The Fairfax County Chamber of Commerce

The Driving Forces Behind Fairfax County’s Future Growth

Stephen S. Fuller, Ph.D.
Dwight Schar Faculty Chair and University Professor
Director, Center for Regional Analysis
George Mason University

October 23, 2014

The Washington Metropolitan Area from The International Space Station, January 20, 2013
### The Washington Metropolitan Area in 2023

(population and employment in millions, GRP in billions of 2014 $s)

<table>
<thead>
<tr>
<th>Metric</th>
<th>2013</th>
<th>2023</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>5.988</td>
<td>6.665</td>
<td>11.3</td>
</tr>
<tr>
<td>Employment</td>
<td>3.097</td>
<td>3.514</td>
<td>13.5</td>
</tr>
<tr>
<td>Gross Regional Product (GRP)</td>
<td>$478.5</td>
<td>$701.7</td>
<td>46.6</td>
</tr>
</tbody>
</table>

Source: IHS Global Insight, GMU Center for Regional Analysis
The Washington Area Economy’s Competitive Position

- 1st in percent of residents with graduate or professional degrees
- 3rd in number of workers per household
- 2nd in labor force participation rate
- 1st in median household income
- 2nd for traffic congestion
- 2nd in the number of square feet of total office space
- 5th largest economy among U.S. metropolitan areas but only 7th in population

Federal Spending – Washington MSA Total & Procurement

Source: US Census, Consolidated Federal Funds Report
Share of Washington Area Economy 1970-2010

Growth in Jobs, 1980 - 2010

Source: US Bureau of Labor Statistics, GMU Center for Regional Analysis
Structural Change and Recent Trends in the Washington Metropolitan Area Economy

Annual Job Change – MOTYC
Washington MSA

Source: Bureau of Labor Statistics (Not Seasonally Adjusted), GMU Center for Regional Analysis
Federal Procurement in the Washington Metro Area, 1980-2013

The Economic Performance of Maryland, DC and the Commonwealth of Virginia in 2013

State         GSP Growth 2012-2013         US Ranking
US            1.84%                        -
Virginia      0.06%                        48th
Maryland      0.01%                        49th
DC*           - 0.49%                      51st
WMSA          - 0.8%                       330th**

Source: U.S. Bureau of Economic Analysis
*DC’s economy also declined 0.46% in 2012.
**out of 381 metro areas
WMSA Payroll Job Change: Private Sector
The Great Recession and Recovery
Aug 2008-Feb 2010  Feb 2010-Sep 2014
Total -178 Total 217

Prof. & Bus. Svcs
-23 0

Educ & Health Svcs
-23 0

Retail Trade
Leisure & Hosp.
-34 0

Construction
-48 24

Other Services
-8 12

Financial
-10 11

Information
-12 11

Manufacturing
-10 11

Wise Trade
-7 1

Transp. & Util.
-4 12

Source: Bureau of Labor Statistics (Not Seasonally Adjusted), GMU Center for Regional Analysis

The GRP* Effects of Job Change in the Washington Metropolitan Area, Aug 08-Sept 14
(in billions of current year $s)

<table>
<thead>
<tr>
<th>Job Change</th>
<th>Total GRP Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 177,700</td>
<td>- $26,760,932,000^1</td>
</tr>
<tr>
<td>+ 217,000</td>
<td>+ $22,872,254,000^2</td>
</tr>
<tr>
<td>Net Effect</td>
<td>+ 39,300 + $3,888,678,000</td>
</tr>
</tbody>
</table>

Source: GMU Center for Regional Analysis
*Gross Regional Product
^1 $150,596 per job contribution to GRP
^2 $105,402 per job contribution to GRP
The Household Income Effects of Structural Change in the Washington Metropolitan Area

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Median HH Income 2013*</th>
<th>Change from 2009*</th>
</tr>
</thead>
<tbody>
<tr>
<td>District (DC)</td>
<td>$67,575</td>
<td>$2,919</td>
</tr>
<tr>
<td>Frederick Cty</td>
<td>84,308</td>
<td>- $8,215</td>
</tr>
<tr>
<td>Montgomery Cty</td>
<td>98,326</td>
<td>- $5,856</td>
</tr>
<tr>
<td>Prince George’s Cty</td>
<td>72,052</td>
<td>- $4,060</td>
</tr>
<tr>
<td>Arlington County</td>
<td>102,501</td>
<td>- $1,675</td>
</tr>
<tr>
<td>Fairfax County</td>
<td>111,079</td>
<td>- $249</td>
</tr>
<tr>
<td>Loudoun County</td>
<td>116,768</td>
<td>- $7,283</td>
</tr>
<tr>
<td>Prince Wm County</td>
<td>95,268</td>
<td>- $2,234</td>
</tr>
<tr>
<td>Alexandria City</td>
<td>86,775</td>
<td>$2,985</td>
</tr>
<tr>
<td>Total Metro Area</td>
<td>$90,149</td>
<td>- $2,287</td>
</tr>
</tbody>
</table>

Source: U.S. Census, ACS 1-Year; GMU Center for Regional Analysis  *in 2013 dollars

15 Largest Job Markets

<table>
<thead>
<tr>
<th>Job Market</th>
<th>GRP Percent Change: 2012 – 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Houston</td>
<td></td>
</tr>
<tr>
<td>Minneapolis</td>
<td></td>
</tr>
<tr>
<td>Miami</td>
<td></td>
</tr>
<tr>
<td>Dallas</td>
<td></td>
</tr>
<tr>
<td>Atlanta</td>
<td></td>
</tr>
<tr>
<td>SF-Oakland</td>
<td></td>
</tr>
<tr>
<td>Boston</td>
<td></td>
</tr>
<tr>
<td>Detroit</td>
<td></td>
</tr>
<tr>
<td>Chicago</td>
<td></td>
</tr>
<tr>
<td>Los Angeles</td>
<td></td>
</tr>
<tr>
<td>Phoenix</td>
<td></td>
</tr>
<tr>
<td>New York</td>
<td></td>
</tr>
<tr>
<td>Philadelphia</td>
<td></td>
</tr>
<tr>
<td>DC</td>
<td>Washington -0.8%</td>
</tr>
</tbody>
</table>

Source: Bureau of Economic Analysis, GMU Center for Regional Analysis
15 Largest Job Markets
Job Change: Sep 2013 – Sep 2014

Job Change by Sector
Sep 2013 – Sep 2014
Washington MSA

Source: Bureau of Labor Statistics (Not Seasonally Adjusted), GMU Center for Regional Analysis
The GRP* Effects of Job Change in the
Washington Metro Area, September 2013-14
(in billions of 2013$)

<table>
<thead>
<tr>
<th>Job Change</th>
<th>Average GRP Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>-17,400</td>
<td>$119,090</td>
</tr>
<tr>
<td>+28,100</td>
<td>$65,097</td>
</tr>
</tbody>
</table>

Net Effect + 10,700 - $277,219,200**

Source: GMU Center for Regional Analysis
*Gross Regional Product
**Calculation omits Information Services (-2,500/1.37 billion) and Financial Services (+5,100/3.02 billion), both very high value added sectors.

Job Change by Sector
Aug 2014 – Sep 2014
Washington MSA

Source: Bureau of Labor Statistics (Not Seasonally Adjusted), GMU Center for Regional Analysis
Professional & Business Services
Washington MSA

Annual Data
Annual Month over Year

Source: Bureau of Labor Statistics (Not Seasonally Adjusted), GMU Center for Regional Analysis

Sep-14 Total: 700.9

Federal Government
Washington MSA

Annual Data
Annual Month over Year

Source: Bureau of Labor Statistics (Not Seasonally Adjusted), GMU Center for Regional Analysis

Sep-14 Total: 365.5
Unemployment Rates in the WMSA
By Sub-State Area, 2007-2014


15 Largest Job Markets
Ranked by Unemployment Rate
Aug 2014

Economic Trends in Northern Virginia

Annual Job Change – MOTYC
Northern Virginia

Source: Bureau of Labor Statistics (Not Seasonally Adjusted), GMU Center for Regional Analysis
Annual Job Change
Northern Virginia, 2002-2014

Annual Data

Annual Month over Year

2010 2011 2012 2013 2014

Job Change by Sector
Sep 2013 – Sep 2014
Northern Virginia

Source: Bureau of Labor Statistics (Not Seasonally Adjusted), GMU Center for Regional Analysis
The GRP* Effects of Job Change in the Northern Virginia, September 2013-14
(in billions of 2013$)

<table>
<thead>
<tr>
<th>Job Change</th>
<th>Average GRP Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>-11,100</td>
<td>$179,432</td>
</tr>
<tr>
<td>+16,000</td>
<td>$129,883</td>
</tr>
<tr>
<td>Net Effect</td>
<td>+ 4,900</td>
</tr>
<tr>
<td></td>
<td>+ $86,433,900(^1)</td>
</tr>
</tbody>
</table>

Source: GMU Center for Regional Analysis
*Gross Regional Product
\(^1\) Northern Virginia’s GRP equals $229.7 billion; $86.4 million = 0.04% growth

Job Change by Sector
Aug 2014 – Sep 2014
Northern Virginia

Source: Bureau of Labor Statistics (Not Seasonally Adjusted), GMU Center for Regional Analysis
Having Had a Rich Uncle Was Great, But Now What?

2010 Structure of the Greater Washington Economy

Local Serving Activities 34.8%

Non-Local Business 12.0%

Fed Wages & Salaries 10.0%

Procurement 19.1%

Other Federal 10.7%

Infra 3.5%

Total Federal 39.8%

Health/Ed 4.5%

Assn 2.1%

Hosp 2.1%

Source: GMU Center for Regional Analysis
**2017 Structure of the Greater Washington Economy**

- **Local Serving Activities**: 38.0%
- **Non-Local Business**: 16.3%
- **Federal Procurement**: 12.2%
- **Total Federal**: 28.8%
- **Fed Wages & Salaries**: 7.7%
- **Other Federal**: 8.9%
- **International**: 3.9%
- **Health/Ed**: 7.0%
- **Other**: 1.5%

Source: GMU Center for Regional Analysis

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**The Changing Structure of the Washington Area Economy, 2010-2040**

- **Professional + Bus. Svcs.**
  - 2010: 23.0%
  - 2020: 26.4%
  - 2030: 31.0%
  - 2040: 35.6%

- **Education + Health Svcs.**
  - 2010: 12.0%
  - 2020: 12.7%
  - 2030: 12.2%
  - 2040: 11.5%

- **Hospitality**
  - 2010: 8.8%
  - 2020: 9.4%
  - 2030: 7.8%
  - 2040: 7.4%

- **State + Local Govt.**
  - 2010: 10.4%
  - 2020: 8.7%
  - 2030: 9.3%
  - 2040: 7.5%

- **Federal**
  - 2010: 12.8%
  - 2020: 10.4%
  - 2030: 8.9%
  - 2040: 7.6%

- **Other Sectors**
  - 2010: 33.0%
  - 2020: 32.4%
  - 2030: 30.8%
  - 2040: 30.4%

Source: IHS Global Insight, GMU Center for Regional Analysis

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Jobs</th>
<th>Net New (% Change)</th>
<th>Replacement (% Change)</th>
<th>Openings (% Change)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>586,241</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014 - 2019</td>
<td>628,132</td>
<td>41,891 (7.1%)</td>
<td>69,922 (11.9%)</td>
<td>111,813 (19.1%)</td>
</tr>
<tr>
<td>2019 - 2024</td>
<td>674,596</td>
<td>46,464 (7.4%)</td>
<td>74,676 (11.9%)</td>
<td>121,140 (19.3%)</td>
</tr>
</tbody>
</table>

Sources: JobsEQ, GMU Center for Regional Analysis
## Fairfax County, VA
### Change in All Jobs, 2014 – 2019

<table>
<thead>
<tr>
<th>Occupation 2-Digit SOC</th>
<th>Net New</th>
<th>Replacements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer &amp; Mathematical</td>
<td>8,498</td>
<td>4,986</td>
</tr>
<tr>
<td>Business &amp; Financial</td>
<td>4,695</td>
<td>5,483</td>
</tr>
<tr>
<td>Office &amp; Admin Support</td>
<td>4,304</td>
<td>11,085</td>
</tr>
<tr>
<td>Healthcare (All)</td>
<td>3,908</td>
<td>3,371</td>
</tr>
<tr>
<td>Management Occupations</td>
<td>3,077</td>
<td>4,375</td>
</tr>
<tr>
<td>Sales &amp; Related Occupations</td>
<td>2,826</td>
<td>8,771</td>
</tr>
<tr>
<td>Construction &amp; Extraction</td>
<td>2,252</td>
<td>1,831</td>
</tr>
<tr>
<td>Food Prep &amp; Serving</td>
<td>1,640</td>
<td>7,481</td>
</tr>
<tr>
<td>Architecture &amp; Engineering</td>
<td>1,400</td>
<td>1,906</td>
</tr>
<tr>
<td>Personal Care &amp; Service</td>
<td>1,354</td>
<td>2,142</td>
</tr>
<tr>
<td>All Others</td>
<td>7,936</td>
<td>18,491</td>
</tr>
<tr>
<td><strong>Totals, All</strong></td>
<td><strong>41,891</strong></td>
<td><strong>69,922</strong></td>
</tr>
</tbody>
</table>

Sources: JobsEQ, GMU Center for Regional Analysis

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## Fairfax County, VA
### Major Sources of Net New Jobs, 2014 – 2019

<table>
<thead>
<tr>
<th>5-Digit SOC</th>
<th>Net New</th>
<th>%Total</th>
<th>%Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Computer &amp; Mathematical</strong></td>
<td>8,498</td>
<td>20.3</td>
<td>14.0</td>
</tr>
<tr>
<td>Software Developers, Apps</td>
<td>1,970</td>
<td>4.7</td>
<td>16.0</td>
</tr>
<tr>
<td>Computer Systems Analysts</td>
<td>1,564</td>
<td>3.7</td>
<td>17.3</td>
</tr>
<tr>
<td>Software Developers, Systems</td>
<td>1,162</td>
<td>2.8</td>
<td>16.3</td>
</tr>
<tr>
<td>Computer Use Support Specs</td>
<td>1,087</td>
<td>2.6</td>
<td>14.8</td>
</tr>
<tr>
<td><strong>Business &amp; Financial</strong></td>
<td>4,695</td>
<td>11.2</td>
<td>9.0</td>
</tr>
<tr>
<td>Management Analysts</td>
<td>1,024</td>
<td>2.4</td>
<td>12.5</td>
</tr>
<tr>
<td>Market Research Analysts</td>
<td>822</td>
<td>2.0</td>
<td>20.2</td>
</tr>
<tr>
<td>Accountants &amp; Auditors</td>
<td>806</td>
<td>1.9</td>
<td>7.7</td>
</tr>
<tr>
<td>Business Ops Specs, All Other</td>
<td>478</td>
<td>1.1</td>
<td>6.5</td>
</tr>
<tr>
<td><strong>All Others</strong></td>
<td>28,698</td>
<td>68.5</td>
<td>6.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>41,891</td>
<td>100.0</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Sources: JobsEQ, GMU Center for Regional Analysis

* % Total of All Net New Jobs
### Fairfax County, VA

#### Major Sources of Net New Jobs, 2014 – 2019

<table>
<thead>
<tr>
<th>5-Digit SOC</th>
<th>Net New</th>
<th>%Total</th>
<th>%Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Office &amp; Admin Support</strong></td>
<td>4,304</td>
<td>10.3</td>
<td>4.4</td>
</tr>
<tr>
<td>Customer Service Reps</td>
<td>963</td>
<td>2.3</td>
<td>7.8</td>
</tr>
<tr>
<td>Secretaries &amp; Admin Assistant</td>
<td>865</td>
<td>2.1</td>
<td>7.9</td>
</tr>
<tr>
<td>Bookkeep, Acct, &amp; Audit Clerks</td>
<td>633</td>
<td>1.5</td>
<td>7.3</td>
</tr>
<tr>
<td>Office Clerks, General</td>
<td>618</td>
<td>1.5</td>
<td>4.7</td>
</tr>
<tr>
<td><strong>Healthcare (All)</strong></td>
<td>3,908</td>
<td>9.3</td>
<td>11.5</td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>599</td>
<td>1.4</td>
<td>9.4</td>
</tr>
<tr>
<td>Home Health Aides</td>
<td>424</td>
<td>1.0</td>
<td>21.4</td>
</tr>
<tr>
<td>Nursing Assistants</td>
<td>286</td>
<td>0.7</td>
<td>9.9</td>
</tr>
<tr>
<td>Medical Assistants</td>
<td>276</td>
<td>0.7</td>
<td>13.6</td>
</tr>
<tr>
<td><strong>All Others</strong></td>
<td>33,679</td>
<td>80.4</td>
<td>7.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>41,891</td>
<td>100.0</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Sources: JobsEQ, GMU Center for Regional Analysis

### Fairfax County, VA

#### Change in All Jobs, 2019 – 2024

<table>
<thead>
<tr>
<th>Occupation 2-Digit SOC</th>
<th>Net New</th>
<th>Replacements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer &amp; Mathematical</td>
<td>9,772</td>
<td>5,763</td>
</tr>
<tr>
<td>Business &amp; Financial</td>
<td>5,244</td>
<td>6,004</td>
</tr>
<tr>
<td>Office &amp; Admin Support</td>
<td>4,775</td>
<td>11,462</td>
</tr>
<tr>
<td>Healthcare (All)</td>
<td>4,409</td>
<td>3,803</td>
</tr>
<tr>
<td>Management Occupations</td>
<td>3,371</td>
<td>4,739</td>
</tr>
<tr>
<td>Sales &amp; Related Occupations</td>
<td>3,038</td>
<td>9,178</td>
</tr>
<tr>
<td>Construction &amp; Extraction</td>
<td>2,536</td>
<td>2,073</td>
</tr>
<tr>
<td>Food Prep &amp; Serving</td>
<td>1,732</td>
<td>7,775</td>
</tr>
<tr>
<td>Architecture &amp; Engineering</td>
<td>1,543</td>
<td>2,095</td>
</tr>
<tr>
<td>Personal Care &amp; Service</td>
<td>1,524</td>
<td>2,284</td>
</tr>
<tr>
<td>All Others</td>
<td>8,520</td>
<td>19,501</td>
</tr>
<tr>
<td><strong>Totals, All</strong></td>
<td>46,645</td>
<td>74,676</td>
</tr>
</tbody>
</table>

Sources: JobsEQ, GMU Center for Regional Analysis
Economic Outlook for the Washington Metropolitan Area: 2014-2019

Economic Outlook (GRP), 2001-2018
Washington Area and Sub-State Areas
(Annual % Change)

Source: GMU Center for Regional Analysis, Forecast: October 2014
### Employment Change in the WMSA by Sub-State Area (000s)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>D.C.</td>
<td>14.1</td>
<td>5.6</td>
<td>11.0</td>
<td>7.5</td>
<td>8.5</td>
<td>7.5</td>
<td>8.0</td>
<td>5.6</td>
</tr>
<tr>
<td>Sub. MD</td>
<td>4.4</td>
<td>4.8</td>
<td>6.7</td>
<td>12.1</td>
<td>17.0</td>
<td>20.5</td>
<td>22.6</td>
<td>18.0</td>
</tr>
<tr>
<td>No. VA</td>
<td>26.4</td>
<td>23.5</td>
<td>12.6</td>
<td>15.6</td>
<td>25.8</td>
<td>31.1</td>
<td>34.5</td>
<td>32.7</td>
</tr>
<tr>
<td>REGION</td>
<td>42.6</td>
<td>32.2</td>
<td>30.3</td>
<td>35.2</td>
<td>51.3</td>
<td>59.1</td>
<td>65.1</td>
<td>56.3</td>
</tr>
</tbody>
</table>

Average Annual Change 1990-2010 = 35,800

Source: BLS, IHS Economics, GMU Center for Regional Analysis

NOTE: The regional totals include Jefferson, WV.

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### U.S. GDP and Washington Area GRP 2001 – 2014 – 2018

Source: IHS Economics, GMU Center for Regional Analysis, Forecast: October 2014
Thank You & Questions
cra.gmu.edu

Save The Date:
GMU/Cardinal Bank
Economic Conference
January 15, 2015