Economic and Housing Market Trends

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Washington Region
How is the Washington economy performing?

Annual Job Change, 2002-2017
Washington Region

Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
Washington Region Job Change by Sector
February 2016 – February 2017

(Ranked by Size in 2016)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Change (000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>20</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>18</td>
</tr>
<tr>
<td>Construction</td>
<td>10</td>
</tr>
<tr>
<td>Information Services</td>
<td>6</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>5</td>
</tr>
<tr>
<td>Leisure &amp; Hospitality Services</td>
<td>3</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>1</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>-3</td>
</tr>
</tbody>
</table>

Sources: U.S. Bureau of Labor Statistics (Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU

Washington Region Job Change: Private Sector
The Great Recession and Recovery

Aug 2008-Feb 2010
Total -180

<table>
<thead>
<tr>
<th>Sector</th>
<th>Change (000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional &amp; Business Services</td>
<td>-23.7</td>
</tr>
<tr>
<td>Education &amp; Health Services</td>
<td>-22.7</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>-34.4</td>
</tr>
<tr>
<td>Leisure &amp; Hospitality Services</td>
<td>-22.7</td>
</tr>
<tr>
<td>Construction</td>
<td>-48.6</td>
</tr>
<tr>
<td>Other Services</td>
<td>-11.6</td>
</tr>
<tr>
<td>Financial Services</td>
<td>-9.8</td>
</tr>
<tr>
<td>Information Services</td>
<td>-6.7</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>-4.4</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>0</td>
</tr>
<tr>
<td>Transportation &amp; Utilities</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>-180</td>
</tr>
</tbody>
</table>

Feb 2010-Feb 2017
Total +331

<table>
<thead>
<tr>
<th>Sector</th>
<th>Change (000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional &amp; Business Services</td>
<td>76.1</td>
</tr>
<tr>
<td>Education &amp; Health Services</td>
<td>33.0</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>22.9</td>
</tr>
<tr>
<td>Leisure &amp; Hospitality Services</td>
<td>22.9</td>
</tr>
<tr>
<td>Construction</td>
<td>79.3</td>
</tr>
<tr>
<td>Other Services</td>
<td>19.0</td>
</tr>
<tr>
<td>Financial Services</td>
<td>10.1</td>
</tr>
<tr>
<td>Information Services</td>
<td>10.1</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>4.0</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>-4.4</td>
</tr>
<tr>
<td>Transportation &amp; Utilities</td>
<td>-4.4</td>
</tr>
<tr>
<td>Total</td>
<td>+331</td>
</tr>
</tbody>
</table>

Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
Average Wage in the Washington Region
(000s of 2015 $s)

Sources: Bureau of Labor Statistics; The Stephen S. Fuller Institute

15 Largest U.S. Job Markets
Job Change: February 2016 – February 2017

Washington: +62,400

Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
15 Largest U.S. Job Markets
Job Change: 2009 – 2010 (Ranked by GRP in 2010)

Washington: +11,400

Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU

15 Largest U.S. Job Markets

Washington: +18,600

Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
Unemployment Rates By Sub-State Area
Washington Region, 2010-2017

Percent Change in Employed Residents By Sub-State Area
Month-Over-the-Year Change, 2013-2016

Sources: U.S. Bureau of Labor Statistics (US: Seasonally Adjusted; MSA: Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
What is the regional economic outlook?

The Washington Region’s Advanced Industrial Clusters

- Advocacy Services
- Information & Communications Technology Services
- Media & Information Services
- Science & Security Technology Services
- Business & Leisure Travel Services
- Bio & Health Technology Services
- Business & Financial Services
Growth Rates of the Washington Region’s Advanced Industrial Clusters
March 2014 – March 2016

- 0.6% to 2.6% in federal jobs,
- -$2.3 and -$2.7 billion of federal salaries

- -$800 million to -$1.2 billion in federal procurement spending,
- = -12,000 private sector contractor jobs

- -$1.1 billion in federal grants

The Direct Effect of the Trump Budget Blueprint on Federal Activity in the Region

one percent of GRP

Source: The Stephen S. Fuller Institute at the Schar School, GMU
Employment Forecast Scenarios
Washington Region

Sources: BLS, IHS Economics, The Stephen S. Fuller Institute at the Schar School, GMU (forecast as of April 2017)
(a) Incorporating spending reductions providing for in the Budget Control Act of 2011.
(b) Reflecting federal spending reductions in Trump FY 2018 Budget Blueprint released March 16, 2017

How is the housing market performing?
Annual Existing Homes Sales
Washington Region

Percent Change in Active Listings and Closed Sales
Washington MSA, Month-Over-Year, 2013 – 2017

Sources: RealEstate Business Intelligence (RBI), Metropolitan Regional Information Systems (MRIS), The Stephen S. Fuller Institute
Median House Sales Price
Washington Region

Mar 17: $396.6k

Average Sales Price, Washington Region

Sources: Metropolitan Regional Information Systems (MRIS); The Stephen S. Fuller Institute

Sources: RealEstate Business Intelligence (RBI), Metropolitan Regional Information Systems (MRIS), The Stephen S. Fuller Institute
What are the macro trends effecting the housing market?

Population Growth by Sub-State Area
Washington Region, 2010 to 2016

Sources: U.S. Census Bureau (v2016 Population Estimates); The Stephen S. Fuller Institute at the Schar School, GMU
Population Growth By Component Change
Washington Region (in 000s)

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Domestic Migration</th>
<th>Net International Migration</th>
<th>Natural Increase</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-2011</td>
<td>23.0</td>
<td>37.7</td>
<td>49.0</td>
<td>109.7</td>
</tr>
<tr>
<td>2011-2012</td>
<td>38.9</td>
<td>36.7</td>
<td>47.8</td>
<td>123.4</td>
</tr>
<tr>
<td>2012-2013</td>
<td>36.7</td>
<td>48.7</td>
<td>49.2</td>
<td>134.6</td>
</tr>
<tr>
<td>2013-2014</td>
<td>-</td>
<td>(26.4)</td>
<td>48.7</td>
<td>22.8</td>
</tr>
<tr>
<td>2014-2015</td>
<td>-</td>
<td>(29.4)</td>
<td>46.4</td>
<td>17.0</td>
</tr>
<tr>
<td>2015-2016</td>
<td>-</td>
<td>(31.0)</td>
<td>43.9</td>
<td>12.9</td>
</tr>
</tbody>
</table>

Total Increase: +1.9% +1.6% +1.5% +1.1% +1.0% +0.9%

Sources: U.S. Census Bureau (v2016 Population Estimates); The Stephen S. Fuller Institute at the Schar School, GMU

Home Ownership Rates by Age of Householder
NVAR Region, 2000 and 2010

Sources: U.S. Census Bureau (2000 and 2010 Census, microdata); The Stephen S. Fuller Institute at the Schar School, GMU

NVAR Region: Arlington, Alexandria and Fairfax Counties and the cities of Falls Church and Fairfax
Household Situation Distribution
NVAR Region, 2000 and 2010

Sources: U.S. Census Bureau (2000 and 2010 Census, microdata); The Stephen S. Fuller Institute at the Schar School, GMU
NVAR Region: Arlington, Alexandria and Fairfax Counties and the cities of Falls Church and Fairfax.

Population by Age
Washington Region, 1990

Sources: U.S. Census Bureau (1990 Census); The Stephen S. Fuller Institute at the Schar School, GMU
Population by Age
Washington Region, 2000

Sources: U.S. Census Bureau (2000 Census); The Stephen S. Fuller Institute at the Schar School, GMU

Population by Age
Washington Region, 2015

Sources: U.S. Census Bureau (2015 Population Estimates); The Stephen S. Fuller Institute at the Schar School, GMU
Population Distribution by Age
Washington Region, 1990 and 2015

Home Owners by Age of Householder
NVAR Region, 2000 and 2012-2014 (average)

Sources: U.S. Census Bureau (1990 Census and 2015 Population Estimates); The Stephen S. Fuller Institute at the Schar School, GMU

Sources: 2000 Census (microdata), and 2012, 2013 and 2014 American Community Survey (microdata, average); The Stephen S. Fuller Institute
NVAR Region: Arlington, Alexandria and Fairfax Counties and the cities of Falls Church and Fairfax
Tenure and Time in Home, Single-Family Detached Homes
NVAR Region, 2000 and 2012-2014 (average)

<table>
<thead>
<tr>
<th>Tenure and Time in Home</th>
<th>2000</th>
<th>2012-2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacant or Second Home</td>
<td>1.5%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Rented</td>
<td>8.6%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Owned &lt;10 years</td>
<td>43.9%</td>
<td>31.8%</td>
</tr>
<tr>
<td>Owned 10-19 years</td>
<td>22.0%</td>
<td>26.5%</td>
</tr>
<tr>
<td>Owned 20+ years</td>
<td>23.2%</td>
<td>28.7%</td>
</tr>
</tbody>
</table>

Sources: 2000 Census (microdata), and 2012, 2013 and 2014 American Community Survey (microdata, average); The Stephen S. Fuller Institute
NVAR Region: Arlington, Alexandria and Fairfax Counties and the cities of Falls Church and Fairfax

Existing Home Sales per 1,000 Residents
Washington Region, 1997 - 2016

Sources: RealEstate Business Intelligence (RBI); U.S. Census Bureau; The Stephen S. Fuller Institute
Owned Homes by Householder Age and Size
NVAR Region, 2012-2014 (average)

No extra bedrooms | 1 extra* bedroom | 2+ extra* bedrooms

<25 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 | 85+

Sources: 2000 Census (microdata), and 2012, 2013 and 2014 American Community Survey (microdata, average); The Stephen S. Fuller Institute
NVAR Region: Arlington, Alexandria and Fairfax Counties and the cities of Falls Church and Fairfax.

*number of bedrooms minus number of people in the household. In households with a married couple, these homes may one additional extra bedroom.

Thank You & Questions
For reports on the Washington region’s economic performance go to:
sfullerinstitute.gmu.edu