms but for most American workers.”

“For each high-tech job in a city, five additional jobs are ultimately created outside of the high-tech sector in that city.”

- 2 in professional jobs (e.g., doctors, lawyers)
- 3 in other (e.g., waiters, clerks)

Innovation economy is concentrated in “small number of geographic locations.”

“Cities that lack innovation clusters find it hard to create one.”

Thick labor markets are important.
### High Technology Definition

<table>
<thead>
<tr>
<th>Sector</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmaceutical and medicine manufacturing</td>
<td>Wireless telecommunications carriers</td>
</tr>
<tr>
<td>Computer and peripheral equipment manufacturing</td>
<td>Satellite telecommunications</td>
</tr>
<tr>
<td>Communications equipment manufacturing</td>
<td>Other telecommunications</td>
</tr>
<tr>
<td>Semiconductor and other electronic component manufacturing</td>
<td>Internet service providers and Web search portals</td>
</tr>
<tr>
<td>Navigational, measuring, electromedical, and control instruments manufacturing</td>
<td>Data processing, hosting, and related services</td>
</tr>
<tr>
<td>Aerospace product and parts manufacturing</td>
<td>Architectural, engineering, and related services</td>
</tr>
<tr>
<td>Medical equipment and supplies manufacturing</td>
<td>Computer systems design and related services</td>
</tr>
<tr>
<td>Software publishers</td>
<td>Management, scientific and technical consulting services</td>
</tr>
<tr>
<td>Internet publishing and broadcasting</td>
<td>Scientific research-and-development services</td>
</tr>
<tr>
<td>Wired telecommunications carriers</td>
<td>Medical and diagnostic laboratories</td>
</tr>
<tr>
<td></td>
<td>Space research and technology</td>
</tr>
</tbody>
</table>

*Source: Hecker (2005); Center for Innovative Technology*
High Tech Average Annual Payroll, 2013

High tech pays well.

Source: U.S. Census Bureau, County Business Patterns
High Tech Composition, 2013

High tech is relatively small share of local economy.

Source: U.S. Census Bureau, County Business Patterns
But, if you add in Montgomery Co., it definitely helps.

Source: U.S. Census Bureau, County Business Patterns
Roanoke MSA lost significant number of high tech jobs during recession.

Source: U.S. Census Bureau, County Business Patterns
Roanoke MSA patent activity is similar to state.

Source: U.S. Patent and Trademark Office; U.S. Census Bureau
# Educational Attainment (25+ years of age) and Gaps, 2000 and 2013

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2013</th>
<th>GAP 2000</th>
<th>GAP 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High School</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>80.4%</td>
<td>86.6%</td>
<td>-1.0%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>Virginia</td>
<td>81.5%</td>
<td>89.8%</td>
<td>-2.1%</td>
<td>-3.5%</td>
</tr>
<tr>
<td>Northern VA</td>
<td>89.0%</td>
<td>92.1%</td>
<td>-9.6%</td>
<td>-5.8%</td>
</tr>
<tr>
<td>Roanoke MSA</td>
<td>79.4%</td>
<td>86.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bachelor’s</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>24.4%</td>
<td>29.6%</td>
<td>-3.4%</td>
<td>-3.4%</td>
</tr>
<tr>
<td>Virginia</td>
<td>29.5%</td>
<td>37.3%</td>
<td>-8.5%</td>
<td>-11.1%</td>
</tr>
<tr>
<td>Northern VA</td>
<td>47.3%</td>
<td>54.1%</td>
<td>-26.3%</td>
<td>-27.9%</td>
</tr>
<tr>
<td>Roanoke MSA</td>
<td>21.0%</td>
<td>26.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Grad/Prof</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>8.9%</td>
<td>11.2%</td>
<td>-1.8%</td>
<td>-1.9%</td>
</tr>
<tr>
<td>Virginia</td>
<td>11.6%</td>
<td>15.2%</td>
<td>-4.5%</td>
<td>-6.0%</td>
</tr>
<tr>
<td>Northern VA</td>
<td>20.3%</td>
<td>24.2%</td>
<td>-13.2%</td>
<td>-15.0%</td>
</tr>
<tr>
<td>Roanoke VA</td>
<td>7.1%</td>
<td>9.3%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau
On Time High School Graduation Rate

Source: Virginia Department of Education
Bachelor’s Degree Awarded by Student Origin Per 100,000 Residents, 2000-2014

Bachelor degree production now lags state slightly.

Source: State Council of Higher Education for Virginia. LD05 Report
Bachelor’s Degree Awarded by Student Origin Per 100,000 Residents, 2000-2014

Source: State Council of Higher Education for Virginia. LD05 Report
Associate’s Degrees Awarded by Student Origin per 100,000 Residents, 2000-2014

Rest of state caught up with Roanoke MSA in Associate’s degree production.

Source: State Council of Higher Education for Virginia. LD05 Report
Components of Roanoke Metropolitan Population Change, 2005-2014

- Births
- Deaths
- International Migration
- Domestic Migration

Source: U.S. Census Bureau
# Educational Attainment of Long-Distance Migrants (25 Years and Older)

<table>
<thead>
<tr>
<th></th>
<th>Interstate Domestic Inmigrants</th>
<th>Interstate Domestic Outmigrants</th>
<th>Immigrants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong># Roanoke MSA</strong></td>
<td>3,268</td>
<td>3,598</td>
<td>587</td>
</tr>
<tr>
<td><strong>High School</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>90.7%</td>
<td>90.7%</td>
<td>82.0%</td>
</tr>
<tr>
<td>Virginia</td>
<td>93.8%</td>
<td>93.9%</td>
<td>88.2%</td>
</tr>
<tr>
<td>Roanoke MSA</td>
<td>94.8%</td>
<td>92.4%</td>
<td>69.5%</td>
</tr>
<tr>
<td><strong>Bachelor’s</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>40.1%</td>
<td>40.1%</td>
<td>43.9%</td>
</tr>
<tr>
<td>Virginia</td>
<td>51.2%</td>
<td>48.9%</td>
<td>52.4%</td>
</tr>
<tr>
<td>Roanoke MSA</td>
<td>44.4%</td>
<td>36.4%</td>
<td>30.2%</td>
</tr>
<tr>
<td><strong>Grad/Prof</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>16.6%</td>
<td>16.6%</td>
<td>18.3%</td>
</tr>
<tr>
<td>Virginia</td>
<td>23.6%</td>
<td>22.5%</td>
<td>24.4%</td>
</tr>
<tr>
<td>Roanoke MSA</td>
<td>20.6%</td>
<td>14.4%</td>
<td>18.1%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau
Net Long Distance Migration by Educational Attainment, 2009-2013

Source: U.S. Census Bureau
Summary

- The Roanoke metro area recovery has been slower in a slow growth national economic expansion
- The Roanoke metro area is going through a new demographic phase
- The Roanoke metro area generally lags behind on important measures of a high performance economy
  - Patent activity levels similar to the state
  - Low rates of business startup activity
  - Low concentration of high-tech industries
  - Lagging rates of educational attainment
    - The high-school educational pipeline has improved
    - But, Bachelor’s degree production now slightly lags state
    - Longer-distance migrants provide net infusion of highly educated residents
Assets

- Roanoke Blacksburg Technology Council
- Virginia Tech Carillion Research Institute and its world class research teams
- Virginia Tech
  - Knowledge Works and Corporate Research Center
  - VT Investor Network
- Regionally focused Angel Investor and Venture Capital groups
- Roanoke Economic Development Authority Entrepreneur District
- An attractive downtown with a variety of cultural, recreational, and culinary amenities
- A still substantial manufacturing economy that “makes” things
- And, more . . .
Build. Build.
Build. Build.
Build. Build.
Nobody else will make that happen.
Bow-Wow