2018 Annual Economic Forecast
Dragas Center for Economic Analysis and Policy
The forecasts and commentary do not constitute an official viewpoint of Old Dominion University, its President, John R. Broderick, the Board of Visitors, the Strome College of Business, or the generous donors who support the activities of the Dragas Center for Economic Analysis and Policy and the Economic Forecasting Project.
2018 Hampton Roads Economic Forecast
Stagnant Growth, Improving Future?
Professor Vinod Agarwal
January 31, 2018
Annual Growth Rate in Real GDP
Hampton Roads and the United States

<table>
<thead>
<tr>
<th>Period</th>
<th>United States</th>
<th>Hampton Roads</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001 to 2009</td>
<td>1.62%</td>
<td>2.12%</td>
</tr>
<tr>
<td>2009 to 2015</td>
<td>2.17%</td>
<td>-0.04%</td>
</tr>
<tr>
<td>2015 to 2016</td>
<td>1.49%</td>
<td>-1.09%</td>
</tr>
<tr>
<td>2016 to 2017e</td>
<td>2.25%</td>
<td>0.80%</td>
</tr>
</tbody>
</table>

Source: Bureau of Economic Analysis and the Old Dominion University Economic Forecasting Project. Data on GDP incorporates latest BEA revisions in September 2017. US GDP is advance estimate while Hampton Roads GDP is our estimates.
Peak employment for the United States was January 2008, Virginia was April 2008, and Hampton Roads was July 2007. Seasonally adjusted data through December 2017 (US and VA) and November 2017 (HR). Last month of data are preliminary. Data measure number of reported jobs.

Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. Peak employment for the United States was January 2008, Virginia was April 2008, and Hampton Roads was July 2007. Seasonally adjusted data through December 2017 (US and VA) and November 2017 (HR). Last month of data are preliminary. Data measure number of reported jobs.
Defense Spending in Hampton Roads
DoD Base Budget Cap, Request, and Appropriations Bills Fiscal Year 2018

Sources: Budget Control Act of 2011, FY 2018 Presidential Budget Request, U.S. House of Representatives and U.S. Senate
Estimated Direct DoD Spending
Hampton Roads, 2000 to 2017

Source: U.S. Department of Defense and the Old Dominion University Economic Forecasting Project. *Includes Federal Civilian and Military Personnel and Procurement. Data for 2016 are estimates and data for 2017 are forecasts.
## Estimated Average Compensation
### Hampton Roads, Selected Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
<th>2016</th>
<th>Change in Compensation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Military</td>
<td>$91,561</td>
<td>$92,189</td>
<td>0.69%</td>
</tr>
<tr>
<td>Federal Civilian Govt. Employees</td>
<td>$107,322</td>
<td>$109,624</td>
<td>2.15%</td>
</tr>
<tr>
<td>State and Local Govt. Employees</td>
<td>$62,602</td>
<td>$64,164</td>
<td>2.49%</td>
</tr>
<tr>
<td>Private Nonfarm</td>
<td>$42,189</td>
<td>$41,751</td>
<td>-1.04%</td>
</tr>
</tbody>
</table>

*Source: Bureau of Economic Analysis and Old Dominion University Economic Forecasting Project. Compensation includes wages, salaries, and benefits.*
Where are the jobs?
Average Annual Civilian Jobs
Hampton Roads, 1999-2017

Source: U.S. Department of Labor CES data and the Old Dominion University Economic Forecasting Project. Not seasonally adjusted. Data will be revised in March 2018
Change in Private Sector Employment
Selected Industries in Hampton Roads, 2007 Q1 to 2017 Q1

- Health Care and Social Assistance: +19
- Accomodation and Food: +4
- Transportation and Warehousing: +1
- Professional and Scientific: +1
- Management of Companies: +1
- Utilities: -1
- Finance and Insurance: -2
- Admin and Support: -3
- Real Estate: -4
- Information: -5
- Wholesale Trade: -5
- Retail Trade: -6
- Manufacturing: -7
- Construction: -11

Source: Virginia Employment Commission: Covered Employment and Wages by Private Ownership and the Old Dominion University Economic Forecasting Project.
Civilian Labor Force
Hampton Roads, 1999-2017

Source: U.S. Department of Labor LAUS data and the Old Dominion University Economic Forecasting Project. Not seasonally adjusted. Data will be revised in March/April 2018.
Headline Unemployment Rate (U3)
Hampton Roads, Virginia, and United States
January 2007-December 2017*

Source: Bureau of Labor Statistics Seasonally adjusted data and the Old Dominion University Forecasting Project. Preliminary data: US and VA (Dec 17) and HR (Nov 17). Hampton Roads data only through November 2017.
Residential Housing is Looking Up
Value of Building Permits for One-Unit Family Homes
Hampton Roads, 1991-2017

Source: U.S. Bureau of the Census and the Old Dominion University Economic Forecasting Project
Existing and New Construction Home Sales
Hampton Roads, 2010-2017

Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information Deemed Reliable But not Guaranteed. Figures reported here represent only those properties that are listed through REIN by REIN members and may not represent all new construction activity in our region.
Distribution of New Construction Home Sales by Financing Type
Hampton Roads, 2000-2017

Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information Deemed Reliable But not Guaranteed.
Median Sales Price of Existing Homes
Hampton Roads, 2002-2017

$116,900
$223,000
$180,000
$219,000

Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information deemed reliable but not guaranteed. 2002-2007 = 91% increase. 2011-2017 is a 22% increase.
### Median Sale Price of Existing Residential Homes for Selected Cities in Hampton Roads: 2007 and 2017

<table>
<thead>
<tr>
<th>City</th>
<th>Median Price 2007</th>
<th>Median Price 2017</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chesapeake</td>
<td>$250,100</td>
<td>$245,000</td>
<td>-2.0%</td>
</tr>
<tr>
<td>Norfolk</td>
<td>$195,000</td>
<td>$183,500</td>
<td>-5.9%</td>
</tr>
<tr>
<td>Portsmouth</td>
<td>$165,500</td>
<td>$140,000</td>
<td>-15.4%</td>
</tr>
<tr>
<td>Suffolk**</td>
<td>$257,500</td>
<td>$240,000</td>
<td>-6.8%</td>
</tr>
<tr>
<td>Virginia Beach</td>
<td>$245,000</td>
<td>$247,500</td>
<td>+1.2%</td>
</tr>
<tr>
<td>Hampton</td>
<td>$180,000</td>
<td>$155,000</td>
<td>-13.9%</td>
</tr>
<tr>
<td>Newport News</td>
<td>$199,250</td>
<td>$170,000</td>
<td>-14.7%</td>
</tr>
<tr>
<td>Williamsburg*</td>
<td>$284,450</td>
<td>$283,000</td>
<td>-0.5%</td>
</tr>
<tr>
<td>Hampton Roads</td>
<td>$223,000</td>
<td>$219,000</td>
<td>-1.8%</td>
</tr>
</tbody>
</table>

Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information Deemed Reliable But not Guaranteed.
* Williamsburg represents Williamsburg, James City County, York County and Gloucester County. ** Median price in Suffolk peaked in 2006 at $263,950.
Short Sales and Bank-Owned Sales as Percent of Total Sales
Hampton Roads, 2006-2017

Short Sales vs. REO Sales

- 2006: 0.2%
- 2007: 1.2%
- 2008: 200%
- 2009: 10%
- 2010: 7.1%
- 2011: 26.6%
- 2012: 7.1%
- 2013: 10%
- 2014: 8.4%
- 2015: 3.6%
- 2016: 8.4%
- 2017: 8.4%
Hotel Industry
Hotel Revenue in Hampton Roads
2000-2017

Source: STR Global and Old Dominion University Economic Forecasting Project.
Growth in Hotel Revenue and Revenue Per Available Room
United States, Virginia, and Hampton Roads, 2016-2017

- United States: 4.9% (Hotel Revenue), 3.0% (Revenue per Available Room)
- Virginia: 3.9% (Hotel Revenue), 2.9% (Revenue per Available Room)
- Hampton Roads: 4.8% (Hotel Revenue), 4.9% (Revenue per Available Room)
Growth in Hotel Revenue
Hampton Roads, 2016 to 2017

<table>
<thead>
<tr>
<th>Market</th>
<th>2016-2017 Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hampton Roads</td>
<td>4.80%</td>
</tr>
<tr>
<td>Chesapeake/Suffolk</td>
<td>5.81%</td>
</tr>
<tr>
<td>Newport News/Hampton</td>
<td>3.85%</td>
</tr>
<tr>
<td>Norfolk/Portsmouth</td>
<td>14.43%</td>
</tr>
<tr>
<td>Virginia Beach</td>
<td>4.15%</td>
</tr>
<tr>
<td>Williamsburg Market</td>
<td>0.16%</td>
</tr>
</tbody>
</table>

Source: STR Trend Report, January 17, 2018, and the Old Dominion University Economic Forecasting Project. Williamsburg Market includes James City County, York County, and City of Williamsburg.
Monthly Airbnb Revenue in Hampton Roads
2015-2017

 Millions of Dollars

Source: Aidna (2018) market data adjusted by Dragas Center for Economic Analysis and Policy. Excludes shared rooms
Port of Virginia: Growing rapidly
General Cargo Tonnage
Port of Virginia, 2000-2017

Source: Virginia Port Authority and Old Dominion University Economic Forecasting Project.
Thousands of TEUs
Port of Virginia, 2000-2017

Source: Virginia Port Authority and Old Dominion University Economic Forecasting Project.
Movement of Containers by Type of Transportation
Port of Virginia, 2011-2017

Millions of Containers

<table>
<thead>
<tr>
<th>Year</th>
<th>Rail</th>
<th>Barge &amp; Truck</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>0.33</td>
<td>0.77</td>
</tr>
<tr>
<td>2012</td>
<td>0.39</td>
<td>0.82</td>
</tr>
<tr>
<td>2013</td>
<td>0.43</td>
<td>0.84</td>
</tr>
<tr>
<td>2014</td>
<td>0.45</td>
<td>0.93</td>
</tr>
<tr>
<td>2015</td>
<td>0.48</td>
<td>0.98</td>
</tr>
<tr>
<td>2016</td>
<td>0.55</td>
<td>0.95</td>
</tr>
<tr>
<td>2017</td>
<td>0.57</td>
<td>1.04</td>
</tr>
</tbody>
</table>
Average TEUs per Container Vessel Call
Port of Virginia, 2011-2017

Source: Virginia Port Authority and the Old Dominion University Economic Forecasting Project.
<table>
<thead>
<tr>
<th></th>
<th>2017 Forecast</th>
<th>2017 Actual</th>
<th>2018 Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hampton Roads Real Gross Domestic Product Initial Forecast</td>
<td>1.4%</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Hampton Roads Real Gross Domestic Product Mid-year revision</td>
<td>0.8%</td>
<td>--</td>
<td>1.2%</td>
</tr>
<tr>
<td>Civilian Job Growth</td>
<td>0.5%</td>
<td>-0.3%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>4.3%</td>
<td>4.3%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Taxable Sales</td>
<td>2.6%</td>
<td>3.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Hotel Revenue</td>
<td>4.4%</td>
<td>4.8%</td>
<td>3.9%</td>
</tr>
<tr>
<td>General Cargo Tonnage</td>
<td>2.7%</td>
<td>5.3%</td>
<td>2.8%</td>
</tr>
<tr>
<td>One Unit Housing Permit Value</td>
<td>2.6%</td>
<td>8.5%</td>
<td>2.4%</td>
</tr>
</tbody>
</table>

Source: 2017 data reflects the annual rate of growth, last month, or day business day of 2017 where appropriate.
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