The Washington Region’s Economy in 2018
And Its Near-Term Outlook

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The Current and Near-Term Performance of the U.S. Economy
Recession Recovery Patterns of GDP
Past Four Recessions

*in 1992 or 2009 Chained Dollars; **Quarters 32+ include the 1991 Recession; ***Quarters 25+ include the 2009 Recession

Sources: Bureau of Economic Analysis, The Stephen S. Fuller Institute at the Schar School, GMU

U.S. Coincident Index
Month-Over-Year Percent Change

Sources: The Conference Board, The Stephen S. Fuller Institute at the Schar School, GMU
The Changing Structure of the Washington Region’s Economy and its Consequences
The Changing Structure of the Washington Region Economy

2010
- Local Serving Activities: 34.8%
- Non-Local Serving Business: 12.0%
- Fed Wages & Salaries: 10.0%
- Other Federal: 10.7%
- Procurement: 19.1%
- Total Federal: 39.8%

2017
- Local Serving Activities: 38.0%
- Non-Local Serving Business: 15.3%
- Fed Wages & Salaries: 7.6%
- Other Federal: 8.9%
- Total Federal: 31.2%
- Procurement: 14.7%
- Hospital: 5.6%
- Other: 10.1%

Sources: The Stephen S. Fuller Institute at the Schar School, GMU; Forecast January 2017
Federal Government Jobs
Washington MSA

Annual Change

Annual Month-Over-Year Change

Aug 18 Total = 362.4

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

Federal Procurement in the Washington Region, 1980-2017

TOTAL = $1,384.0 Billion

Source: US Census, Consolidated Federal Funds Report and USAspending.gov, The Stephen S. Fuller Institute at the Schar School, GMU
Washington Region Job Change: Private Sector
The Great Recession and Expansion

<table>
<thead>
<tr>
<th>Category</th>
<th>Aug 2008-Feb 2010 Total</th>
<th>Feb 2010-Aug 2018 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional &amp; Business Services</td>
<td>-180,500</td>
<td>111,600</td>
</tr>
<tr>
<td>Education &amp; Health Services</td>
<td>-100,450</td>
<td>47,815</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>-75,100</td>
<td>56,625</td>
</tr>
<tr>
<td>Leisure &amp; Hospitality Services</td>
<td>-50,000</td>
<td>43,200</td>
</tr>
<tr>
<td>Construction</td>
<td>-25,000</td>
<td>34,700</td>
</tr>
<tr>
<td>Other Services</td>
<td>-25,000</td>
<td>16,600</td>
</tr>
<tr>
<td>Financial Services</td>
<td>-25,000</td>
<td>11,600</td>
</tr>
<tr>
<td>Information Services</td>
<td>-25,000</td>
<td>1,900</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>-25,000</td>
<td>0</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>-125,000</td>
<td>-31,256,500,000</td>
</tr>
<tr>
<td>Transportation &amp; Utilities</td>
<td>-48,600</td>
<td>10,700</td>
</tr>
</tbody>
</table>

The GRP* Effects of Private Sector Job Change
in the Washington Region
~2007 to August 2018 (in 2018 $s)

<table>
<thead>
<tr>
<th>Job Change</th>
<th>Average GRP* Value</th>
<th>Total GRP* Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>-180,500</td>
<td>$173,166</td>
<td>-$31,256,500,000</td>
</tr>
<tr>
<td>+444,500</td>
<td>$129,066</td>
<td>+$57,369,800,000</td>
</tr>
<tr>
<td>+264,800</td>
<td></td>
<td>+$26,113,300,000</td>
</tr>
</tbody>
</table>

*Gross Regional Product
Source: The Stephen S. Fuller Institute at the Schar School, GMU
### Per Capita Personal Income Growth Rank

<table>
<thead>
<tr>
<th>2000-2006</th>
<th>2010-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles</td>
<td>SF-Oakland</td>
</tr>
<tr>
<td>Miami</td>
<td>Seattle</td>
</tr>
<tr>
<td>Phoenix</td>
<td>Detroit</td>
</tr>
<tr>
<td>Washington</td>
<td>Los Angeles</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>Chicago</td>
</tr>
<tr>
<td>SF-Oakland</td>
<td>Dallas</td>
</tr>
<tr>
<td>Boston</td>
<td>Minneapolis</td>
</tr>
<tr>
<td>Houston</td>
<td>New York</td>
</tr>
<tr>
<td>New York</td>
<td>Atlanta</td>
</tr>
<tr>
<td>Seattle</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>Minneapolis</td>
<td>Miami</td>
</tr>
<tr>
<td>Chicago</td>
<td>Phoenix</td>
</tr>
<tr>
<td>Atlanta</td>
<td>Boston</td>
</tr>
<tr>
<td>Dallas</td>
<td>Houston</td>
</tr>
<tr>
<td>Detroit</td>
<td>Washington</td>
</tr>
</tbody>
</table>

Sources: U.S. Bureau of Economic Analysis, The Stephen S. Fuller Institute at the Schar School, GMU

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### GRP Per Worker in the Washington Region Annual Percent Change (Real GRP)

![Graph showing GRP per worker annual percent change](image)

Sources: U.S. Bureau of Economic Analysis, The Stephen S. Fuller Institute at the Schar School, GMU
Average Annual GRP Change in the Largest Metros
2010-2017 (inflation-adjusted)

Dallas 4.2%
SF-Oakland 4.1%
Seattle 3.8%
Atlanta 3.1%
Los Angeles 2.6%
Miami 2.6%
Phoenix 2.4%
Houston 2.3%
Boston 2.2%
Detroit 2.2%
Minneapolis 2.1%
Philadelphia 1.7%
Chicago 1.6%
New York 1.3%
Washington 1.1%

Sources: U.S. Bureau of Economic Analysis, The Stephen S. Fuller Institute at the Schar School, GMU
Current Job Growth Trends in the Washington Region

Job Change in the Washington Region
2000 – 2018* (in thousands)

Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
*First eight months
15 Largest U.S. Job Markets
2018 YTD Job Change (through August)
Ranked by GRP in 2017

Washington: +49,300

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

Washington MSA Job Change by Sector
2018 YTD Change (through August)
Total = 49,300

Ranked by Size in 2017
Professional & Business Services
Education & Health Services
Federal Govt
State & Local Govt
Leisure & Hospitality
Retail Trade
Other Services
Construction
Financial Activities
Information Services
Transportation & Utilities
Wholesale Trade
Manufacturing

Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
The Washington Region’s Major Sources of Growth
(jobs in 000s, Through August 2018; GRP in 2018 $s)

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Total Jobs</th>
<th>New Jobs*</th>
<th>GRP/Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. &amp; Bus. Services</td>
<td>778.5</td>
<td>15.1</td>
<td>$163,053</td>
</tr>
<tr>
<td>Education &amp; Health Serv.</td>
<td>438.2</td>
<td>10.5</td>
<td>77,763</td>
</tr>
<tr>
<td>Federal Government</td>
<td>362.4</td>
<td>(5.9)</td>
<td>209,349</td>
</tr>
<tr>
<td>State &amp; Local Government</td>
<td>319.1</td>
<td>5.9</td>
<td>98,315</td>
</tr>
<tr>
<td>Leisure &amp; Hospitality Serv.</td>
<td>348.6</td>
<td>8.3</td>
<td>54,031</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>280.3</td>
<td>2.0</td>
<td>72,293</td>
</tr>
<tr>
<td><strong>Major Sector Jobs</strong></td>
<td><strong>2,527.1</strong></td>
<td><strong>35.9</strong></td>
<td><strong>$89,593</strong></td>
</tr>
<tr>
<td><strong>Total Jobs, 2018</strong></td>
<td><strong>3,333.1</strong></td>
<td><strong>49.3</strong></td>
<td><strong>$152,730</strong></td>
</tr>
<tr>
<td><strong>Major Sectors / Total %</strong></td>
<td><strong>75.9%</strong></td>
<td><strong>72.8%</strong></td>
<td><strong>58.7%</strong></td>
</tr>
<tr>
<td><strong>GRP/Job, all jobs</strong></td>
<td></td>
<td></td>
<td><strong>$162,918</strong></td>
</tr>
</tbody>
</table>


Job Growth By Sub-State Area
Monthly Over-the-Year Change, 2012-2018

Sources: U.S. Bureau of Labor Statistics (US: Seasonally Adjusted; MSA: Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
Recent Geographic Shift in Job Growth in the Washington Region, 2017 & 2018*
(jobs in thousands)

<table>
<thead>
<tr>
<th>Sub-State Area</th>
<th>2017</th>
<th>2018*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jobs</td>
<td>% of MSA</td>
</tr>
<tr>
<td>D.C.</td>
<td>8.9</td>
<td>17.5</td>
</tr>
<tr>
<td>Suburban Maryland</td>
<td>15.2</td>
<td>29.9</td>
</tr>
<tr>
<td>Northern Virginia</td>
<td>26.8</td>
<td>52.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50.9</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*first eight months

The Washington Region’s Non-Federally Dependent, Export-Based Economy
Growth Rates of the U.S. and Washington Region’s Advanced Industrial Clusters, 2015-2017

Growth Rates of the Washington Region’s Advanced Industrial Clusters, Annualized Growth

Sources: U.S. Bureau of Labor Statistics (QCEW), The Stephen S. Fuller Institute at the Schar School, GMU
Growth Rates of the U.S. and Washington Region’s Advanced Industrial Clusters, 2017

The Near-Term Performance of the Washington Region’s Economy

Sources: U.S. Bureau of Labor Statistics (OCEW), The Stephen S. Fuller Institute at the Schar School, GMU
Washington Region Coincident Index
(100 = 2015)

Source: The Stephen S. Fuller Institute at the Schar School, GMU

Washington Region Leading Index
Month-Over-The-Year Percent Change

Source: The Stephen S. Fuller Institute at the Schar School, GMU
Employment Change by Sub-State Area (000s)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>D.C.</td>
<td>15.7</td>
<td>14.5</td>
<td>8.9</td>
<td>7.6</td>
<td>8.2</td>
<td>7.2</td>
<td>2.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Sub. MD</td>
<td>10.5</td>
<td>14.2</td>
<td>15.2</td>
<td>6.2</td>
<td>15.4</td>
<td>10.6</td>
<td>4.7</td>
<td>4.0</td>
</tr>
<tr>
<td>No. VA</td>
<td>29.5</td>
<td>30.6</td>
<td>26.8</td>
<td>36.1</td>
<td>35.8</td>
<td>27.1</td>
<td>14.5</td>
<td>13.5</td>
</tr>
<tr>
<td>REGION</td>
<td>55.7</td>
<td>59.2</td>
<td>50.9</td>
<td>49.9</td>
<td>59.4</td>
<td>44.9</td>
<td>21.7</td>
<td>21.5</td>
</tr>
</tbody>
</table>

Average Annual Change 2000-2017 = 38,800

Source: BLS, IHS Economics, The Stephen S. Fuller Institute at the Schar School, GMU (forecast as of January 2018)

NOTE: The regional totals include Jefferson, WV.

U.S. GDP and Washington MSA GRP
2007 – 2017 – 2022
(Annual % Change)

Sources: U.S. Bureau of Economic Analysis, IHS Markit, The Stephen S. Fuller Institute at the Schar School, GMU
Forecast as of September 2018
The Changing Structure of the Washington Region Economy

2010
- Local Serving Activities: 34.8%
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2022
- Local Serving Activities: 38.3%
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- Fed Wages & Salaries: 10.0%
- Procurement: 19.1%
- Total Federal: 27.2%

Source: The Stephen S. Fuller Institute at the Schar School, GMU; Forecast January 2017

Thank You & Questions

For monthly reports on the Washington region’s economic performance go to:
sfullerinstitute.gmu.edu