

# Hampton Roads Regional Benchmarking Study

12th Edition



E17-01



October 2017

**HAMPTON ROADS PLANNING DISTRICT COMMISSION**

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# Hampton Roads

# Regional Benchmarking Study

# 12th Edition

Preparation of this report was included in the HRPDC Unified Planning Work Program for Fiscal Year 2017-2018, approved by the Hampton Roads Planning District Commission at its Commission Meeting on May 18, 2017.

Prepared by the staff of the  
Hampton Roads Planning District Commission

October 2017



Hampton Roads Benchmarking Study

# Narrative Title

**TITLE:**  
**Hampton Roads Regional Benchmarking**  
**Study 2017**

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**October 2017**

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## ABSTRACT

The Hampton Roads Regional Benchmarking Study is an annual publication designed to evaluate regional progress across a broad range of categories. The publication includes a locality profile for each of the region's 17 jurisdictions as well as graphical illustrations for a myriad of regional benchmarks covering the economy, demographics, housing, transportation, and various quality of life indicators. Each graph is accompanied by a brief explanation regarding the purpose of the benchmark and the current condition in Hampton Roads.

## ACKNOWLEDGMENTS

Prepared by the staff of the Hampton Roads Planning District Commission.

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## Section I.

# Introduction

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## Introduction

Hampton Roads is a dynamic metropolitan region complete with a rich history, a diverse landscape, and a growing population of more than 1.7 million people. The region's vibrant mix of people, places, and employment opportunities combine to make Hampton Roads a popular destination for people to live, work, and play. As with any metropolitan area, there are many factors that have bearing on the region's quality of life. An understanding of various socioeconomic metrics is necessary to understand the region's strengths, weaknesses, and challenges.

The purpose of the Hampton Roads Regional Benchmarking Study is to shed light on the numerous metrics and statistics that provide insight into the region's health and to assist in decision making processes. To that end, the Study provides 154 graphs and illustrations to better understand Hampton Roads' relative well-being in comparison to other regions and with respect to changing regional trends.

The Hampton Roads Regional Benchmarking Study is comprised of 14 sections that cover measures of the region's economy, various industries, demographics, transportation system, education system, government finances, and quality of life. The Study also includes metrics on each of the regions localities in relation to each other.

We begin with a table used to rank and compare Hampton Roads on a variety of metrics to 34 reference metropolitan areas (MSAs) which have a population between 1 and 3 million persons. It also contains a data profile for the region and each of the 17 member localities of the HRPDC.

This Study may best be used as a reference guide to assist in understanding the various facets of the regional economy. Graphs, illustrations, and datasets are available for download on the Commission's website at <http://www.hrpdcva.gov/page/benchmarking>.

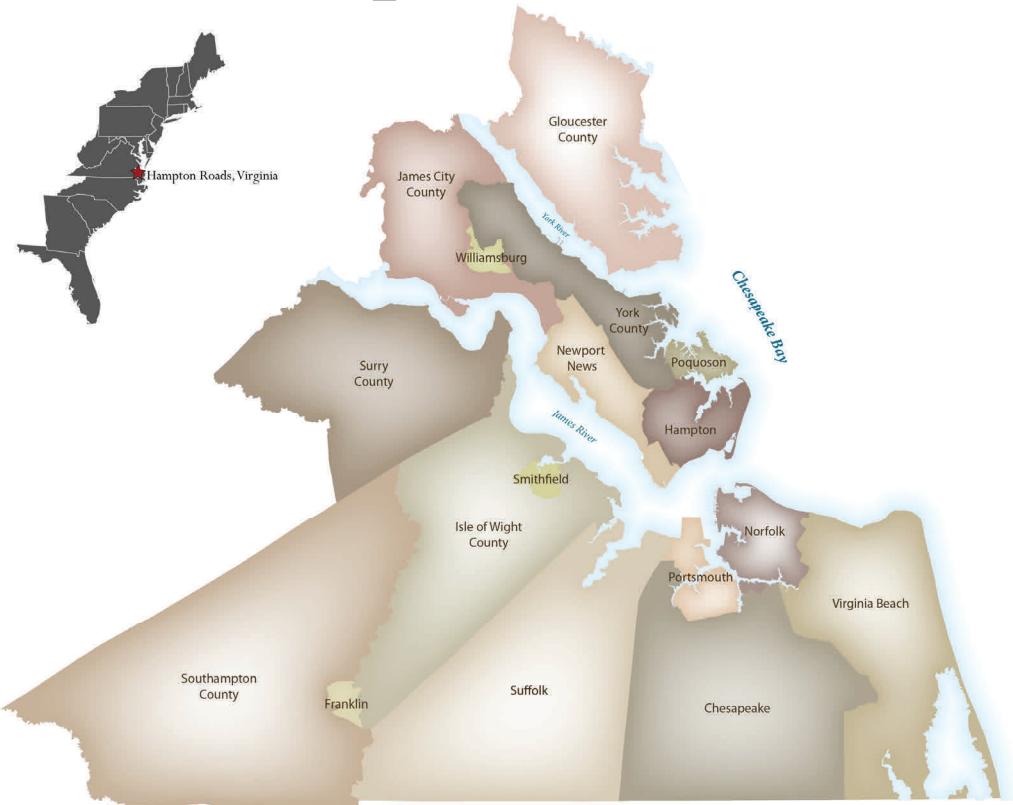
## American Community Survey (ACS) Data for Hampton Roads

Uses ACS One-Year Estimates 2016 (largest value is ranked #1)

Category	Hampton Roads		Median		
	Value	Rank*	MSA Value	Virginia	USA
<u>Demographics</u>					
Median Age	35.9	29	37.4	38.2	37.9
% of Population 17 & Younger	22.2%	24	23.1%	22.2%	22.8%
% of Population 65 & Older	13.8%	22	14.3%	14.6%	15.2%
% of Population Who Are African American	55.4%	26	64.7%	62.2%	61.1%
% of Population Who Are White Non-Hispanic	29.8%	3	12.2%	18.7%	12.3%
% of Population Who Are Hispanic	6.5%	24	8.9%	9.0%	17.8%
% of Population Who Moved in Past Year	18.4%	3	15.5%	15.7%	14.6%
% of Population Who Are Foreign Born	6.5%	27	7.7%	12.3%	13.5%
% of Who Don't Speak English at Home	9.2%	29	11.9%	16.2%	21.6%
Birthrate per 1000 women (15 - 50 Years Old)	51	17	51	50	52
Teen Birthrate per 1000 women (15-19 Years Old)	21	6	11	16	14
<u>Commuting</u>					
Mean Travel Time to Work (Minutes)	24.0	26	25.6	28.5	26.6
% Who Traveled to Work by Public Transit	1.8%	22	2.2%	4.1%	5.1%
% Who Worked Outside County of Residence	47.7%	3	26.9%	51.5%	27.6%
<u>Education</u>					
% of People Who Completed High School	91.1%	8	90.0%	89.3%	87.5%
% of People Who Have a Bachelor's Degree	31.4%	25	33.1%	38.1%	31.3%
% of People Who Have an Advanced Degree	11.8%	24	12.4%	16.4%	11.9%
<u>Housing</u>					
Average Household Size	2.59	16	2.58	2.62	2.65
Average Family Size	3.18	19	3.19	3.2	3.27
% of Households With Children in Residence	31.1%	19	31.2%	31.7%	31.1%
% of Housing Units that are Owner-Occupied	60.5%	26	64.4%	65.3%	63.1%
% Owners Spending >30% Income on Housing	31.5%	5	24.6%	26.7%	28.3%
% Renters Spending >30% Income on Housing	26.3%	5	20.8%	21.8%	22.9%
<u>Employment and Income</u>					
% Labor Force Participation	67.4%	7	65.8%	65.8%	63.1%
% of Labor Force in the Armed Forces	9.0%	1	0.1%	2.6%	0.6%
Median Household Income	\$61,805	12	\$59,979	\$68,114	\$57,617
Per Capita Income	\$31,622	19	\$31,733	\$36,206	\$31,128
<u>Other Indicators</u>					
Gini Coefficient	0.44	33	0.46	0.47	0.48
% of People in Poverty	11.4%	23	12.5%	11.0%	14.0%
% of Children Under 18 Years in Poverty	17.5%	18	17.5%	14.3%	19.5%
% of People With a Disability	12.7%	15	12.5%	11.8%	12.8%
% of Veterans in the Civilian Population	15.9%	1	7.4%	10.4%	7.4%
% with Health Insurance Coverage	91.6%	23	92.5%	91.3%	91.4%
% of Children with Health Insurance	95.6%	26	96.4%	95.2%	95.5%

\*Rank & Median Value is for all MSAs with 2016 Populations between 1 - 3 Million, 35 in Total

# Hampton Roads



Population (2016)	1,727,366
Area in Square Miles	2,909
Population Density (2016)	593.8
Population Growth 2011–2016	47,629
Percent Population Growth 2011-2016	3.4%
Percent Employment Growth 2011-2016	3.8%
Civilian Employment (2016)	734,846
Unemployment (2016)	4.6%
Poverty Rate (2011-2015)	12.4%
Taxable Value of Real Estate 2015 (Billions)	\$169.26
On Time High School Graduation Rate (2017)	91.7%
Median Household Income (2011-2015)	\$59,244

# Chesapeake

## City Council

Mayor Alan P. Krasnoff

Vice Mayor Rick West

Mr. Lonnie Craig

Mr. Roland J. Davis

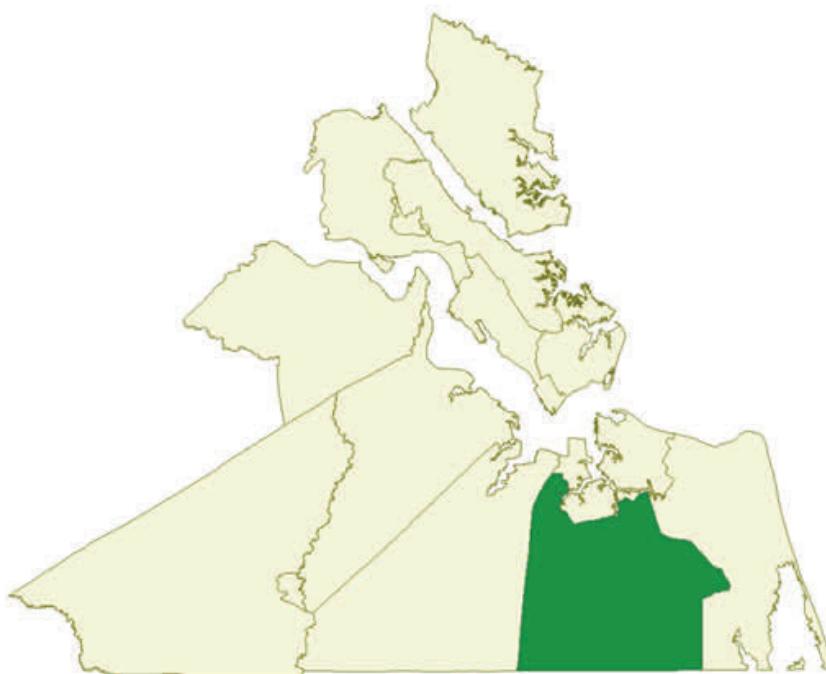
Dr. John de Triquet

Mr. Robert C. Ike Jr.

Ms. Susan H .Kelly

Ms. Debbie Ritter

Dr. Ella P. Ward



Population (2016)-----	240,485
Area in Square Miles -----	340
Population Density (2016)-----	707.3
Population Growth 2011—2016 -----	14,588
Percent Population Growth 2011-2016-----	6.5%
Percent Employment Growth 2011-2016 -----	4.0%
Civilian Employment (2016) -----	98,469
Unemployment (2016) -----	4.3%
Poverty Rate (2011-2015) -----	9.7%
Taxable Value of Real Estate 2015 (Billions) -----	\$23.51
On Time High School Graduation Rate (2017)-----	93.9%
Median Household Income (2011-2015)-----	\$68,620

# Franklin

## City Council

Mayor Frank M. Rabil

Vice Mayor Barry W. Cheatham

Mr. Brenton D. Burgess

Mr. Robert Cutchins

Mrs. Mary E. Hilliard

Mr. Linwood Johnson

Mr. Greg McLemore



Population (2016)-----	8,597
Area in Square Miles-----	8
Population Density (2016)-----	1,074.6
Population Growth 2011–2016 -----	-83
Percent Population Growth 2011-2016 -----	-1.0%
Percent Employment Growth 2011-2016-----	7.8%
Civilian Employment (2016)-----	4,414
Unemployment (2016) -----	5.9%
Poverty Rate (2011-2015) -----	21.2%
Taxable Value of Real Estate 2015 (Billions) -----	\$0.55
On Time High School Graduation Rate (2017) -----	83.3%
Median Household Income (2011-2015) -----	\$32,399

# Gloucester

## Board of Supervisors

Chair Phillip Bazzani

Vice Chair Christopher Hutson

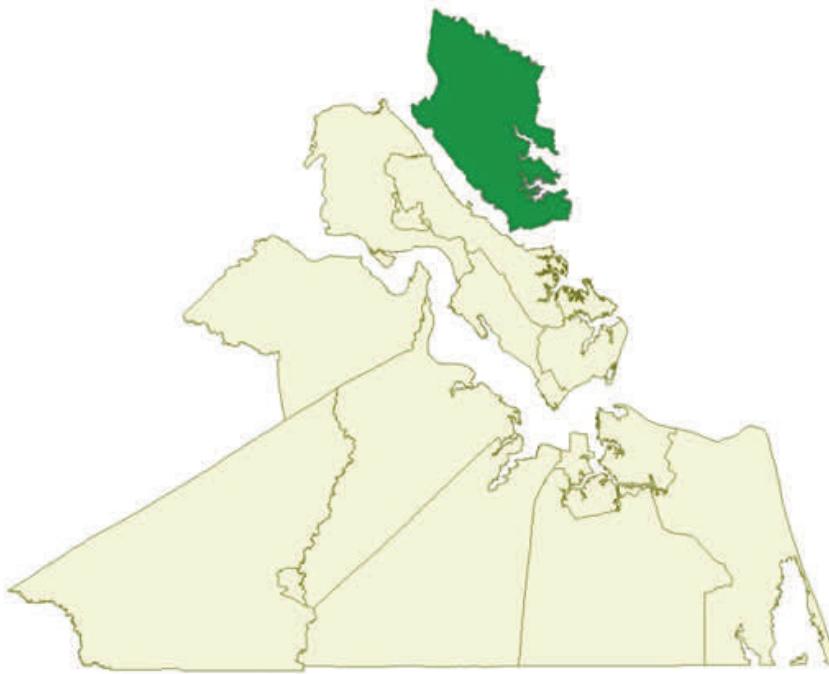
Mr. Ashley Chriscoe

Mr. Andrew James, Jr.

Mr. John Meyer

Mr. Robert Orth

Mr. Michael R. Winebarger



Population (2016)-----	36,983
Area in Square Miles -----	225
Population Density (2016)-----	164.4
Population Growth 2011—2016 -----	-4
Percent Population Growth 2011-2016-----	0.0%
Percent Employment Growth 2011-2016 -----	-0.8%
Civilian Employment (2016) -----	9,344
Unemployment (2016) -----	3.7%
Poverty Rate (2011-2015) -----	7.4%
Taxable Value of Real Estate 2015 (Billions) -----	\$4.20
On Time High School Graduation Rate (2017)-----	91.5%
Median Household Income (2011-2015)-----	\$61,121

# Hampton

## City Council

Mayor Donnie Tuck

Vice Mayor Linda D. Curtis

Mr. James Gray

Mr. W.H. Hobbs

Mr. Will J. Moffett

Ms. Teresa V. Schmidt

Ms. Chris Osby Snead



Population (2016) -----	137,492
Area in Square Miles -----	52
Population Density (2016) -----	2,644.1
Population Growth 2011–2016 -----	120
Percent Population Growth 2011-2016 -----	0.1%
Percent Employment Growth 2011-2016 -----	-1.3%
Civilian Employment (2016) -----	53,826
Unemployment (2016)-----	5.6%
Poverty Rate (2011-2015)-----	15.3%
Taxable Value of Real Estate 2015 (Billions) -----	\$10.40
On Time High School Graduation Rate (2017) -----	91.4%
Median Household Income (2011-2015)-----	\$49,190

# Isle of Wight County

## Board of Supervisors

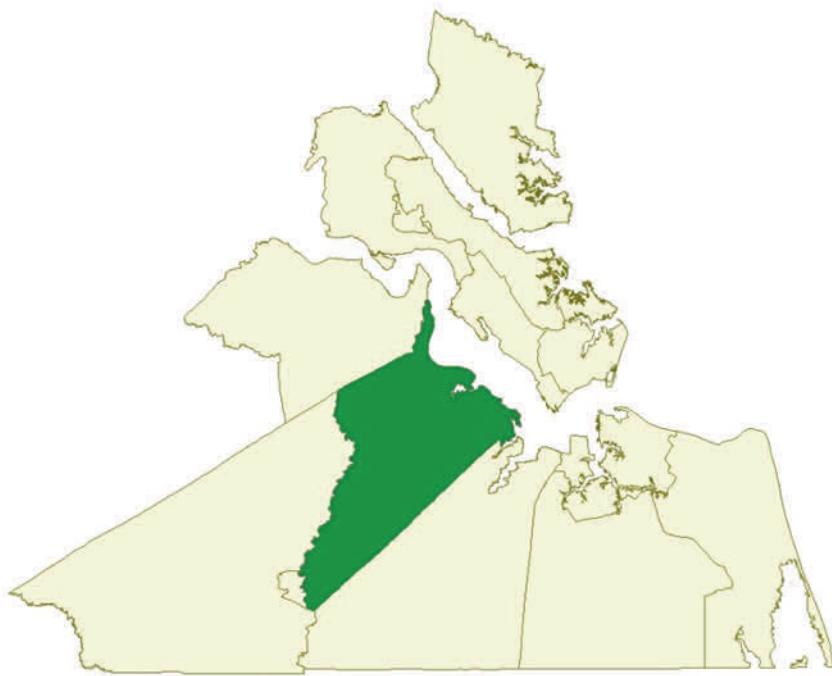
Chair Rex Alphin

Vice Chair Mr. William McCarty

Mr. Joel C. Acree

Mr. Richard L. Grice

Mr. Rudolph Jefferson



Population (2016)-----	37,074
Area in Square Miles -----	316
Population Density (2016)-----	117.3
Population Growth 2011—2016 -----	1,617
Percent Population Growth 2011-2016-----	4.6%
Percent Employment Growth 2011-2016 -----	11.6%
Civilian Employment (2016) -----	10,800
Unemployment (2016) -----	4.3%
Poverty Rate (2011-2015) -----	11.7%
Taxable Value of Real Estate 2015 (Billions) -----	\$4.23
On Time High School Graduation Rate (2017)-----	90.9%
Median Household Income (2011-2015)-----	\$65,741

# James City County

## Board of Supervisors

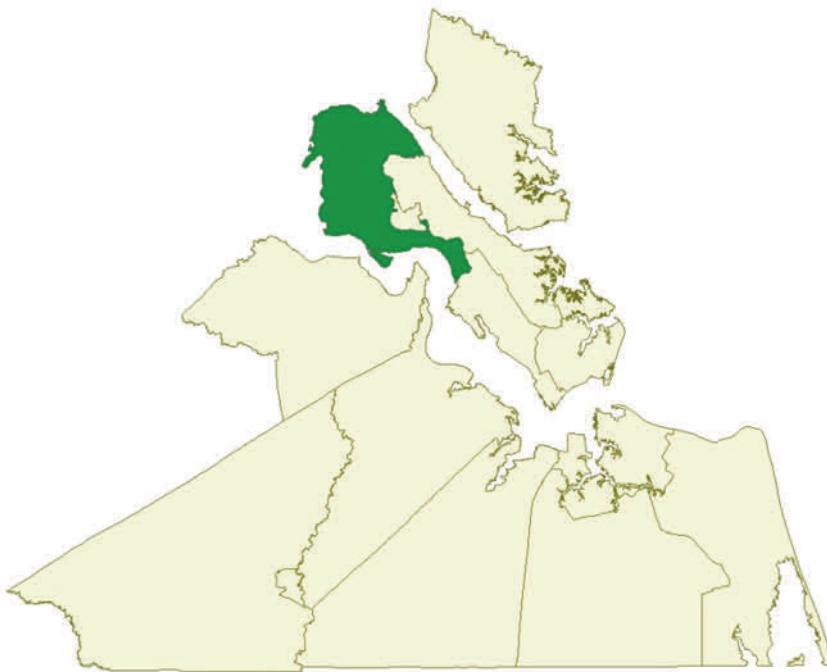
Chair Kevin Onizuk

Vice Chair Ms. Ruth Larson

Mr. Michael Hipple

Mr. John J. McGlennon

Ms. Sue Sadler



Population (2016) -----	73,615
Area in Square Miles -----	153
Population Density (2016) -----	481.1
Population Growth 2011–2016 -----	4,741
Percent Population Growth 2011-2016 -----	6.9%
Percent Employment Growth 2011-2016 -----	9.8%
Civilian Employment (2016) -----	28,972
Unemployment (2016)-----	3.9%
Poverty Rate (2011-2015)-----	8.1%
Taxable Value of Real Estate 2015 (Billions)-----	\$11.35
On Time High School Graduation Rate (2017) -----	91.8%
Median Household Income (2011-2015)-----	\$75,710

# Newport News

## City Council

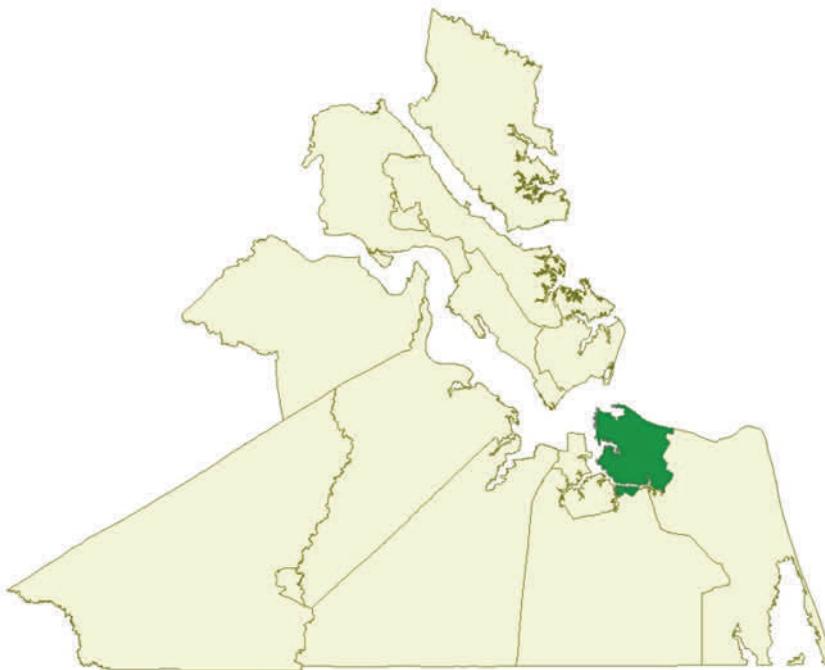


Mayor McKinley Price  
 Vice Mayor Tina L. Vick  
 Mr. Herbert H. Bateman Jr.  
 Ms. Saundra Nelson Cherry  
 Mr. Marcellus L. Harris III  
 Ms. Sharon P. Scott  
 Dr. Patricia P. Woodbury

Population (2016)-----	183,218
Area in Square Miles -----	70
Population Density (2016)-----	2,617.4
Population Growth 2011—2016 -----	2,192
Percent Population Growth 2011-2016-----	1.2%
Percent Employment Growth 2011-2016 -----	-0.1%
Civilian Employment (2016) -----	96,203
Unemployment (2016) -----	5.1%
Poverty Rate (2011-2015) -----	15.7%
Taxable Value of Real Estate 2015 (Billions) -----	\$14.28
On Time High School Graduation Rate (2017)-----	93.2%
Median Household Income (2011-2015)-----	\$50,077

# Norfolk

## City Council



Mayor Kenneth C. Alexander

Vice Mayor Theresa W. Whibley

Ms. Angelia Williams Graves

Ms. Mamie Johnson

Ms. Andria P. McClellan

Mr. Paul R. Riddick

Mr. Thomas R Smigiel Jr.

Mr. Martin A. Thomas Jr.

Population (2016) -----	247,087
Area in Square Miles -----	54
Population Density (2016) -----	4,575.7
Population Growth 2011–2016 -----	3,103
Percent Population Growth 2011-2016 -----	1.3%
Percent Employment Growth 2011-2016 -----	1.6%
Civilian Employment (2016) -----	140,204
Unemployment (2016)-----	5.2%
Poverty Rate (2011-2015)-----	21.0%
Taxable Value of Real Estate 2015 (Billions)-----	\$18.21
On Time High School Graduation Rate (2017) -----	87.1%
Median Household Income (2011-2015)-----	\$44,480

# Poquoson

## City Council

Mayor W. Eugene Hunt Jr.

Vice Mayor Carey L. Freeman

Ms. Jana D. Andrews

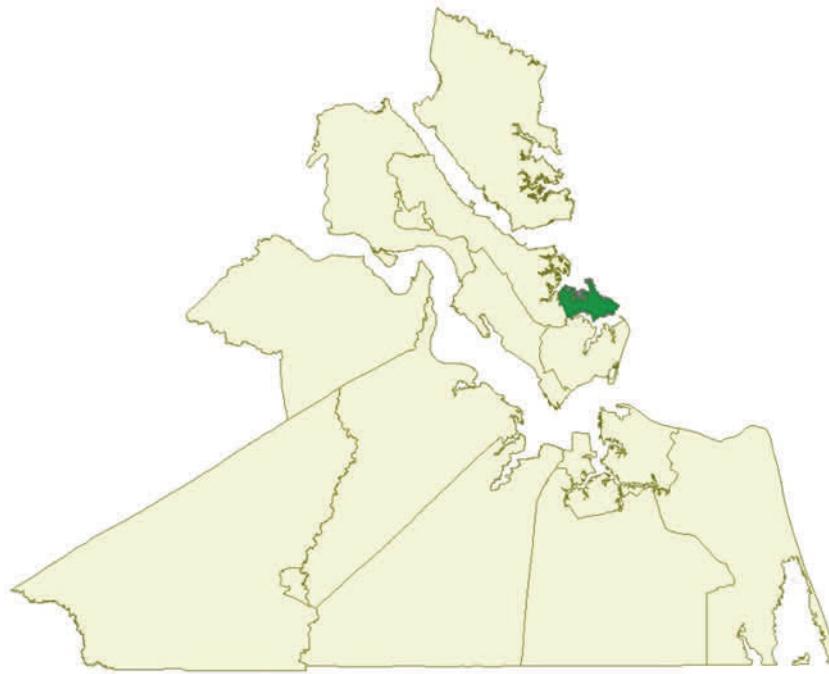
Mr. Thomas J. Cannella II

Mr. Herbert R. Green Jr.

Mr. David A. Hux

Mr. Charles M. Southall III

Ms. Judy F. Wiggins

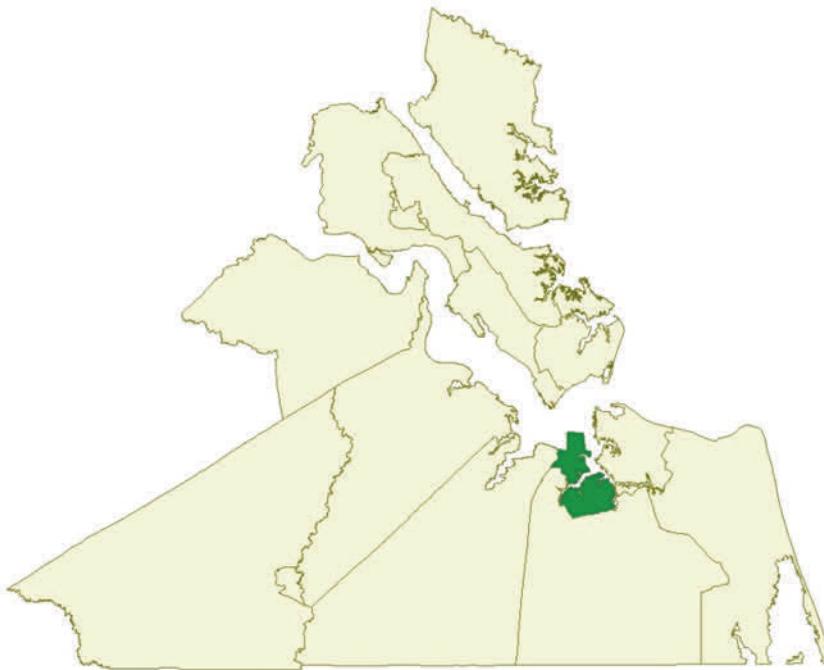


Population (2016)-----	12,287
Area in Square Miles -----	16
Population Density (2016)-----	767.9
Population Growth 2011—2016 -----	47
Percent Population Growth 2011-2016-----	0.4%
Percent Employment Growth 2011-2016 -----	-1.9%
Civilian Employment (2016) -----	1,737
Unemployment (2016) -----	3.5%
Poverty Rate (2011-2015) -----	4.2%
Taxable Value of Real Estate 2015 (Billions) -----	\$1.50
On Time High School Graduation Rate (2017)-----	91.4%
Median Household Income (2011-2015)-----	\$83,735

# Portsmouth

## City Council

Mayor John L. Rowe Jr.  
 Vice Mayor Paige D. Cherry  
 Ms. Lisa Lucas-Burke  
 Mr. Nathan J. Clark  
 Mr. William E. Moody Jr.  
 Ms. Elizabeth M. Psimas  
 Dr. Mark M. Whitaker



Population (2016) -----	96,179
Area in Square Miles -----	33
Population Density (2016) -----	2,914.5
Population Growth 2011–2016 -----	-189
Percent Population Growth 2011-2016 -----	-0.2%
Percent Employment Growth 2011-2016 -----	0.9%
Civilian Employment (2016) -----	43,708
Unemployment (2016)-----	6.1%
Poverty Rate (2011-2015)-----	18.2%
Taxable Value of Real Estate 2015 (Billions)-----	\$7.04
On Time High School Graduation Rate (2017) -----	90.2%
Median Household Income (2011-2015)-----	\$45,676

# Southampton County

## Board of Supervisors

Chair Dallas O. Jones

Vice Chair Ronald M. West

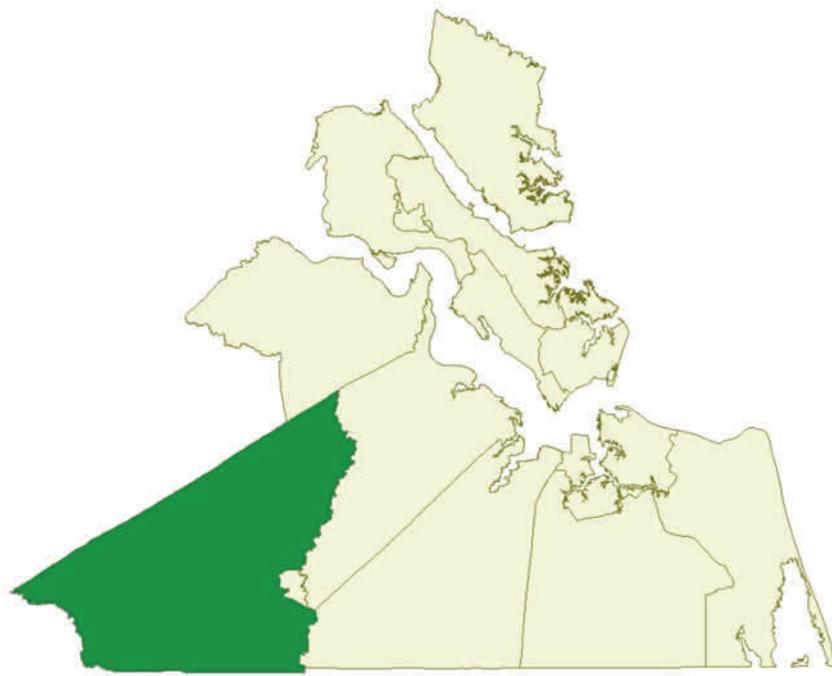
Mr. R. Randolph Cook

Dr. Alan W. Edwards

Mr. Carl J. Faison

Mr. S. Bruce Phillips

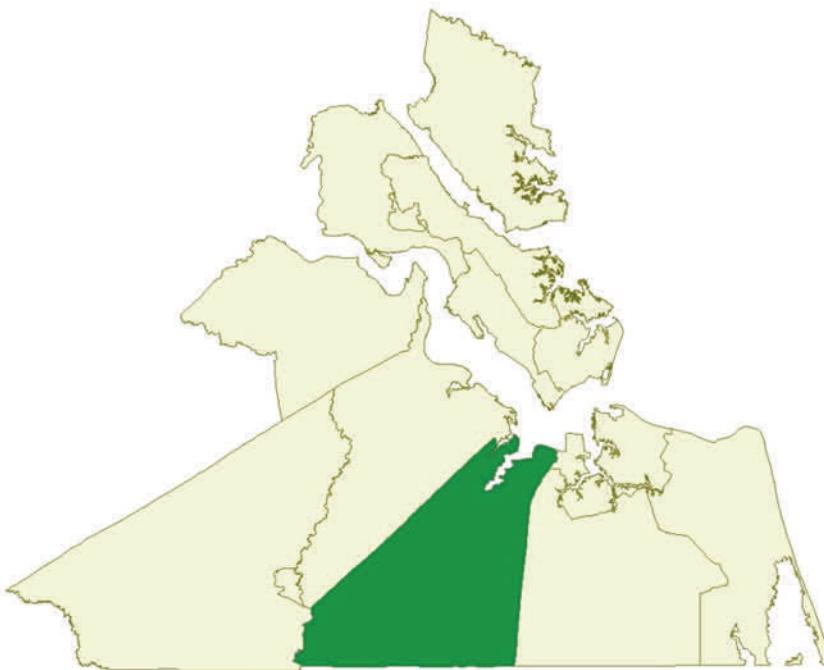
Mr. Barry Porter



Population (2016)-----	18,242
Area in Square Miles -----	600
Population Density (2016)-----	30.4
Population Growth 2011—2016 -----	-472
Percent Population Growth 2011-2016-----	-2.5%
Percent Employment Growth 2011-2016 -----	2.9%
Civilian Employment (2016) -----	3,709
Unemployment (2016) -----	3.9%
Poverty Rate (2011-2015) -----	15.7%
Taxable Value of Real Estate 2015 (Billions) -----	\$1.36
On Time High School Graduation Rate (2017)-----	81.6%
Median Household Income (2011-2015)-----	\$48,962

# Suffolk

## City Council



Mayor Linda T. Johnson  
 Vice Mayor Leroy Bennett  
 Mr. Michael D. Duman  
 Mr. Roger W. Fawcett  
 Mr. Donald Z. Goldberg  
 Mr. Timothy J. Johnson  
 Mr. Curtis R. Milteer Sr.  
 Mr. Lue R. Ward Jr.

Population (2016) -----	91,722
Area in Square Miles -----	400
Population Density (2016) -----	229.3
Population Growth 2011–2016 -----	6,030
Percent Population Growth 2011-2016 -----	7.0%
Percent Employment Growth 2011-2016 -----	20.5%
Civilian Employment (2016) -----	29,843
Unemployment (2016)-----	4.7%
Poverty Rate (2011-2015)-----	11.5%
Taxable Value of Real Estate 2015 (Billions)-----	\$9.03
On Time High School Graduation Rate (2017) -----	88.5%
Median Household Income (2011-2015)-----	\$65,499

# Surry County

## Board of Supervisors

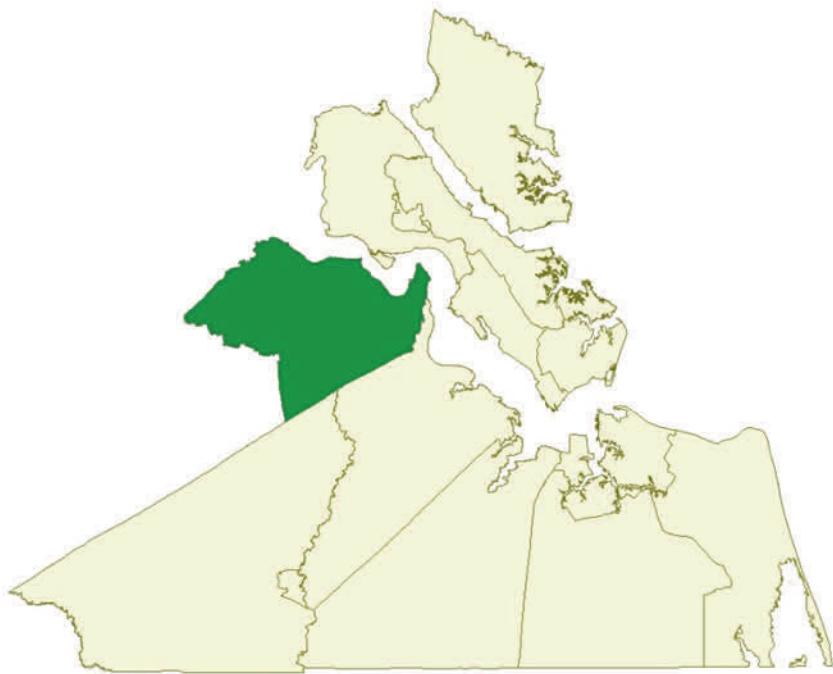
Chair Judy S. Lyttle

Vice Chair Michael H. Drewry

Mr. Kenneth R. Holmes

Mr. John M. Seward

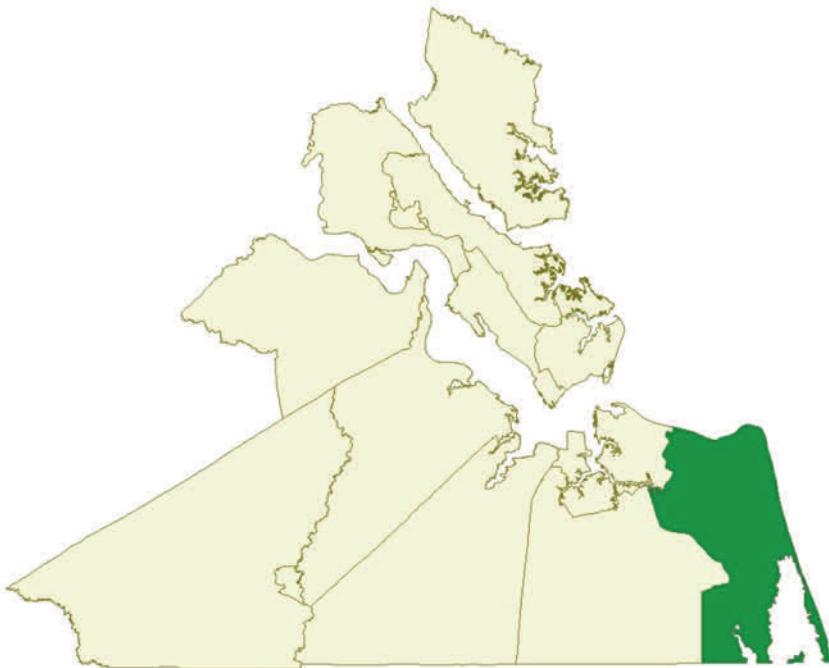
Mr. Giron R. Wooden Sr.



Population (2016)-----	6,743
Area in Square Miles -----	279
Population Density (2016)-----	24.2
Population Growth 2011—2016 -----	-225
Percent Population Growth 2011-2016-----	-3.2%
Percent Employment Growth 2011-2016 -----	-0.7%
Civilian Employment (2016) -----	2,326
Unemployment (2016) -----	5.3%
Poverty Rate (2011-2015) -----	12.9%
Taxable Value of Real Estate 2015 (Billions) -----	\$0.89
On Time High School Graduation Rate (2017)-----	92.5%
Median Household Income (2011-2015)-----	\$53,673

# Virginia Beach

## City Council



Mayor William D. Sessoms Jr.

Vice Mayor Louis R. Jones

Ms. Jessica Abbott

Mr. Benjamin Davenport

Dr. Robert M. Dyer

Ms. Barbara M. Henley

Ms. Shannon Kane

Mr. John Moss

Mr. John E. Uhrin

Ms. Rosemary Wilson

Mr. James L. Wood

Population (2016) ----- 453,628

Area in Square Miles ----- 248

Population Density (2016) ----- 1,829.1

Population Growth 2011–2016 ----- 12,382

Percent Population Growth 2011-2016 ----- 2.8%

Percent Employment Growth 2011-2016 ----- 8.6%

Civilian Employment (2016) ----- 176,481

Unemployment (2016)----- 3.9%

Poverty Rate (2011-2015)----- 8.3%

Taxable Value of Real Estate 2015 (Billions) ----- \$52.08

On Time High School Graduation Rate (2017) ----- 92.3%

Median Household Income (2011-2015)----- \$66,634

# Williamsburg

## City Council

Mayor Paul Freiling

Vice Mayor Scott Foster

Mr. Douglas Pons

Ms. Barbara Ramsey

Mr. Benny Zhang



Population (2016)-----	15,429
Area in Square Miles -----	9
Population Density (2016)-----	1,714.3
Population Growth 2011—2016 -----	1,173
Percent Population Growth 2011-2016-----	8.2%
Percent Employment Growth 2011-2016 -----	-2.4%
Civilian Employment (2016) -----	13,063
Unemployment (2016) -----	5.6%
Poverty Rate (2011-2015) -----	22.4%
Taxable Value of Real Estate 2015 (Billions) -----	\$1.79
On Time High School Graduation Rate (2017)-----	91.8%
Median Household Income (2011-2015)-----	\$48,639

# York County

## Board of Supervisors

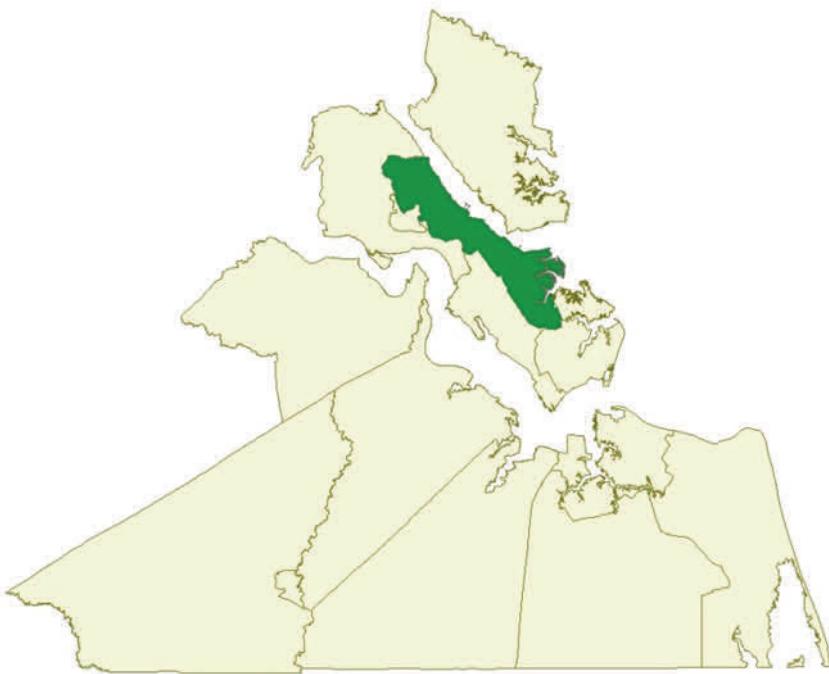
Chair Ms. Sheila S. Noll

Vice Chair Jeffrey D. Wassmer

Mr. W. Chad Green

Mr. Thomas G. Shepperd Jr.

Mr. Walter C. Zaremba



Population (2016) -----	68,585
Area in Square Miles -----	106
Population Density (2016) -----	647.0
Population Growth 2011–2016 -----	2,612
Percent Population Growth 2011-2016 -----	2.8%
Percent Employment Growth 2011-2016 -----	2.0%
Civilian Employment (2016) -----	21,747
Unemployment (2016)-----	3.9%
Poverty Rate (2011-2015)-----	6.4%
Taxable Value of Real Estate 2015 (Billions) -----	\$8.82
On Time High School Graduation Rate (2017) -----	95.9%
Median Household Income (2011-2015)-----	\$81,749

# Smithfield



## Town Council

Mayor T. Carter Williams

Vice Mayor Andrew C. Gregory

Ms. Connie Chapman

Mr. Milton Cook

Mr. Randy Pack

Mr. Michael G. Smith

Ms. Denise N. Tynes

Population (2016) -----	8435
Area in Square Miles -----	10
Population Density (2016) -----	843.5
Population Growth 2011—2016-----	323
Percent Population Growth 2011-2016 -----	4.0%
Percent Employment Growth 2011-2016 -----	Included in Isle of Wight
Employment (2016)-----	Included in Isle of Wight
Unemployment (2016)-----	Included in Isle of Wight
Poverty Rate (2011-2015)-----	10.2%
Taxable Value of Real Estate 2015 (Billions)-----	Included in Isle of Wight
On Time High School Graduation Rate (2017) -----	Included in Isle of Wight
Median Household Income (2011-2015)-----	\$82,958

# Notes

## Data Sources:

- Population (2016)- Weldon Cooper Center
- Area in Square Miles– HRPDC
- Population Density (2016)- Weldon Cooper Center, HRPDC
- Population Growth 2011–2016- Weldon Cooper Center, HRPDC
- Percent Population Growth 2011-2016- Weldon Cooper Center, HRPDC
- Percent Employment Growth 2011-2016- Virginia Employment Center, HRPDC
- Employment (2016)- Virginia Employment Commission
- Unemployment (2016)- Virginia Employment Commission
- Poverty Rate (2011-2015)- U.S. Census Bureau American Community Survey
- Taxable Value of Real Estate 2015 (Billions)- Virginia Department of Taxation
- On Time High School Graduation Rate (2017)- Virginia Department of Education
- Median Household Income (2011-2015)- U.S. Census Bureau American Community Survey

## Section II

# The Economy

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## The Hampton Roads Economy

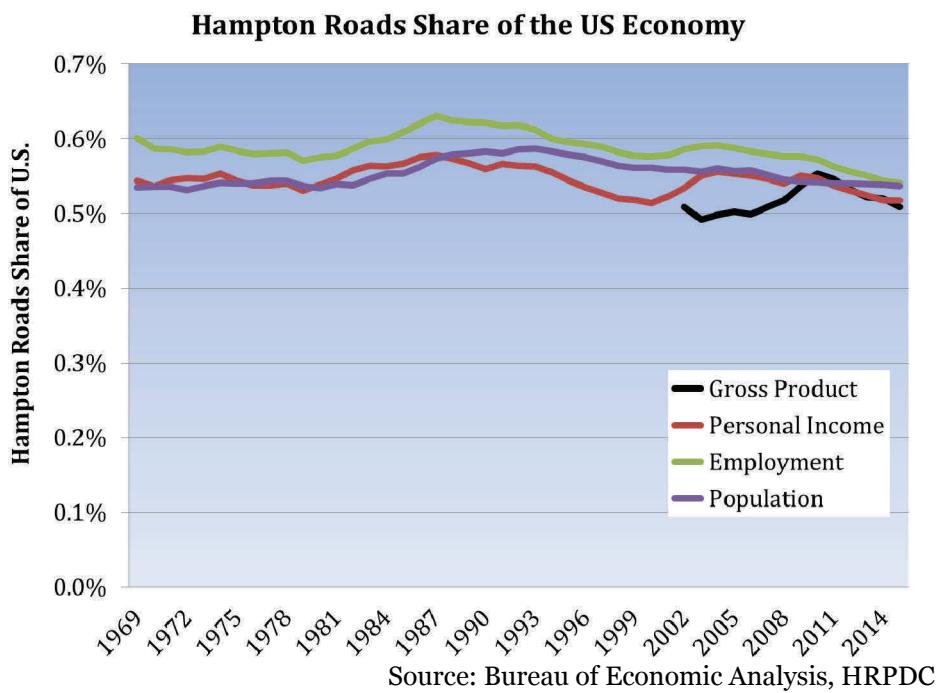
The Hampton Roads economy continues to struggle with after effects from the Great Recession. The region's gross product has been highly variable over the past three years and, while it has surpassed 2007 levels, there is a significant output gap at both the national and regional levels when compared to prerecession trends. Additionally, local growth in gross product and employment has trailed the performance of other metropolitan areas with similar population sizes. Hampton Roads' employment currently lags its prerecession peak by 13,200 jobs (Jul-2007 to Aug-2017).

Employment in Hampton Roads derives mainly from military personnel and federal civilians, as well as industries that are related to the Department of Defense. Healthcare employment has experienced significant growth both regionally and nationally, and it is the only industry that added employment continuously throughout the entire recession.

The gap between the national and regional unemployment rate has declined, reflecting the strong recovery experienced by the country overall. The regional unemployment rate has continued to decline, albeit erratically, and Hampton Roads' labor market remains relatively tight. It is important to note the unemployment measure undercounts the strength of the region's labor market because employed military personnel are not included in the calculation of the unemployment rate.

Regional per capita incomes are similar to the national level after outperforming the country during the initial years of the recession. Most of the income growth in the region has been driven by increased personal transfers (government benefits), as wage and salary income has only slightly increased since 2007 (1.3%).

The Hampton Roads economy is significant on both the national and international stage, with a gross product comparable to some large industrialized countries, and an economy that constitutes about 0.5% of our nation's economy, income, and population.



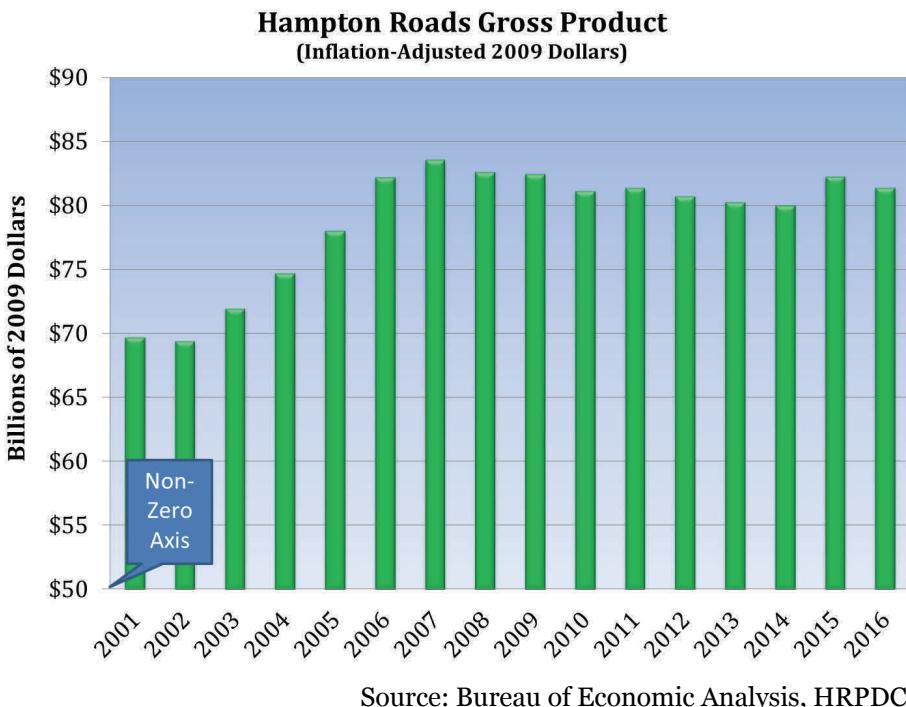
## Figure 2.1 Hampton Roads Historic Gross Product

### Why is it important?

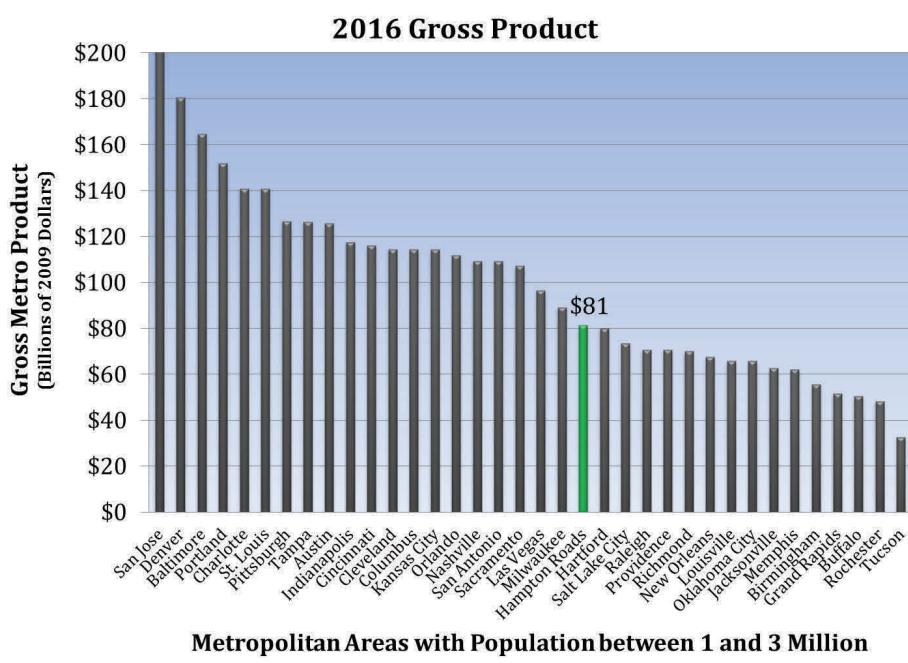
Gross product measures the dollar value of all the goods and services that are produced within a geographic area during a year. Tracking gross product over time illustrates the region's relative economic performance.

### How are we doing?

Between 2001 and 2007, real gross product grew at annualized rate of 3.3%; however, since the recession, the regional economy has failed to grow in real terms and remains 2.6% below the inflation adjusted 2007 level.



## Figure 2.2 Gross Product in Hampton Roads and Reference MSAs



### Why is it important?

It is important to understand the relative size of other metropolitan areas' economies when making direct comparisons. This graph illustrates the broad range in the size of Hampton Roads' reference metropolitan areas.

### How are we doing?

Hampton Roads' gross product reflects both the size of the population and the productivity/value added by its industries. As with most metro areas, the size of the region's economy closely correlates with the size of its population.

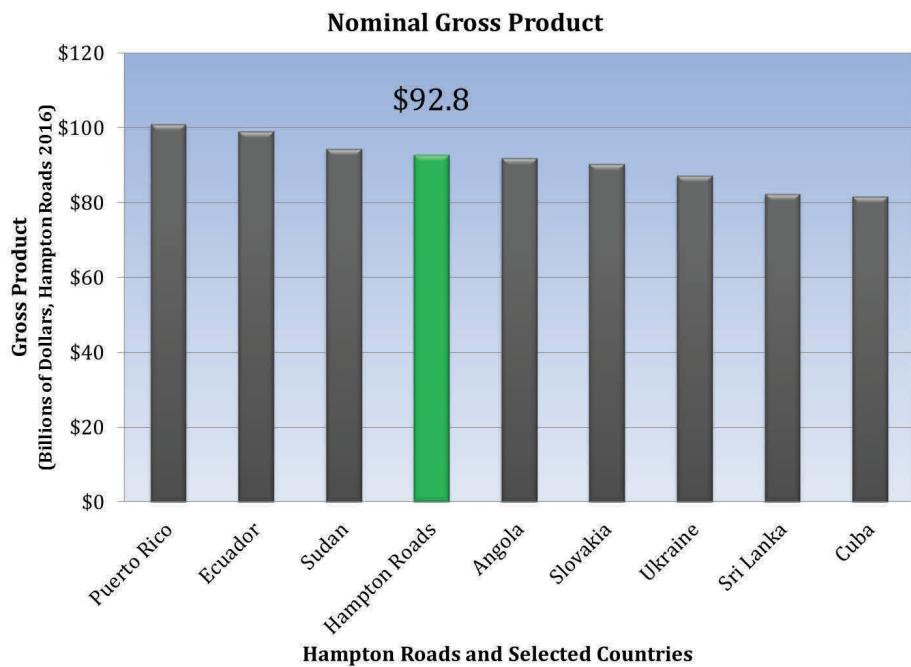
## Figure 2.3 Hampton Roads Gross Product Compared to Foreign Economies

### Why is it important?

A comparison of the Hampton Roads economy relative to foreign economies of a similar size provides perspective as to the magnitude and potential influence of the regional market.

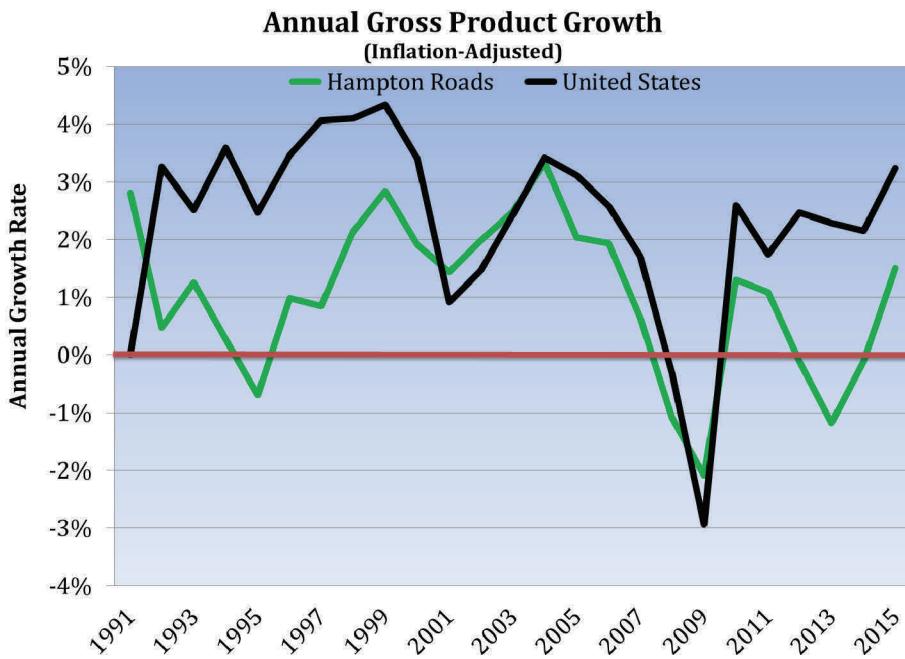
### How are we doing?

Hampton Roads has a world-scale economy, comparable to countries such as Ecuador, Sudan, and Angola. The high levels of growth in output and productivity in both the U.S. and Hampton Roads allows this region's economy to rival those of nations with significantly larger populations.



Source: Bureau of Economic Analysis, CIA Worldbook, HRPDC

## Figure 2.4 National and Regional Gross Product Growth



Source: Regional Economic Modeling, Inc., HRPDC

### Why is it important?

Comparing the gross regional product to the U.S. Gross Domestic Product provides a benchmark against which one can measure the region's performance.

### How are we doing?

The Hampton Roads economy typically grows in tandem with the national economy. The only two deviations from this trend took place during the combined internet boom and defense cuts of the mid 1990s and during the most recent economic recovery.

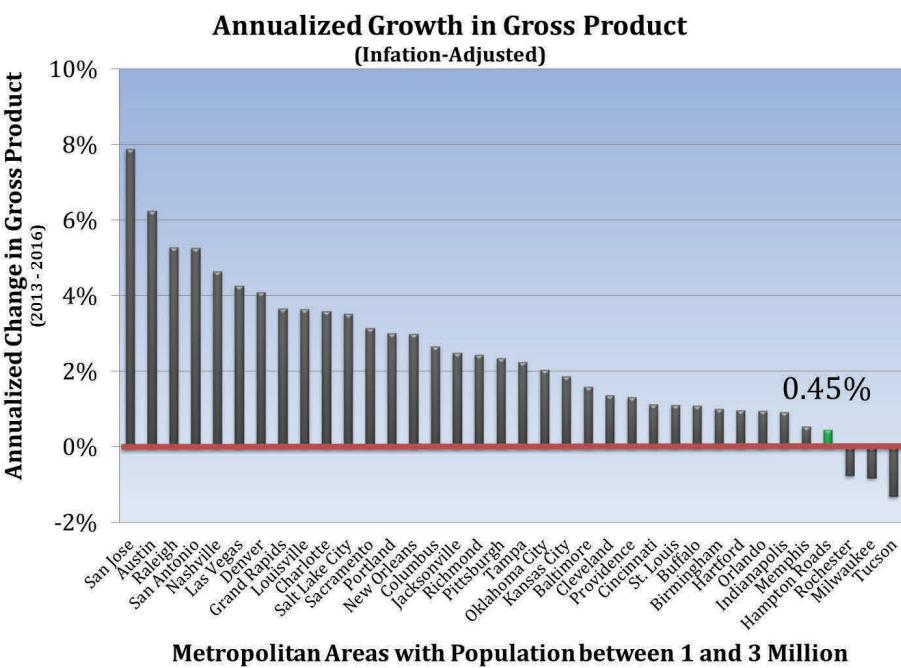
## Figure 2.5 Three-Year Gross Product Growth in Hampton Roads and Reference MSAs

### Why is it important?

The reference metropolitan areas are subject to many of the same pressures that influence economic conditions in Hampton Roads. Benchmarking local economic growth against growth in competing metros allows one to assess a region's performance irrespective of market conditions.

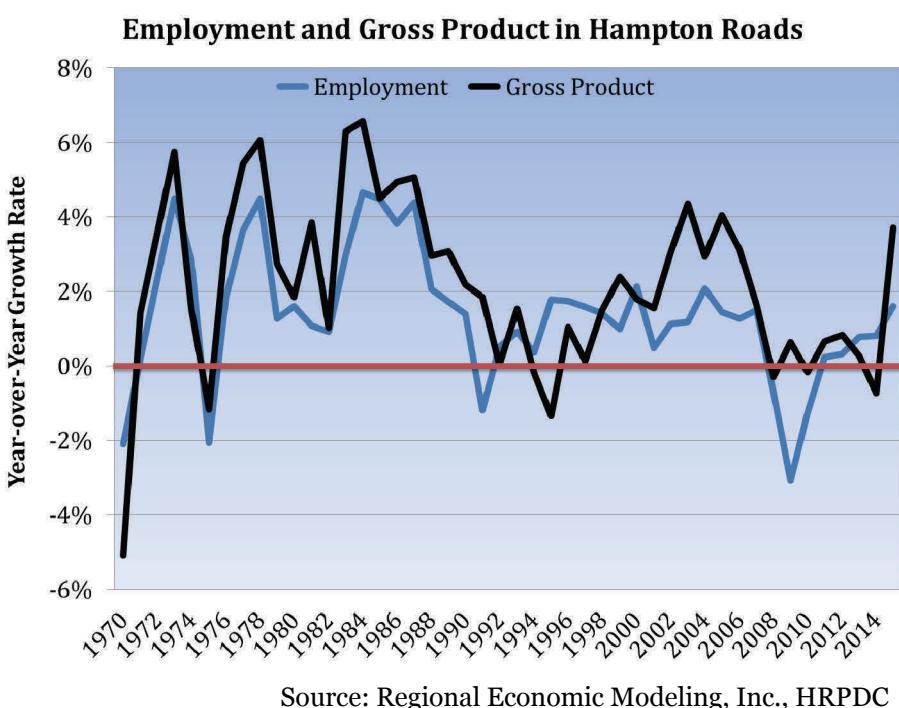
### How are we doing?

While this region has grown since the onset of the recovery in 2010, that growth has been anemic compared to other similar sized metropolitan areas.



Source: Bureau of Economic Analysis, HRPDC

## Figure 2.6 Employment and Gross Product in Hampton Roads



### Why is it important?

Employment figures typically track gross product statistics; however, employment statistics are more readily available from a host of reliable sources. It is common practice to use employment information as a general indicator of economic well-being.

### How are we doing?

Regional economic growth and employment growth are historically related, but that relationship has weakened recently, as periods of sharp employment declines have occurred without commensurate declines in gross product, and vice versa.

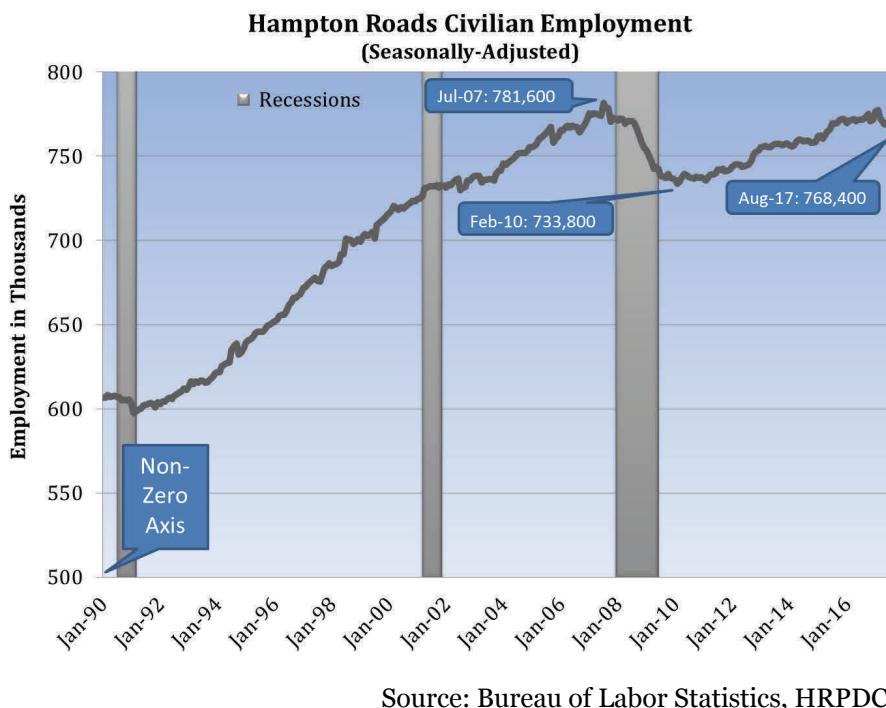
## Figure 2.7 Seasonally Adjusted Hampton Roads Employment

### Why is it important?

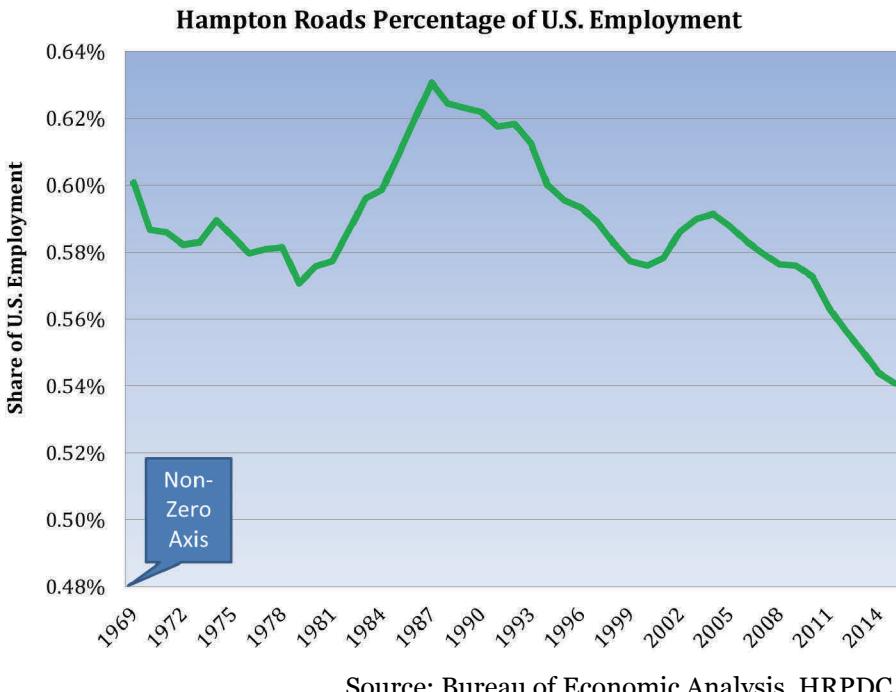
When adjusted for seasonal factors, monthly employment data provide a real time indicator of regional economic activity.

### How are we doing?

The Hampton Roads economy is struggling to return to the prerecession employment peak of July 2007. Seasonally adjusted employment has gradually increased since February 2010, but has experienced a setback this year, with the region losing 8,200 jobs since February 2017. Hampton Roads' employment remains 13,200 jobs below its prerecession peak.



## Figure 2.8 Hampton Roads Employment Share of U.S. Employment



### Why is it important?

The local business cycle influences relative growth rates. Comparing local employment figures to national employment figures reveals how the local business cycle deviates from the national business cycle.

### How are we doing?

Regional employment constitutes a larger share of national employment during periods of elevated military spending, including the 1980s and shortly after 9/11. As military spending has declined relative to economic growth, the region's share of U.S. employment has fallen.

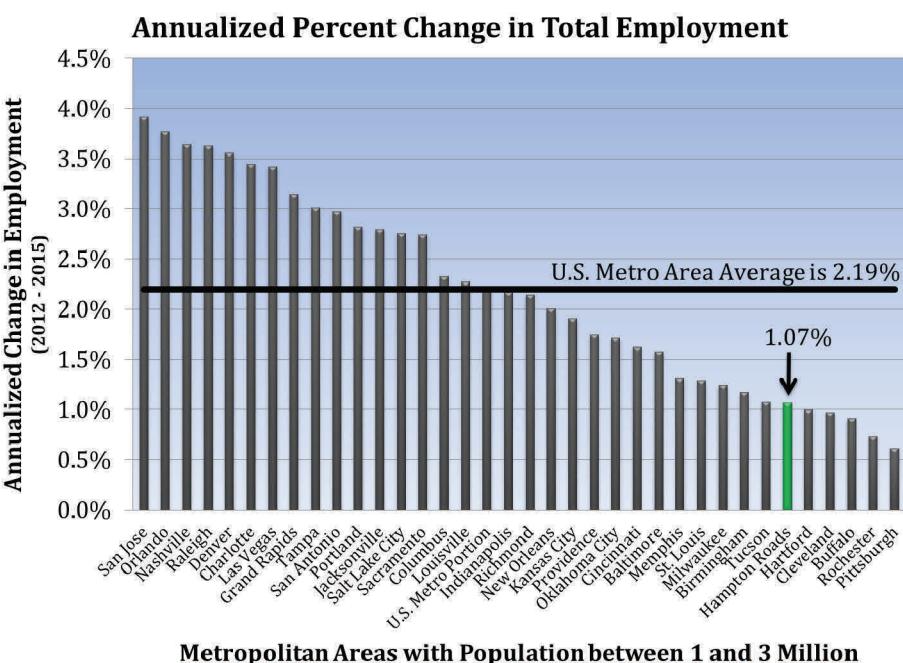
## Figure 2.9 Three-Year Employment Growth in Hampton Roads and Reference MSAs

### Why is it important?

A change in the level of regional employment often coincides with growth or declines in regional output. Comparing Hampton Roads to metropolitan areas of a similar size creates an opportunity to assess the competitive strength and growth prospects for the regional economy.

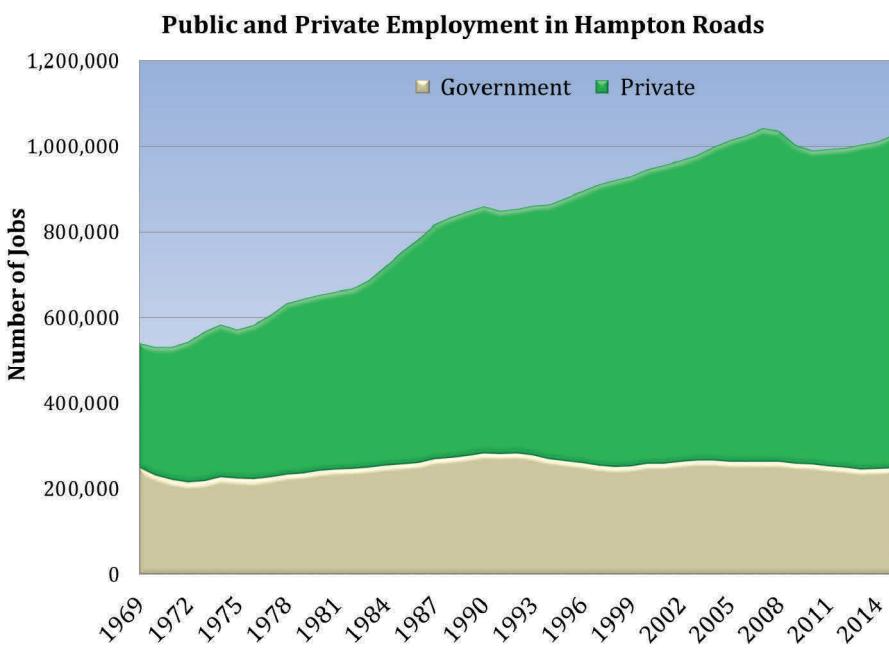
### How are we doing?

Regional employment growth has lagged that of its reference MSAs, as well as the average growth for U.S. metropolitan areas. While year-to-year performance will vary, a sustained period of weak employment growth signals underlying economic issues.



Source: Bureau of Economic Analysis, HRPDC

## Figure 2.10 Public and Private Sector Employment in Hampton Roads



Source: Bureau of Economic Analysis, HRPDC

### Why is it important?

Stable government employment can insulate an economy from volatile markets. Conversely, changes in government employment can exacerbate or counter market forces.

### How are we doing?

While private employment fell sharply during the recession, regional government employment has experienced a gradual decline. Separating regional employment into these categories does not fully capture the influence of the federal government, as civilian contractors supported by the DoD are considered privately employed.

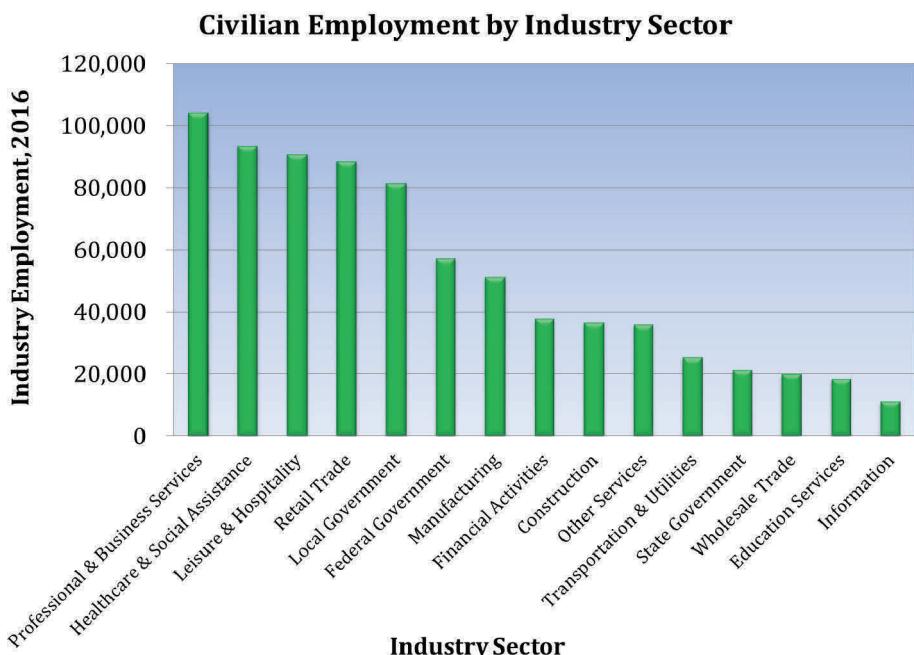
## Figure 2.11 Distribution of Hampton Roads Employment by Industry Sector

### Why is it important?

Regional economic behavior is heavily influenced by its sector composition. The current industrial makeup of a region will influence future economic growth.

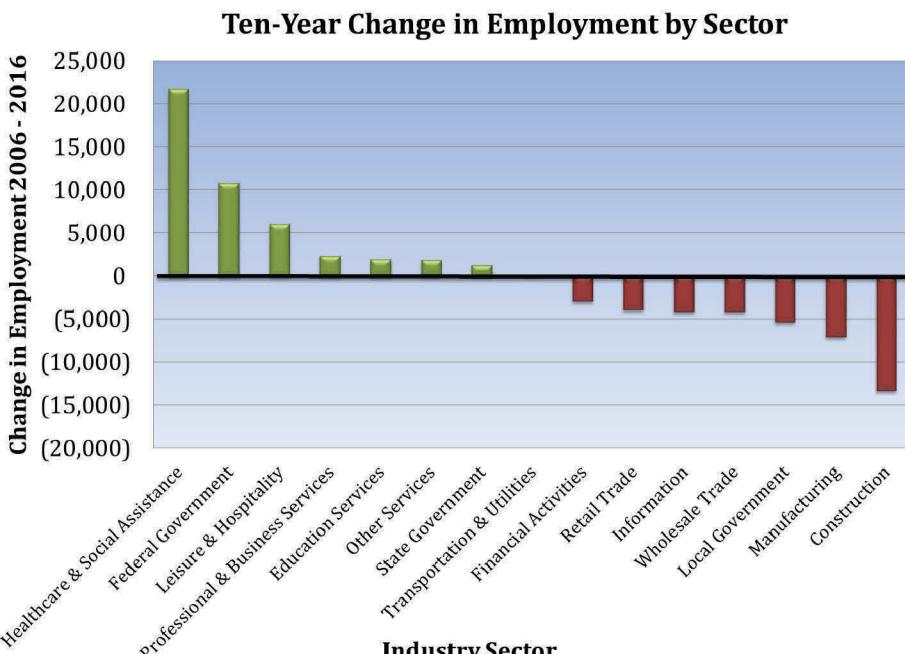
### How are we doing?

Professional and business services, an industry often influenced by government contracting, is the largest regional employment sector. There is also significant employment in healthcare as well as leisure and hospitality.



Source: Bureau of Labor Statistics, HRPDC

## Figure 2.12 Ten-Year Change in Hampton Roads Employment by Industrial Sector



### Why is it important?

Industrial employment is influenced by the business cycle. One can observe local trends by tracking changes in regional industrial employment.

### How are we doing?

Hampton Roads employment has grown by only 4,400 since 2006, but job growth or decline varies considerably by industry.

Healthcare employment continued to grow throughout the recession and the recovery. Conversely, local government, manufacturing, and construction employment continue to be negatively impacted by a weak real estate market.

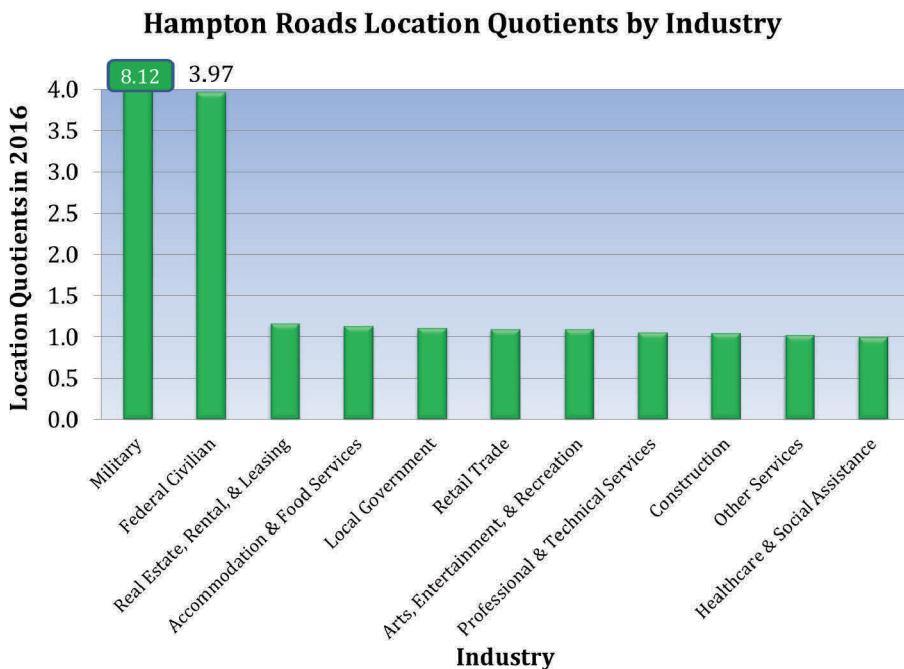
## Figure 2.13 Hampton Roads Industrial Location Quotients

### Why is it important?

Location Quotients (LQ) identify competitive advantages by comparing regional employment distributions to national employment distributions. LQs greater than one suggest a comparative advantage.

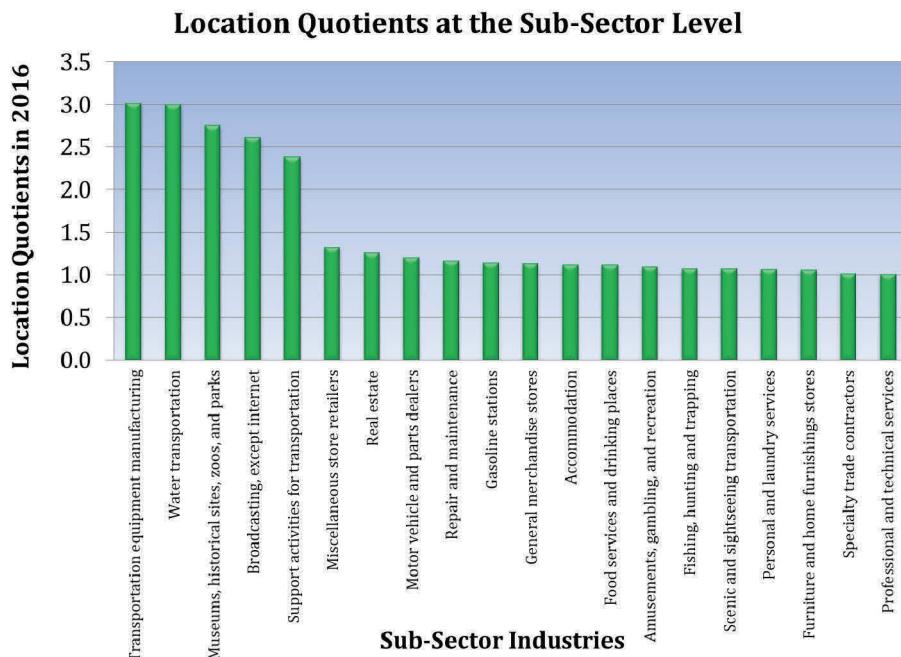
### How are we doing?

The regional concentration of military employment continues to be striking, even as the overall number of military personnel in the region continues to fall. It is also notable that Hampton Roads construction employment has a higher concentration than the construction industry nationwide.



Source: Bureau of Labor Statistics, HRPDC

## Figure 2.14 Hampton Roads Sub-Sector Industrial Location Quotients



Source: Bureau of Labor Statistics, HRPDC

### Why is it important?

Sub-sector LQs reveal specific industries that have a high regional concentration. The industries listed all have a LQ above 1. These sub-sector industries represent the backbone of the private sector economy in Hampton Roads.

### How are we doing?

Transportation equipment manufacturing, water transportation, and attraction employment (museums, historical sites, et al) reflect the three basic sector industries of the regional economy: the port, the DoD (shipbuilding), and tourism.

## Figure 2.15 Unemployment Rates in the U.S., Virginia, and Hampton Roads

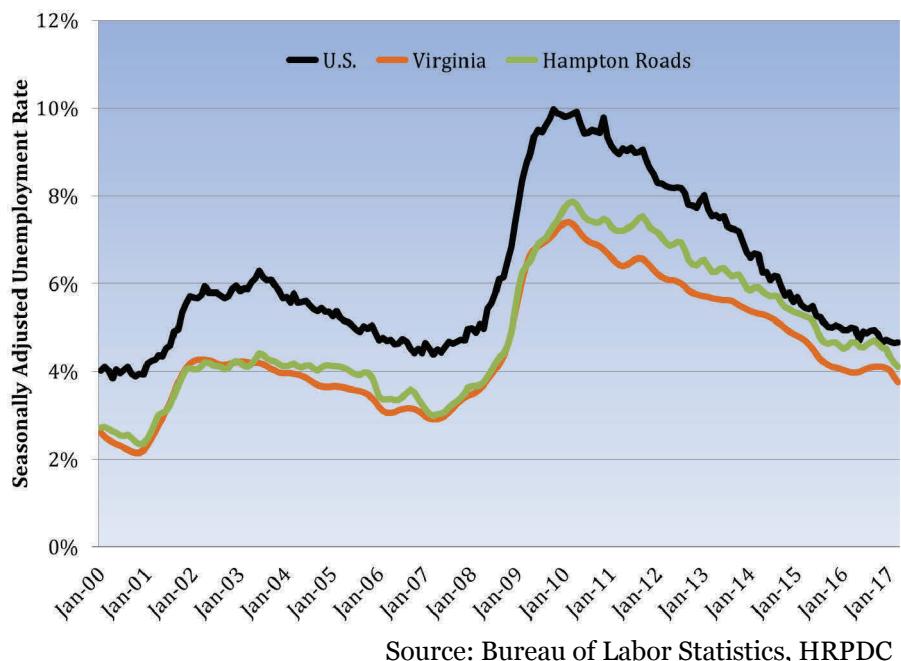
### Why is it important?

Unemployment rates reflect the general well-being of the labor force and the ability of the labor force to meet the needs of employers. Comparing the regional unemployment rate to the national rate enables one to assess the condition of the regional labor market over time.

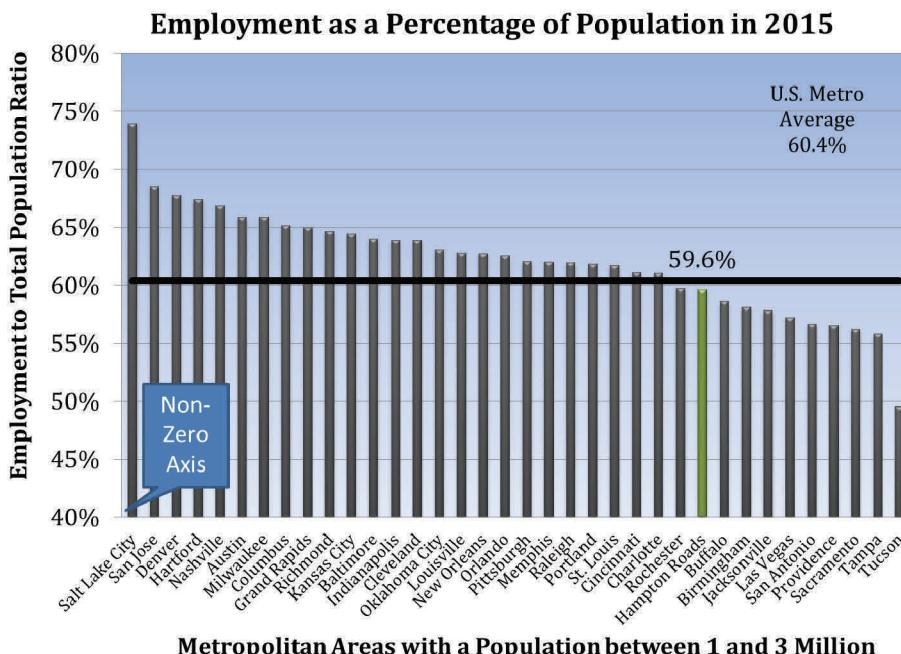
### How are we doing?

Hampton Roads historically has had a low unemployment rate compared to the nation, a trend that has continued throughout the recession; however, the gap has narrowed significantly during the recovery.

Unemployment Rate in the U.S., Virginia, and Hampton Roads



## Figure 2.16 Employment to Population Ratio in Hampton Roads and Reference MSAs



### Why is it important?

Comparing the number of jobs in the economy to the total population indicates how many jobs support the regional economy relative to those not working, which includes children, retirees, and those who are unemployed/out of the labor force for other reasons.

### How are we doing?

The employment to population ratio in Hampton Roads falls just below the national average for metropolitan areas, and at the lower end of the range for this region's reference metropolitan areas.

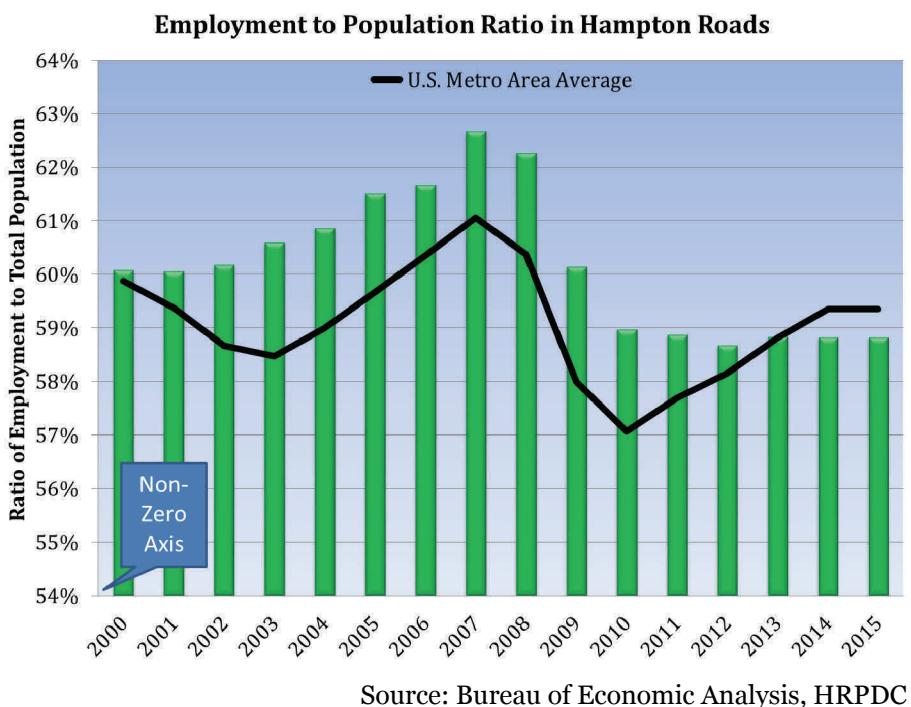
## Figure 2.17 Employment to Population Ratios in Hampton Roads and the U.S.

### Why is it important?

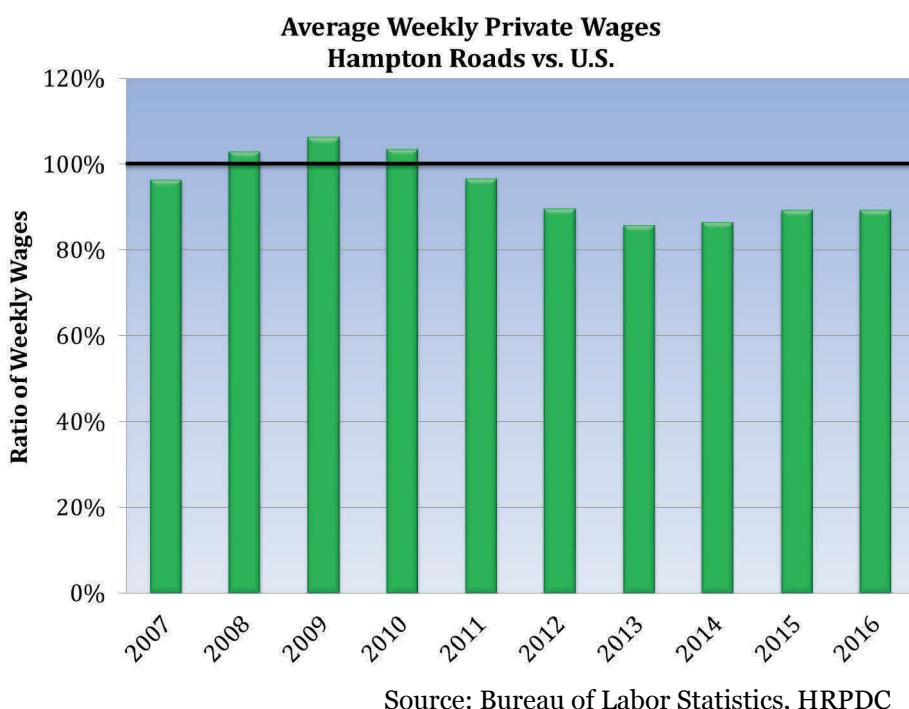
Changing employment to population ratios can be the result of either economic or demographic changes. Considering changes in the employment to population ratio will result in a better understanding of the market.

### How are we doing?

Hampton Roads employment to population ratio has fallen off its recent peak of 62.5% in 2007 due to its growing population and weak regional employment growth. While most MSAs saw a similar decline from 2007, they have had growing participation since 2010, but this region has not experienced similar growth.



## Figure 2.18 Ratio of Average Weekly Wages



### Why is it important?

Average weekly wages combines a variety of information, including the tightness of the regional labor market, the cost of living, and the productivity of labor within the region.

### How are we doing?

Hampton Roads' weekly wage increased relative to that of the nation in 2008 and 2009, reflecting the impact of the recession on the rest of the country, and relative stability of this region's economy. As the rest of the country has experienced a robust recovery, DoD cuts beginning in 2012 have caused this region's relative wage to decline.

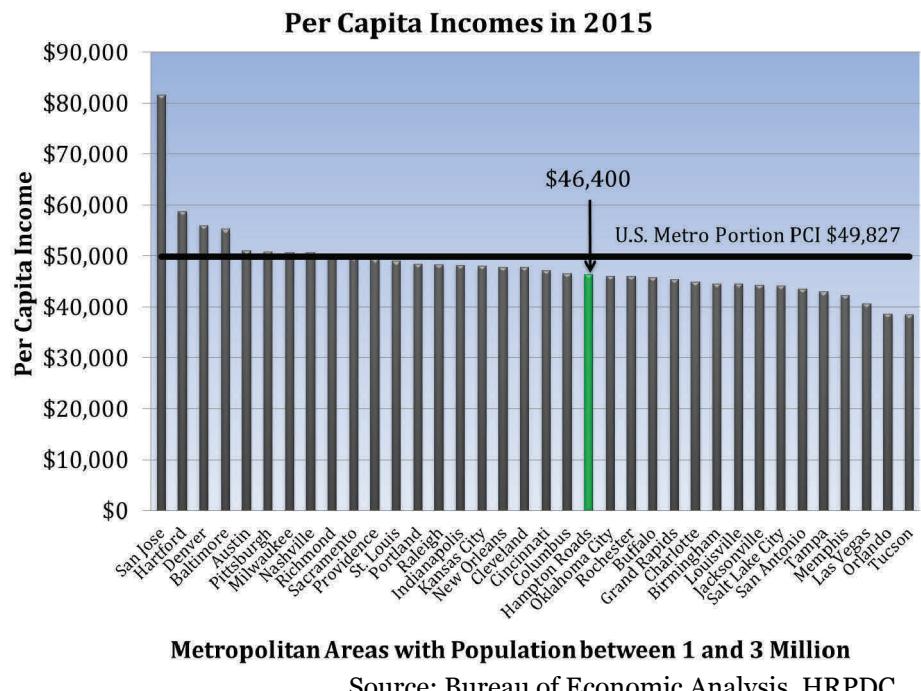
## Figure 2.19 Per Capita Income in Hampton Roads and Reference MSAs

### Why is it important?

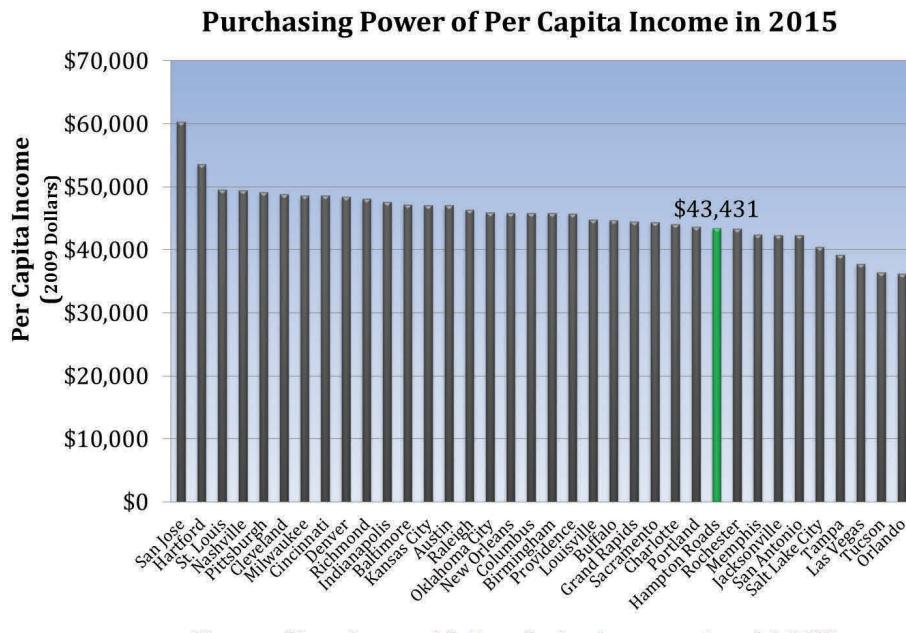
Per capita income is the most widely available statistic on economic well-being. Per capita income is estimated by dividing total personal income by the population of the region.

### How are we doing?

Hampton Roads per capita income is slightly below the U.S. metropolitan portion average, but remains in line with the incomes of its reference MSAs.



## Figure 2.20 Purchasing Power of Income in Hampton Roads and Reference MSAs



### Why is it important?

The cost of living can vary substantially between metropolitan areas. Understanding incomes within the context of the cost of living provides a clearer picture of real purchasing power parity.

### How are we doing?

The cost of living in Hampton Roads is slightly more expensive than many of its reference metro areas, thus the per capita income adjusted for purchasing power performs slightly worse than its unadjusted per capita income. Rents, in particular, are 5.4% higher in Hampton Roads than in the average MSA.

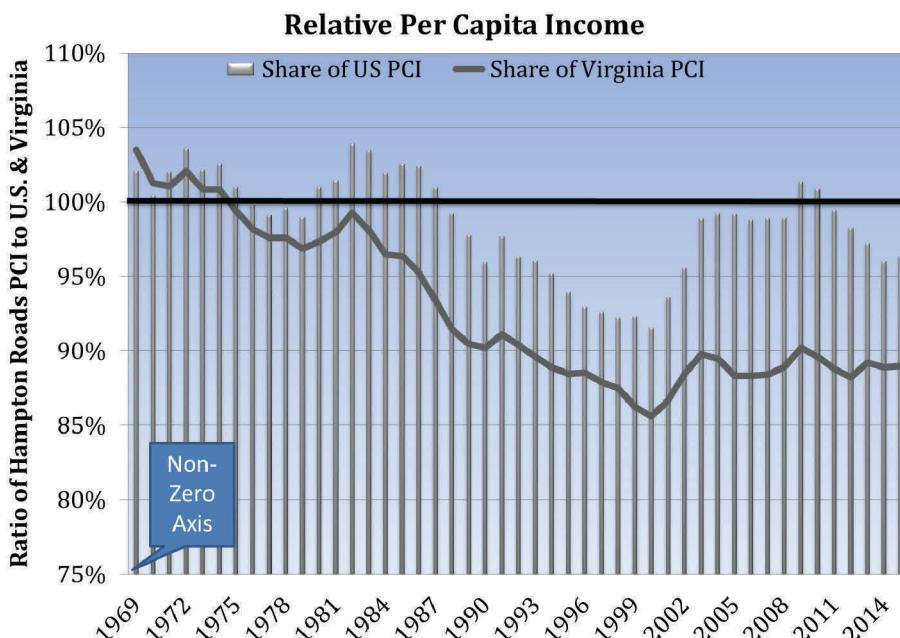
## Figure 2.21 Relative Per Capita Income of Hampton Roads to Virginia and U.S.

### Why is it important?

Fluctuations in relative incomes reflect variations in standards of living. It is useful to track how well Hampton Roads performs in relation to the state and the nation.

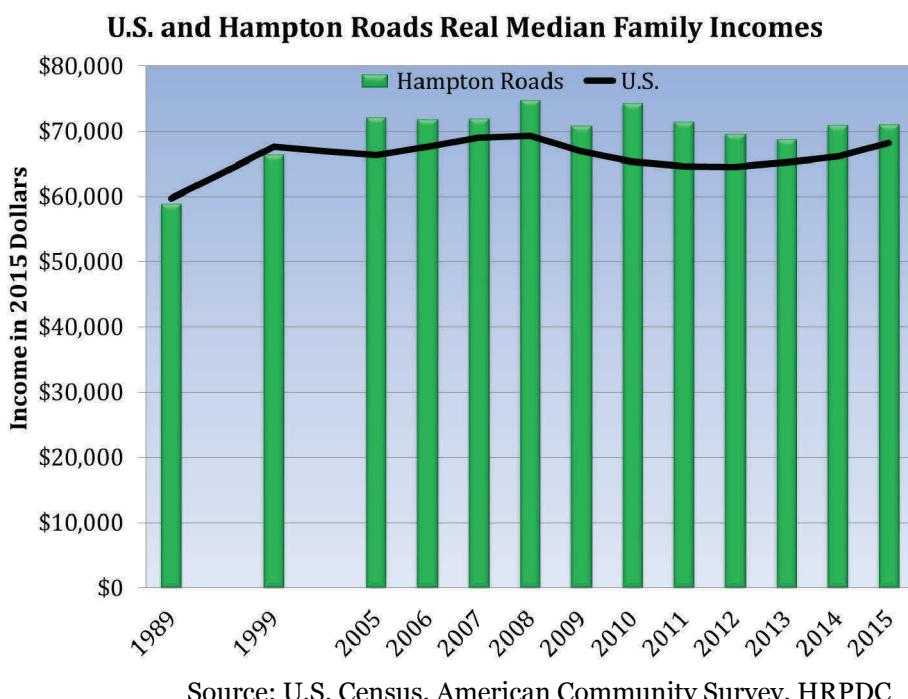
### How are we doing?

Hampton Roads per capita incomes levels returned to those of the nation over the past four years, but its performance compared to the Commonwealth's has held steady over the same period, suggesting the same forces propel growth in incomes for both Virginia and Hampton Roads.



Source: Bureau of Economic Analysis, HRPDC

## Figure 2.22 U.S. and Hampton Roads Real Median Family Incomes



Source: U.S. Census, American Community Survey, HRPDC

### Why is it important?

The median family income represents the general well-being of regional households. Families are the fundamental purchasing unit for many products and services.

### How are we doing?

Real median family incomes have remained fairly constant over the last eight years. Regionally, families have maintained their income levels better than median family income at the national level.

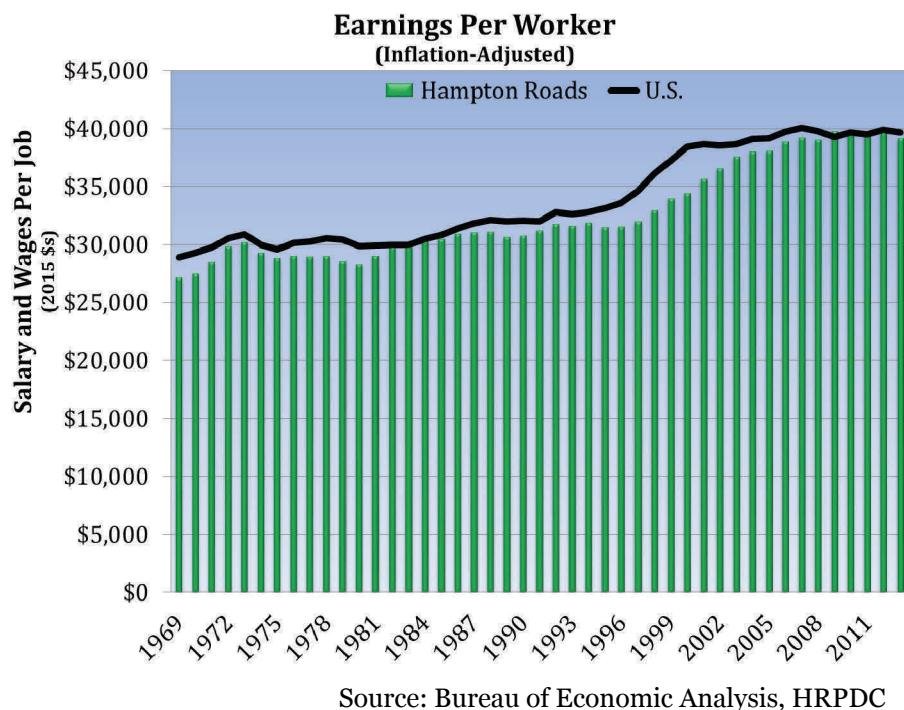
## Figure 2.23 Inflation Adjusted Earnings Per Worker in Hampton Roads and the U.S.

### Why is it important?

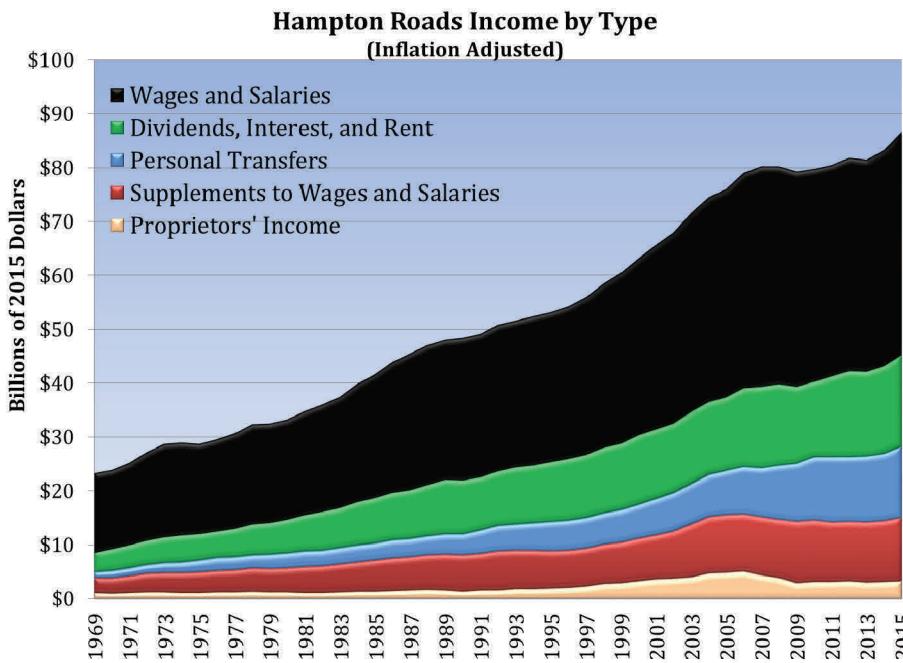
One indicator of productivity is earnings-per-worker. Employment shifts from low to high paying jobs, along with increased salaries both suggest increased productivity. Stable employment and slow growth in earnings are both signs of limited productivity.

### How are we doing?

Real earnings per worker have grown fairly consistently since 1970. Hampton Roads' growth in this metric has paralleled that of the nation, catching up to national levels during periods of higher defense spending, including the 1980s and after 9/11.



## Figure 2.24 Hampton Roads Income by Source



### Why is it important?

Although there are numerous sources of income for individuals, and while those sources may under/over perform, the overall trend in incomes is important.

### How are we doing?

Since the onset of the Great Recession, only wage & salary incomes have declined, and while that is the largest income category, strong growth in several other categories, particularly personal transfers, have allowed total incomes in the region to continue growth.

## Section III

# Defense Industry

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## The Defense Industry in Hampton Roads

The Department of Defense (DoD) serves as the primary driver of the Hampton Roads economy. It is influenced by military personnel, military families, federal civilian employees, military contracts, and the numerous veterans who call this region home. The HRPDC's [Economic Impact of the Department of Defense in Hampton Roads](#) report estimated that through direct, indirect, and induced impacts, the DoD supports approximately 40% of all regional employment.

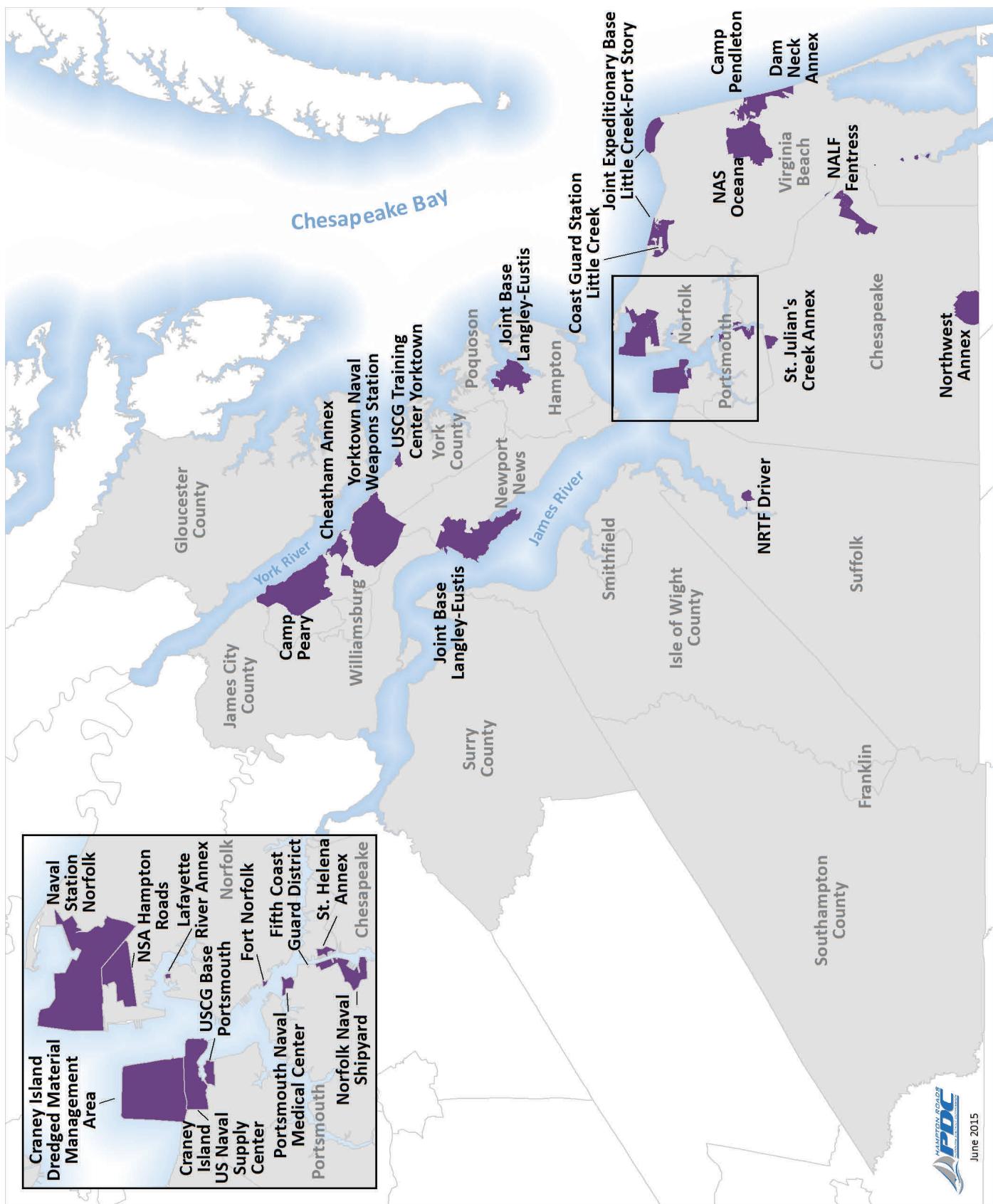
DoD spending sustained high real levels of spending through the second half of the past decade, but the combination of winding down the wars in Iraq and Afghanistan, budget pressures from the recession, and changing spending priorities will likely cause defense spending to decline both in absolute terms and as a share of GDP. Reflecting the change in national spending, DoD contracting dollars in Hampton Roads have declined in recent years after a period of strong growth between 2001 and 2011.

The number of military personnel in Hampton Roads varies based on strategic needs, but has generally declined since the end of the Vietnam War, with exceptions for the 1980's and the beginning of the War on Terror. As military employment has fallen, its share in total regional employment and regional incomes has also dropped. At the same time, some of the decline in military personnel has been replaced by contracting dollars as the military began to employ contractors and local businesses to complete tasks formerly performed by uniformed personnel.

The Ship and Boat Building & Repair Industry in Hampton Roads serves as its own sub-cluster within the larger defense-related industries in Hampton Roads. Newport News Shipbuilding remains one of two U.S. shipbuilders capable of building nuclear submarines and the only shipyard in the country capable of building nuclear aircraft carriers. Additionally, numerous other shipyards in the region maintain the U.S. fleet and employ many in Hampton Roads.

The Defense Industry Section of the Benchmarking Study contains 1 map and 13 graphics illustrating the state of the DoD and its impact on this region.

## **Map 3.1 Military Installations in Hampton Roads**



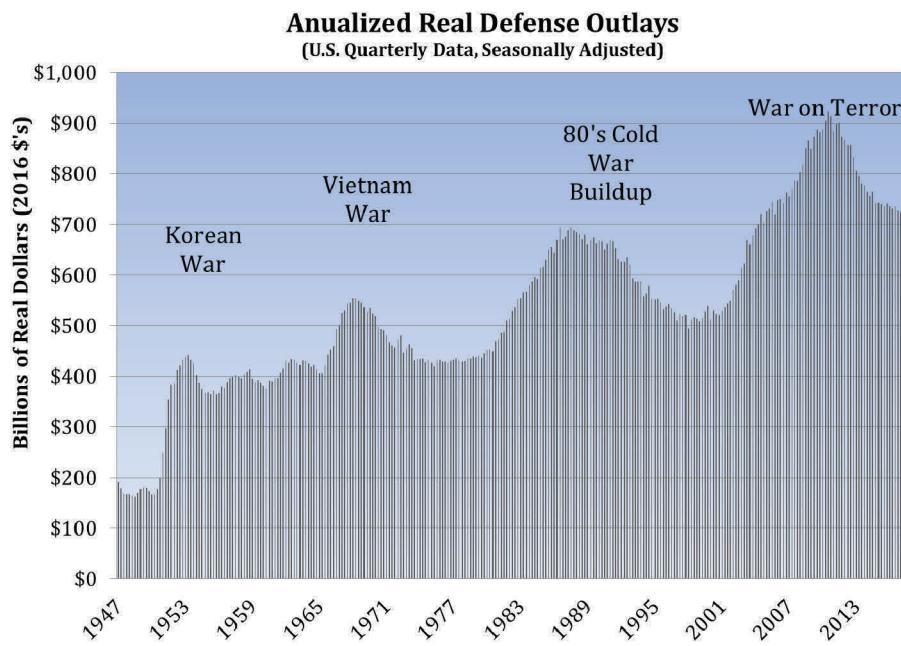
## Figure 3.1 Cycle of National Defense Spending

### Why is it important?

Defense expenditures in Hampton Roads are closely tied to federal defense outlays. National defense spending has a direct impact on the regional economy.

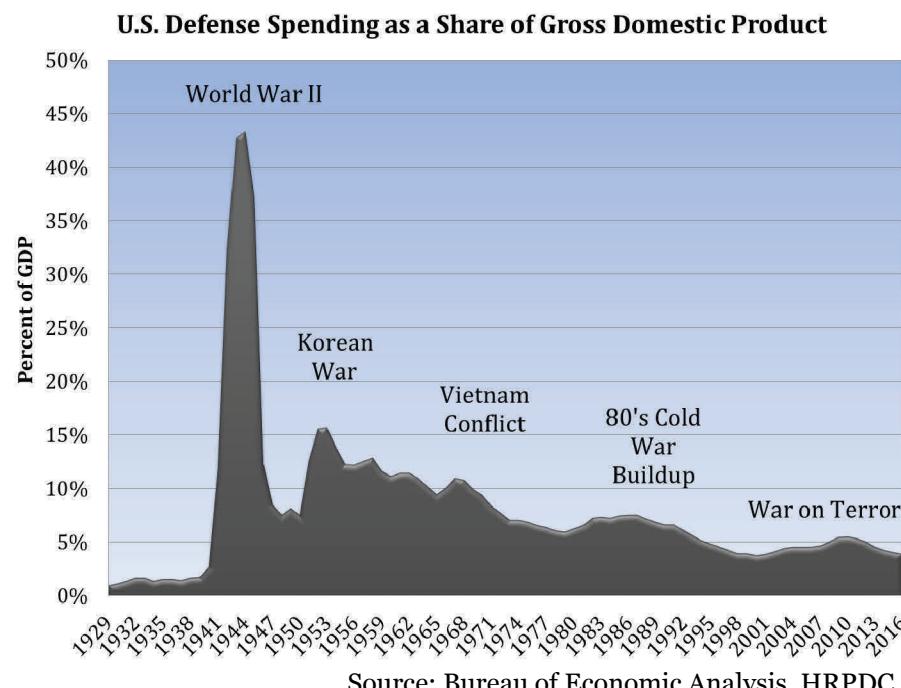
### How are we doing?

National defense spending increased during the Reagan Administration and fell following the collapse of the USSR. Defense spending began increasing again around the turn of the century, but has contracted recently as a result of the fiscal challenges that face the nation.



Source: Bureau of Economic Analysis, HRPDC

## Figure 3.2 Cycle of National Defense Spending as Share of Gross Domestic Product



### Why is it important?

Overall levels of defense spending, both in the U.S. and other countries, are often tied to growth in gross product.

### How are we doing?

Defense spending in terms of gross product has declined significantly since the beginning of the Cold War. This results from a larger U.S. economy and changing government spending priorities. As government healthcare expenses continue to grow, defense spending, as a share of gross domestic product, will likely continue to decline unless the government begins to raise new revenue.

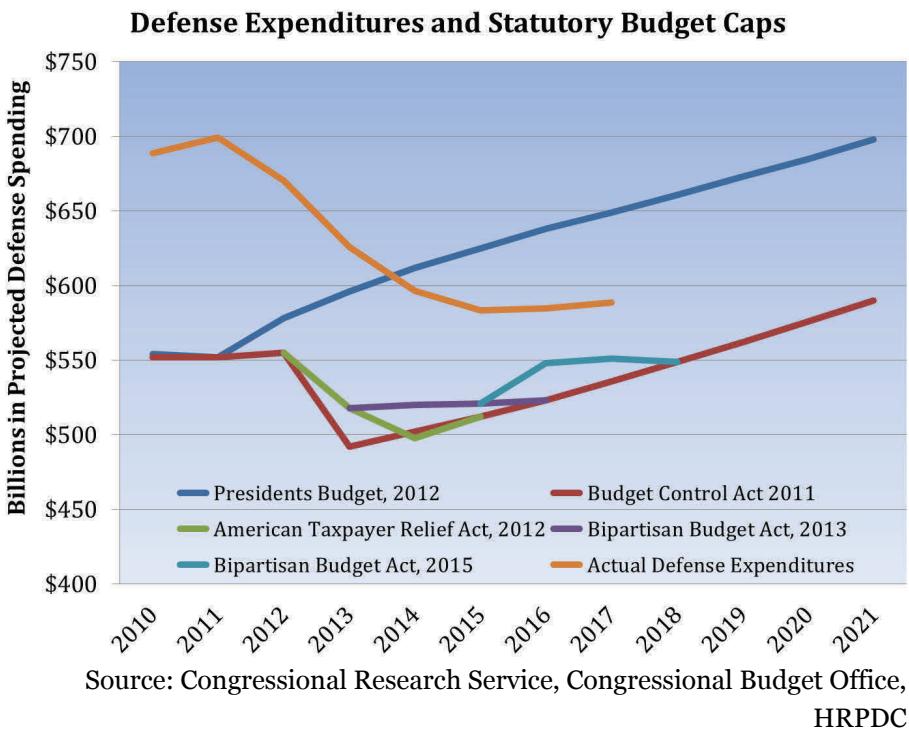
## Figure 3.3 Projected Defense Budget

### Why is it important?

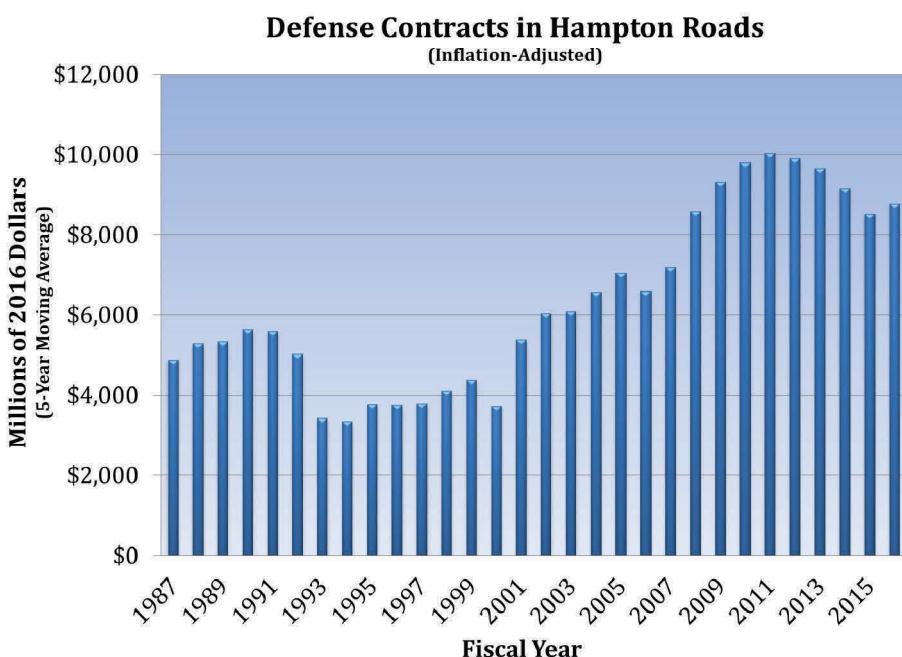
Defense expenditures are important to the local economy. The two factors that determine defense spending in the region are the share of U.S. defense spending which comes to Hampton Roads, as well as the overall level of spending.

### How are we doing?

The Budget Control Act significantly reduced the amount that could be authorized for defense expenditures. Several subsequent bills have increased the caps at various points, but through the use of overseas contingency funds, actual defense expenditures have never conformed to even the expanded caps.



## Figure 3.4 Inflation Adjusted Department of Defense Spending in Hampton Roads



### Why is it important?

Spending on defense contracts in this region supports a significant portion of regional economic activity. This figure shows the dollars obligated for Department of Defense contracts that were performed in this region.

### How are we doing?

After a long period of growth in defense contracts performed in Hampton Roads, contracting dollars have declined since 2011, contributing to the region's tepid recovery from the Great Recession; fortunately, this trend reversed itself in 2016.

Source: USA Spending.gov, Consolidated Federal Funds Report, HRPDC

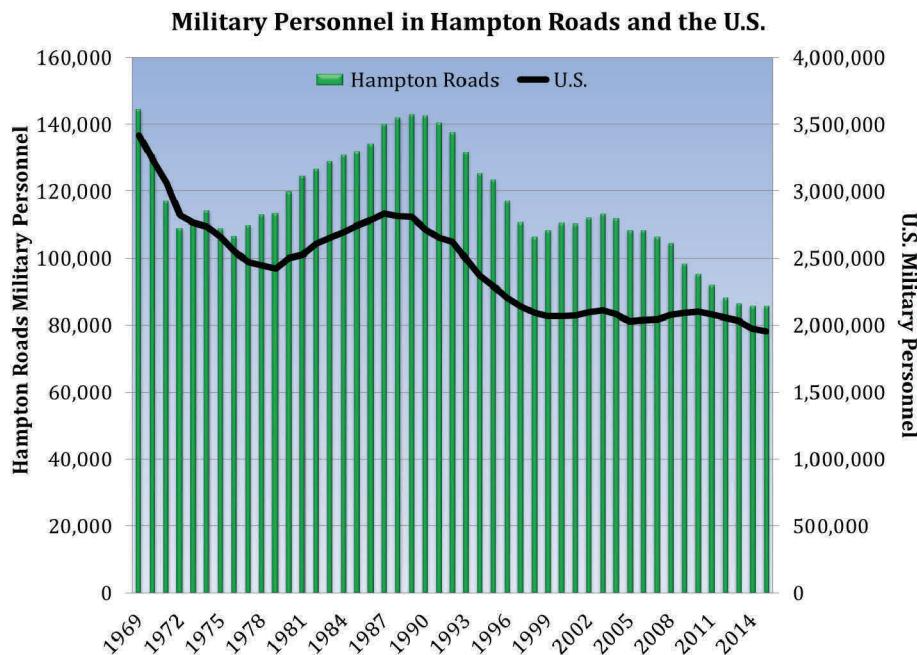
## Figure 3.5 Total Military Personnel in Hampton Roads & the U.S.

### Why is it important?

Due to an oversized DoD presence, military personnel have a profound impact on Hampton Roads. The change in the number of military personnel adjusts the region's requirements for schools, housing, and support services.

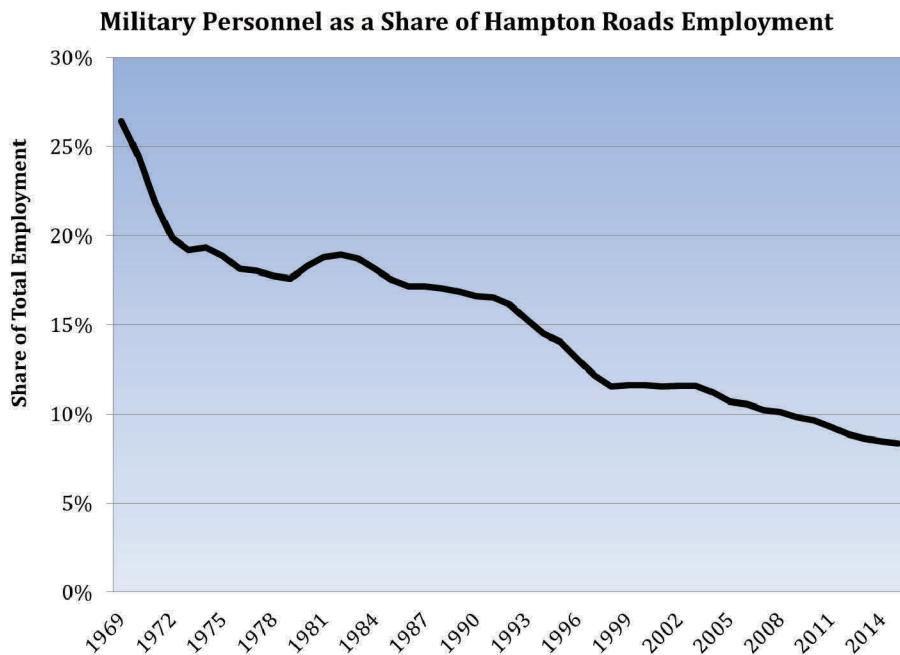
### How are we doing?

The number of military personnel in Hampton Roads fluctuates with the strategic defense requirements of the nation. After rising briefly at the onset of the War on Terror, the number of military personnel in Hampton Roads has declined at a steady pace since 2003.



Source: Bureau of Economic Analysis, HRPDC

## Figure 3.6 Military Personnel as a Share of Hampton Roads Total Employment



### Why is it important?

One way of measuring the impact of military personnel on the Hampton Roads economy is to compare the relative size of military personnel to regional employment.

### How are we doing?

Military personnel's share of regional employment has been on a fairly steady decline since the end of the Vietnam War. This reflects both the declining level of military personnel, as well as growth in other types of employment.

Source: Bureau of Economic Analysis, HRPDC

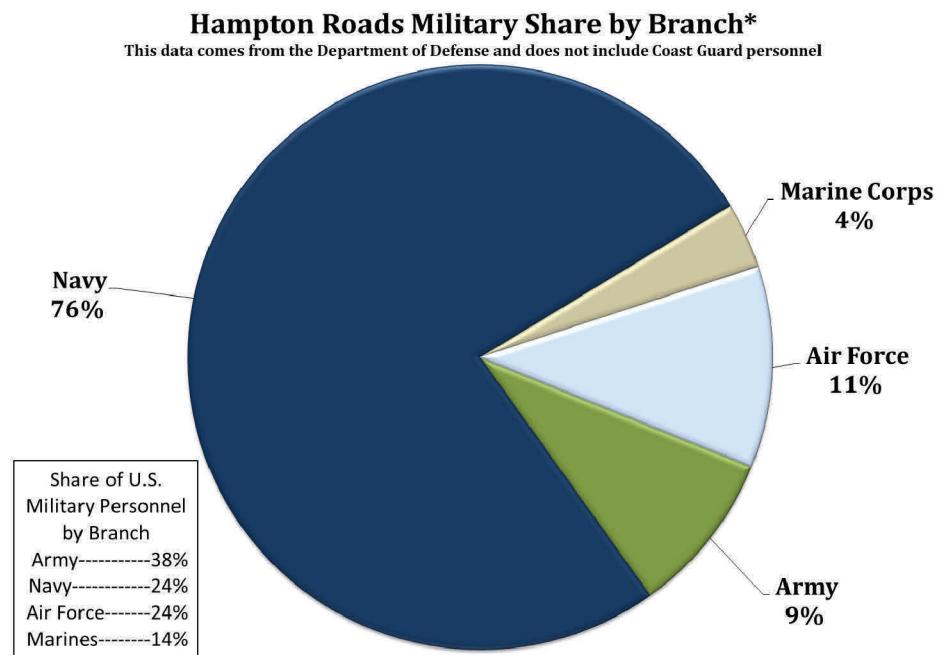
## Figure 3.7 Hampton Roads Military Employment Share by Branch

### Why is it important?

As the overall DoD budget changes, it affects each of the military branches in their own unique ways.

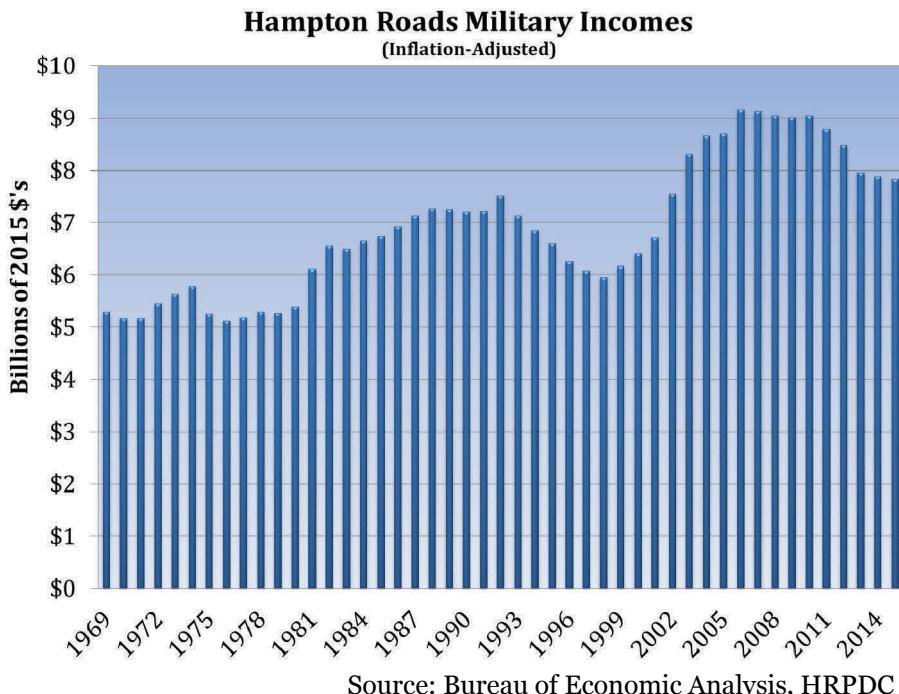
### How are we doing?

Military personnel in this region are heavily tied to the Navy, with 76% of all personnel serving in that branch. This has served the region well recently, as the cuts to Army and Marines personnel have been greater than those sustained by the Navy.



Source: Department of Defense Base Structure Report FY2015, HRPDC

## Figure 3.8 Inflation-Adjusted Military Incomes



### Why is it important?

How well-compensated military personnel are in this region has important impacts on military families' well-being, their ability to participate in the labor market, and their economic impact on the region.

### How are we doing?

Total military income in the region remained at a high level during the previous decade despite cuts to the number of personnel in the region. This was a result of increasing salaries and benefits to help retain personnel during the wars in Afghanistan and Iraq.

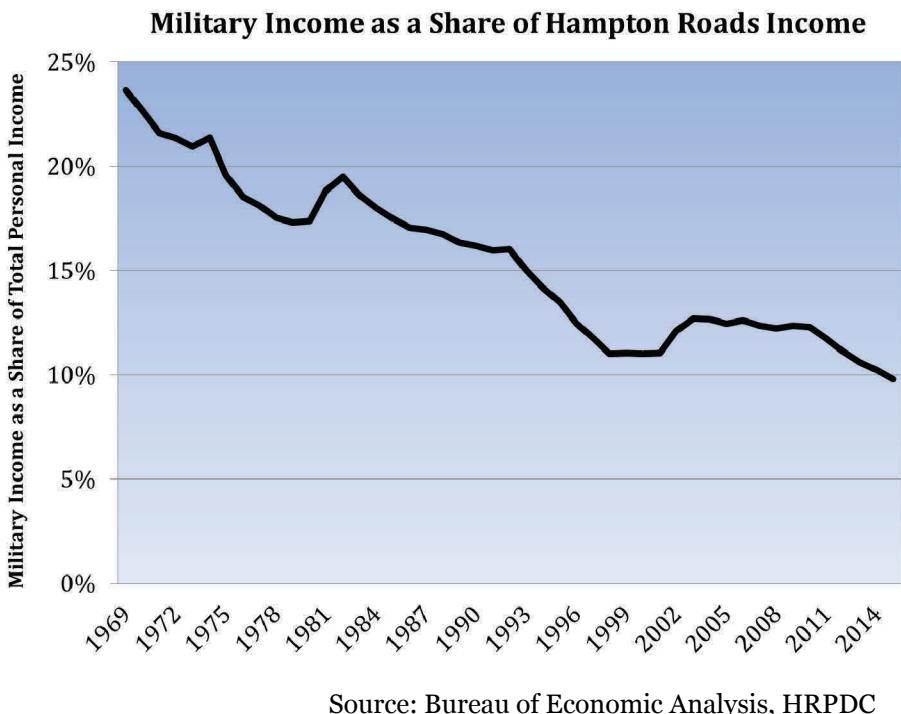
## Figure 3.9 Military Incomes as a Share of Hampton Roads Incomes

### Why is it important?

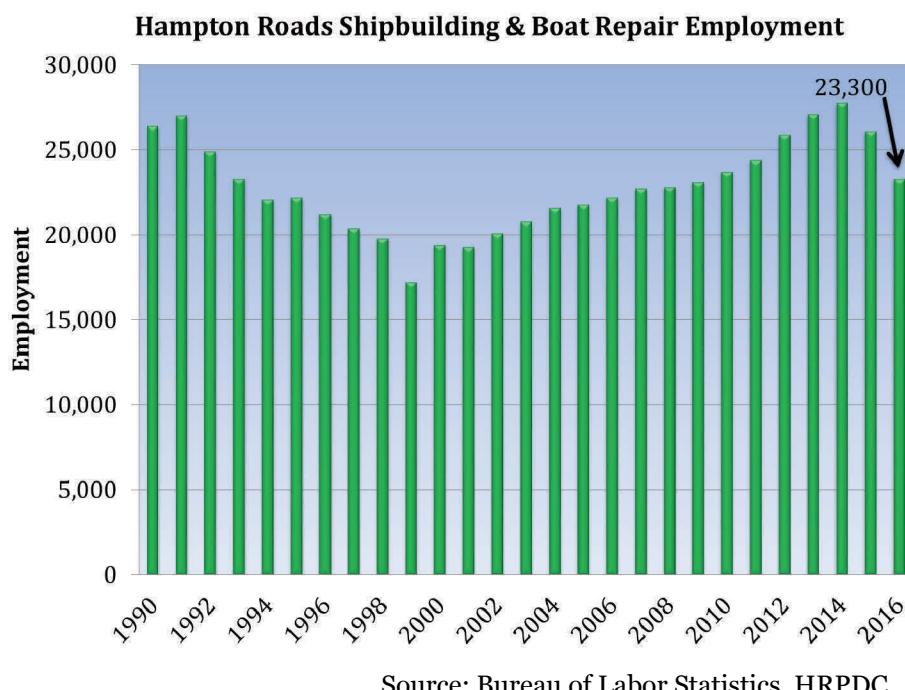
Measuring military incomes as a share of the region's total personnel income quickly shows their ability to support regional business.

### How are we doing?

Military incomes have comprised a declining portion of regional incomes, as cuts to military personnel have shrunk regional military incomes relative to regional civilian incomes.



## Figure 3.10 Total Ship Building and Repair Employment in Hampton Roads



### Why is it important?

The shipbuilding and repair industry serves as a sub-cluster within the region's defense industry. This industry provides well-compensated jobs for individuals across the education spectrum.

### How are we doing?

Regional employment in this industry declined during the 1990's, but recovered during the past decade reaching 27,800 employed in the ship repair & boat building industry in 2014. Those employed privately in ship building and repair have fallen over the past two years to 23,300.

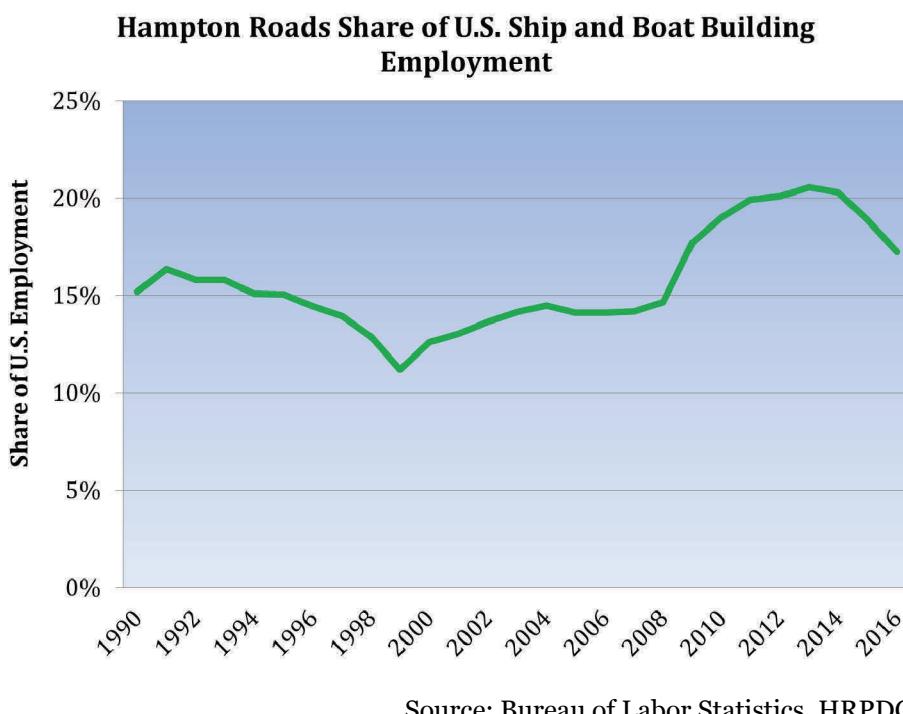
## Figure 3.11 Concentration of Ship Building and Repair Employment in Hampton Roads

### Why is it important?

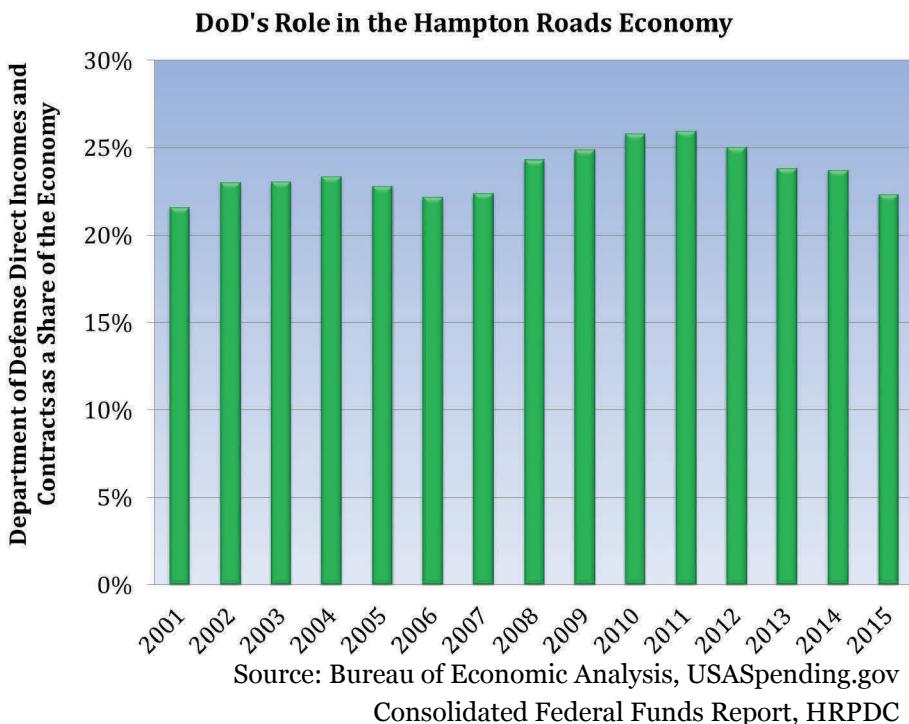
The region's share of national ship building and repair employment indicates the strength of this regional cluster.

### How are we doing?

While as recently as 2014, over 20% of the U.S. Shipbuilding and Repair industry was employed in Hampton Roads, recently the region's share has declined. Newport News Shipbuilding is one of two U.S. shipyards that construct nuclear submarines, and the only one that constructs nuclear aircraft carriers.



## Figure 3.12 Department of Defense Incomes and Spending as a Share of the Regional Economy



### Why is it important?

The role of the DoD in the regional economy has changed over time, and understanding its contribution is important for assessing the impacts of changes to the DoD budget. This chart only takes into account direct contracts and incomes, and does not include the indirect and induced impacts.

### How are we doing?

Peak DoD spending in Hampton Roads occurred in 2011. Since that time, defense contracts and the number of personnel have declined in the region.

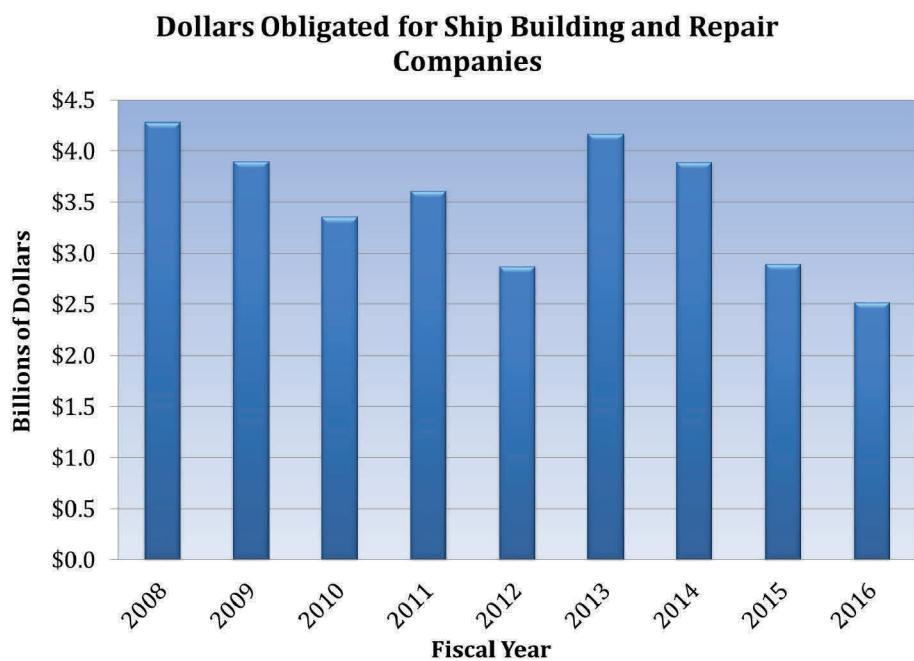
## Figure 3.13 Total Contracting for Ship Building and Repair Performed in Hampton Roads

### Why is it important?

These are dollars obligated by the federal government to companies with ship and boat building NA-ICS codes.

### How are we doing?

The region has seen fairly consistent levels of contracting dollars in this industry. It is difficult to use one-year data for ship and boatbuilding because shipbuilding dollars allocated in one year can be spent over as many as five years.



Source: USAspending.gov, HRPDC

## Section IV

# The Port

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## The Port in Hampton Roads

The Port of Virginia serves as one of Hampton Roads' three basic sector industries that enable long-term economic growth. It brings capital from around the country and all over the world into the region through handling cargo and showcasing this region to major companies and shippers across the globe.

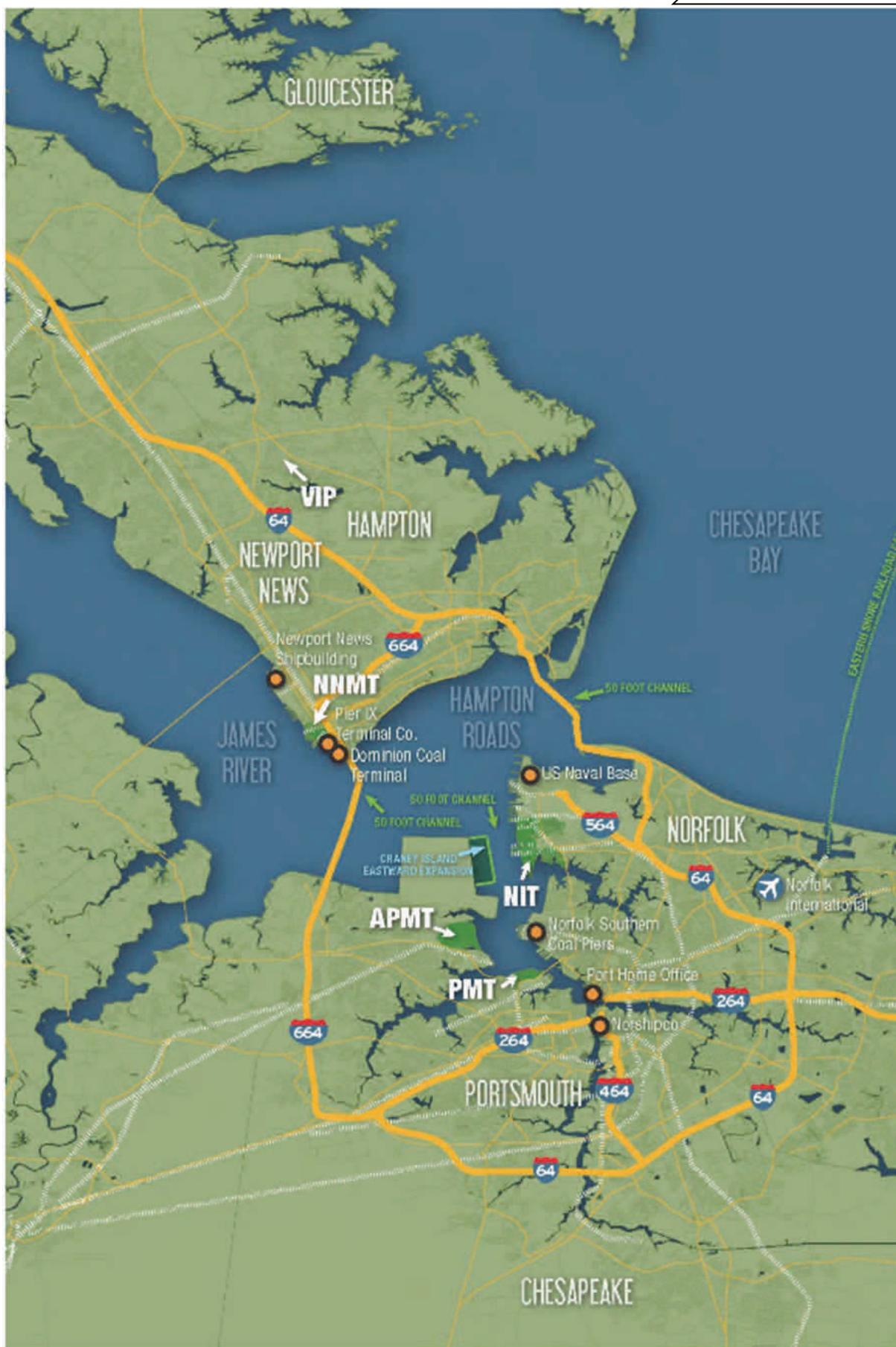
One of the lenses we see the port through is in a role of competing with other East Coast ports. Hampton Roads handled 14% of all East Coast foreign trade, by weight, in 2015, but only 13% of the value. While this competition serves the valuable purpose of encouraging increased efficiency at the port, there are very real elements of cooperation as major container ships stop at several East Coast ports as part of their trade route. Indeed, all East Coast ports work under the same contract with the longshoreman union.

The absolute levels of trade are a preferred area of focus when analyzing port statistics, because this is a better measure of the economic relevance of this region to the United States and to the world. As trade grows, so will the importance of port regions.

Trade has grown rapidly, both through the region and throughout the world, as both natural and governmental barriers to trade have fallen. Technology has increased the level of trade, by easing communication and by making shipping faster, more reliable, and less expensive. Also, while recent efforts have slowed, great advances to lower trade barriers and quotas went into effect across the globe throughout the 1980s and 1990s. Even after the worst economic crisis since World War II, trade has recovered and continues to grow strongly. Total trade has increased more than 593% since 1973 and general cargo has now risen 12.4% above 2007 levels.

As one would expect from this region's proximity, Northern Europe continues to play an important role in this region's exports and imports, but Northeast Asia is also extremely important showing the impact of China, Korea, and others on world trade.

It is also important to note that although total trade has grown at high levels, the total number employed in the transportation industry or in transportation occupations has remained relatively static compared to the gains of trade. This indicates that the economic impact from trade in this region is not directly correlated with port traffic, but is instead predicated on a host of different industries that are enabled by the Port.



Source: Virginia Maritime Association, The Ports of Virginia Annual 2014

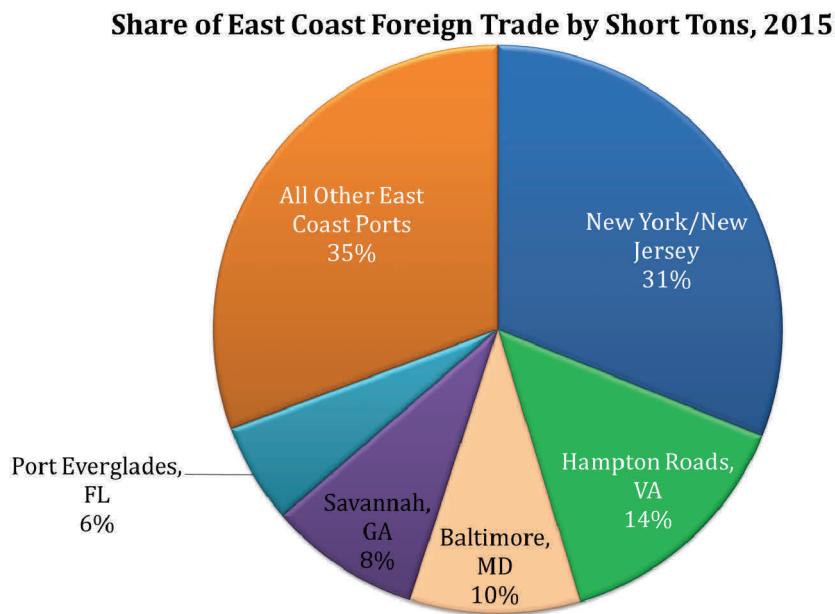
## Figure 4.1 East Coast Trade Volume Share by Weight

### Why is it important?

The Port of Hampton Roads serves a vital role in the region's economy. There is significant competition for port traffic on the East Coast, and this graphic shows how that trade is dispersed among East Coast ports by weight.

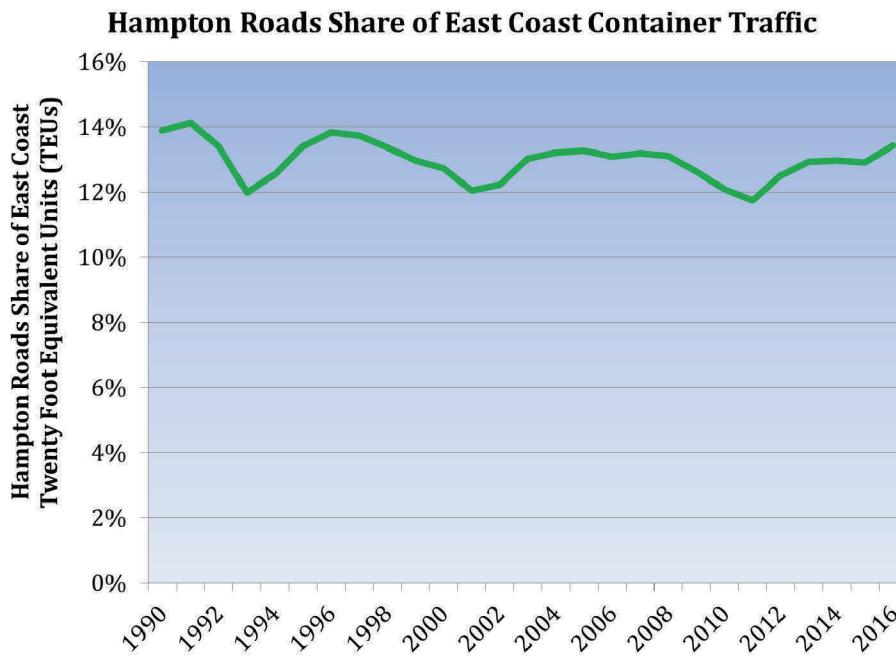
### How are we doing?

In 2015, Hampton Roads handled 14% of all East Coast foreign trade by weight, down from 24% in 2014. This decline was driven by declining coal exports as energy demand continues to be volatile.



Source: American Association of Port Authorities, HRPDC

## Figure 4.2 Hampton Roads Share of East Coast Shipping by Twenty Foot Equivalent Units



Source: Waterborne Commerce Statistics Center, U.S. Army Corp of Engineers, HRPDC

### Why is it important?

Containerization is shipping freight in containers that is easily transferred between trains, trucks, and ships. Since the first U.S. container ship in 1956, they have become the most important method of shipping goods and the industry standard for comparing ports.

### How are we doing?

Hampton Roads' share of container traffic has comprised between 12% and 14% of total East Coast traffic since 1990. Many factors impact container traffic at the Port, including railway costs and regional demand.

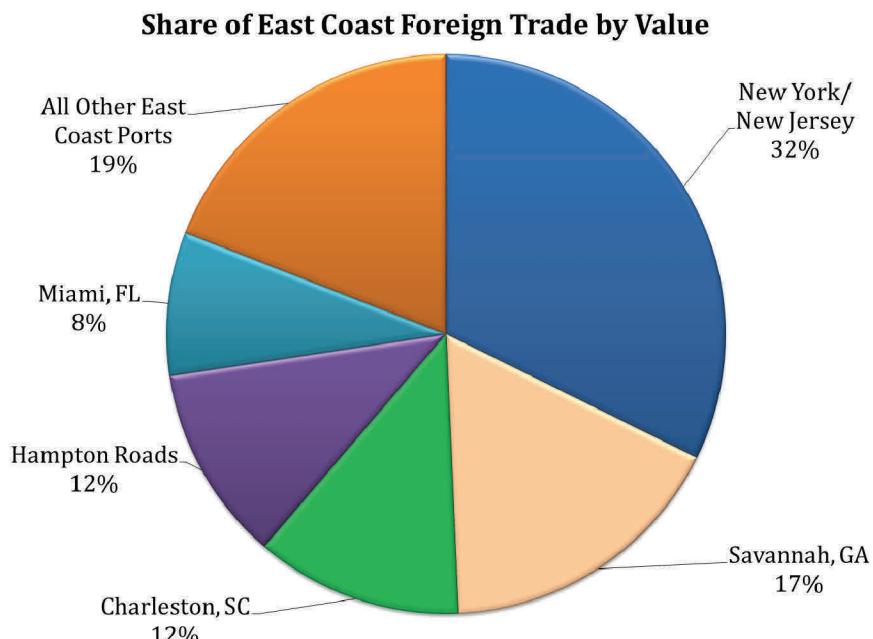
## Figure 4.3 East Coast Trade Volume Share by Value

### Why is it important?

Another way of measuring trade along the East Coast comes from the value of trade at each port. This provides yet another perspective of the importance of trade to the local economy.

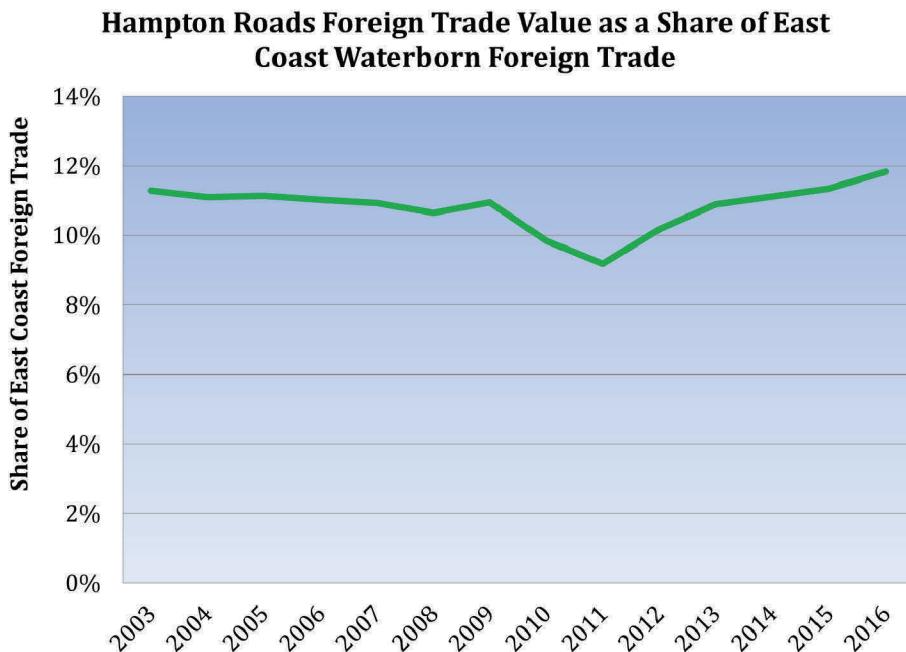
### How are we doing?

Hampton Roads constitutes a lower share of East Coast trade measured by value. This results from the composition of the trade which passes through this region. Higher value goods, such as BMWs shipped through Charleston, would cause a port to have a higher share of traded value versus weight of cargo handled.



Source: American Association of Port Authorities, HRPDC

## Figure 4.4 Hampton Roads Share of East Coast Foreign Trade by Value



### Why is it important?

This graphic illustrates the relative value of Hampton Roads trade versus the value of items traded through all East Coast ports.

### How are we doing?

Over time, the share of goods by value has trended downward in Hampton Roads. The slight uptick in share after 2010 may be the result of the Heartland Corridor's completion, as well as recovering global trade in 2012.

Source: United States Maritime Administration, HRPDC

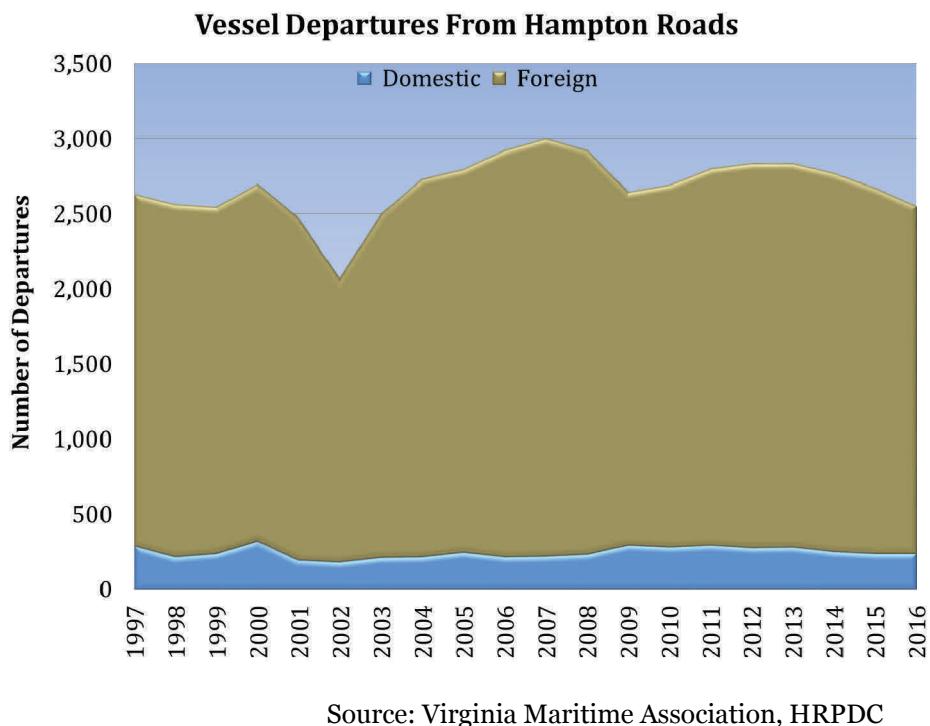
## Figure 4.5 Vessel Departures from Hampton Roads

### Why is it important?

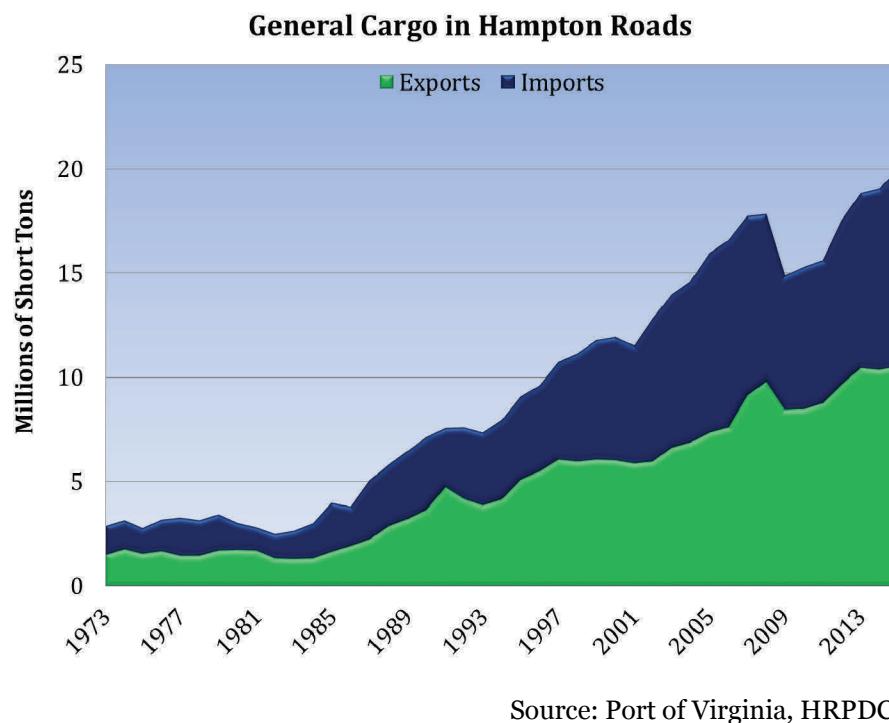
One trend that helps illuminate the demand for port services comes from the number of vessels that call on Hampton Roads in a particular year.

### How are we doing?

The number of vessels moving through Hampton Roads is largely tied to the global demand for traded goods and services. One element that has weakened this as an indicator is the transition to increasingly larger sizes of container ship, so that even as trade increases, the number of vessels calling on Hampton Roads would not change to the same extent.



## Figure 4.6 General Cargo Volumes in Hampton Roads



### Why is it important?

General cargo includes both containerized and break-bulk cargo. The ability to attract and manage general cargo measures the port's productivity and success as an economic engine.

### How are we doing?

Trade through Hampton Roads has increased by a large margin since the early 1980's, as trade barriers have fallen and communication technology has improved to better facilitate commerce. While Hampton Roads' trade dropped sharply during the Great Recession, it has recovered to an equal extent.

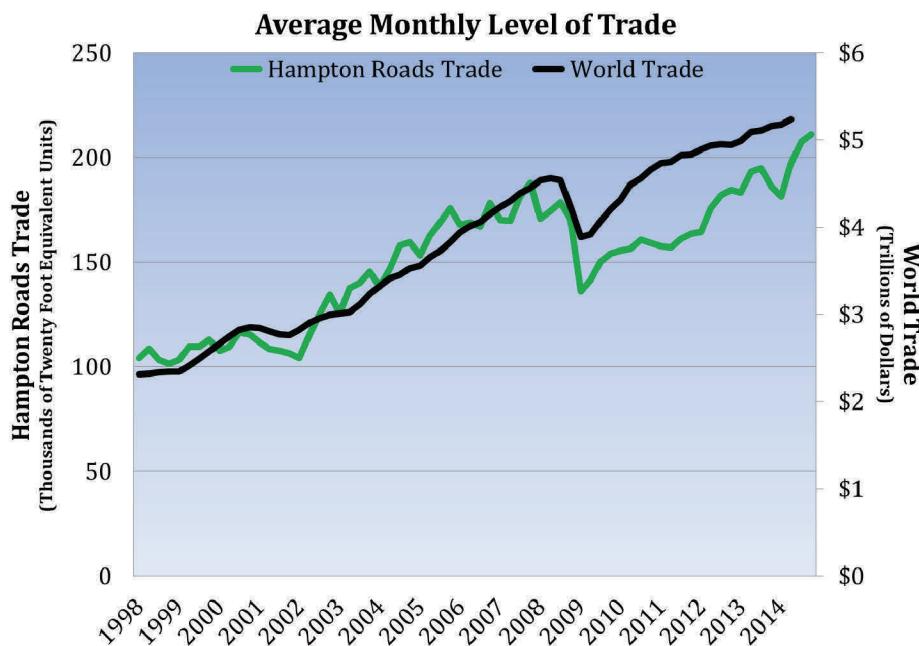
## Figure 4.7 Hampton Roads Twenty Foot Equivalent Units and World Trade Volumes

### Why is it important?

Containerized trade plays a significant role in world trade of goods, and with the exception of build commodities and vehicles (that roll on and off ships), it captures the majority of international trade.

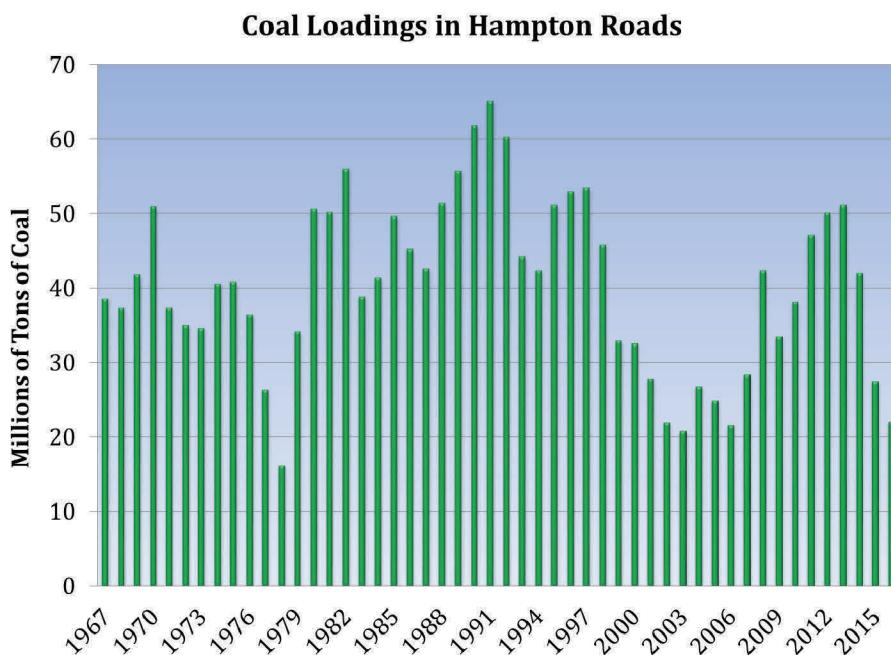
### How are we doing?

Hampton Roads follows the world trend in trade, and a significant portion of the region's trade growth will likely occur in concert with growth in international trade.



Source: Port of Virginia, Organization for Economic Co-Operation and Development, HRPDC

## Figure 4.8 Coal Loadings in Hampton Roads



### Why is it important?

There are three coal piers in Hampton Roads, and the move to exporting coal helped develop the railroad network in Hampton Roads. Coal still serves as a primary export of the region, as well as a major profit center for the two railroad companies that serve Hampton Roads.

### How are we doing?

Coal exports depend on the state of the regional economy, the price of alternative sources of energy around the globe, and U.S. demand for coal. Coal exports have declined with the decrease in energy demands in the BRICs.

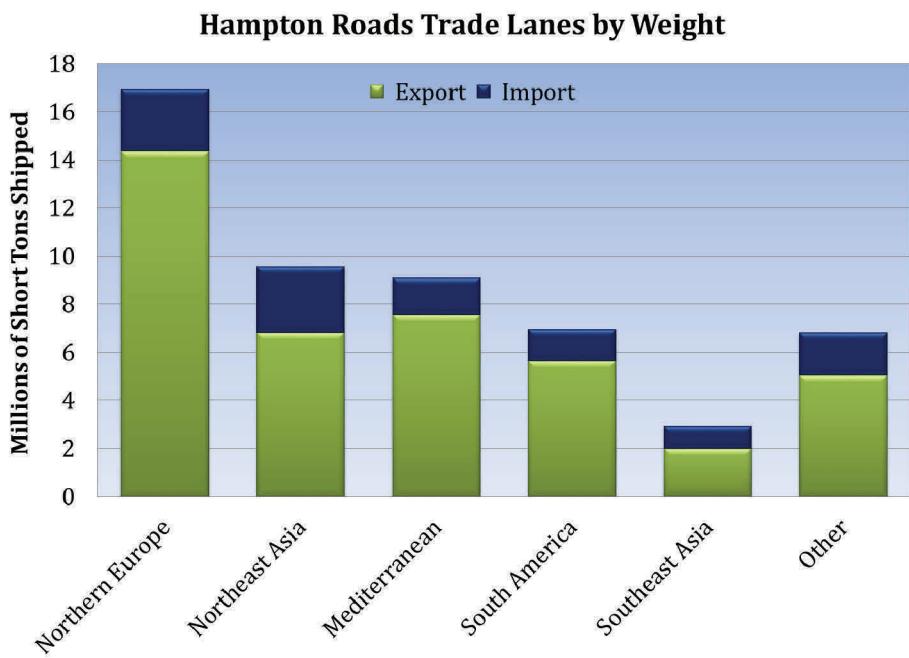
## Figure 4.9 Hampton Roads Trade Lanes by Weight

### Why is it important?

One interesting measure of the port is the source of imports and the destination of exports that flow through Hampton Roads. Measuring these flows by weight is one measure of the level of service provided to trading regions.

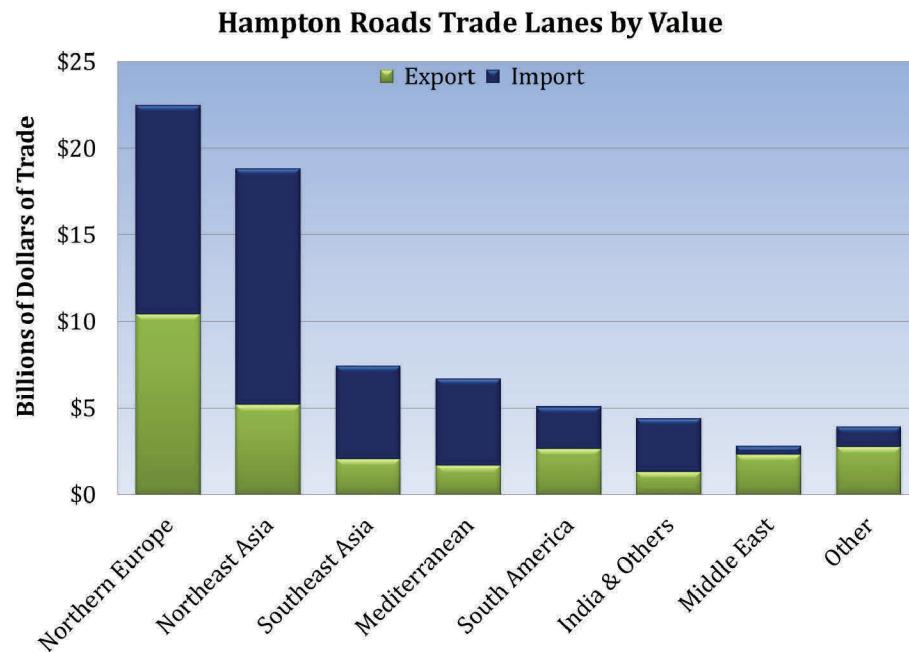
### How are we doing?

Northern Europe and Northeast Asia see the highest percentage of trade by weight, and all of the region's trade lanes are dominated by exports, likely linked to the region's coal exports.



Source: Virginia Maritime Association, HRPDC

## Figure 4.10 Hampton Roads Trade Lanes by Value



### Why is it important?

One interesting measure of the port is the source of imports and the destination of exports that flow through Hampton Roads. Measuring these flows by value indicates the relative importance to the broader economy, and assesses the port's role as an economic engine.

### How are we doing?

When measured by value, exports and imports play a more balanced role for Hampton Roads' trading partners. Northern Europe continues to play a major role as a partner trading through the Port of Virginia.

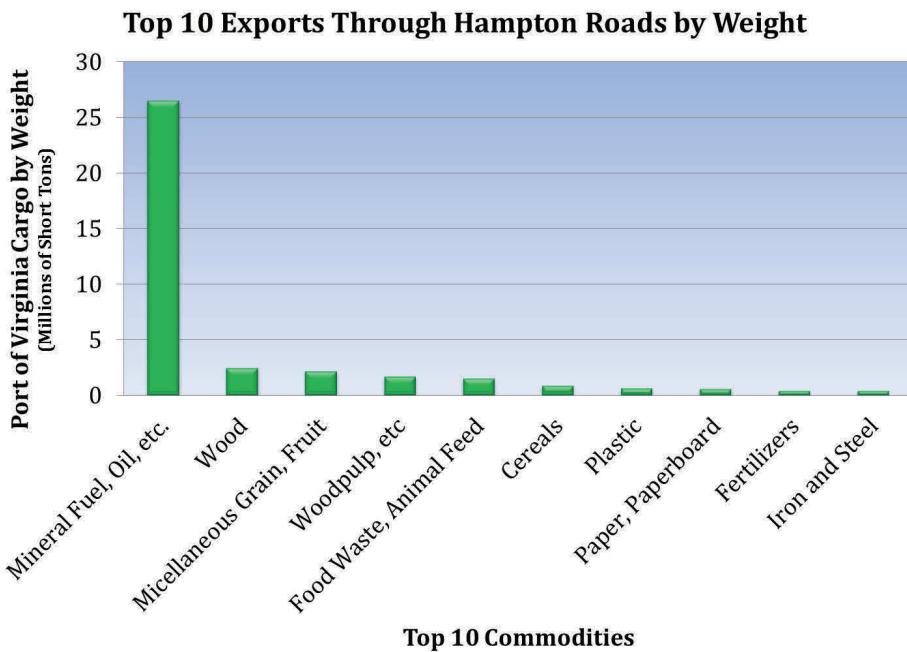
## Figure 4.11 Top Ten Exports Through Hampton Roads by Weight

### Why is it important?

Another interesting measure is examining which goods are produced in the United States that are then shipped through Hampton Roads. In cases where these goods are not produced in Hampton Roads, these represent areas of possible economic development.

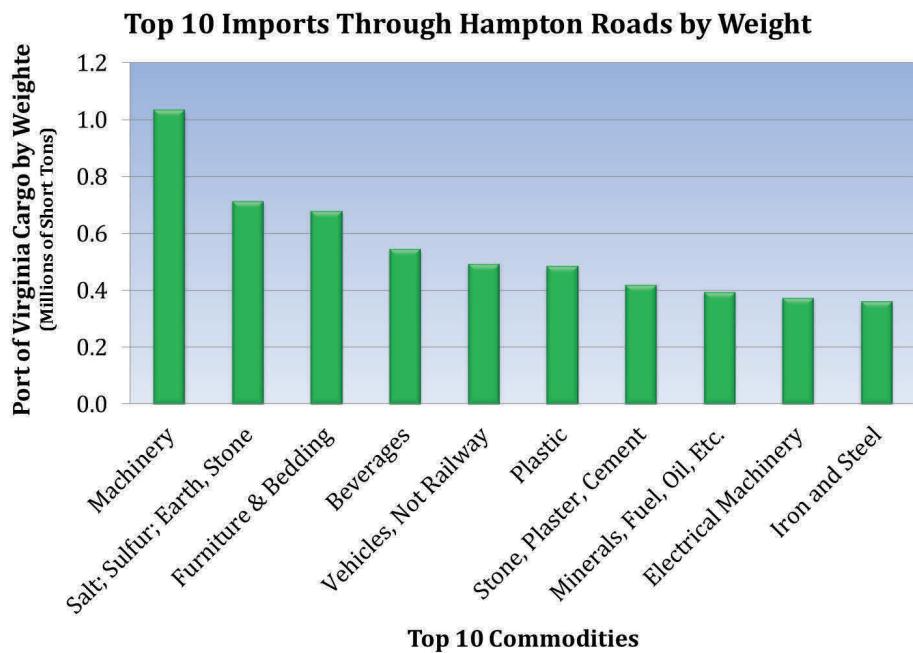
### How are we doing?

By weight, Coal dominates exports from this region by a wide margin. This region also facilitates the export of a variety of goods related to the lumber industry and paper production, as well as a variety of other goods.



Source: Virginia Maritime Association, HRPDC

## Figure 4.12 Top Ten Imports Through Hampton Roads by Weight



### Why is it important?

Determining the most significant imports through the region by value also identifies potential overseas targets for economic development opportunities.

### How are we doing?

Machinery is the primary import that moves through the Port, as well as the primary export, when measured by value. This region also serves as a gateway to imports of a wide variety of other goods, including raw inputs to various construction and manufacturing processes.

Source: Virginia Maritime Association, HRPDC

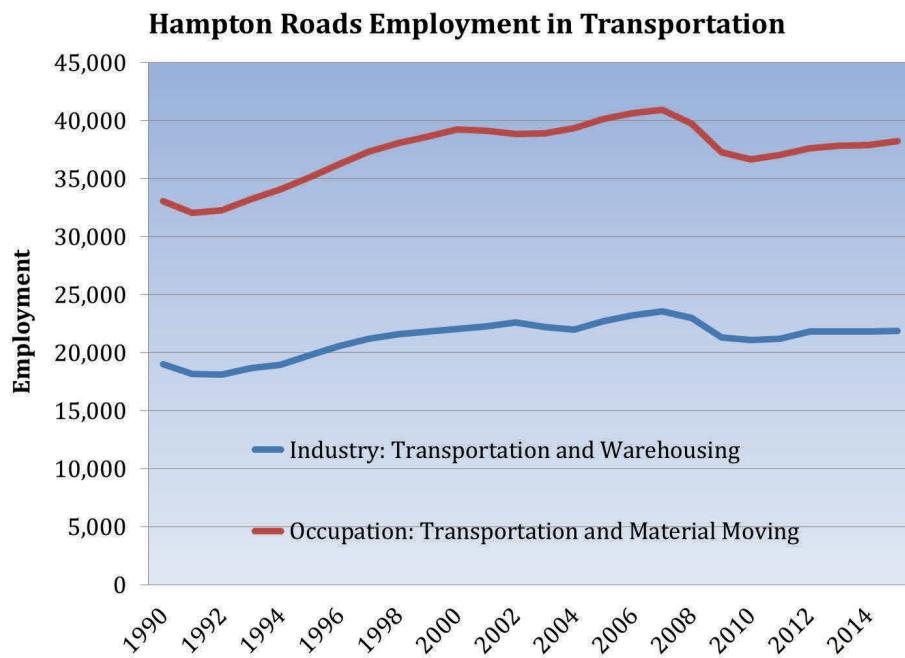
## Figure 4.13 Hampton Roads Employment in Transportation by Industry and Occupation

### Why is it important?

While many of the previous measures have focused on cargo that moves through the Port, another measure of the economic impact of the Port is employment in the transportation industry, or examining the number of jobs in an occupation considered to be in transportation.

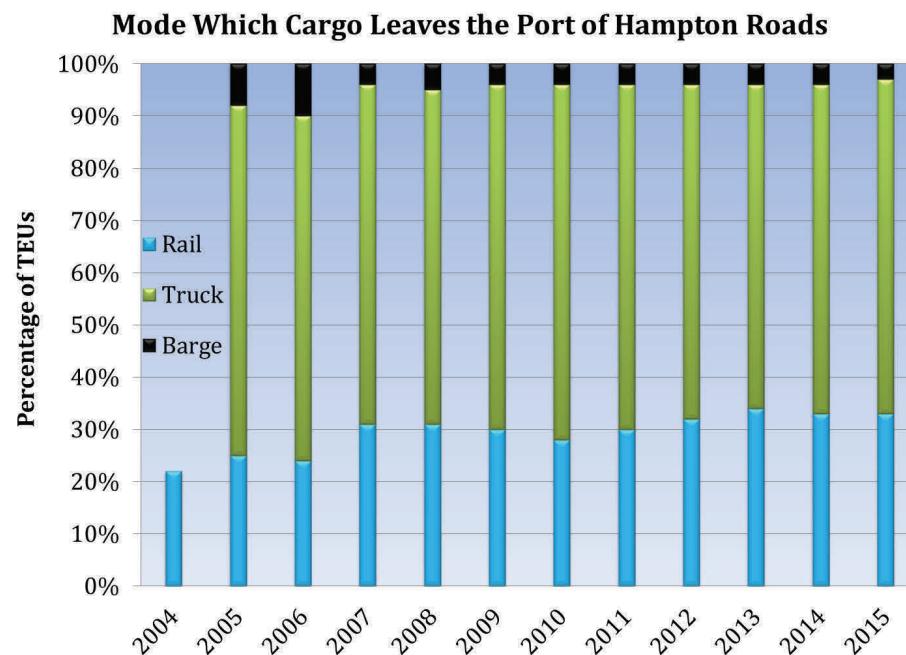
### How are we doing?

Occupational employment in transportation is higher than industry employment, as many jobs derived from trade are not necessarily employed by a company in the trade industry.



Source: Regional Economic Modeling Inc., HRPDC

## Figure 4.14 Mode of Transport for Freight Leaving the Port of Hampton Roads



### Why is it important?

A measure of the impact of the Port on the regional quality of life evaluates what percentage of cargo arriving there travels by truck versus by other transportation modes.

### How are we doing?

Rail transportation has become increasingly important over the last few years. This derives partly from the opening of the Heartland Corridor and better rail links to local ports.

Source: Virginia Port Authority, HRPDC

## Section V

# Tourism Industry

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## The Tourism Industry in Hampton Roads

Hampton Roads offers numerous attractions that draw visitors to the region, including the oceanfront and historic treasures. The region also hosts many world-renowned theme parks, sporting events, festivals, and cultural events, as well as performing arts, concerts, and conventions that support the region's tourism industry.

Tourism expenditures are an important part of the region's economic fabric as it, in addition to the defense industry and port activities, accounts for the lion's share of new dollars flowing into Hampton Roads. The outside dollars generated by the tourism industry are essentially an "export" of the region's amenities, sustaining the regional economy through indirect and induced investments.

Leisure and hospitality employment has slightly increased its share of regional employment over the years, indicating that it has been outpacing the regional economy. It is difficult to determine the exact share of employment in leisure and hospitality that derives from tourism, but the density of employment in those industries are higher in Hampton Roads than in many of the region's reference metropolitan areas.

While the Virginia Tourism Corporation estimates indicate that Tourism Spending is at a new peak, hotel revenues and local tax collections derived from tourism have yet to meet their 2007 and 2006 peaks, respectively (inflation-adjusted). This is due to both the continued economic recovery across the nation, and efforts across all tourism destinations to attract visitors. Additionally, shrinking federal budgets have reduced business travel and hotel stays throughout the region.

As the national economy regains strength, it should help increase tourism expenditures in the region. However, growth will be modest to some degree, as the region's tourism industry is mature in nature.

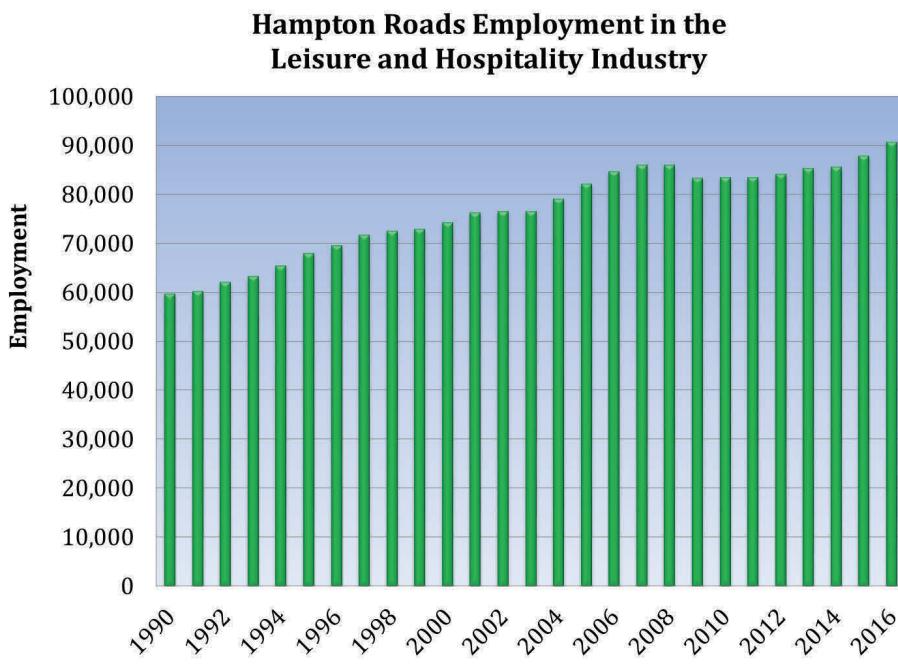
## Figure 5.1 Employment in the Hampton Roads Leisure and Hospitality Industry

### Why is it important?

The economic impact of the leisure and hospitality industry can be measured through the number employed in the industry regionally.

### How are we doing?

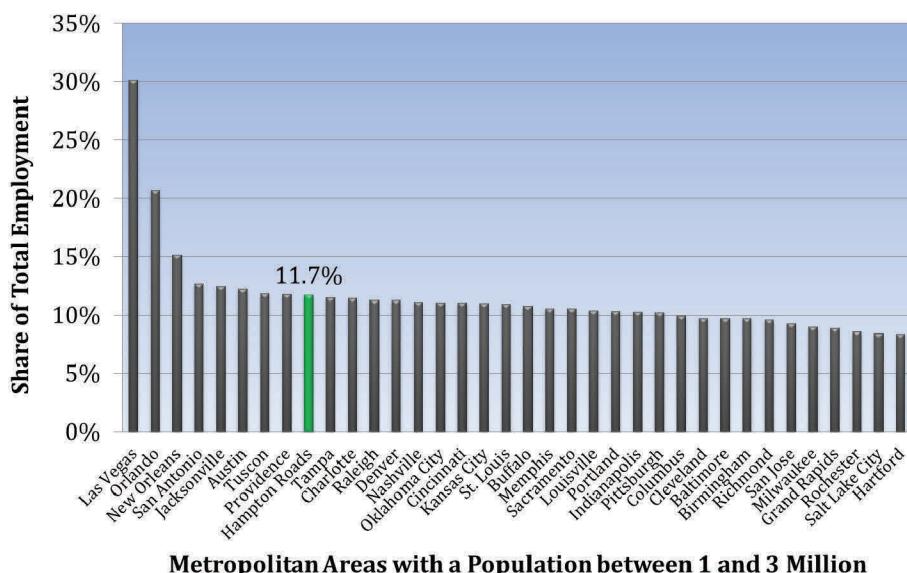
While it declined slightly with the recession, employment in the Hampton Roads leisure and hospitality industry has grown over the past 23 years, and has increased from 9.8 percent of regional civilian employment to 11.7 percent of employment, indicating that it has increased not only in absolute terms, but also in relative terms for the economy.



Source: Bureau of Labor Statistics, HRPDC

## Figure 5.2 Employment Share of the Leisure and Hospitality Industry

### Leisure and Hospitality Employment as a Share of Total Employment, 2016



### Why is it important?

The intensity of employment in the leisure and hospitality industry indicates where Hampton Roads places among other comparable metropolitan areas with relation to dependence on tourism.

### How are we doing?

While Las Vegas and Orlando have exceptionally high levels of leisure and hospitality employment density, Hampton Roads derives a greater share of its employment from that industry than most of its competitor cities.

Source: Bureau of Labor Statistics, HRPDC

## Figure 5.3 Hampton Roads Seasonally and Inflation-Adjusted Taxable Hotel Sales

### Why is it important?

Taxable hotel sales provide a measure of the number of visitors staying in Hampton Roads, as a significant percentage of the region's tourists stay in resorts.

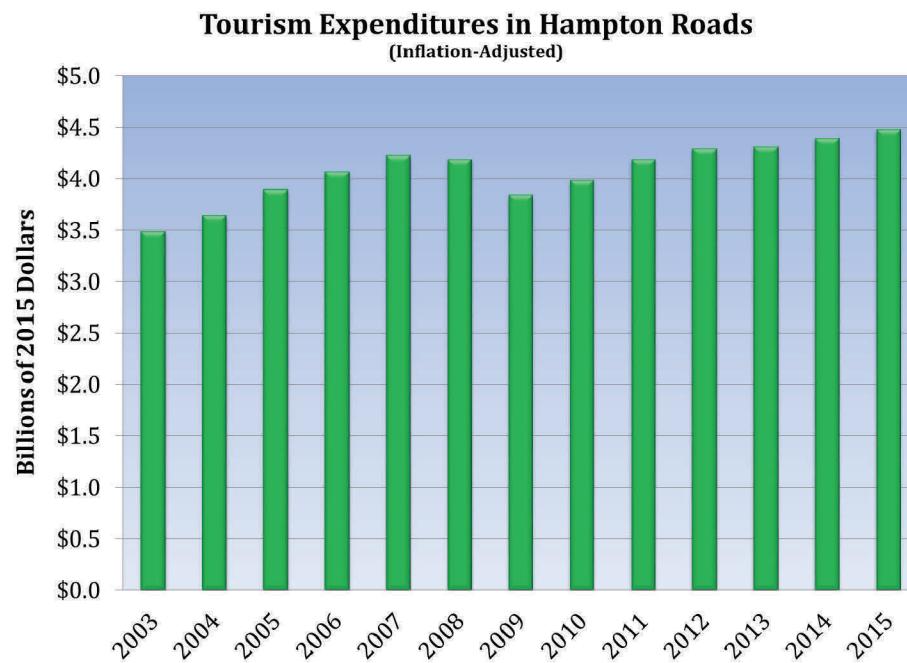
### How are we doing?

Taxable hotel revenues have seen a decline since 2007 when adjusted for inflation, indicating the weakness in the tourism market stemming from the Great Recession. The initial decline was a result of the economic weakness, and the second due to budget cuts to the DoD. Hotel Sales remain 10.5% below their pre-recession peak.



Source: Virginia Department of Taxation, HRPDC

## Figure 5.4 Tourism Expenditures in Hampton Roads



### Why is it important?

The Virginia Tourism Corporation produces estimates of the economic impact of tourism in the Commonwealth. As part of this estimate, it attempts to measure the expenditures of tourists in each locality. This indicates the outside dollars that tourists bring into the regional economy.

### How are we doing?

Tourism spending rose to \$4.48B in 2015, or 4.9% of the regional GDP. This would indicate that tourism is a significant driver of the regional economy.

Source: Virginia Tourism Corporation, HRPDC

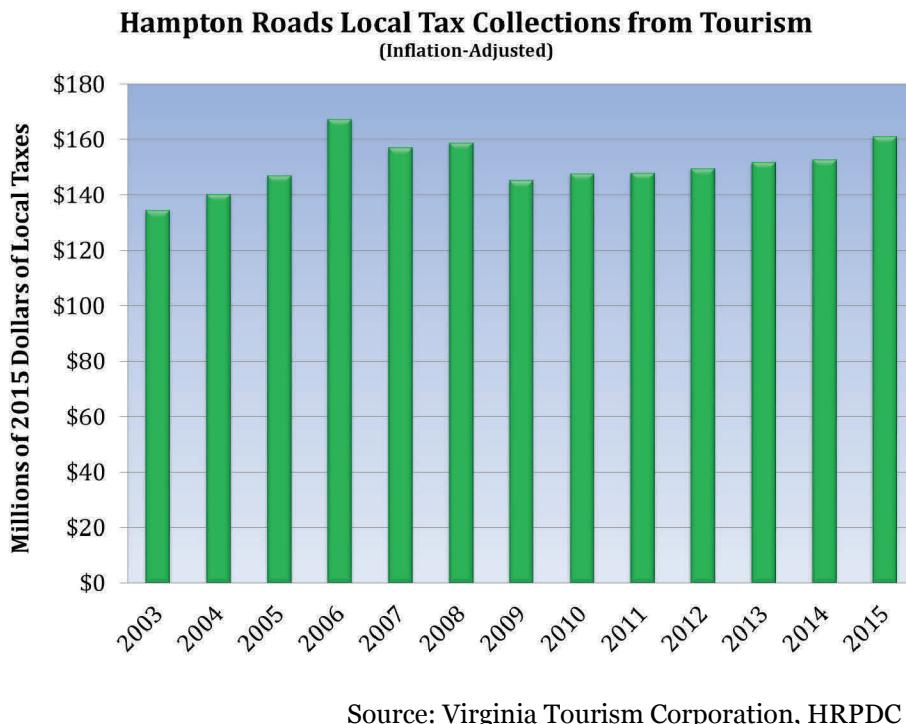
## Figure 5.5 Local Tax Revenues from Tourism in Hampton Roads

### Why is it important?

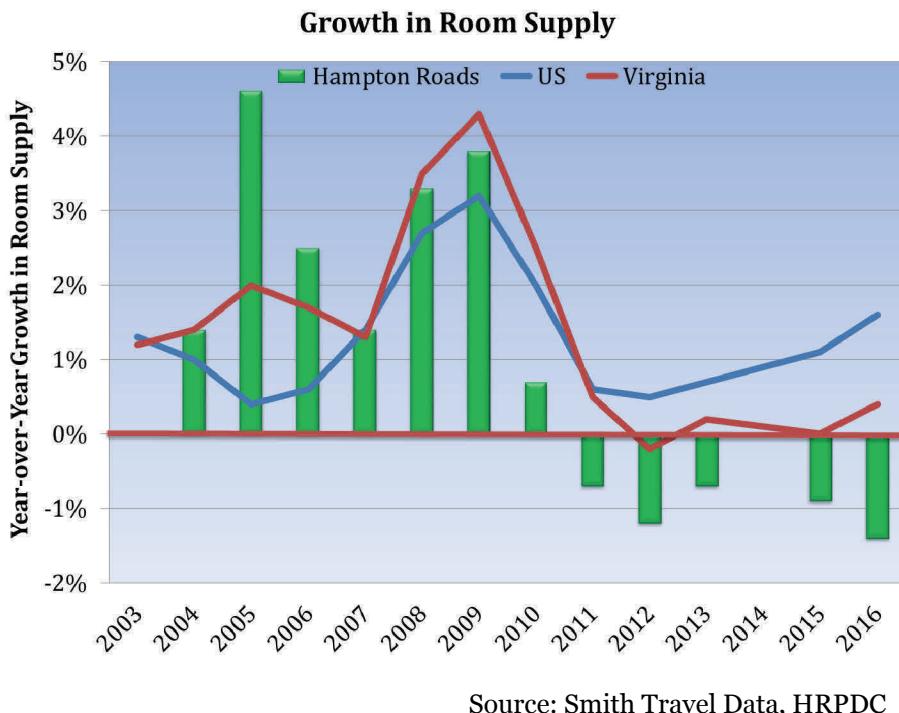
Another important measure of the economic impact of tourism looks at the extent to which tourism supports local government services. Often, tax revenues from tourism support broader services of the government and special projects related to the tourism industry.

### How are we doing?

Local tax collections from tourism increased to \$161 million according to estimates by the Virginia Tourism Corporation. For the first time since the recession, these tax collections have grown past the 2006 peak, which was \$159M when measured in 2016 dollars.



## Figure 5.6 Room Supply Growth in Hampton Roads and U.S.



### Why is it important?

Room supply growth measures the growth of tourism capacity in the region. It also measures developers' expectations of future tourism conditions since investing in hotel rooms signals confidence in the future of the market.

### How are we doing?

Supply continued to grow both regionally and nationally during the beginning of the Great Recession, but later faced steep declines. Several projects have been announced which should begin to grow regional supply.

## Figure 5.7 Total Hotel Revenues in Hampton Roads

### Why is it important?

Measuring annual hotel performance allows for another perspective on the performance of the hotel industry. Healthy hotels have the ability to reinvest in amenities and upgrades maintaining Hampton Roads' stature as a premier tourism destination.

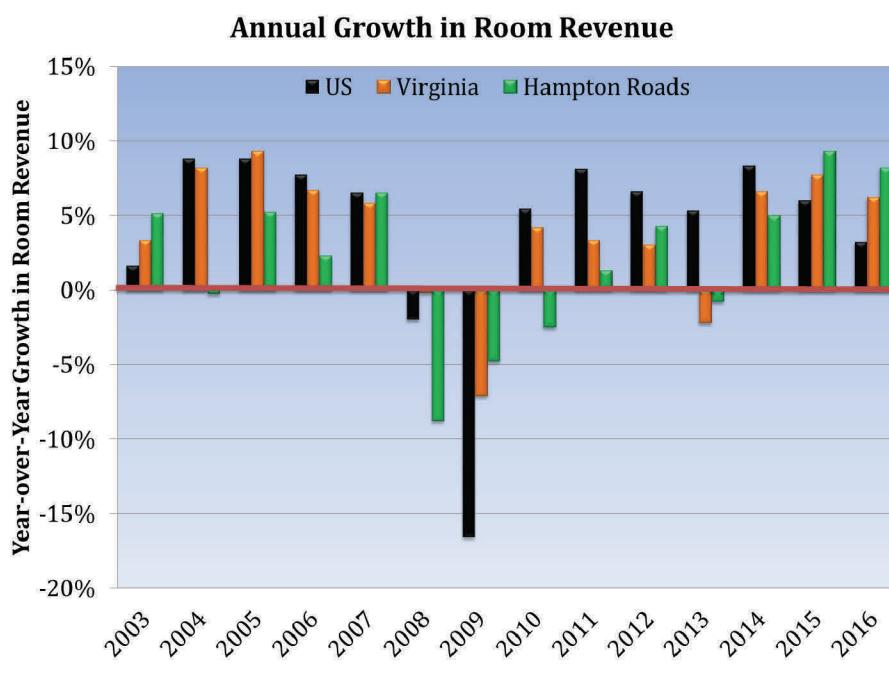
### How are we doing?

Hotel revenues have declined since 2007 in both real and nominal terms. 2007 was a unique year for the region because the 400th anniversary of Jamestown took place, which likely created a surge of tourism and masked the beginning of the recession later that year.



Source: Smith Travel Data, HRPDC

## Figure 5.8 Room Revenue Growth in Hampton Roads, Virginia, and the U.S.



### Why is it important?

Growth in room revenue indicates revenue growth from room rentals and related sales. While hotels generate revenue from other services, this serves as a measure of tourism growth in the region.

### How are we doing?

While Hampton Roads and Virginia did not experience the one-year shock that the nation saw in 2009, the recovery in room revenue has proven far more tepid. This likely results from decreased travel by the military to this region, as the DoD has cut travel for budgetary reasons, though room revenue has begun to grow again.

## Section VI

# Retail Industry

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## The Retail Industry in Hampton Roads

Trade is the backbone of a regional economy because the exchange of goods and services is a primary driver in creating value and providing benefit to market participants. One of the best ways to measure trade is through retail sales. When Hampton Roads' economy expands, retail sales grow as increased income quickly passes through to consumption of goods and services. Conversely, during the most recent recession, retail sales shrunk considerably as individuals cut back on their purchases.

Hampton Roads' retail employment declined from 93,800 jobs in 2007 to 84,200 in 2010. Although it has grown to 88,300 in the past six years, employment in the retail industry remains at 5.9% below 2007 levels. Interestingly, retail employment fell despite an increase in retail sales, which grew by 6.6% between 2007 and 2016. While retail sales have experienced some recovery from their 12.6% decline during the recession, the number of retail establishments in the region only started growing in 2012, and retailers have exercised caution against increasing payrolls until the region recovers further.

The regional and national retail experience have diverged considerably, and while both Hampton Roads and the country saw a proportional decline in retail sales, the U.S. retail recovery has been more robust than that of the region. Retail sales have increased by 43.4% nationally since March 2009, while Hampton Roads' retail sales only began increasing after March 2010, growing by 24.9%.

While some regional retail sales have been lost to the growth of internet sales, there seem to be other factors at work as well. Despite the continued growth of regional incomes during the recovery, the retail sales industry has likely been held back by the decline in household wealth during the recession.

## Figure 6.1 Employment in the Hampton Roads Retail Industry

### Why is it important?

One measure of the economic impact of the retail trade industry comes from counting the number of employees the industry supports in the region.

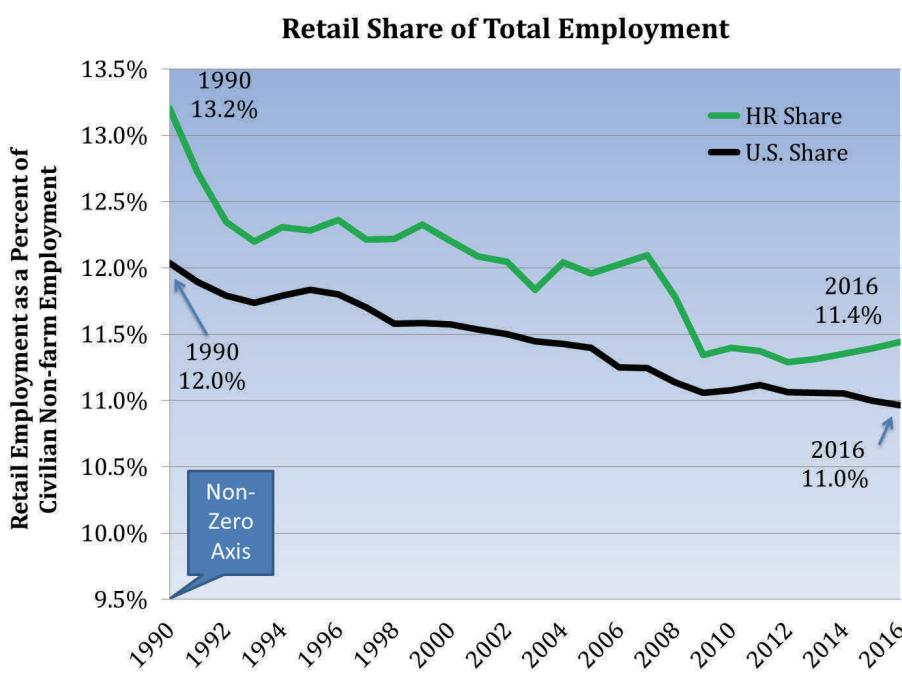
### How are we doing?

Regional retail employment fell from its 2007 peak of 93,800 jobs and has yet to replace those positions. Retail employment has increased by 10.2% since 1990, but during the same period regional sales have increased by 27.2%.



Source: Bureau of Labor Statistics, HRPDC

## Figure 6.2 Retail Employment as a Share of Total Employment in Hampton Roads and the U.S.



Source: Virginia Employment Commission, HRPDC

### Why is it important?

A measure of the importance of retail trade to the regional economy is the share of employment that has been derived from retail sales.

### How are we doing?

Retail employment as a share of total employment has declined steadily since 1990, reaching 11.4% in 2016. The most significant periods of decline have occurred during recessions, indicating that retail employment tends to be sensitive to economic conditions. Retail employment forms a greater share of total employment regionally than in the United States as a whole.

## Figure 6.3 Change in Retail Employment in Hampton Roads and Reference Metro Areas

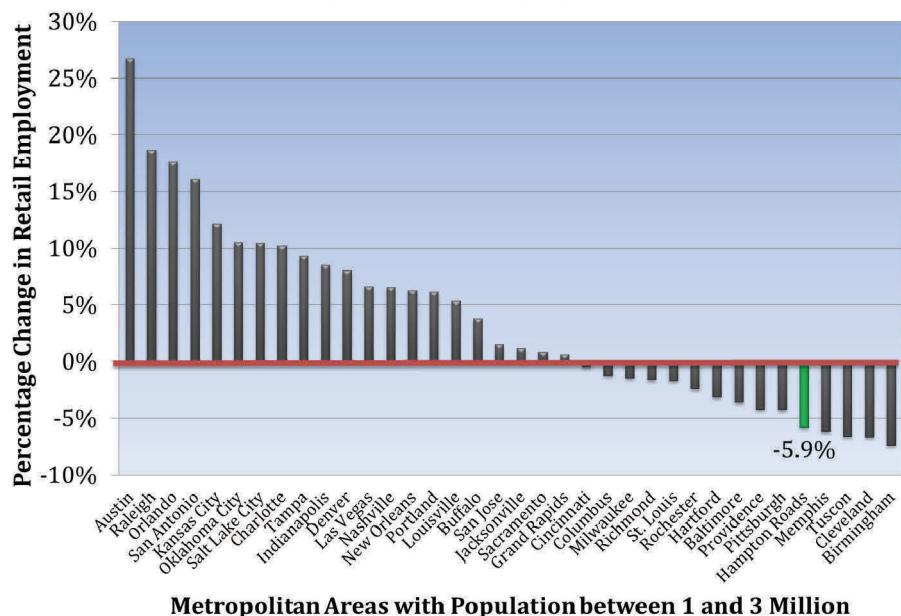
### Why is it important?

It is difficult to measure retail sales of a variety of metropolitan areas using government statistics, thus comparing retail employment enables perspective on how different metropolitan areas have performed over time.

### How are we doing?

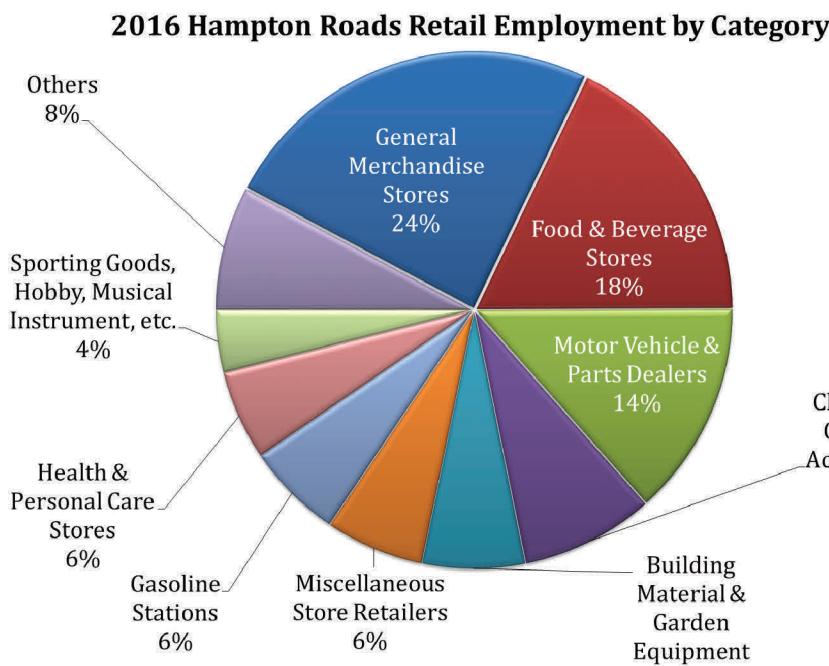
Hampton Roads saw a much steeper decline in retail employment than the majority of its reference MSAs. Hampton Roads' retail employment has declined 5.9% since the start of the recession, which stands in contrast to other regions where employment has had a stronger recovery.

Percentage Change in Retail Employment 2007 - 2016



Source: Bureau of Labor Statistics, HRPDC

## Figure 6.4 Distribution of Retail Employment



### Why is it important?

The retail sector consists of a variety of sub-sectors, each of which are subject to unique market forces. In order to appreciate how market changes affect the retail industry, it is important to observe the composition of retail employment.

### How are we doing?

General merchandise, food & beverage stores, and motor vehicles & parts account for the majority of retail employment in Hampton Roads. A myriad of other business categories constitute the other 44% of retail employment.

Source: Bureau of Labor Statistics, HRPDC

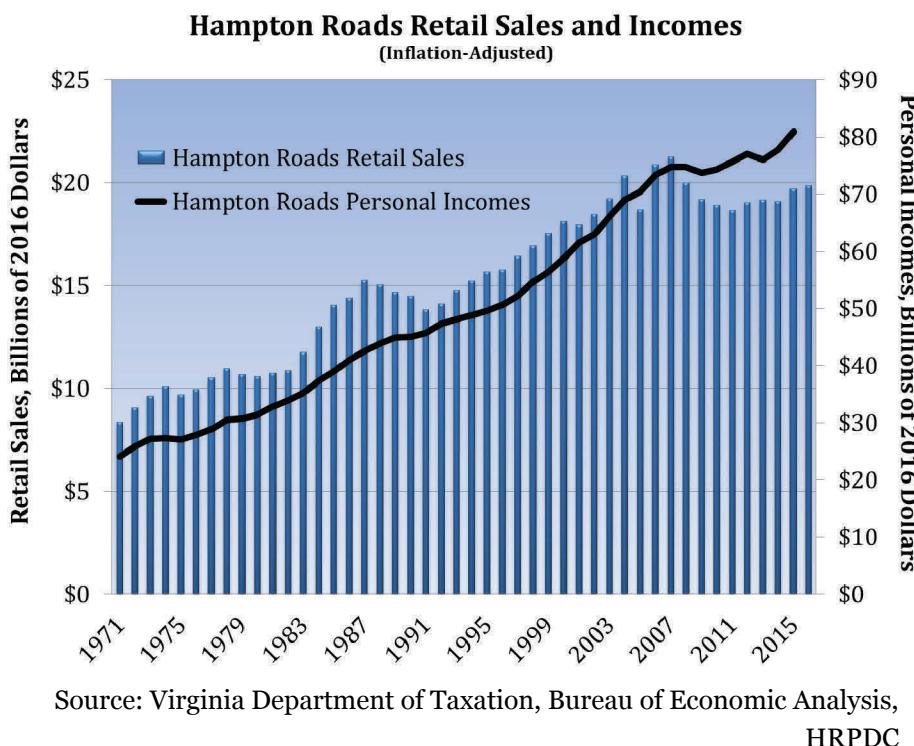
## Figure 6.5 Inflation-Adjusted Taxable Retail Sales and Income

### Why is it important?

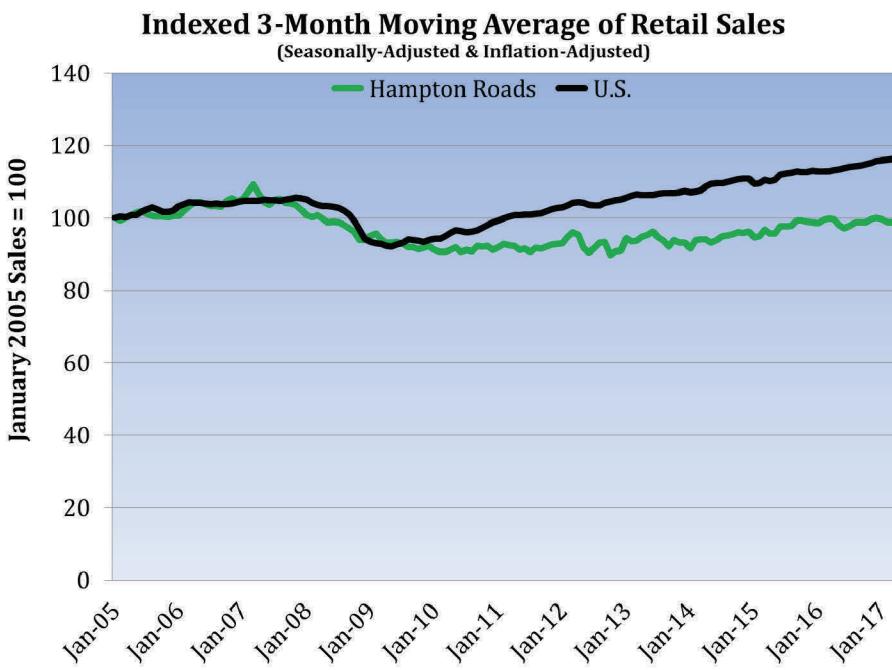
Retail sales and incomes should be closely linked, and generally increase at the same rate, but over short periods of time will diverge significantly.

### How are we doing?

While Hampton Roads' incomes held relatively constant through the recession, retail sales declined significantly and have yet to fully recover. While it is unclear what has driven this deviation, it probably has its roots in the local decline in household wealth from the housing correction and general weakness in tourism since the start of the recession.



## Figure 6.6 Monthly Hampton Roads Taxable Sales and U.S. Retail Sales



Source: Virginia Department of Taxation, U.S. Census Bureau, Bureau of Economic Analysis, HRPDC

### Why is it important?

Indexed sales at the regional and national level should change at the same rate assuming equal economic performance. Divergence between retail sales indicates the relative health of retail and the economy in general.

### How are we doing?

Hampton Roads' retail sales began declining earlier than U.S. sales after peaking in March 2007. While national retail sales declined to a similar extent, regional retail sales have not recovered at the same pace as they have nationally.

## Figure 6.7 Retail Sales by Business Category

### Why is it important?

Hampton Roads had 69 different business categories with retail sales in 2015. Measuring the retail sales by type of business offers an alternative understanding of different business category impacts on the regional economy.

### How are we doing?

General merchandise stores, which includes department stores as well as businesses such as Walmart and Target, comprise the largest share of sales in the region. Grocery stores (food and beverage) and restaurants (food services and drinking places) round out the top three.



Source: Virginia Department of Taxation, HRPDC

## Figure 6.8 Change in Retail Sales by Business Category



### Why is it important?

Growth or decline in retail sales by business category indicates how the regional economy is changing and how various business categories have responded to recent economic conditions.

### How are we doing?

Health & personal care products spending has grown since the beginning of the recession. Surprisingly, spending at restaurants has also grown through this period, both on a regional and a national level. Other categories have underperformed, including electronics, furniture, and entertainment/discretionary goods.

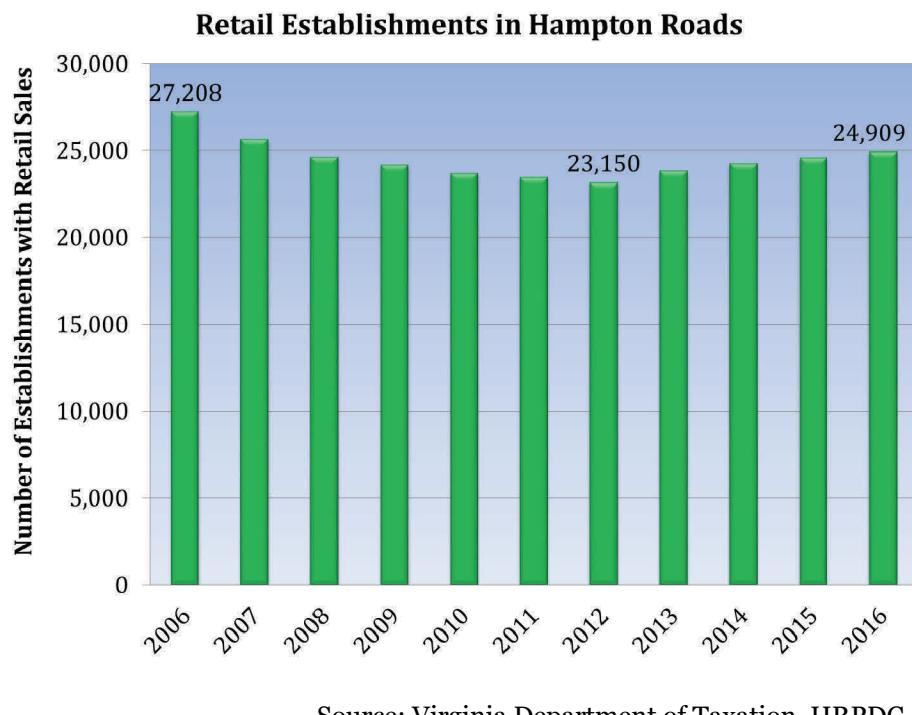
## Figure 6.9 Retail Establishments in Hampton Roads

### Why is it important?

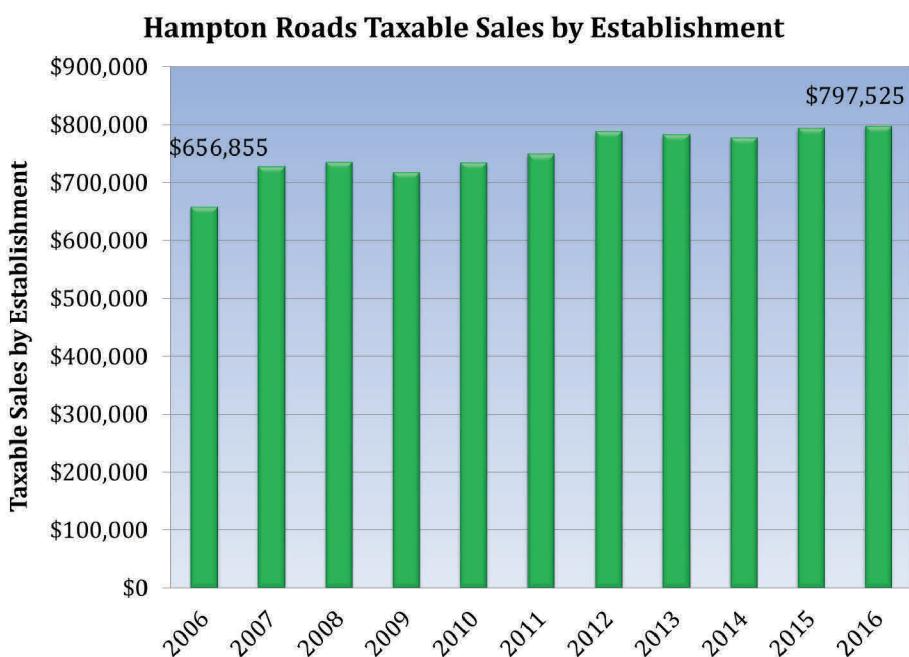
The number of establishments that have taxable sales serve as another indicator of the health of the retail sector. As the economy improves, the number of retail locations should expand.

### How are we doing?

The number of retail locations declined throughout the recession as businesses closed and new business formation slowed down in Hampton Roads. The number of retail locations has increased over the past four years.



## Figure 6.10 Retail Sales per Establishment in Hampton Roads



### Why is it important?

Retail sales per establishment measures the health of individual retail outlets, although these numbers need to be analyzed carefully, as the prevalence of big box stores versus smaller boutiques can affect this number.

### How are we doing?

Even as retail sales declined during the recession, retail sales per establishment grew slightly as a result of many establishments closing throughout the region. This trend reversed itself in 2012, but the impact has been modest.

Source: Virginia Department of Taxation, HRPDC

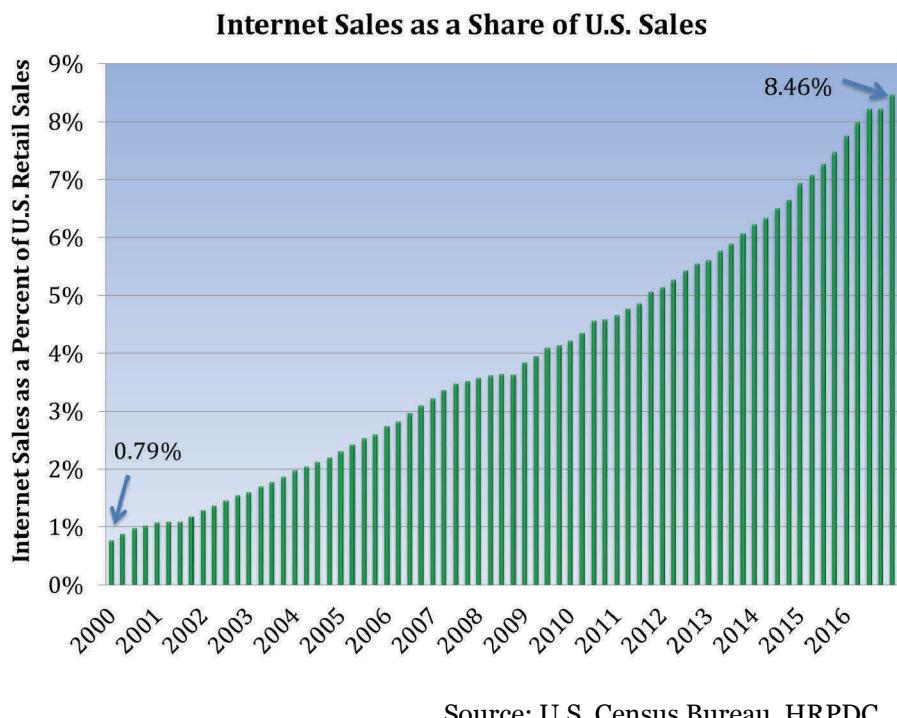
## Figure 6.11 Internet Sales as a Percentage of Total Retail Sales in the U.S.

### Why is it important?

Internet sales are an important part of modern commerce and offer affordable options for many consumers without adequate local retailers. Unfortunately, few internet retailers directly pay taxes, nor do they hire local workers or pay property taxes to localities.

### How are we doing?

Internet sales in Hampton Roads have grown strongly as a share of all U.S. sales since 2000, and now represent almost 8.46% of all retail sales nationally.



## Section VII

# Hampton Roads Real Estate

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## Real Estate in Hampton Roads

Real estate plays a vital role in the economy and constitutes where the people in Hampton Roads live, work, shop, and stay. Hampton Roads real estate has remained in a fragile state since the onset of the Great Recession in 2007. Residential home building hit its peak in 2005, but construction employment has since declined by 13,500 positions. The number of building permits issued fell from more than 11,000 in 2005 to a low of 3,966 in 2010, then ticked up to 6,375 in 2016. The average value of single family permits decreased by 10.5% between 2005 and 2014, before increasing to a new high in 2016 (inflation-adjusted).

Homeownership declined from its peak in 2004, but that resulted from increasing home prices making purchasing a home unaffordable. During the Great Recession, the decline in home prices made housing more affordable, which meant a family who earned the region's median income could afford 80.3% of homes sold in the first quarter of 2017. Mortgage rates are also exceptionally low compared to long-term trends, improving affordability. However, reports indicate stricter credit standards put in place after the onset of the financial crisis have made it difficult for some perspective buyers to gain access to credit.

One result of the housing correction and lower rate of homeownership has been growth in multifamily construction, as builders take advantage of higher rents relative to the cost of homeownership.

While the vacancy rate of retail space has not increased significantly across the region, it is important to note that all real estate is local, so trends across the region will not necessarily manifest themselves in individual pockets of Hampton Roads. The industrial market vacancy rate remains elevated, despite little growth in industrial square footage over the past five years.

While there has been some recovery in construction, general weakness in the Hampton Roads labor market suggests the regional housing market will not experience the rapid home price appreciations that have occurred in some of Hampton Roads' reference MSAs. The Hampton Roads housing market is expected to continue its long, slow recovery.

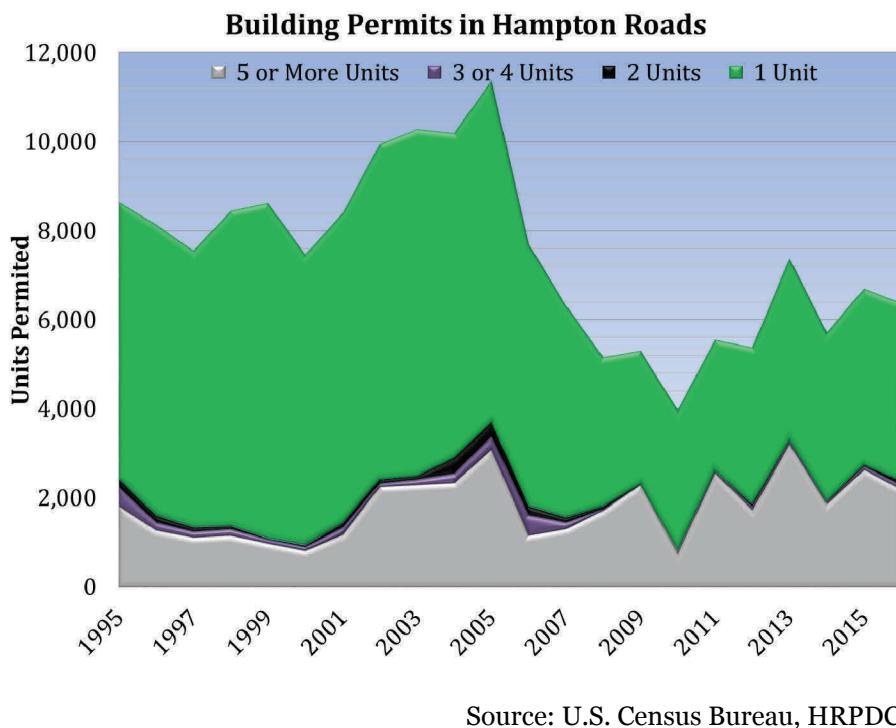
## Figure 7.1 Building Permits in Hampton Roads

### Why is it important?

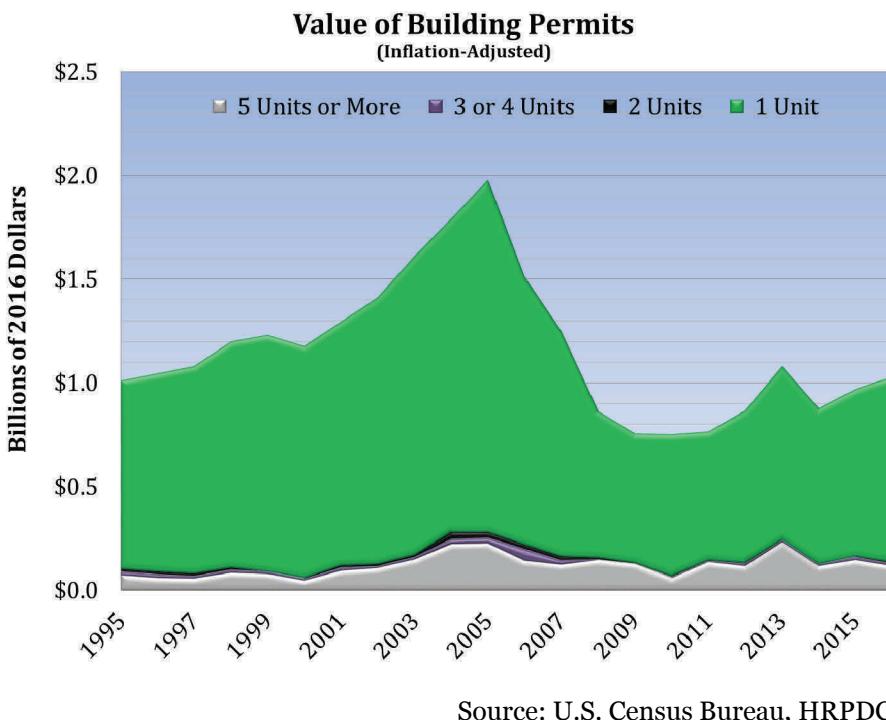
Building permit information reflects on the general well-being of the residential construction industry. Large increases or decreases in the number of building permits have both social and economic implications.

### How are we doing?

Building permits declined rapidly on the eve of the Great Recession as builders quickly reacted to the looming housing correction. The number of units permitted fell to under 6,375 in 2016. Single family homes typically comprise greater than 75% of all permits issued, but only represented 62% of permits in 2016.



## Figure 7.2 Value of Building Permits in Hampton Roads



### Why is it important?

The value of building permits is an excellent indicator of residential construction activity. Both the number and the value of building permits reflect the demand for housing in relation to the price of housing.

### How are we doing?

The value of housing permits issued has increased since the housing correction, indicating a level of recovery to the overall housing market. It is important to note recovery will likely not achieve the levels seen during the housing boom.

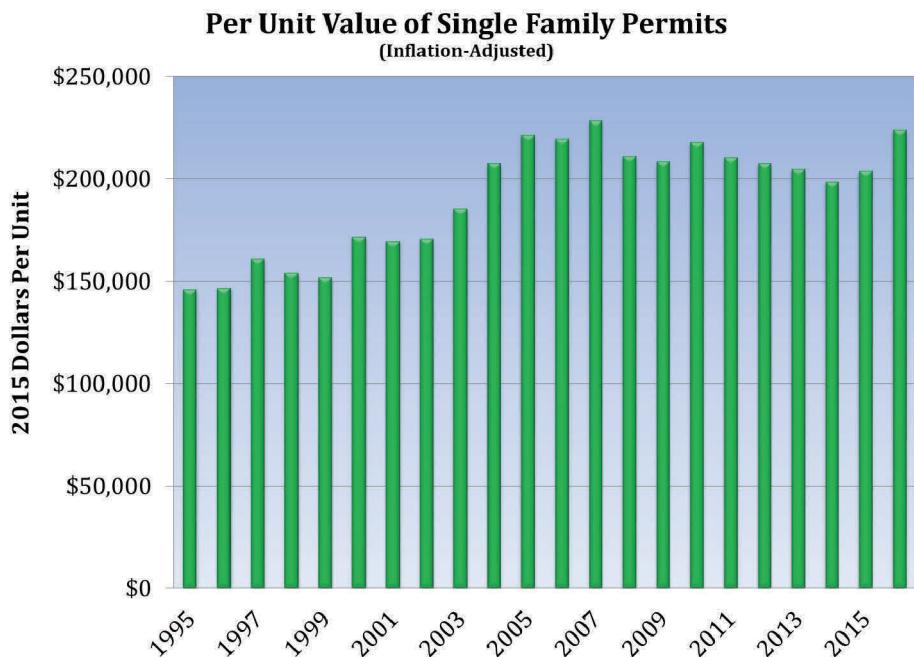
## Figure 7.3 Per Unit Value of Single Family Building Permits in Hampton Roads

### Why is it important?

The size and amenities of homes built in the region respond to numerous features, including economic factors, family size, and changing tastes. The cost of building new homes indicates at what price point the market has been operating.

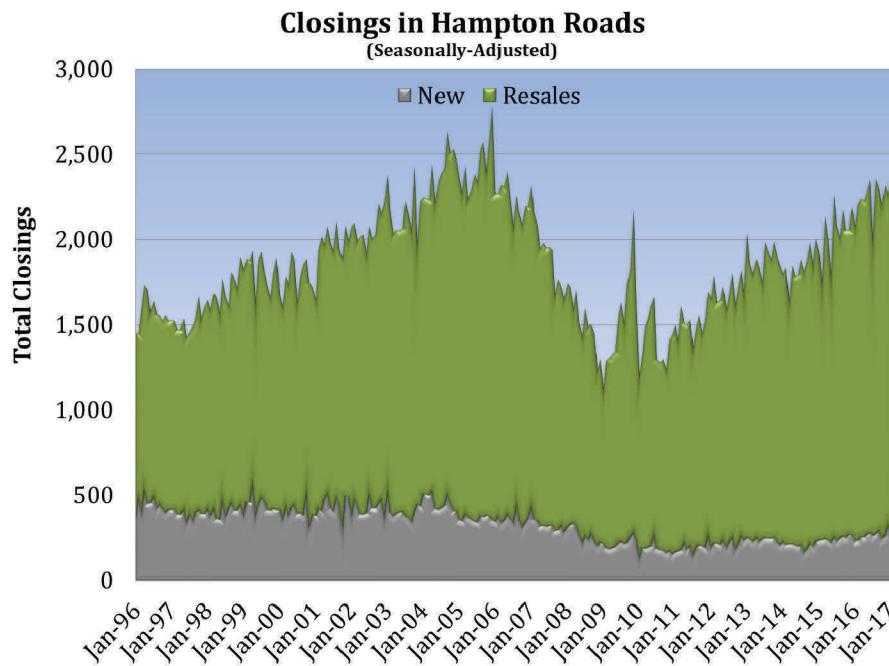
### How are we doing?

Inflation-adjusted values peaked in 2007, before declining slightly through the Great Recession. After stabilizing around \$200,000 for several years, the average value jumped to \$223,000 in 2016.



Source: U.S. Census Bureau, HRPDC

## Figure 7.4 Pre-Owned and New Construction Home Sales in Hampton Roads



Source: Rose and Womble Residential Data Bank, HRPDC

### Why is it important?

Regional home sales react to both local and national market pressures. Large increases in new construction sales often indicate increasing population, while increases in housing resales can be attributed to a variety of factors, including economic growth.

### How are we doing?

Closings in Hampton Roads contracted significantly during the Great Recession, with a brief spike related to the homebuyer tax credit. The number of transactions has increased over the past two years, but with relatively lower levels of new construction.

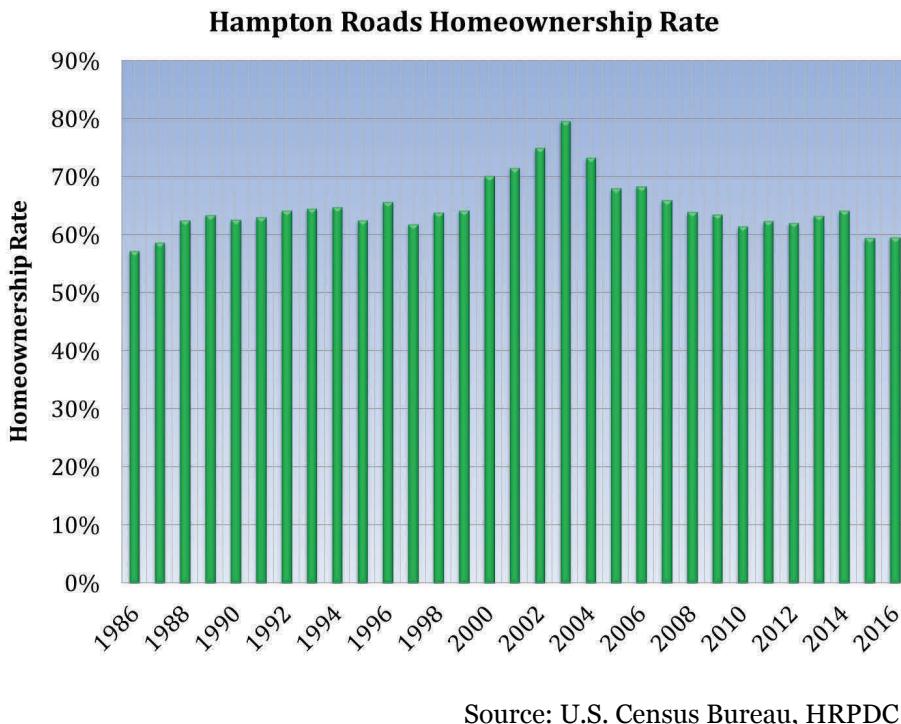
## Figure 7.5 Homeownership Rates in Hampton Roads

### Why is it important?

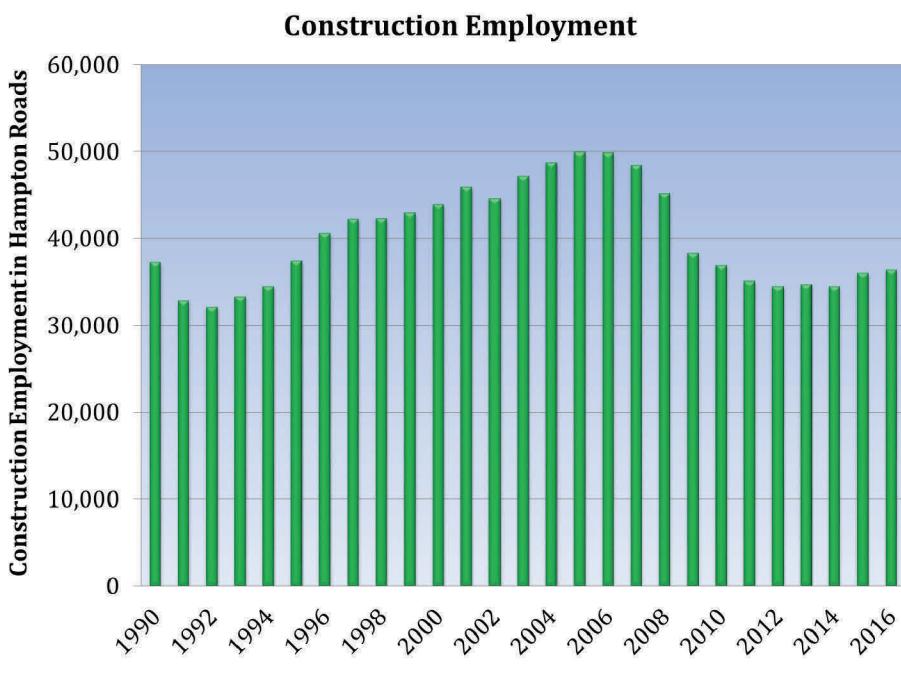
Homeownership was a stated policy goal of the two previous presidential administrations, and is often been considered part of the American Dream. Changes in the homeownership rate are driven by new household formation, as well as other demographics changes.

### How are we doing?

Homeownership peaked in 2003, until rising home prices started to slow down household formation. The homeownership rate is now below the levels seen in the 80s, and this should result in strong household formation as the population continues to grow.



## Figure 7.6 Construction Employment in Hampton Roads



### Why is it important?

Construction employment serves as another measure of the construction industry, and the industry provides employment opportunities for individuals who decided to forego high levels of education.

### How are we doing?

Construction employment declined significantly during the housing correction and has yet to return to the levels seen through the 2000s.

Source: Bureau of Labor Statistics, HRPDC

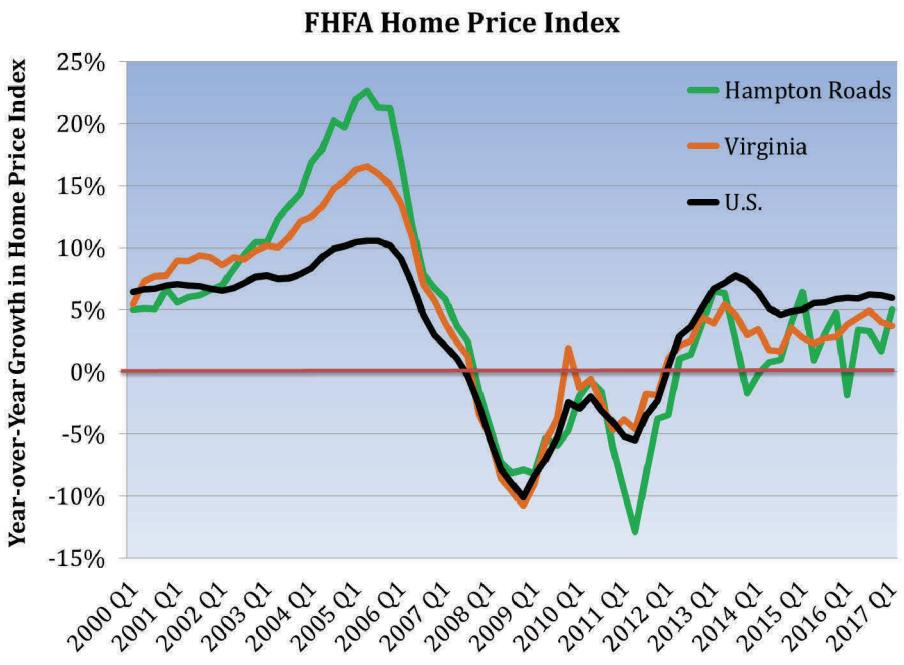
## Figure 7.7 Housing Price Index in Hampton Roads, Virginia, and the U.S.

### Why is it important?

The FHFA Home Price Index (HPI) measures repeated sales of homes to capture the true increase in the cost of housing. Rising home values serve as an asset to families and represent a rising cost of living for workers regionally.

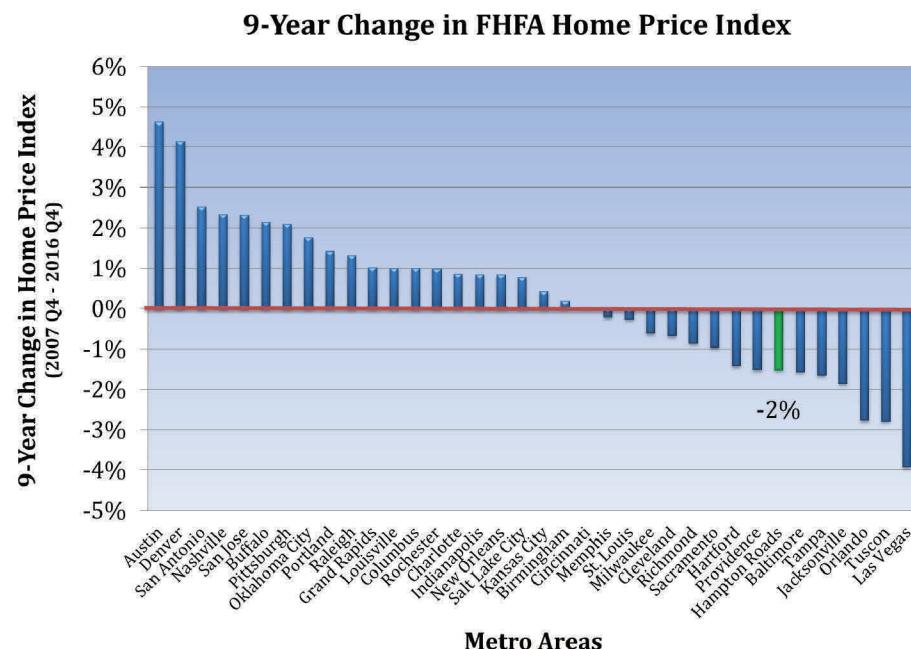
### How are we doing?

The HPI in Hampton Roads experienced a similar decline to that of the nation and the Commonwealth from 2007 to 2009, although its decline in 2011 was significantly worse. In recent years the Hampton Roads HPI has been very erratic.



Source: Federal Housing Finance Agency, HRPDC

## Figure 7.8 Housing Price Index in Hampton Roads and Reference Metropolitan Areas



### Why is it important?

Housing is a major component of the cost of living, affecting how the Hampton Roads region can compete for employment with other metro areas. Also, real property taxes are an important part of local government finances, and changes in home values can impact the level of services a locality can provide.

### How are we doing?

Hampton Roads home prices declined by 2% from 2007 levels, showing the continued weakness in Hampton Roads housing.

Source: Federal Housing Finance Agency, HRPDC

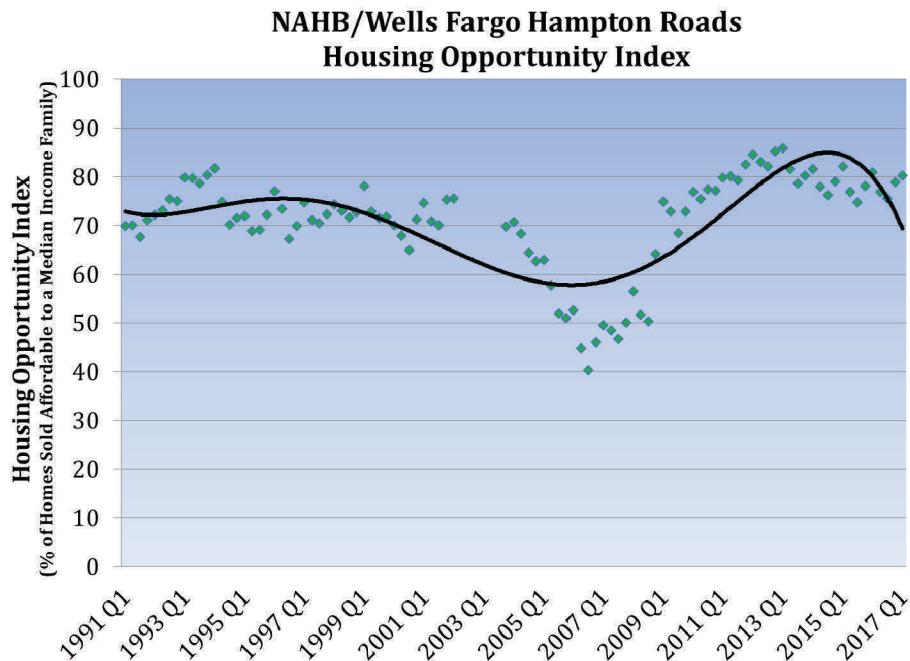
## Figure 7.9 Housing Opportunity Index

### Why is it important?

The ability to purchase housing improves the quality of life by offering individuals the opportunity to take advantage of the benefits associated with homeownership. This index estimates the percentage of homes sold that are affordable to a family earning the region's median income.

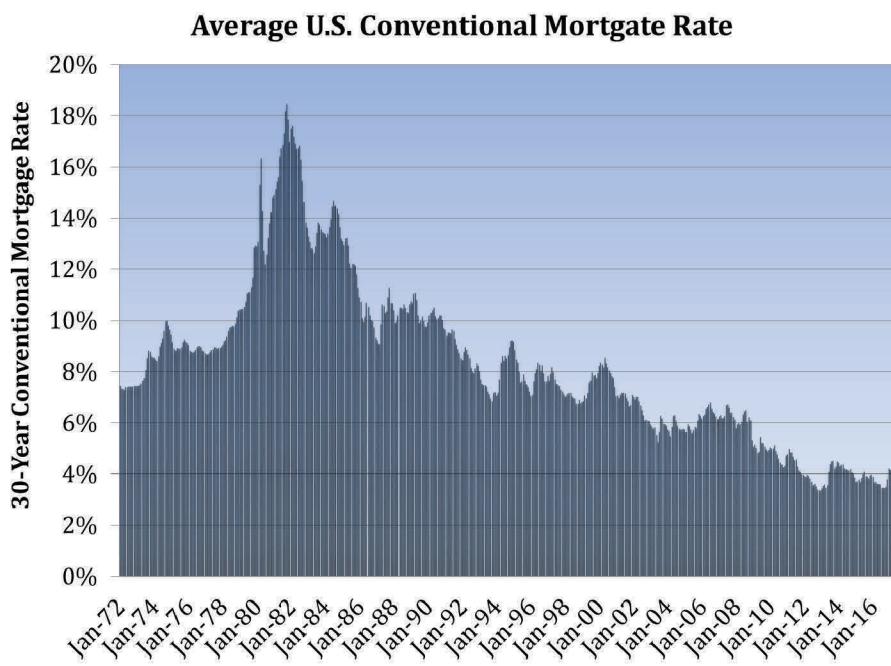
### How are we doing?

Housing affordability had increased in Hampton Roads as a result of lower home prices, lower interest rates, and steady growth in median incomes. More recently, affordability started declining according to this measure.



Source: National Association of Home Builders, Wells Fargo, HRPDC

## Figure 7.10 30-Year Conventional Mortgage Rates



Source: Freddie Mac, HRPDC

### Why is it important?

National mortgage rates influence local mortgage rates and the overall affordability of the housing market. Continued low rates allow the market to continue to improve, but any major increase in mortgage rates could greatly impact the housing market.

### How are we doing?

Mortgage rates have decreased as a result of lower demand for loans and accommodative monetary policy after the recession. As the Federal Reserve raises interest rates, higher mortgage rates may impact affordability.

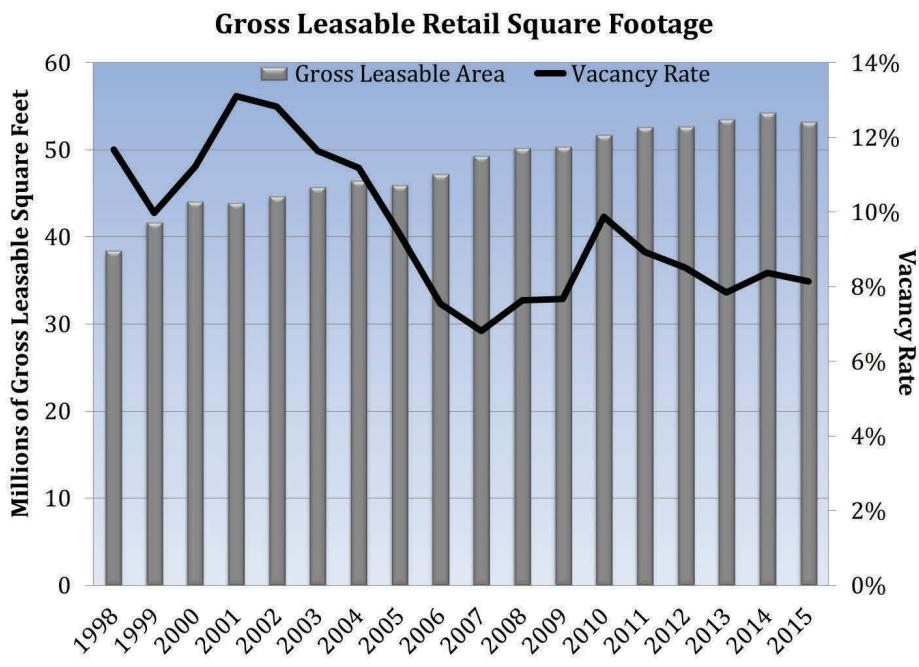
## Figure 7.11 Gross Leasable Retail Space in Hampton Roads

### Why is it important?

The availability of retail space reflects market conditions, speculation, and access to real estate.

### How are we doing?

Hampton Roads has continued to add retail square footage, and has maintained a lower vacancy rate for that retail footage than it saw during the late 1990s and early 2000s.



Source: Old Dominion University Center for Real Estate and Economic Development, HRPDC

## Figure 7.12 Hampton Roads Industrial Market Vacancy Rate



### Why is it important?

The industrial market vacancy rate signals the availability of industrial space for area employers. Sudden changes in the vacancy rate can indicate the arrival or departure of a major employer. Sustained changes are indicative of trends in the industrial market place.

### How are we doing?

The vacancy rate spiked during the recession, and while it has declined from its peak in 2009, it remains elevated above normal levels.

Source: Old Dominion University Center for Real Estate and Economic Development, HRPDC

## Section VIII

# Demographics

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## Demographics in Hampton Roads

Hampton Roads was the 37th most populous metropolitan area in 2015, behind San Jose, Austin, and Nashville, and ahead of Providence, Milwaukee, and Jacksonville. The region's population grew to 1.73 million that year, adding almost 3,500 individuals to the region. While the region's population growth is steady, it lags several of its reference MSAs. The Hampton Roads region has lagged behind national and state levels of population growth since the early 1990s.

Hampton Roads has consistently had a high level of births relative to deaths in the region, which in theory should lead to a much higher population growth. On average, the region has experienced significant out-migration (on average, 1,350 persons per year for the last 10 years). Since this region has low levels of unemployment, it is theorized that this out-migration is driven by military families that start families in this region, but move as they leave the service.

The share of the population 65 and older remains fairly small in Hampton Roads, at just 13.8% in 2016, but this share has increased from 10% in 2000, likely because of the declining presence of military personnel and aging of the national population. While not as significant as in the U.S. overall, this has pushed the region's dependency ratio to 65.5% from a low of 61.5% in 2011. The dependency ratio indicates the number of potential dependents (persons 65 and older, as well as minors) an economy needs to support for every person in their prime working age (persons aged 20-65). It has traditionally been difficult for regions with a higher dependency ratio to make investments and grow their economy, although several factors can mitigate these risks.

Another change over time has been that the number of females has surpassed males in the region's population, likely derived by the decreasing number of military personnel in the region, and the growth of the rest of the population and economy.

With some slight differences, the occupational mix in Hampton Roads mirrors that of the nation, with a slightly higher percentage employed in engineering and architecture occupations, likely related to the needs of the federal government presence in the region, including both the Department of Defense and research institutions.

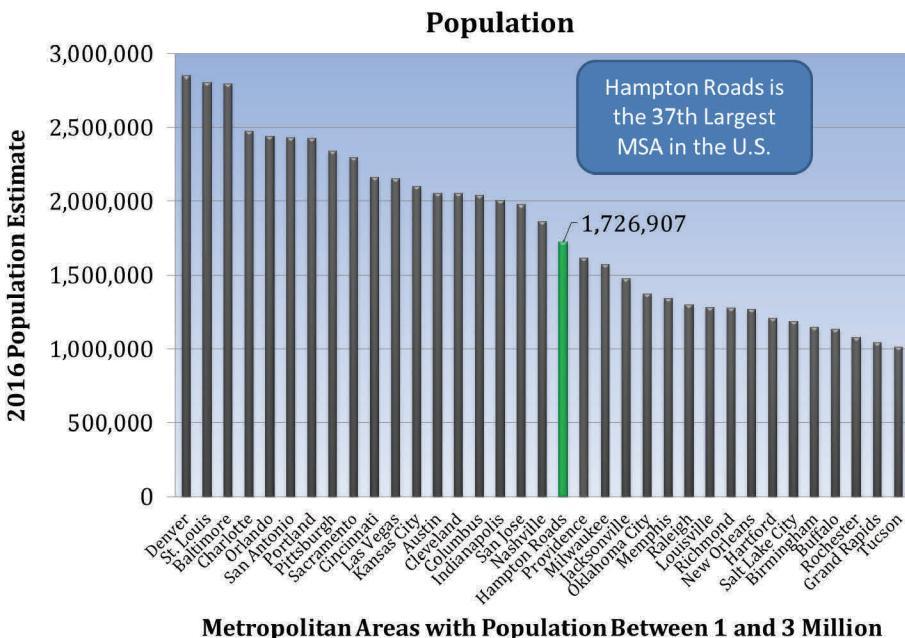
## Figure 8.1 Population of Hampton Roads and Reference Metro Areas

### Why is it important?

Population provides a context for understanding many economic and social indicators.

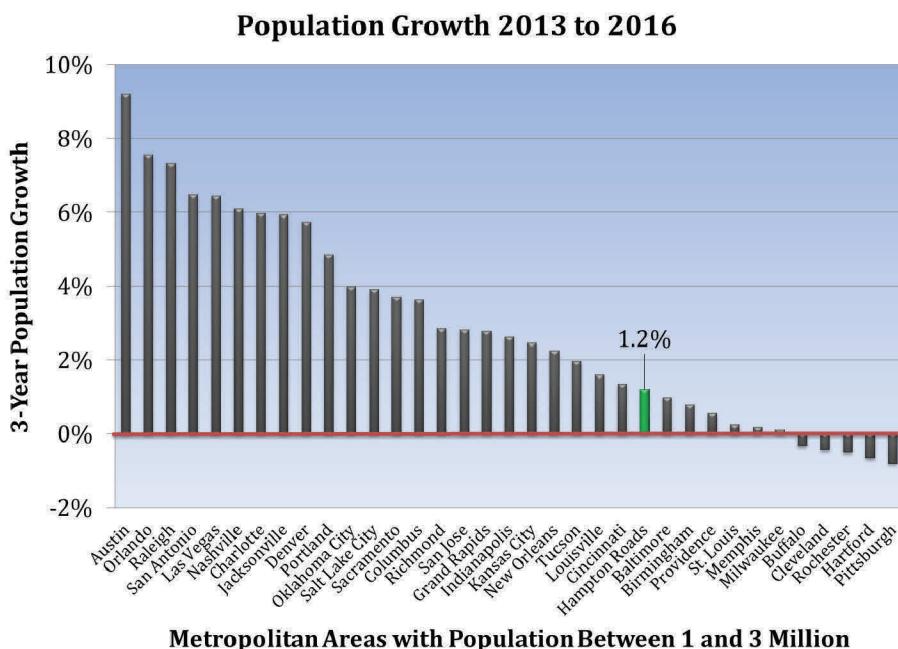
### How are we doing?

With a population of 1.7 million persons, Hampton Roads is the 37th largest metropolitan area in the country. It was 36th just five years ago, but Nashville has been growing very rapidly for a number of years and recently moved past Hampton Roads in 2011.



Source: U.S. Census Bureau, HRPDC

## Figure 8.2 3-Year Population Growth Rate of Hampton Roads and Reference Metro Areas



### Why is it important?

Population growth is indicative of the relative attractiveness of a region. Regions that have a robust economy often have rapid population growth as they attract new residents.

### How are we doing?

Over the past three years, Hampton Roads has grown, but not as quickly as many similar sized metro areas. Some areas that have seen high levels of population growth include Austin, Raleigh, and Richmond.

Source: U.S. Census Bureau, HRPDC

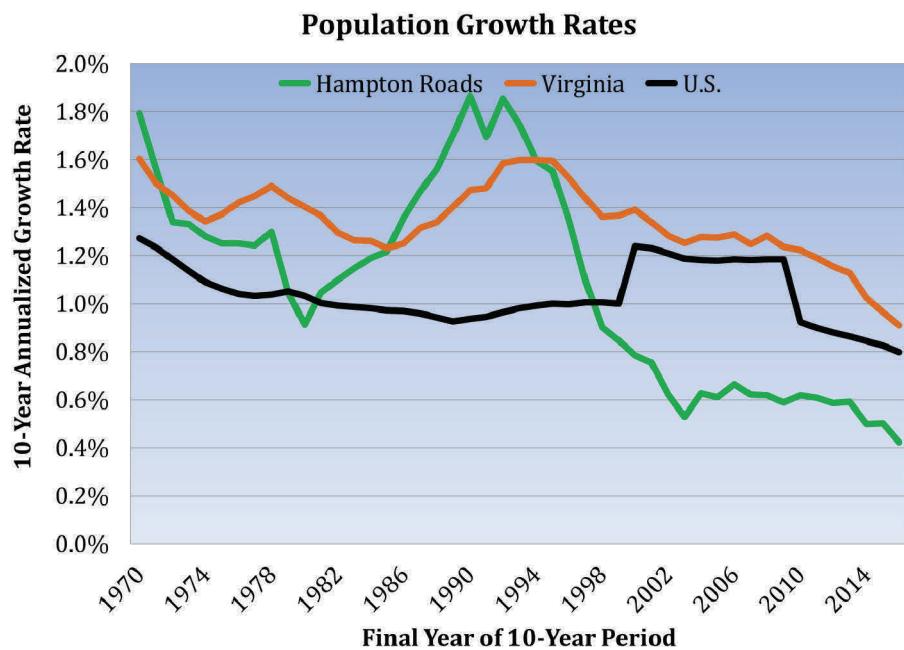
## Figure 8.3 Population Growth Rates in Hampton Roads, Virginia, and the U.S.

### Why is it important?

Population growth tracks closely with other expressions of economic growth. Changes in population can impact employment and income statistics. Smoothing the growth for ten years allows for observation of underlying trends.

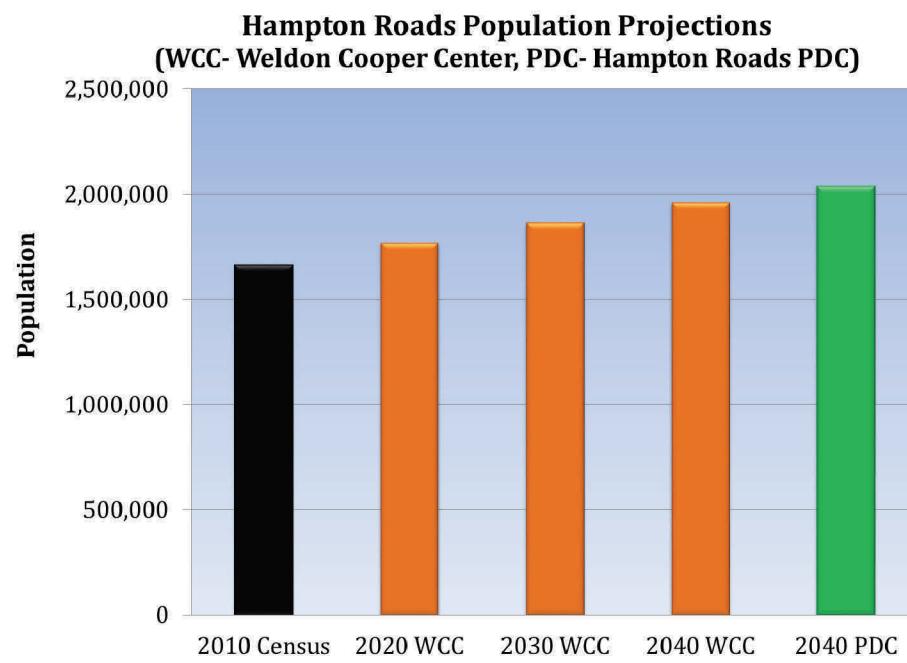
### How are we doing?

Hampton Roads has seen high levels of population growth when the federal government has invested heavily in defense, such as during the 1960s and again at the end of the 1980s. Since the 1990s Hampton Roads' population growth has lagged behind that of Virginia and the nation.



Source: Weldon Cooper Center, U.S. Census Bureau, HRPDC

## Figure 8.4 Projected Hampton Roads Population



Source: U.S. Census Bureau, Weldon Cooper Center, HRPDC

### Why is it important?

While long-term forecasting is not an exact science, it is important to look at potential population growth to estimate needed infrastructure, housing, and services in the region.

### How are we doing?

Hampton Roads' population growth has been very consistent over the long-term trend. While there are concerns about the future of defense spending and its impact on population growth, projected growth in employment in the region suggests that the population will continue its slow but steady expansion.

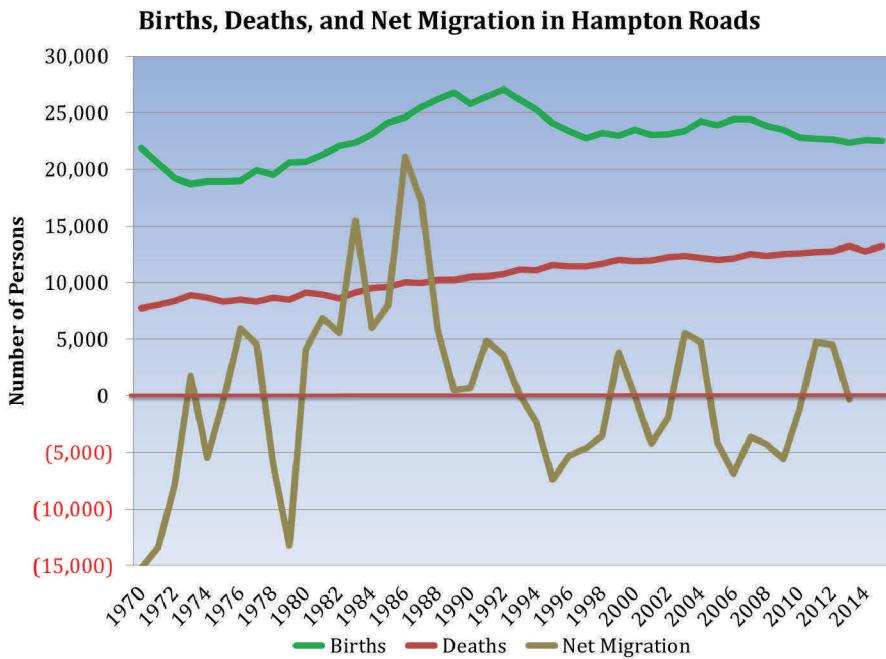
## Figure 8.5 Components of Population Change in Hampton Roads

### Why is it important?

Changes in regional population are due to births, deaths, and migration. Reviewing the components of population provides a clearer picture of changes in a region's demographics.

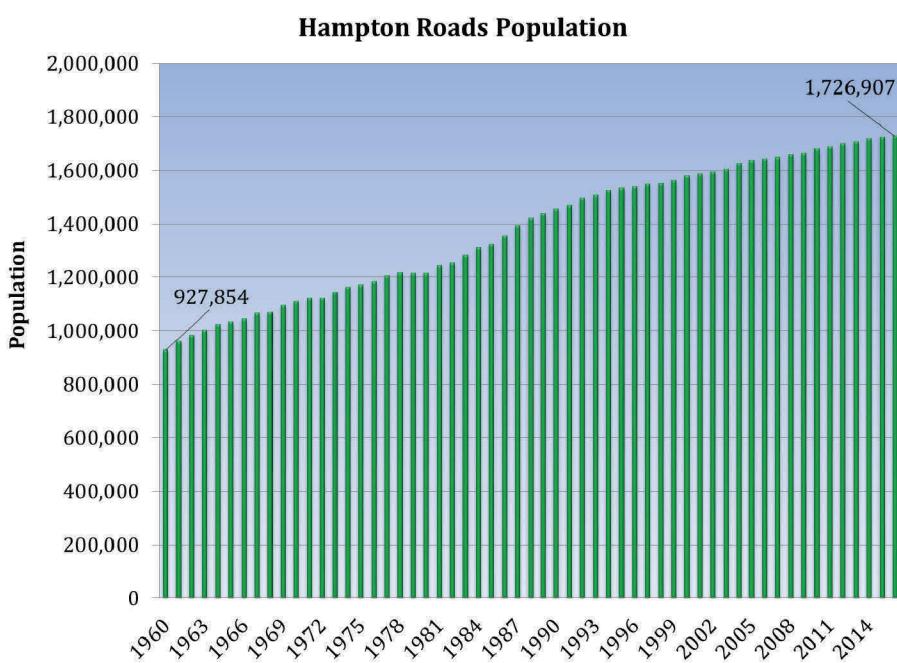
### How are we doing?

Hampton Roads continues to see significant natural increases. While the region's birthrate is higher than its death rate, several periods of negative migration have prevented the region from experiencing high levels of population growth. Many servicemembers enter and leave the region each year as a result of military orders and deployments.



Source: Weldon Cooper Center, Virginia Department of Health, HRPDC

## Figure 8.6 Hampton Roads Population



Source: U.S. Census Bureau, Weldon Cooper Center, HRPDC

### Why is it important?

Total population indicates the attractiveness of the region in terms of economics and quality of life. Larger populations also mean larger markets, which is important for attracting development and businesses.

### How are we doing?

Population has grown steadily over the past 53 years, with the exception of slight declines in 1979 and 1980.

## Figure 8.7 Age Distribution of Hampton Roads Population

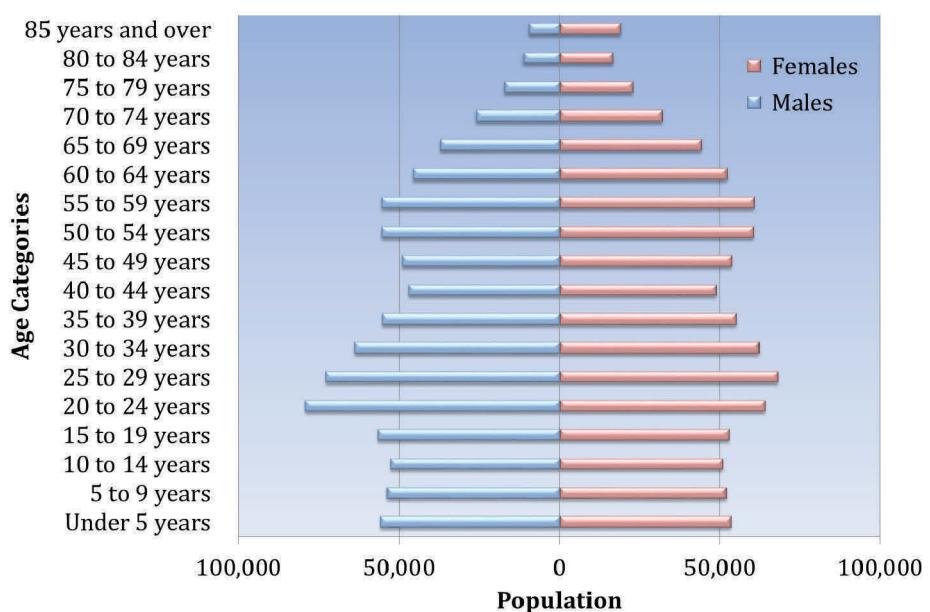
### Why is it important?

The age distribution of a region's population has social and economic implications. It provides insight into the need for family and senior services, as well as indicating the availability of labor. Growing populations have a histogram that looks like a pyramid.

### How are we doing?

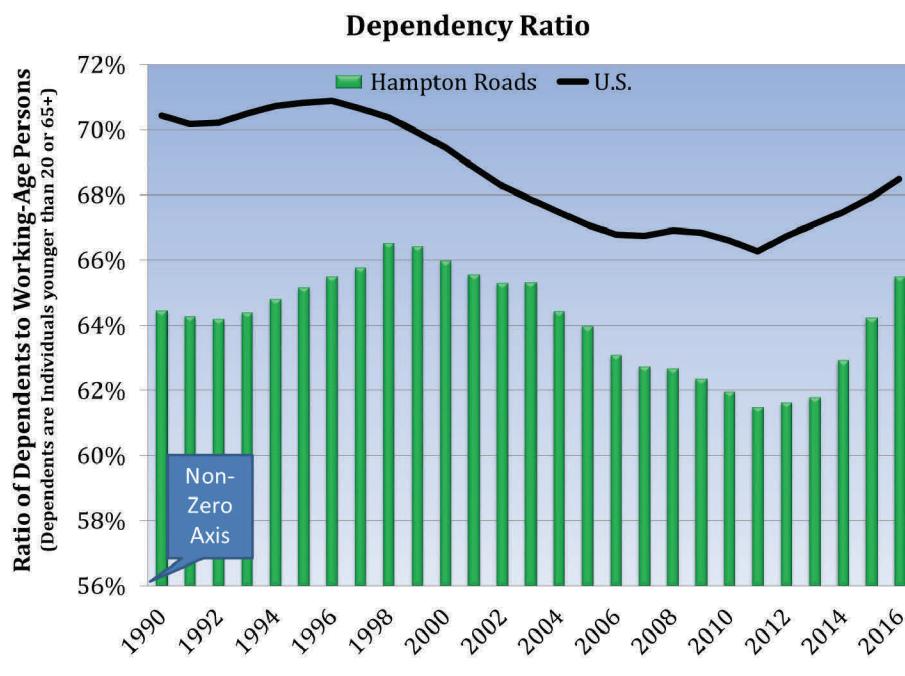
Hampton Roads does not have a rapidly expanding population of minors, nor does it have a large elderly population. Rapid growth is seen for the 20-24 and the 25-29 age groups, which is related to military personnel stationed in the region.

### Hampton Roads Population Histogram 2016



Source: U.S. Census Bureau, HRPDC

## Figure 8.8 Dependency Ratio in Hampton Roads and the U.S.



Source: Regional Economic Modeling Inc., HRPDC

### Why is it important?

This illustrates the extent to which the working age population supports dependents (both children and adults). The size of the dependency ratio has a causal link to GDP growth.

### How are we doing?

The dependency ratio has increased since the onset of the Great Recession, both nationally and regionally, driven by baby boomers moving into retirement age. While the population shifts have been small in absolute terms, increasingly fewer workers are supporting a larger population of dependents.

## Figure 8.9 Gender Distribution of the Hampton Roads Population

### Why is it important?

Men and women require distinctive services, tend to pursue different occupations, and impact the social and economic landscape in a unique manner.

### How are we doing?

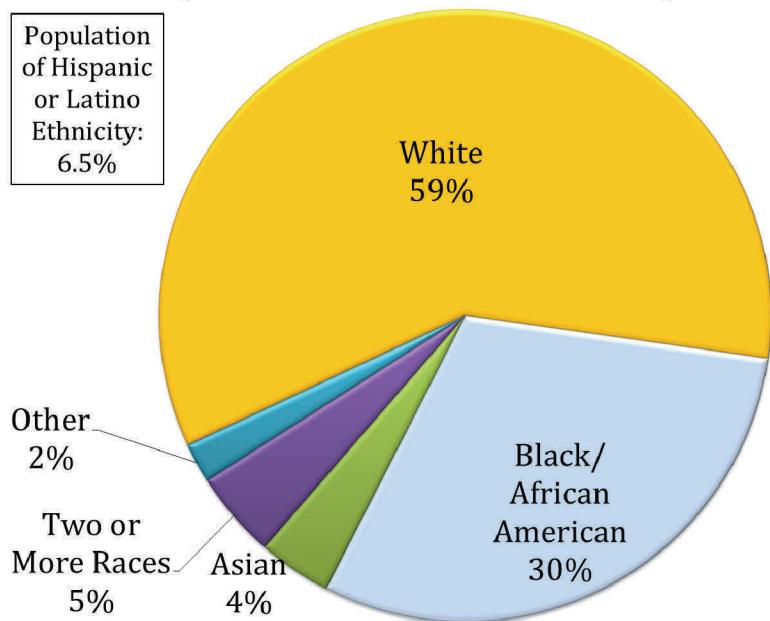
Since 1992, the number of women in Hampton Roads has surpassed the number of men. Females in Hampton Roads now outnumber males by a substantial margin.



Source: Regional Economic Modeling Inc., HRPDC

## Figure 8.10 Race and Ethnicity in Hampton Roads

### Hampton Roads Race & Ethnicity, 2016



### Why is it important?

Understanding racial and ethnic diversity is important in order to ensure equal opportunities for all persons. One should employ localized diversity statistics when evaluating regional employment trends.

### How are we doing?

Hampton Roads has a significant African American population relative to that of the Nation, as well as a smaller percentage of the population of Hispanic or Latino ethnicity than the U.S. average.

Source: American Community Survey, HRPDC

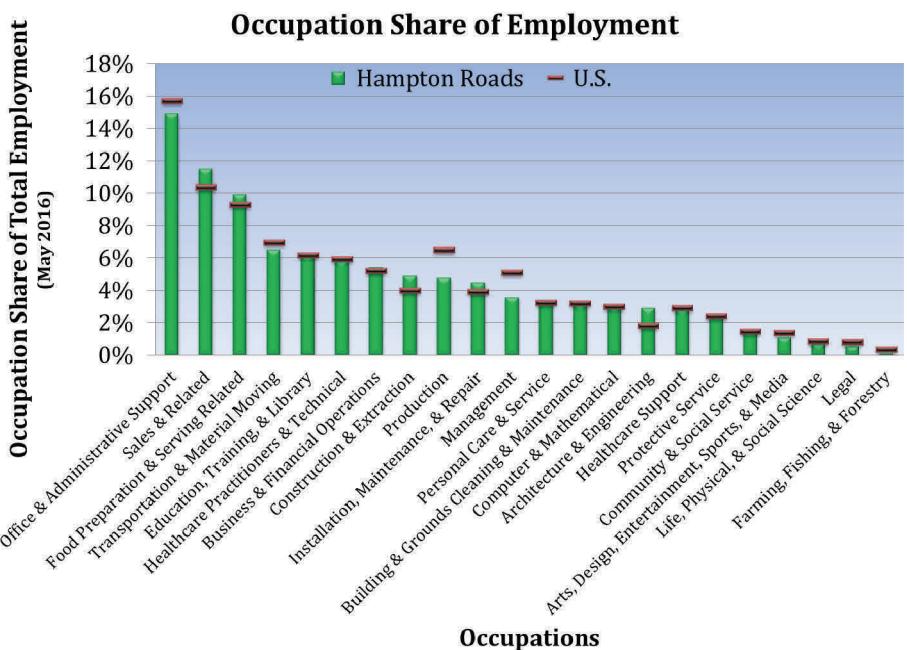
## Figure 8.11 Distribution of Occupations in Hampton Roads

### Why is it important?

Employment is often classified by industry, although persons seeking employment typically search by occupation. A single industry can capture diversity in workforce needs and potential incomes. Examining occupational distribution allows for a more precise analysis of the region's workforce.

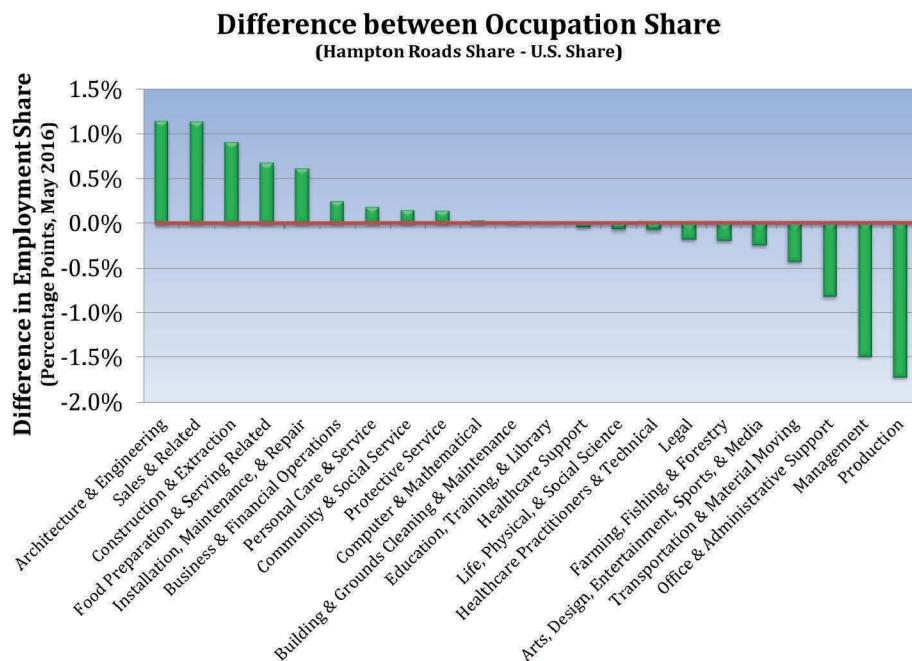
### How are we doing?

Hampton Roads has significant diversity within occupations available to its residents, ranging from office and administrative jobs that comprise 14.9% of the region's employment to farming, fishing, and forestry that employ 0.1%.



Source: Bureau of Labor Statistics, HRPDC

## Figure 8.12 Comparative Occupation Percentage for Hampton Roads and the U.S.



### Why is it important?

The differences between the occupation mix in Hampton Roads and the U.S. indicate some of the differences in the underlying economy. This also reflects underlying education levels and areas of potential growth for the Hampton Roads workforce.

### How are we doing?

Hampton Roads has a greater percentage of its employment concentrated in architecture & engineering as well as construction & extraction than the nation as a whole.

Source: Bureau of Labor Statistics, HRPDC

## Section IX

# Transportation

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## Transportation in Hampton Roads

The transportation network in Hampton Roads has garnered considerable attention as aging infrastructure and traffic congestion are closely tied to the economy and quality of life within the region. The recent downturn in the economy has affected many aspects of the Hampton Roads transportation system, with growth in roadway travel coming to a halt and a decrease in air travel from Hampton Roads airports.

Over the last decade, Hampton Roads has experienced a decrease in terms of per capita vehicle miles traveled. In addition, the region also has a lower level of vehicle miles traveled per capita and a lower mean travel time to work than most other competitor regions.

In spite of relatively lower amounts of travel per capita in Hampton Roads than in competitor regions, congestion is a significant issue in the area, particularly at bridges and tunnels. According to the Texas Transportation Institute, among competitor regions, only six similar sized MSAs had a higher Travel Time Index (which measures the extra amount of time trips take in each region during congested peak travel periods) than Hampton Roads did in 2014.

Public transportation continues to play a small role in the region when compared to some other areas of similar size due in part to low population density. Norfolk has completed building the region's first light rail line, running 7.4 miles from Eastern Virginia Medical Center to Newtown Road. Light rail has the capability to impact future land use decisions and encourage increased density in development.

## Figure 9.1 Per Capita Daily Vehicle Miles Traveled in Hampton Roads

### Why is it important?

Per capita vehicle miles traveled (VMT) is the industry standard in determining the amount of traffic generated per person. Increased sprawl, higher employment to population ratios, and low transit usage can put upward pressure on a region's per capita VMT.

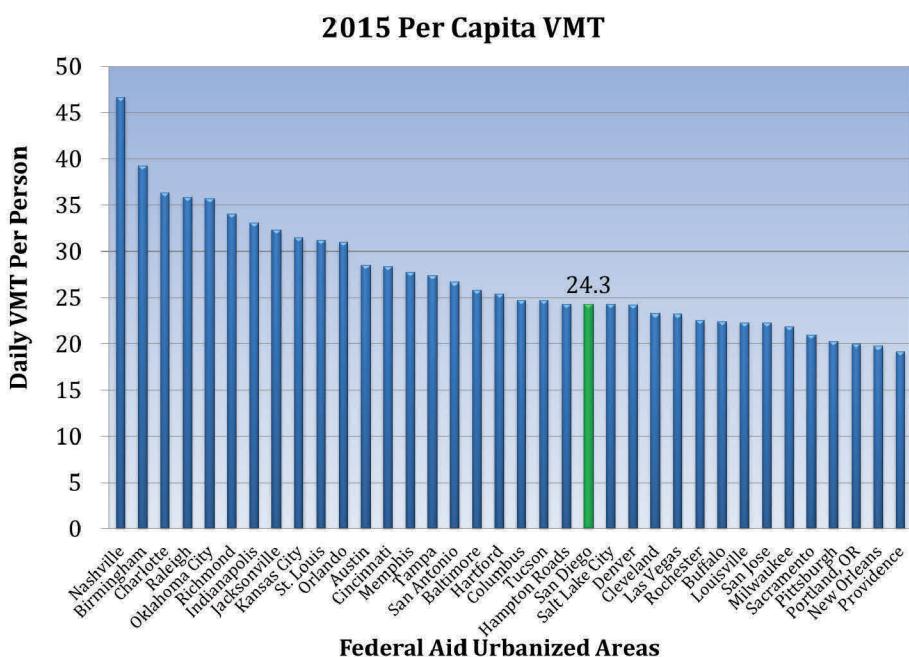
### How are we doing?

Per Capita Vehicle Miles Traveled has declined slightly from its peak in 2003, but remained remarkably stable overall until the recent decline starting in 2011.



Source: Federal Highway Administration, HRPDC

## Figure 9.2 Per Capita Daily Vehicle Miles Traveled in Hampton Roads and Reference Metro Areas



### Why is it important?

Traffic patterns and congestion have a bearing on regional competitiveness and quality of life. Per capita VMT is a reflection of a region's commuting distance, density, and transit usage.

### How are we doing?

Hampton Roads' per capita VMT is average compared to that of its reference MSAs.

Source: Federal Highway Administration, HRPDC

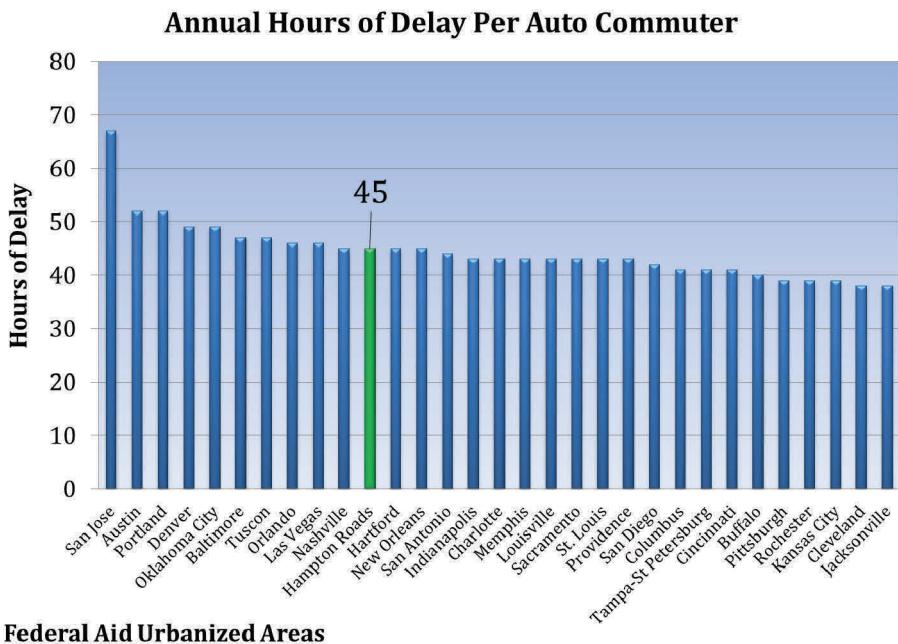
## Figure 9.3 Annual Hours of Delay Per Auto Commuter in 2014 in Hampton Roads and Reference MSAs

### Why is it important?

While VMT refers to the distance traveled, annual hours of delay reflects the degree of congestion. Comparing the annual hours of delay illustrates how local congestion compares with congestion in competing metro areas.

### How are we doing?

Hampton Roads annual hours of delay is comparable to other similar sized southeastern metropolitan areas that face the same land use decisions. Regional delay grew from 43 to 45 hours over the past two years, but Hampton Roads' rank fell as other regions saw greater growth.



Source: Texas Transportation Institute, HRPDC

## Figure 9.4 Annual Hours of Delay Per Auto Commuter in Hampton Roads



### Why is it important?

Congestion trends are important because of the impact congestion has on the cost of businesses and quality of life. Residents and businesses base their estimation of congestion on prior commuting experiences when planning for the future.

### How are we doing?

Average hours of delay declined as a result of the recession (and to a lesser extent regionally), but have grown over the past five years.

Source: Texas Transportation Institute, HRPDC

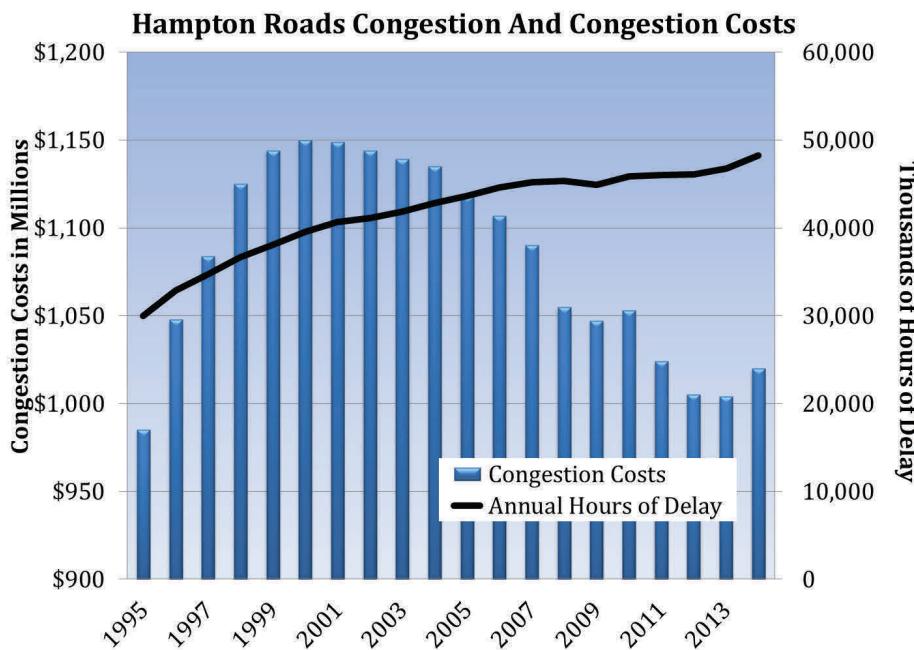
## Figure 9.5 Hampton Roads Congestion and Congestion Costs

### Why is it important?

Time spent in traffic comes at a cost for both residents and businesses. Increased congestion adds to the cost of doing business and decreases the quality of life.

### How are we doing?

Congestion costs rose substantially through the nineties. In 2011 congestion costs in Hampton Roads reached \$1.02 billion. Continued congestion will inhibit the ability of the Port of Virginia to be competitive, restrict the flow of tourists, and reduce quality of life for Hampton Roads residents.



Source: Texas Transportation Institute, HRPDC

## Figure 9.6 Peak Period Travel Time Index 2014



### Why is it important?

The Travel Time Index measure of congestion focuses on each trip and each mile of travel. It is calculated as the ratio of travel time in the peak period to travel time in free-flow.

### How are we doing?

The data indicates that Hampton Roads is about average for peak period congestion among similar sized MSAs. According to the data, it takes approximately 19% longer to make a trip during peak driving times in Hampton Roads than it would under unburdened conditions.

Source: Texas Transportation Institute., HRPDC

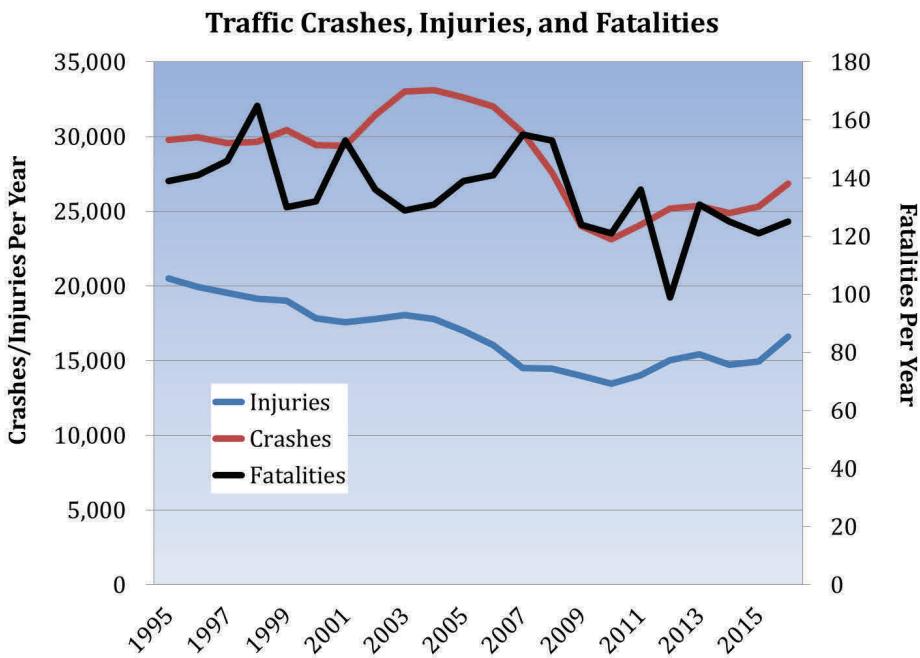
## Figure 9.7 Hampton Roads Traffic Crashes

### Why is it important?

One of the costs of driving that receives less attention than it deserves is the risk of injuries and fatalities.

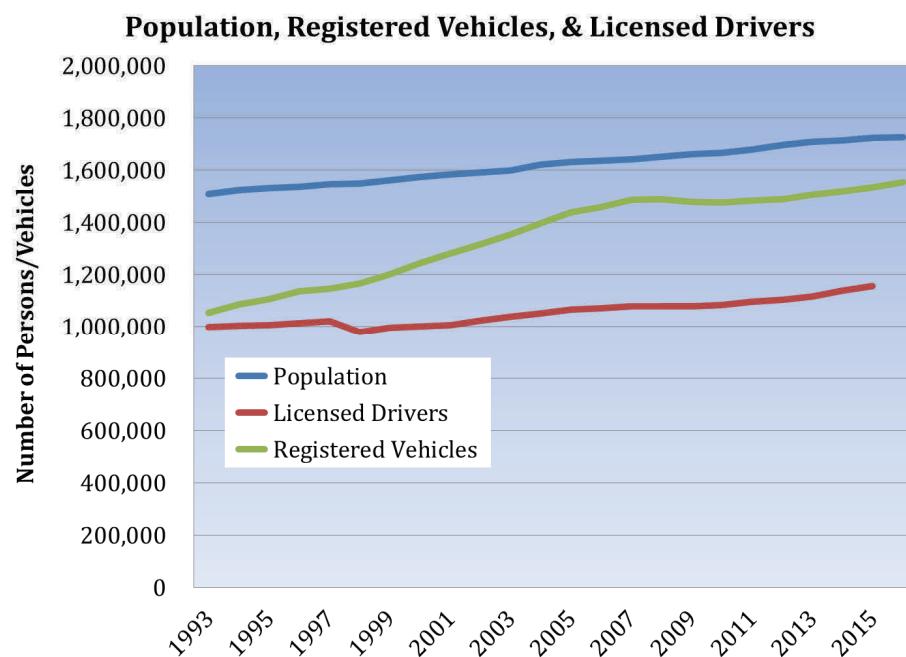
### How are we doing?

Fatalities due to traffic crashes in Hampton Roads have averaged 130 per year over the past decade, declining despite an increasing population. The decrease in the numbers of injuries and crashes can be attributed in part to improved safety standards for roadways and automobiles, as well as reduced alcohol-related crashes.



Source: Virginia Department of Motor Vehicles, HRPDC

## Figure 9.8 Hampton Roads Vehicle Registrations



### Why is it important?

Population, the number of licensed drivers, and the availability of automobiles are all factors in determining automobile usage.

### How are we doing?

As the Hampton Roads population increases, so do the number of licensed drivers. Precipitous growth in the number of registered vehicles has increased the availability of automobiles subsequently increasing the number of vehicles on the road, though that growth has leveled off since the recession.

Source: Virginia Department of Motor Vehicles, Weldon Cooper Center, HRPDC

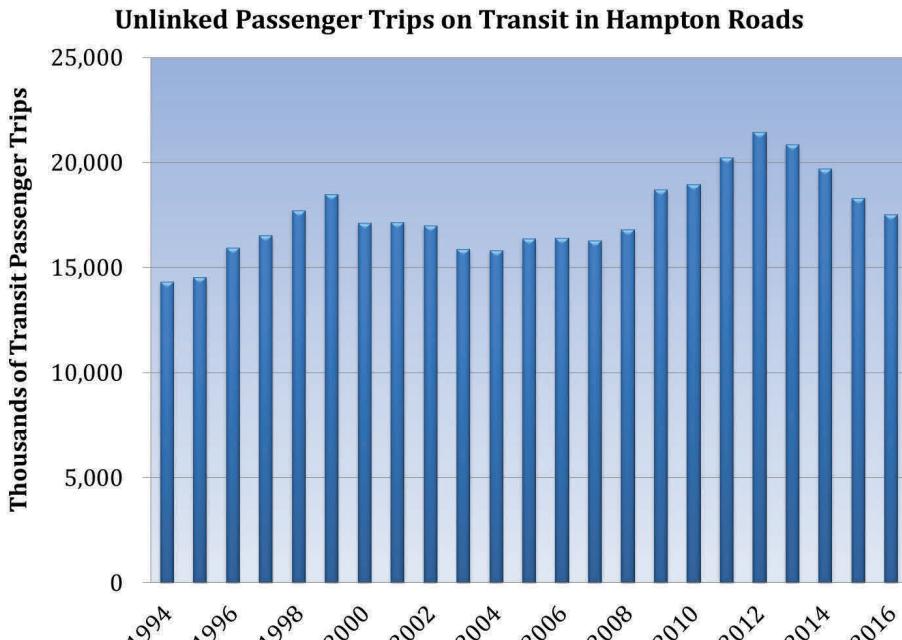
## Figure 9.9 Transit Passenger Trips in Hampton Roads

### Why is it important?

Public transit serves as primary transportation for those without cars and an alternate source of transportation for commuters. Transit can also help alleviate roadway congestion. Transit ridership is typically a function of availability, necessity, and opportunity.

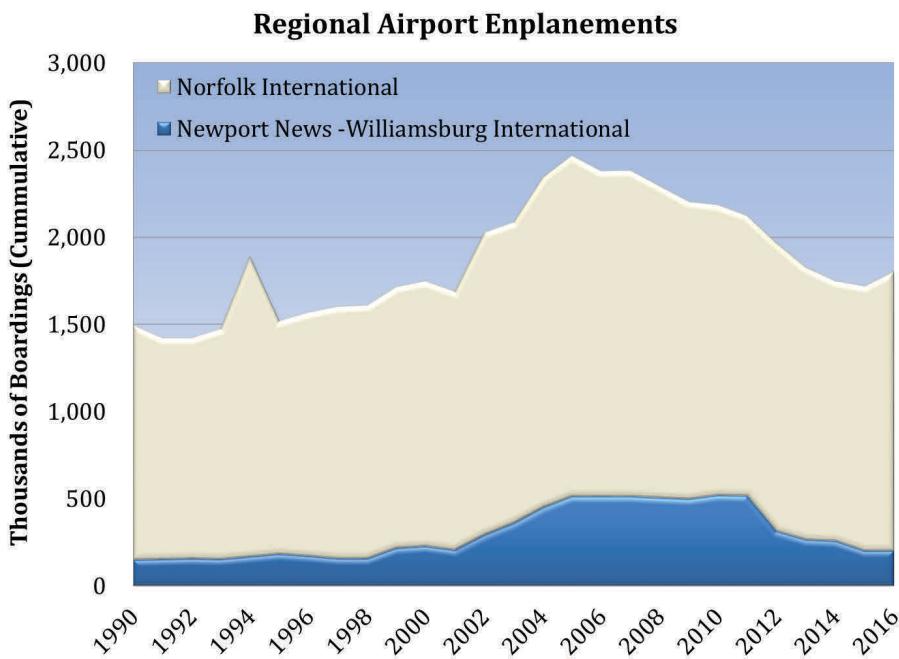
### How are we doing?

Passenger trips taken on public transit increased through the latter half of the nineties and again in 2007 before declining over the past four years.



Sources: Federal Transit Administration, APTA, HRPDC

## Figure 9.10 Airport Enplanements at Hampton Roads Major Airports



Source: Federal Aviation Administration, HRPDC

### Why is it important?

As the world inches ever closer to a global economy, access to airports and air travel becomes increasingly important.

### How are we doing?

Value priced airlines entering the market in the early 2000s increased competition, driving down ticket costs and increasing the number of enplanements. The consolidation of some airlines and resulting increased ticket prices added to a weaker economy since 2007. The number of enplanements have declined since their peak in 2005, but have seen a slight uptick in 2016.

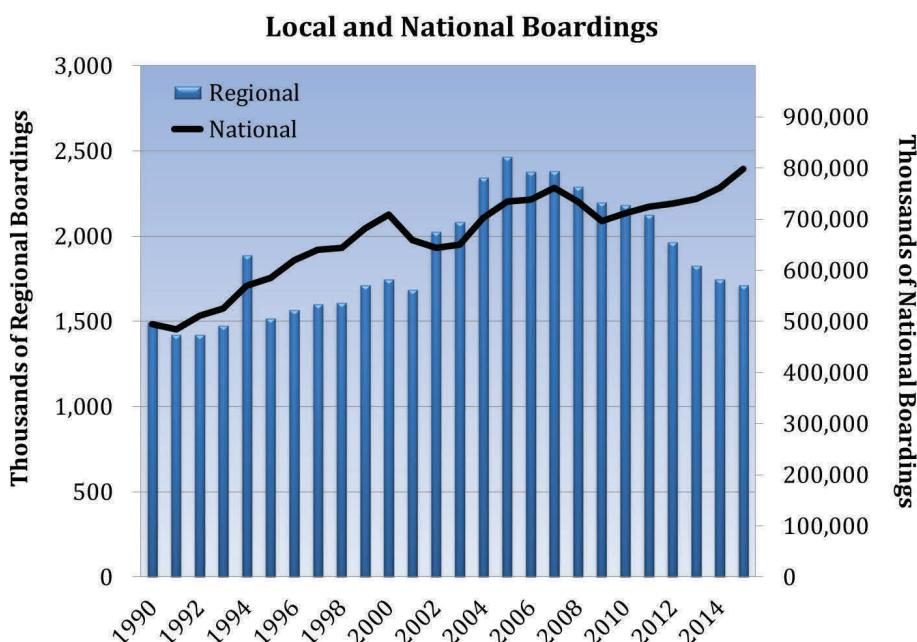
## Figure 9.11 Enplanement Trend in Hampton Roads Compared to the National Enplanement Trend

### Why is it important?

The market for air travel is influenced by several factors including price and consumer confidence. Referencing national air travel trends allows us to better understand regional air travel.

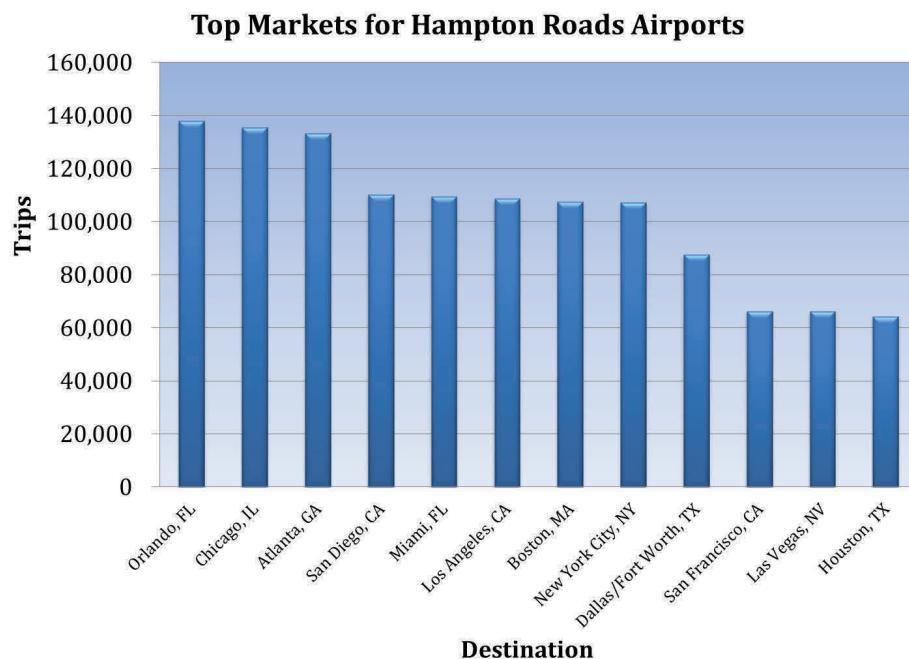
### How are we doing?

Regional enplanements have lagged the national trend due to the decline in military travel as a result of federal budget cuts, as well as decreased service to Newport News.



Source: Federal Aviation Administration, HRPDC

## Figure 9.12 Top Markets for Hampton Roads Airports



### Why is it important?

This graphic shows the top final destinations and points of origin for air travel to and from this region, showing where commerce connections to Hampton Roads exist.

### How are we doing?

The destinations with the greatest number of Hampton Roads trips also have some of the highest populations. One notable exception is Orlando, a tourism hub.

Source: Federal Aviation Administration, HRPDC

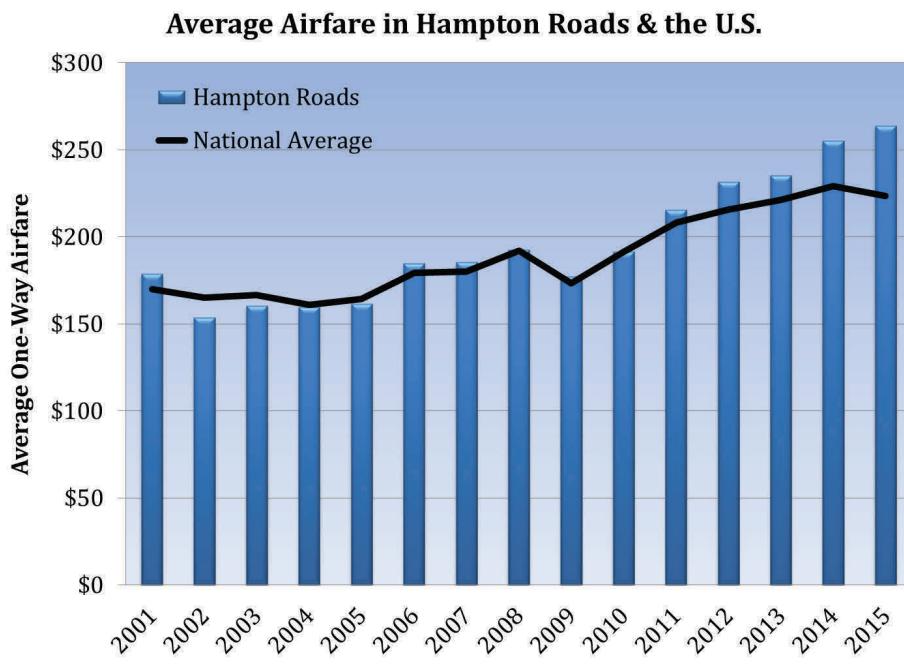
## Figure 9.13 Average One-way Airfare in Hampton Roads & the United States

### Why is it important?

Price is one of the most significant factors determining air travel demand. Several factors determine prices, including airline competition and oil prices.

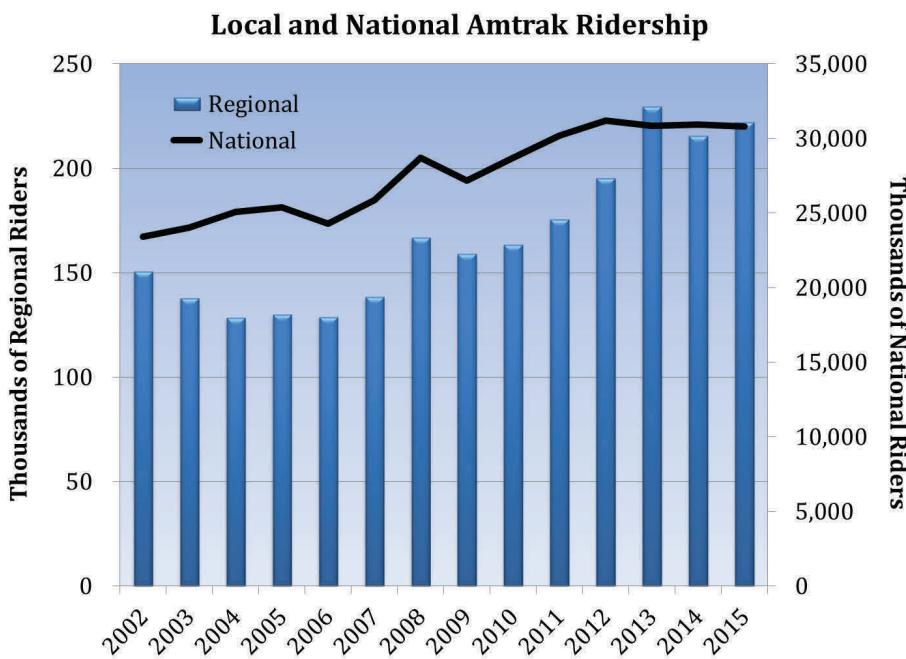
### How are we doing?

Until recently Hampton Roads' average airfares tracked national average airfares. The consolidation of airlines has driven up the cost of flights. Reduced competition in Hampton Roads has contributed to even higher increases in the cost of regional flights.



Source: Federal Aviation Administration, HRPDC

## Figure 9.14 Local and National Amtrak Ridership Trend



### Why is it important?

As increased attention is placed on transit and environmental issues, train ridership continues to be an area of focus for planners.

### How are we doing?

Hampton Roads' passenger train ridership grew strongly from 2007 to 2014, outpacing the national growth rate. There was a slight decline in 2014 before a rebound in 2015.

Source: Amtrak, HRPDC

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## Section X

# Education in Hampton Roads

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## Education in Hampton Roads

The quality of education provided in Hampton Roads will determine the economic future success of this region. Improved educational outcomes enable a higher quality of life for the residents of Hampton Roads.

High school education is important to individual residents, as workers with high school equivalence have lower unemployment rates and higher wages than those who do not attain that level of education. Furthermore, concentrated pockets of low education achievement have a negative impact when localities fail to effectively educate residents. Over the past five years, Hampton Roads' graduation rate has steadily grown, reflecting progress in the region's school systems. Additionally, the percentage of individuals with at least a high school equivalence is higher than the graduation rate, reflecting the region's ability to recruit workers.

College education plays a strong role for the entire region's growth prospects. The share of college educated workers is closely related to income growth, as demonstrated in the July 2011 Hampton Roads Regional Competitiveness report released by the HRPDC. Hampton Roads needs to continue to support educational institutions in the region and work with them to ensure that each locality's high school graduates are ready to engage in the rigor of post-secondary education.

The final two figures in this chapter examine government financing, as the financial burden of education has been spread among the federal, state, and local governments for many years. That burden has shifted, as the state's contribution for education funding has fallen from 58% regionally in 2000, to 39% in 2016, while the local burden has increased from 34% to 42% over that same time period. Before a slight rebound in 2015 and 2016, real education funding per pupil has declined throughout the state in response to budget pressures placed on all levels of government as a result of the Great Recession.

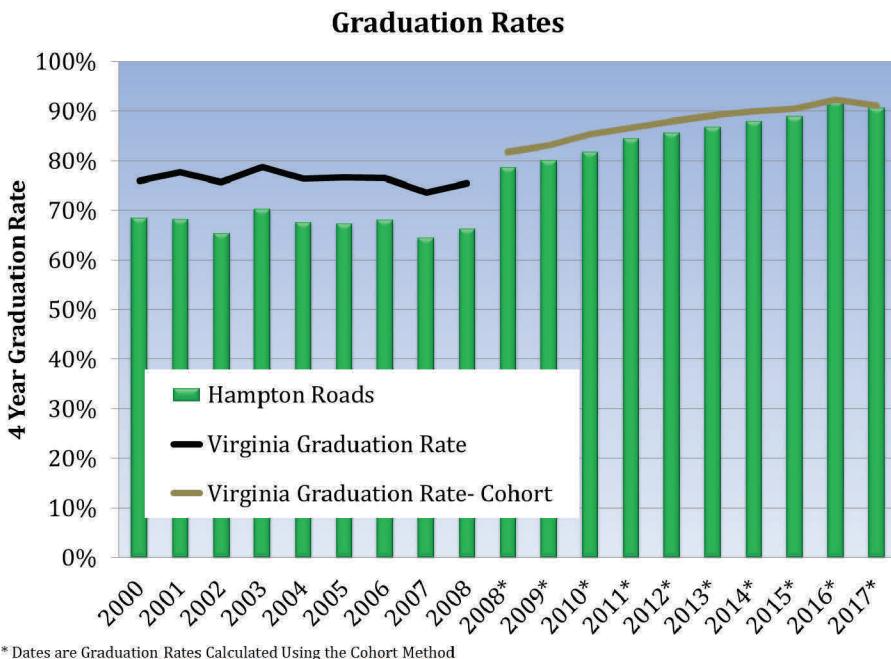
## Figure 10.1 Graduation Rates in Hampton Roads and Virginia

### Why is it important?

Graduation rates are a reflection of a school system's ability to retain and educate students. High graduation rates prevent uneducated residents from becoming a social burden and contribute to a more educated workforce and an increased quality of life.

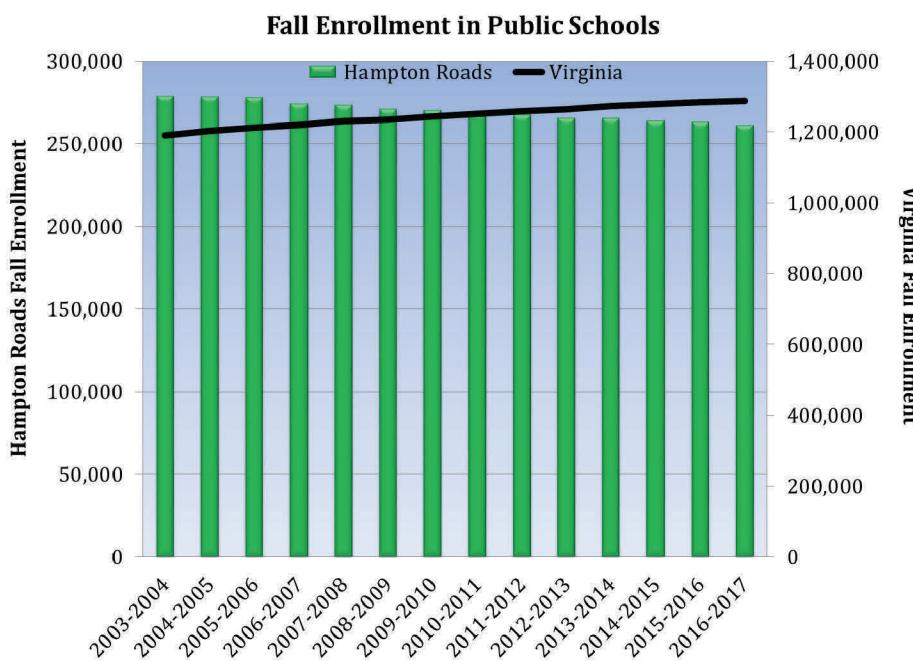
### How are we doing?

Graduation rates in Hampton Roads have consistently underperformed those of the state, but with improved metrics since 2008, the gap is smaller than was previously thought to exist.



Source: Virginia Department of Education, HRPDC

## Figure 10.2 Enrolled Students in Hampton Roads



Source: Virginia Department of Education, HRPDC

### Why is it important?

The number of enrolled students serves as one method of measuring population change. The trend of school enrollments also helps identify future education needs in the region.

### How are we doing?

While public school enrollment in the state has slowly grown, the region has seen a gradual decline in the number of students enrolled in public schools, starting in the 2005-2006 school year.

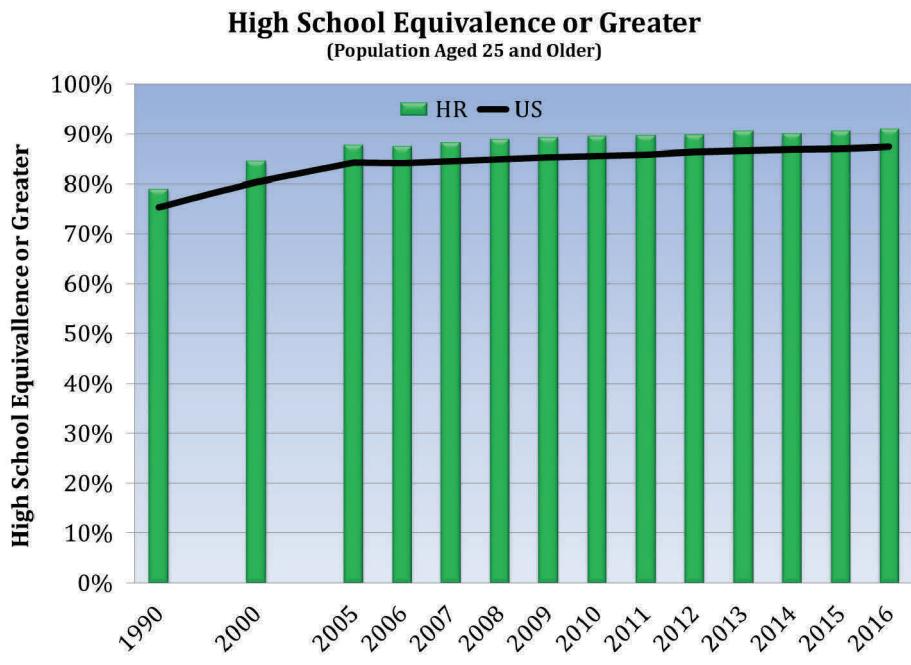
## Figure 10.3 Percent of Population Attaining High School Equivalency or Greater

### Why is it important?

An educated workforce has proven to be an excellent path to economic growth and allows for greater flexibility in the regional labor market.

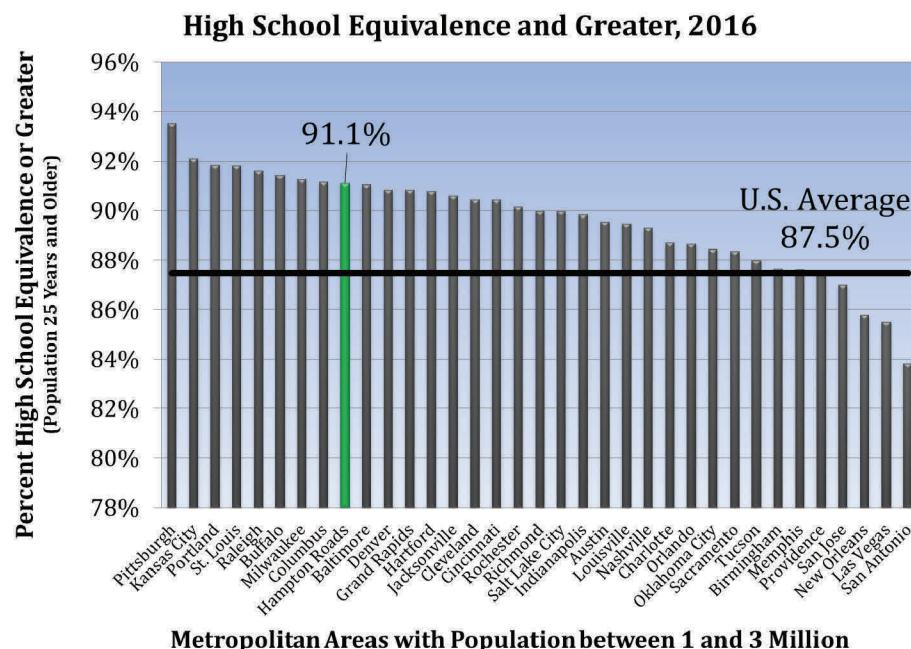
### How are we doing?

The Hampton Roads population has always outperformed the nation's as a whole in terms of achieving basic levels of education. A greater share of the region's population has attained at least high school equivalency as a result of the military and strong employment opportunities that bring educated individuals to Hampton Roads.



Source: U.S. Census Bureau, American Community Survey, HRPDC

## Figure 10.4 High School Equivalence Attainment in Hampton Roads and Reference Metro Areas



### Why is it important?

Measuring education attainment in Hampton Roads as compared to the region's reference metro areas gives an indication of its economic performance. Where there are concentrations of individuals with low levels of educational attainment, there is often urban decline and lower home values.

### How are we doing?

Hampton Roads ranks ninth in high school equivalence attainment among metropolitan areas with populations between 1 and 3 million.

Source: American Community Survey, HRPDC

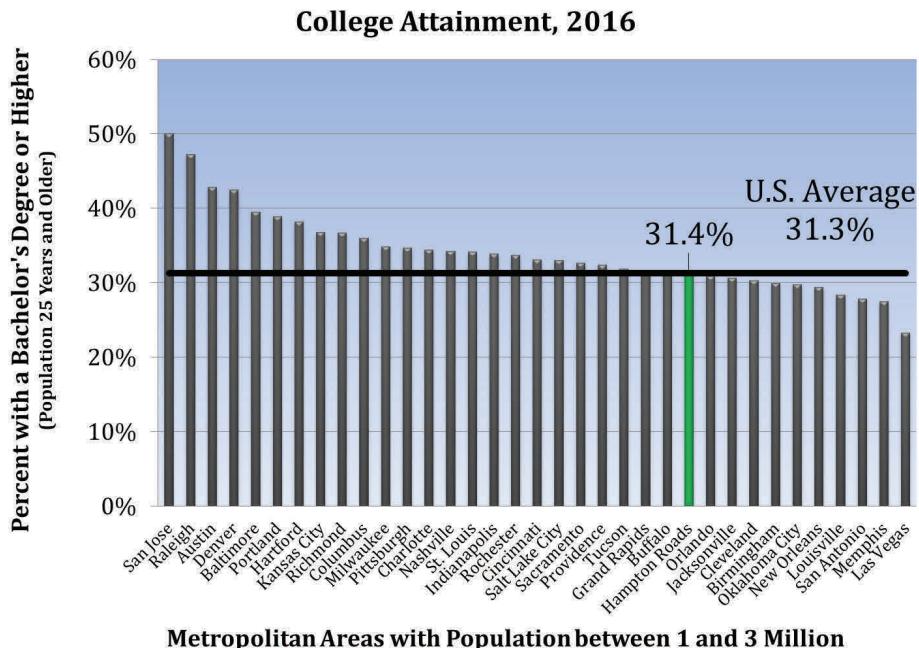
## Figure 10.5 College Attainment in Hampton Roads and Reference Metro Areas

### Why is it important?

College attainment in a region has been shown to have an impact on income within that region, with higher levels of college attainment causing faster income growth for the entire population.

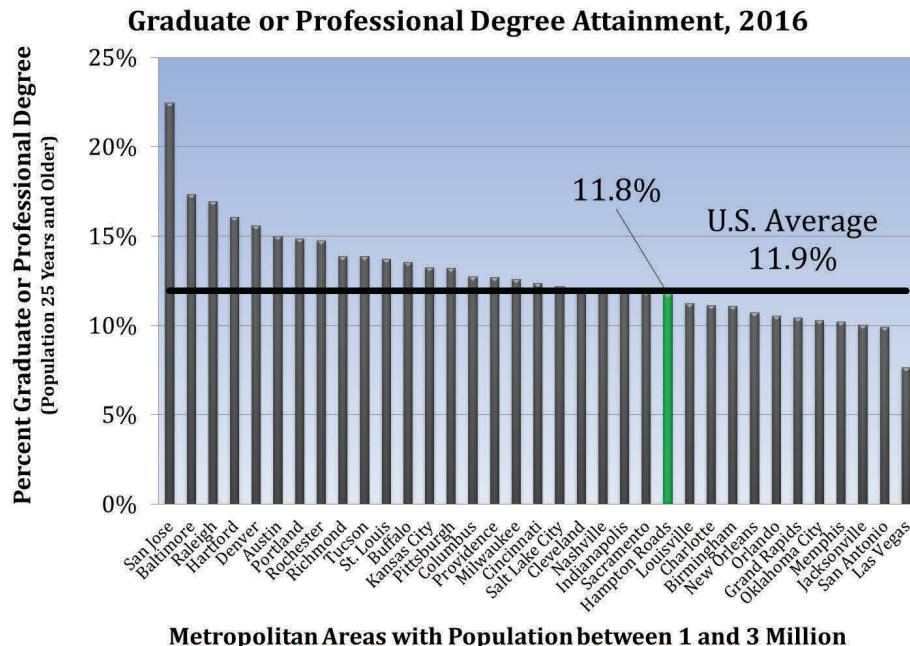
### How are we doing?

29.6% of the Hampton Roads population has at least a college degree, equal to the general U.S. population. Hampton Roads ranks 25th among the 35 metro areas with populations between 1 and 3 million.



Source: American Community Survey, HRPDC

## Figure 10.6 Population with Professional and Advanced Degrees in Hampton Roads and Reference Metro Areas



### Why is it important?

Graduate degrees are often used as a proxy for both productivity and innovation and indicate a region's capacity for high level growth.

### How are we doing?

Hampton Roads ranks 24th among its 35 reference MSAs in terms of population with a graduate or professional degree, and falls just below the national average of 11.8% of the population 25 and older having achieved a graduate or professional degree.

Source: American Community Survey, HRPDC

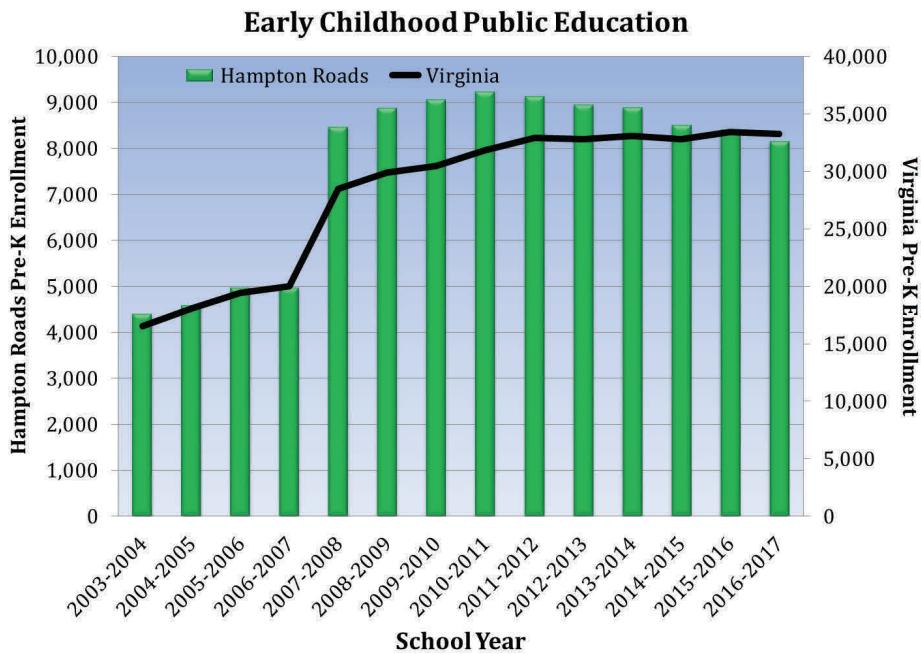
## Figure 10.7 Early Childhood Enrollment

### Why is it important?

Early childhood education has been identified by several groups as an area traditionally under-invested in by local and state governments. Tracking pre-kindergarten public enrollment measures the focus placed on this age group in the region.

### How are we doing?

The number of students enrolled in public preschool expanded rapidly in 2007-2008 at both the state and regional level, but since has gradually declined in the region, following the declines in total enrollment.

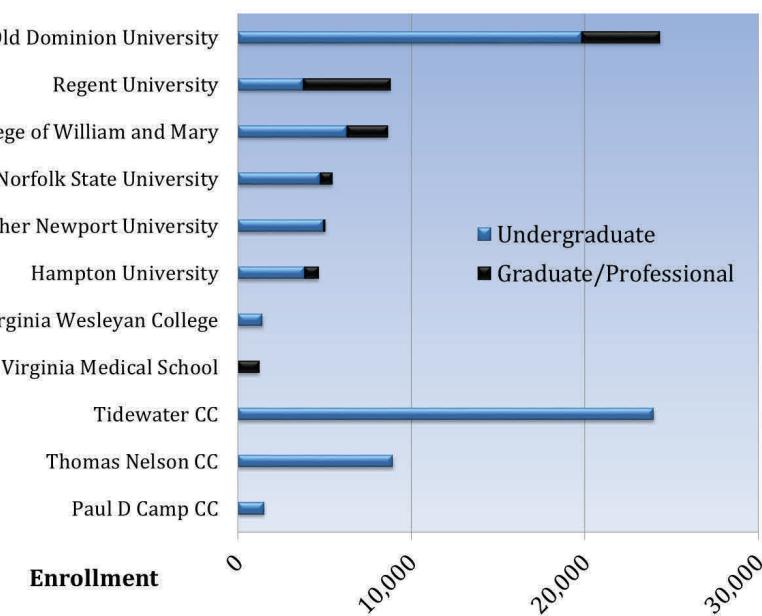


Source: Virginia Department of Education, HRPDC

## Figure 10.8 Number of Enrolled Students at Regional Colleges and Universities

### Hampton Roads Higher Education Enrollment, 2016

Hampton Roads Institution



### Why is it important?

The share of college educated individuals in a region has been shown to have a strong correlation to income growth and economic development in the region. Robust educational opportunities in the region help to introduce motivated students from around the country to this region, as well as providing opportunities to local students.

### How are we doing?

This region has a diverse selection of public and private colleges, as well as a strong community college system.

Source: Virginia Department of Education, HRPDC

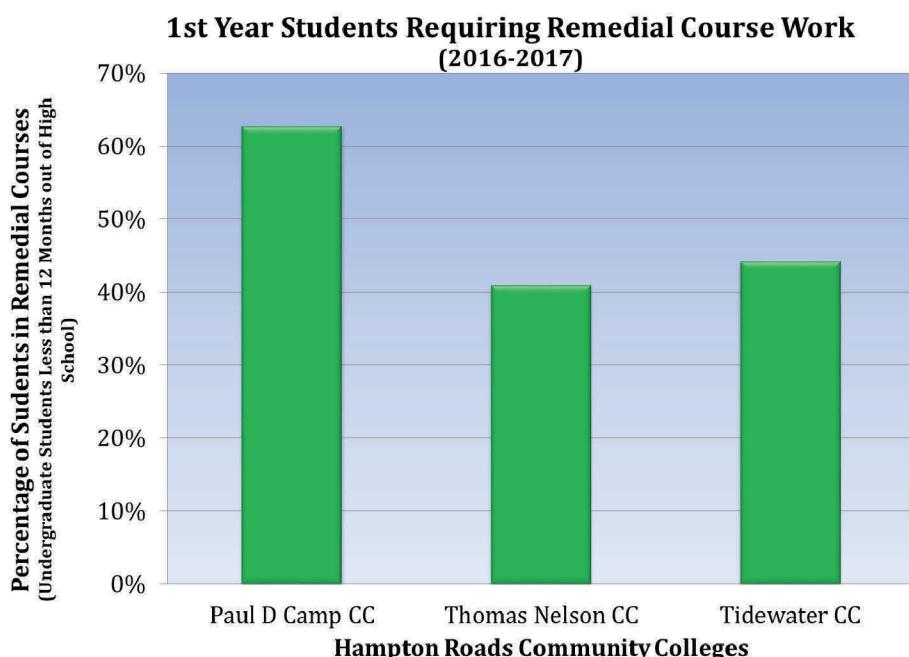
## Figure 10.9 Percentage of First Year Students who Require Remedial Coursework

### Why is it important?

This measure examines the percentage of students less than 12 months out of Virginia high schools who have to take at least one remedial class at regional community colleges. This is a measure of college preparedness for regional high schools, as it is likely the majority of these students attended high school in Hampton Roads.

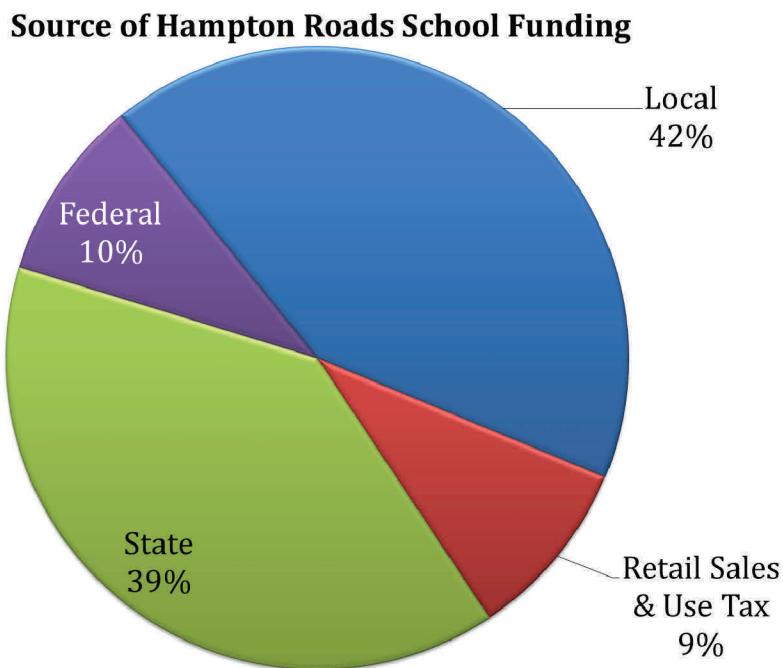
### How are we doing?

A high percentage of 1st year students at regional community colleges require remedial course work in math, reading, or writing within the first year of enrollment.



Source: Virginia Department of Education, HRPDC

## Figure 10.10 Distribution of K-12 Education Financing in Hampton Roads



Source: Virginia Department of Education, HRPDC

### Why is it important?

It is important to see the range of funding sources that support the region's schools. In Virginia, the local, state, and federal governments all share the burden of funding education.

### How are we doing?

42% of all education spending comes from local sources, marking an increase from 2000 when local financing constituted 34% of education financing. During that time period, state support has shrunk considerably. In the rest of the Commonwealth, the localities contribute an average of 52% of education funding, and the state's share is only 32%.

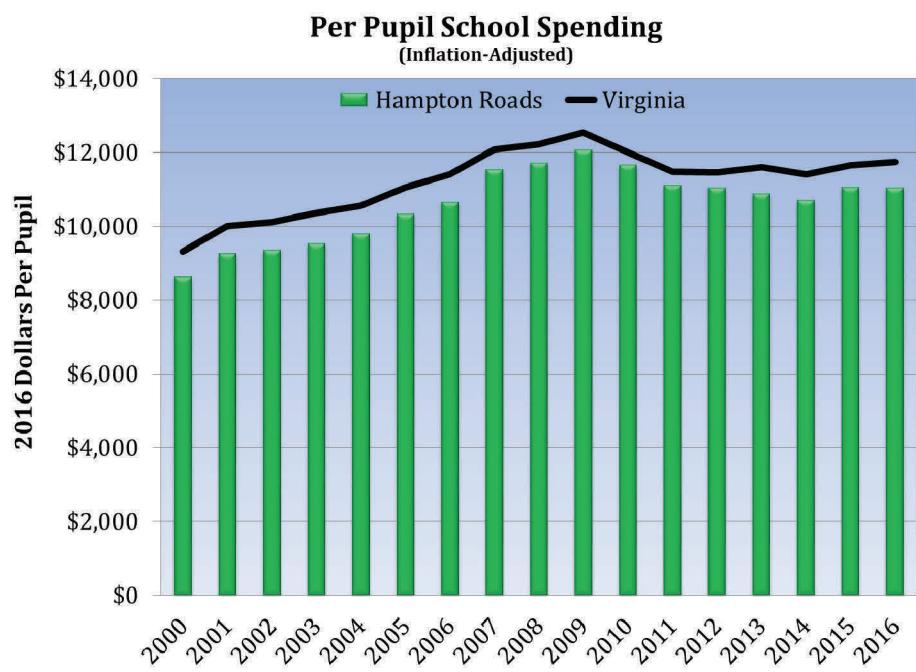
## Figure 10.11 Inflation-Adjusted Per Pupil Expenditures in Hampton Roads and Virginia

### Why is it important?

Figure 10.11 illustrates the cost of education in the region per public school pupil, as well as the relative priorities of the region.

### How are we doing?

Per pupil education expenditures declined in real (inflation-adjusted) terms after 2009, as the recession placed the budgets of local government throughout the Commonwealth under pressure, but per pupil spending recovered slightly in the commonwealth and the region over the past two years.



Source: Virginia Department of Education, Bureau of Economic Analysis,  
HRPDC

## Section XI.

# Government Finances

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## Government Finances in Hampton Roads

Although significant attention has been given to federal and state issues, local governments provide for public schools, public safety, water and sewage, local roads, and a host of other services critical to communities.

Most local revenues come from taxes on real property and personal property. In 2010, 50% of local revenues were generated from the real property tax. While personal property tax provided a greater share of revenue in the 1990s, they declined as a result of former Governor Jim Gilmore's push to decrease personal property taxes imposed on vehicles. By 2016, personal property taxes comprised 10% of local revenues and real property taxes fell to 48% of local revenues.

Another important measure of local finances derives from per capita spending on services. As with the state as a whole, the majority of local spending is devoted to education, averaging \$1,689 per capita in 2016, down from \$1,945 per capita in 2009 (inflation adjusted). Other major categories include public safety (\$578 per capita), health & welfare (\$311), and public works (\$269).

Hampton Roads spends more than most other Virginia localities on public works (+54.2%), parks and recreation (+42.7%), and public safety (+10.4%) on a per capita basis. In 2016, the region spent 4.5% more per capita than the average Virginia locality.

While local revenues indicate how much money is raised locally, it does not indicate the ability to raise taxes or the tax burden on local residents. The Commission on Local Government issues an annual fiscal stress report to measure the revenue capacity, revenue effort, and relative median income of each locality. An area whose revenue effort exceeds its revenue capacity, i.e. whose tax revenues are higher than the incomes from average tax rates, would be considered fiscally stressed and may be overburdening their community if they attempted to increase revenues.

The median fiscal stress of the 16 Hampton Roads localities was 100.4 in 2014, indicating that its localities were slightly more stressed than average Virginia localities. The unweighted mean was slightly higher at 100.6. Many of the more stressed communities are in cities, which is common as they provide higher levels of service than the state as a whole, and thus collect higher levels of taxes.

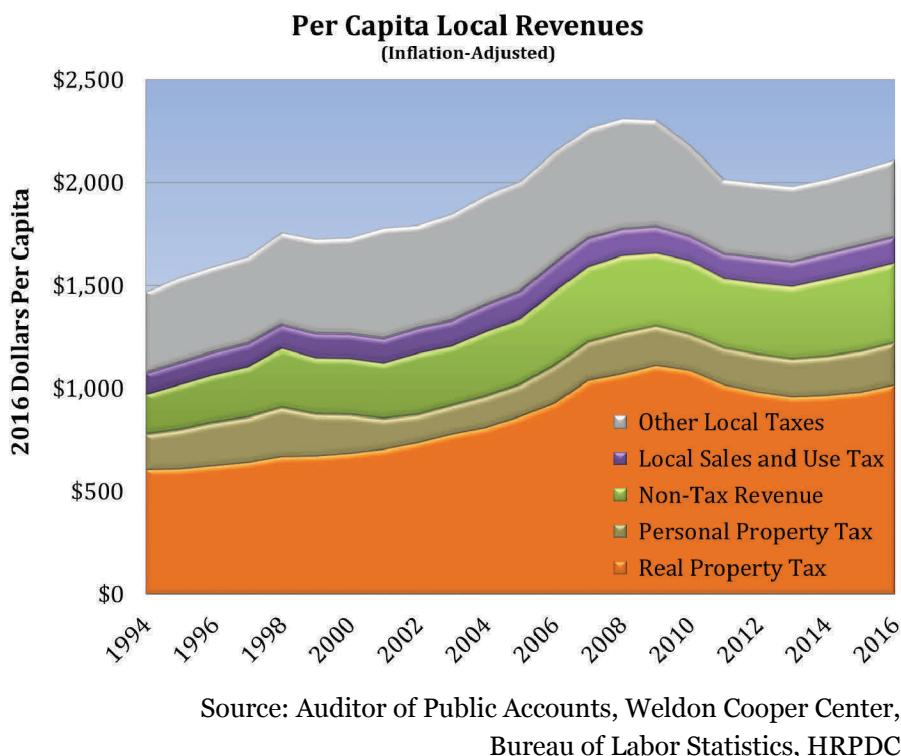
## Figure 11.1 Hampton Roads Per Capita Local Revenues

### Why is it important?

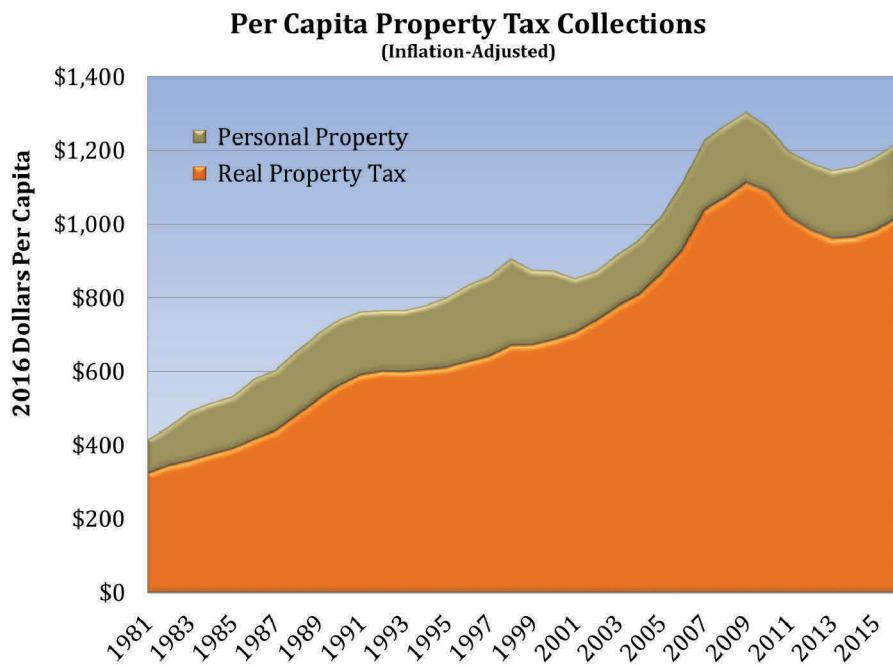
Local governments generate revenues from a host of different sources. Virginia state law limits taxation options available to local governments, requiring localities to concentrate their revenue efforts in a limited number of areas.

### How are we doing?

Most of local government revenues are generated from real and personal property taxes. Other taxes, such as the Business, Professional, and Occupational (BPOL) tax and the utility tax, contribute as well. Revenues experienced significant reductions during the recession but have recovered in the past few years.



## Figure 11.2 Hampton Roads Per Capita Property Tax Collections



### Why is it important?

The majority of local government revenues are generated from real and personal property tax collections. As a result, local government expenditures are sensitive to variability in either category.

### How are we doing?

Inflation-adjusted per capita property tax collections increased by 49% between 2000 and 2009, but declined during the recession and remain at 6.3% below the 2009 levels. This decline was driven by falling home prices and the impact from lowering the property tax rate during the housing boom.

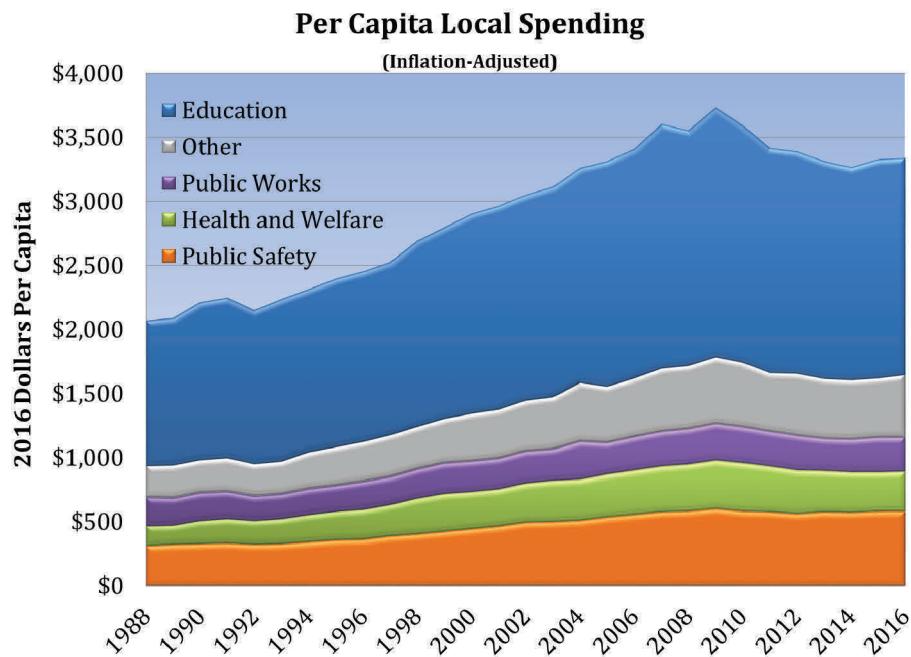
## Figure 11.3 Hampton Roads Per Capita Local Spending by Category

### Why is it important?

Local governments provide a variety of services to their residents. The provision of services is based on federal and state mandates and the demands from residents and businesses. Services are constrained by limited government revenues.

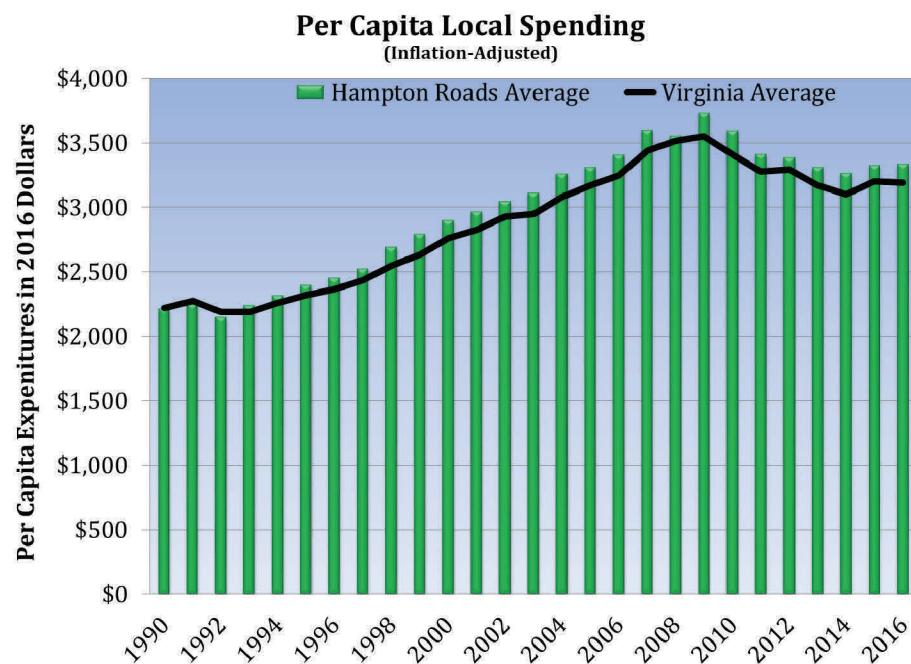
### How are we doing?

More than half of all local government expenditures in Hampton Roads are spent on education. Recent decreases in revenues have reduced funding for public works and other projects.



Source: Auditor of Public Accounts, Weldon Cooper Center, Bureau of Labor Statistics, HRPDC

## Figure 11.4 Per Capita Spending in Hampton Roads and Virginia



### Why is it important?

Per capita expenditures by local government and Virginia give a benchmark for local spending in the context of state averages.

### How are we doing?

Generally, local expenditures for the Commonwealth and the region have followed the same pattern. Regional spending has exceeded that of the state every year since 1992.

Source: Auditor of Public Accounts, Weldon Cooper Center, Bureau of Labor Statistics, HRPDC

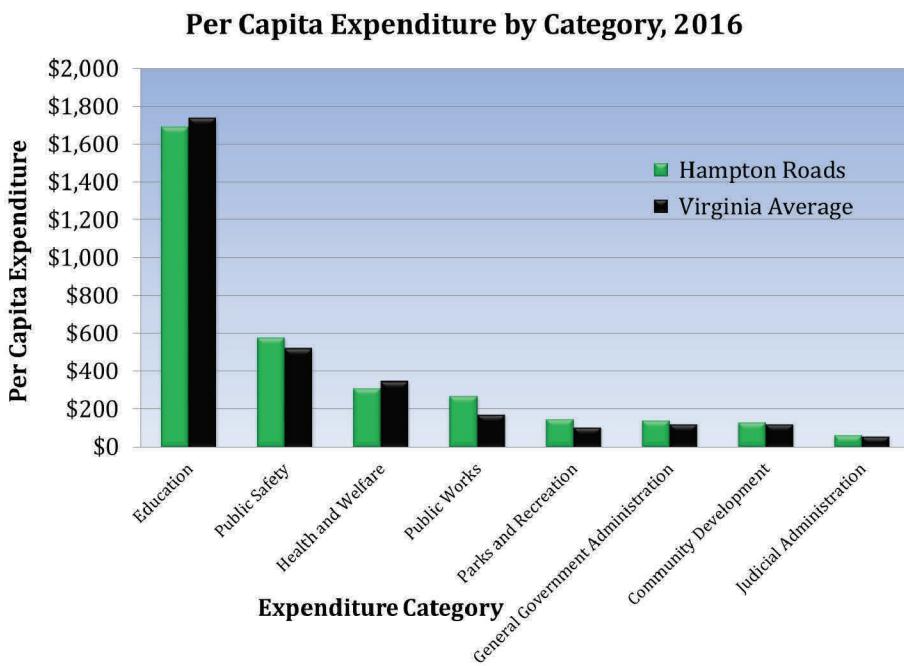
## Figure 11.5 Per Capita Expenditure by Category in Hampton Roads and Virginia

### Why is it important?

Reviewing localities per capita spending by category for the state and the region allows for analysis of relative priorities and costs of various functions within the region.

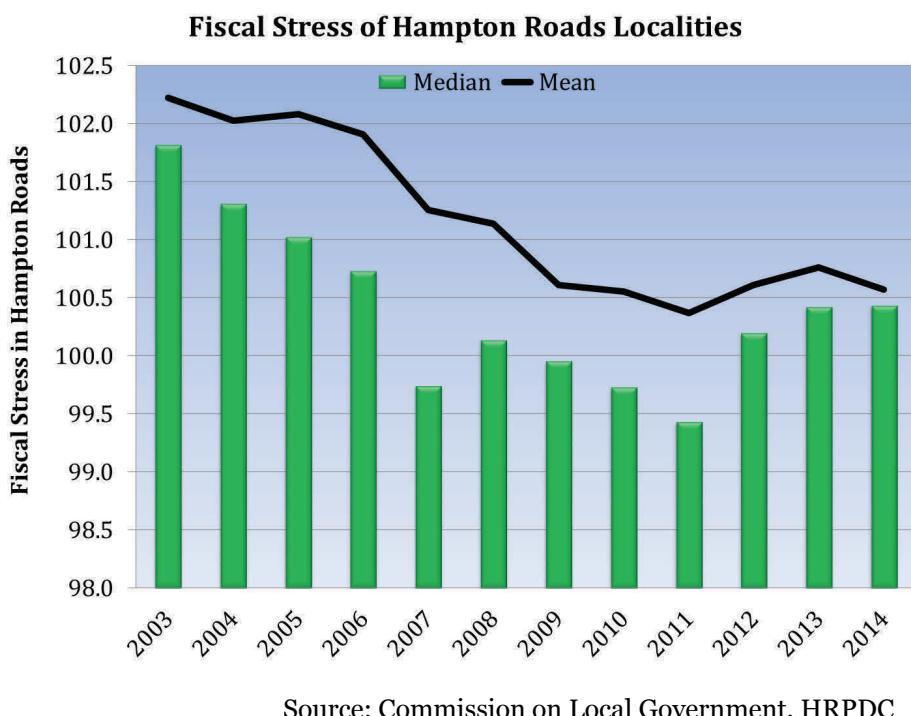
### How are we doing?

Education sees the highest level of spending at the state and regional level, though the per capita level is slightly higher for the Commonwealth. All other categories track fairly closely, with public safety and public works realizing slightly higher levels of spending in the region.



Source: Auditor of Public Accounts, Weldon Cooper Center, Bureau of Labor Statistics, HRPDC

## Figure 11.6 Median and Average Fiscal Stress in Hampton Roads



### Why is it important?

The Commission on Local Government reports on the fiscal condition of Virginia's localities on an annual basis. This Report includes a fiscal stress index that measures the comparative revenue capacity, revenue effort, and median incomes of all Virginia localities. A score of 100 indicates an average level of stress.

### How are we doing?

The composite level of fiscal stress in the region declined between 2003 and 2011, driven by increasing median incomes and home price appreciation leading to higher revenue capacity in the region.

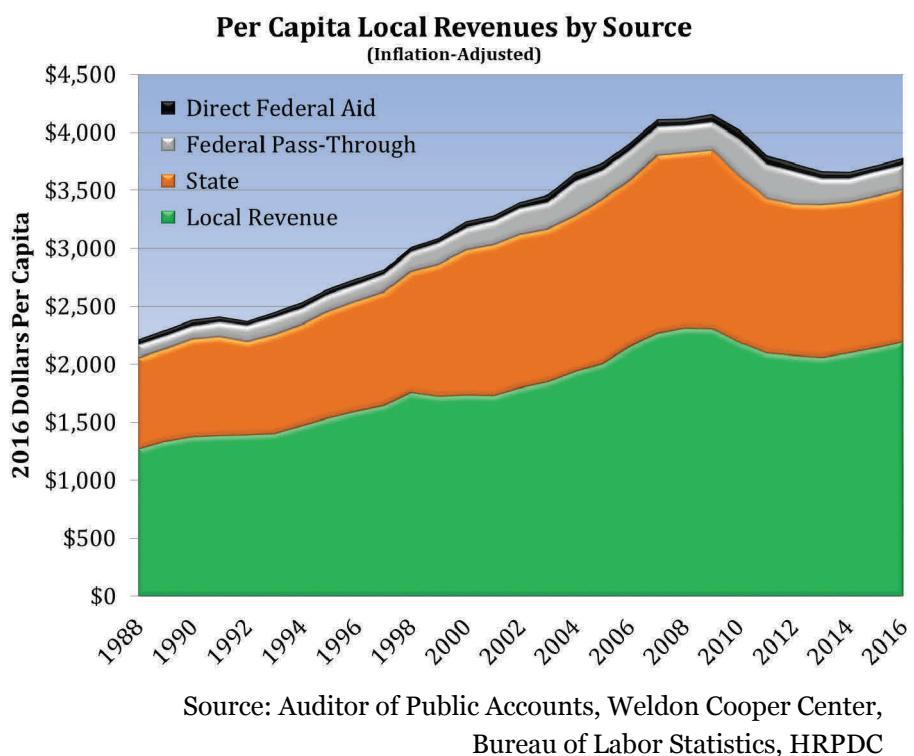
## Figure 11.7 Hampton Roads Per Capita Local Revenues by Source

### Why is it important?

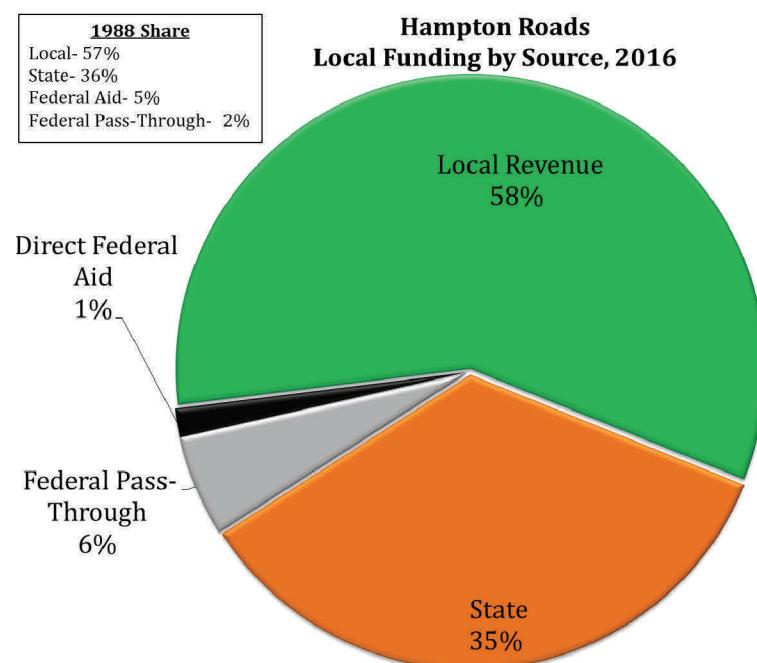
Funding available for local expenditures comes not only through local tax revenue, but also through taxes paid to the state and federal government which are then allocated to local governments.

### How are we doing?

State and local monies are the most important source of funds for regional localities. Over time, the share of the contributions have remained relatively unchanged; however, this does not account for numerous unfunded mandates that the state has placed on local governments.



## Figure 11.8 Sources of Municipal Revenues in Hampton Roads



### Why is it important?

A static view of sources of revenue gives a clearer understanding of the current sources of funds for local governments in Hampton Roads.

### How are we doing?

Local revenues and taxes constitute 58% of all funds available to governments in Hampton Roads, remaining little changed since 1988. In total, the relative share of funding has remained constant over the past 26 years.

Source: Auditor of Public Accounts, Weldon Cooper Center, Bureau of Labor Statistics, HRPDC

## Section XII

# Quality of Life

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## Quality of Life in Hampton Roads

Several economic and demographic measures are used as surrogate measures of the region's general well-being. It is important to realize there are many conditions that influence the region's quality of life, all of which must be included when assessing the benefits accrued to the region.

Unfortunately, many measures of quality of life are difficult to quantify. This includes the quality of amenities and cultural experiences in the region, the sense of community that exists throughout Hampton Roads, and the happiness of its residents.

Other indicators related to quality of life have been spread throughout this study, including measures of income and employment, education, and transportation. This section attempts to evaluate some of the other measures of the region that lie beyond the scope of other sections in this report.

Cost of living is a significant factor in the lives of the residents of Hampton Roads. It has been used in other graphics to provide a more robust comparison of income across metro areas. Hampton Roads' cost of living falls close to the National urban area average, which has been largely driven by the decline in housing prices.

The level of crime also impacts life in Hampton Roads. Following the national trend, the level of violent crime in Hampton Roads has been steadily falling for a number of years.

Understanding relative measures of inequality, disability, and poverty across the region is beneficial when evaluating and setting priorities to address the challenges that face Hampton Roads' vulnerable communities.

Lastly, two measures of air quality attempt to evaluate the environment in the region, which continue to improve.

## Figure 12.1 Hampton Roads Cost of Living

### Why is it important?

Variations in cost of living are not constant across the country but can vary by commodity from region to region and city to city.

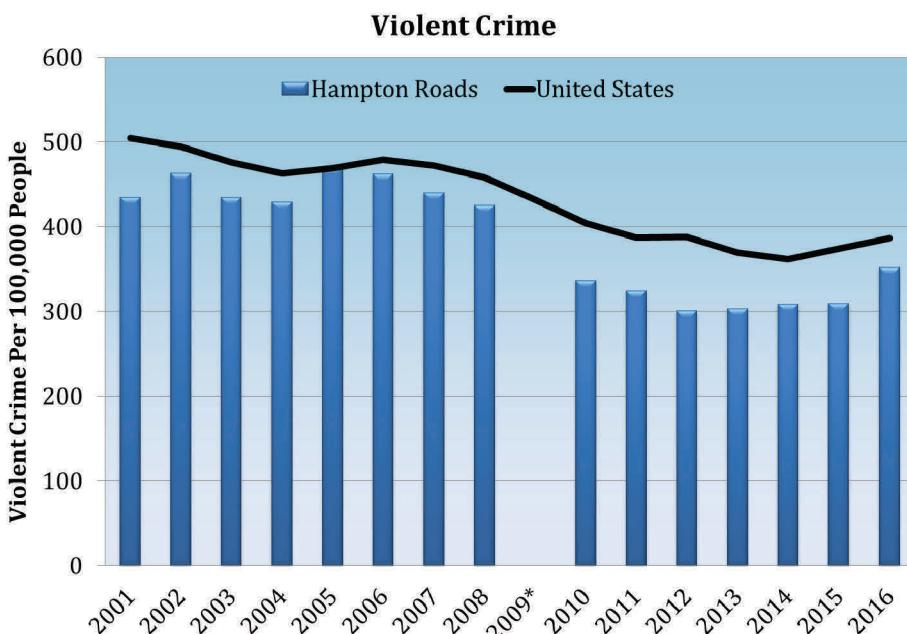
### How are we doing?

According to the most recent AC-CRA survey, the cost of living in Hampton Roads is just below the urban average. The region's costs are above the national urban area average in Health Care, Miscellaneous Goods & Services, and Utilities.



Source: The Council for Community and Economic Research, HRPDC

## Figure 12.2 Violent Crime Rate in the U.S. and Hampton Roads



Source: Federal Bureau of Investigation, HRPDC

### Why is it important?

Crime statistics are a reflection of social conditions and quality of life. Crime trends reflect underlying social issues, including inequality and lack of opportunity.

### How are we doing?

The rate of violent crime in Hampton Roads has traditionally fallen below the national average. The crime rate in Hampton Roads and the nation was falling for a number of years, though that trend appears to have reversed itself in 2016. There has been significant speculation about the causes of this recent uptick, but no consensus has been found.

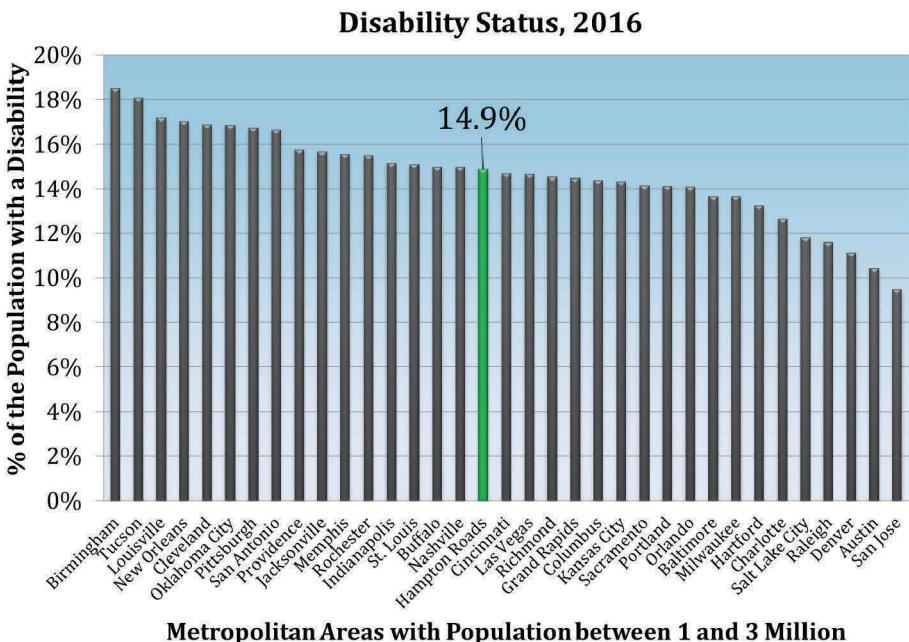
## Figure 12.3 Disability Status in Hampton Roads and Reference Metro Areas

### Why is it important?

The disability rate measures the number of persons in a region that have additional challenges that need to be accommodated.

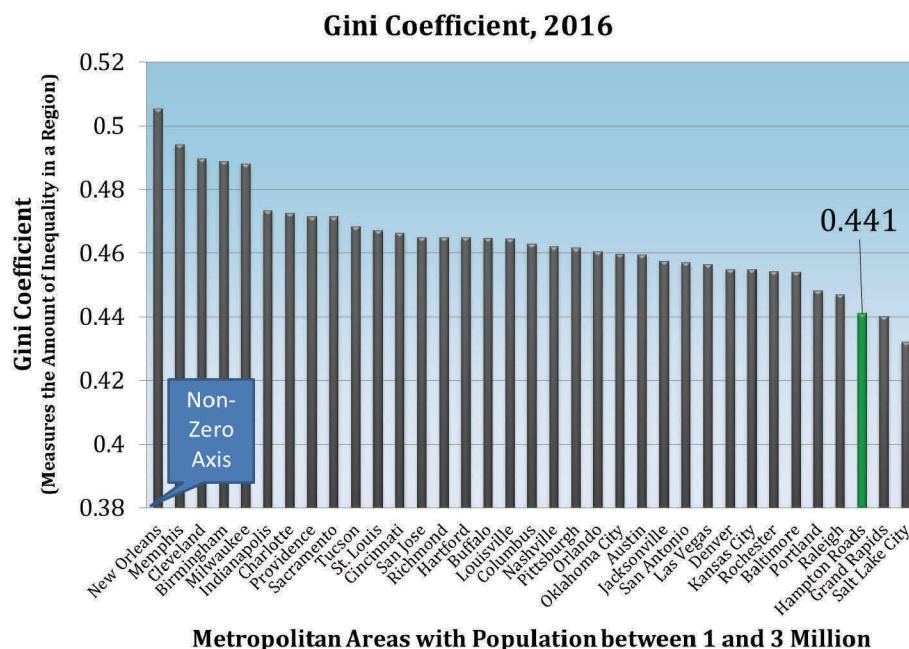
### How are we doing?

The civilian disability rate for Hampton Roads was 14.9% in 2016, average for this region's reference MSAs.



Source: American Community Survey, HRPDC

## Figure 12.4 Gini Coefficient in Hampton Roads and Reference Metro Areas



### Why is it important?

The Gini coefficient measures a region's inequality by comparing it to a theoretical perfect equality scenario. The greater the inequality in the region, the higher the Gini coefficient will be.

### How are we doing?

Hampton Roads has an extremely low level of income inequality, with one of the lowest Gini coefficient of its reference group of MSAs. The strong opportunities provided to individuals with a high school education likely contribute to the low level of inequality in the region.

Source: American Community Survey, HRPDC

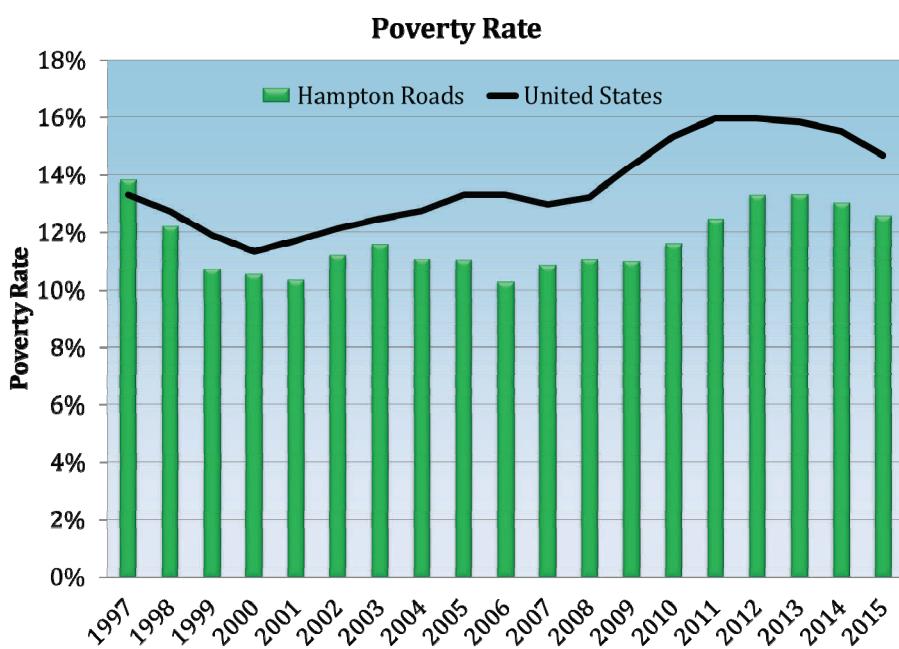
## Figure 12.6 Poverty Status in Hampton Roads and Reference Metro Areas

### Why is it important?

Impoverished persons lack the means to acquire adequate food, clothing, and shelter. Poverty rates are indicative of a region's ability to combat the social and economic conditions that result in poverty.

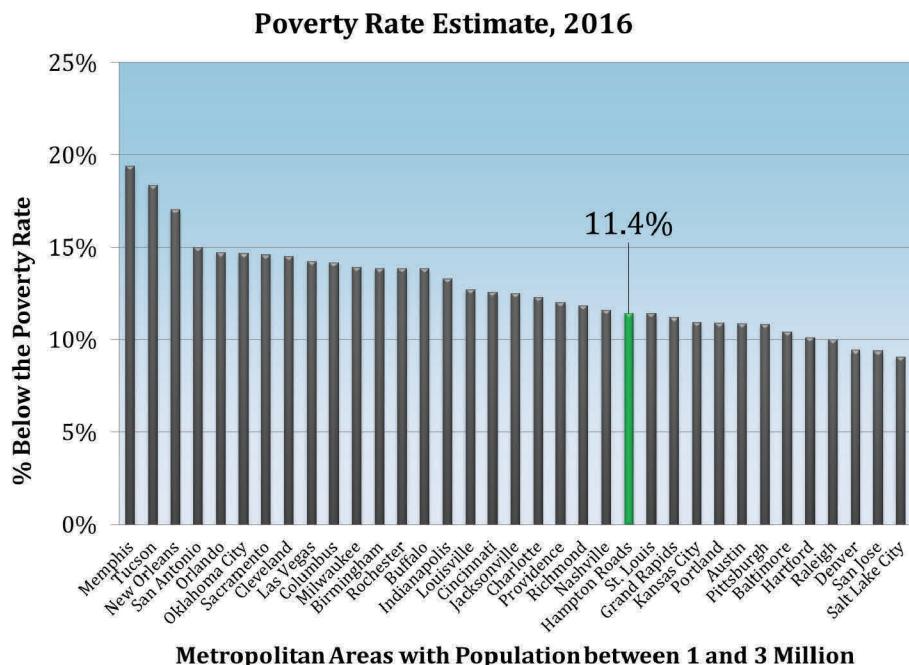
### How are we doing?

Historically, poverty rates in Hampton Roads tended to follow the national trend. The region's poverty rate has remained below the national average since 1997. The poverty rate increased at the start of the recession in 2009, but has declined over the past three years.



Source: U.S. Census Bureau Small Area Income and Poverty Est., HRPDC

## Figure 12.6 Poverty Status in Hampton Roads and Reference Metro Areas



### Why is it important?

High levels of poverty can create significant issues for a jurisdiction, as individuals in poverty contribute less in tax revenue, but consume a higher level of services than an average resident.

### How are we doing?

Hampton Roads has a relatively low level of poverty compared to its reference group.

Source: American Community Survey, HRPDC

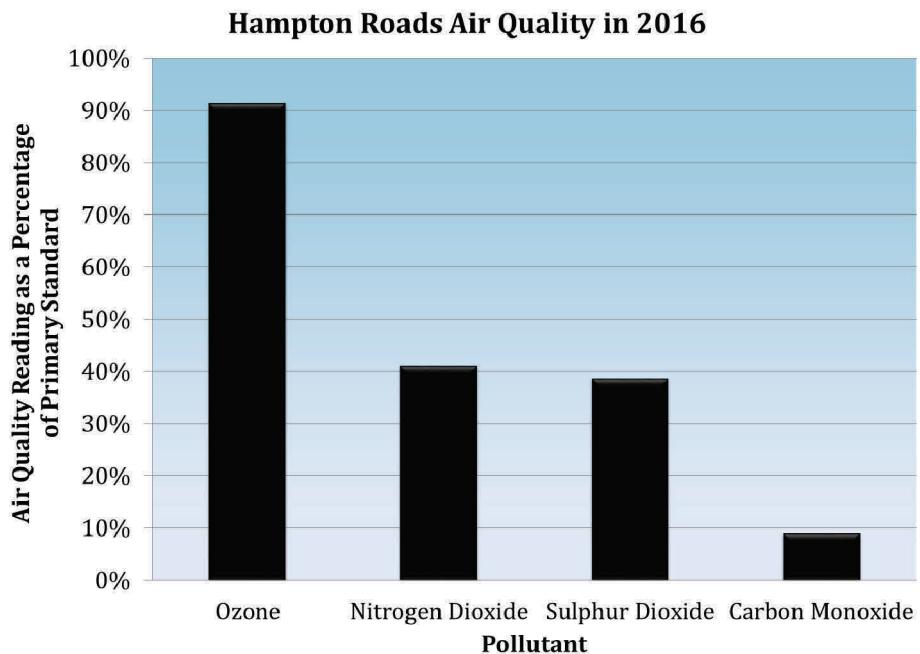
## Figure 12.7 Air Pollutants in Hampton Roads

### Why is it important?

The Environmental Protection Agency (EPA) and the Virginia Department of Environmental Quality (DEQ) monitor air quality to protect the health and welfare of the public.

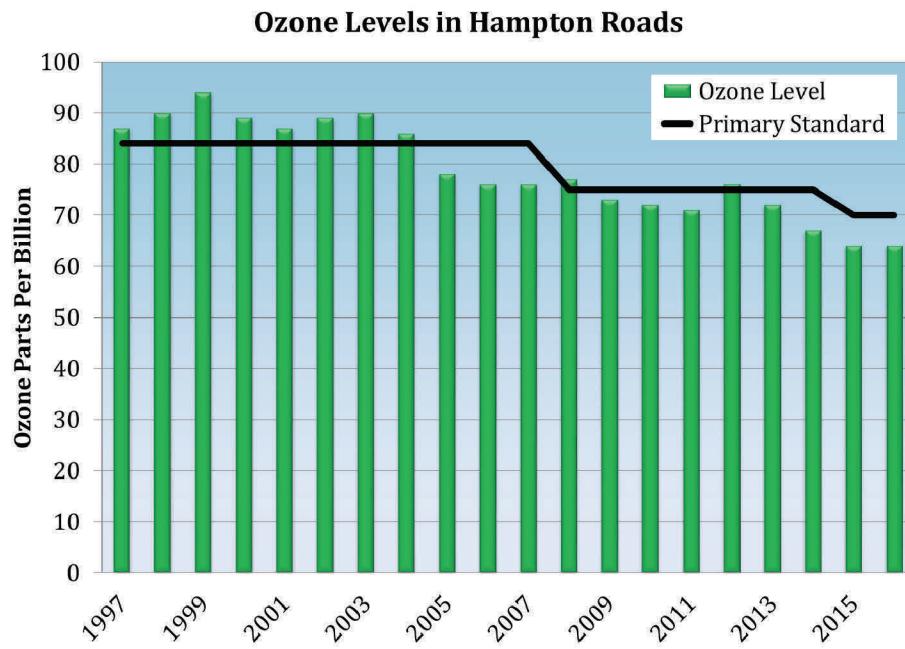
### How are we doing?

Hampton Roads is in compliance with all four of the air pollutants tracked by the DEQ. The only standard where Hampton Roads had problems meeting the standard is with ozone, where the summer's weather pattern can significantly impact its formation.



Source: Virginia Department of Environmental Quality, HRPDC

## Figure 12.8 Ozone Levels in Hampton Roads Compared to the Primary Standard- 3 Year Moving Average



### Why is it important?

According to the National Institute of Environmental Health Sciences, short-term exposure to ambient ozone can have serious health implications.

### How are we doing?

The EPA increased the air quality standard for ozone, lowering the acceptable level to 75 ppb in 2008, and down to 70 ppb in 2015. These tighter standards moved Hampton Roads just slightly out of compliance in 2008 and again in 2012. Ozone levels in the region have realized a steady decline since 2012.

Source: Virginia Department of Environmental Quality, HRPDC

## Section XIII

# Local Comparisons

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## Local Comparisons in Hampton Roads

This section compares the localities of Hampton Roads across a variety of social, economic, and demographic indicators.

Population, population density, and population growth help to determine the character of a locality and shape the challenges that localities will encounter as they engage in planning.

Per capita income, employment, and unemployment provide a basic economic picture to assist in understanding each of the localities. Employment and high per capita income provide resources to a locality, while high levels of unemployment demand a greater level (and different types) of services a locality would otherwise need to provide. The poverty rate indicates the support needs of the local population. The poverty rate and median household income also indicate the financial well-being of residents, as a few high income individuals can skew per capita earnings figures.

Annual retail sales give an excellent indication of the level of economic activity in the region and individual localities.

Assessed value of real estate gives an indication of a locality's housing market, and along with property tax rates, indicate potential revenues for each locality. These indicators, as well as per capita measures of local revenues and total local spending allow us to develop a snapshot of a locality's finances.

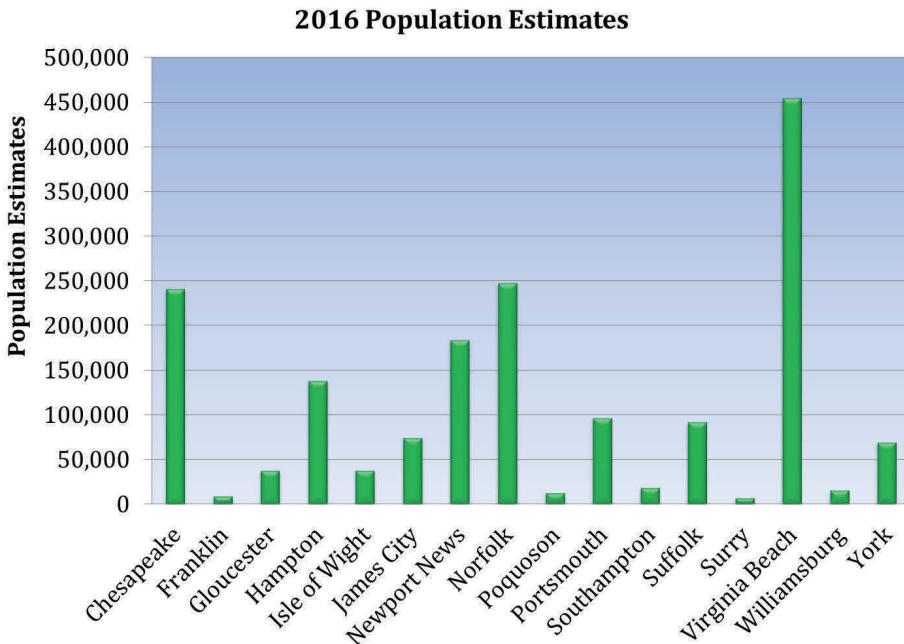
The fiscal stress measure compares a locality's revenue effort to its revenue capacity, and includes relative median income. Cities and counties with fiscal stress above 100 impose a higher burden on their communities than the state average, while those with scores below 100 are imposing a lower burden than the state average.

Lastly, as education remains the area of highest expenditures by localities and the most important role in terms of cultural and economic outcomes, the last graphic compares the on-time graduation rate of each jurisdiction in Hampton Roads.

## Figure 13.1 Population Estimates

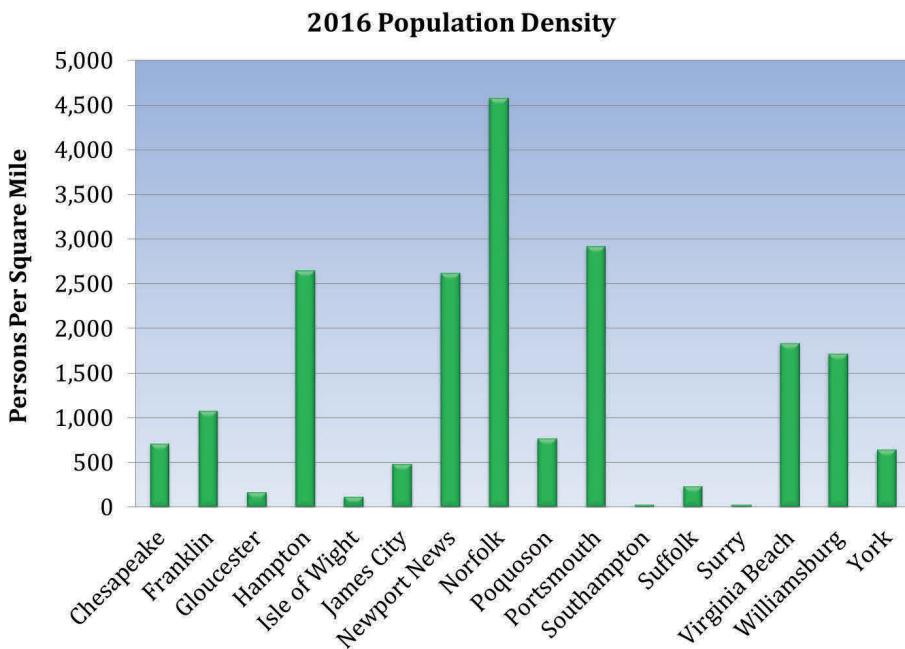
### Why is it important?

Higher population allows the cost of government services to be spread across more individuals and can allow for more representation at the General Assembly. High population also demands greater investments.



Source: Weldon Cooper Center for Public Policy, HRPDC

## Figure 13.2 Population Density Per Square Mile



### Why is it important?

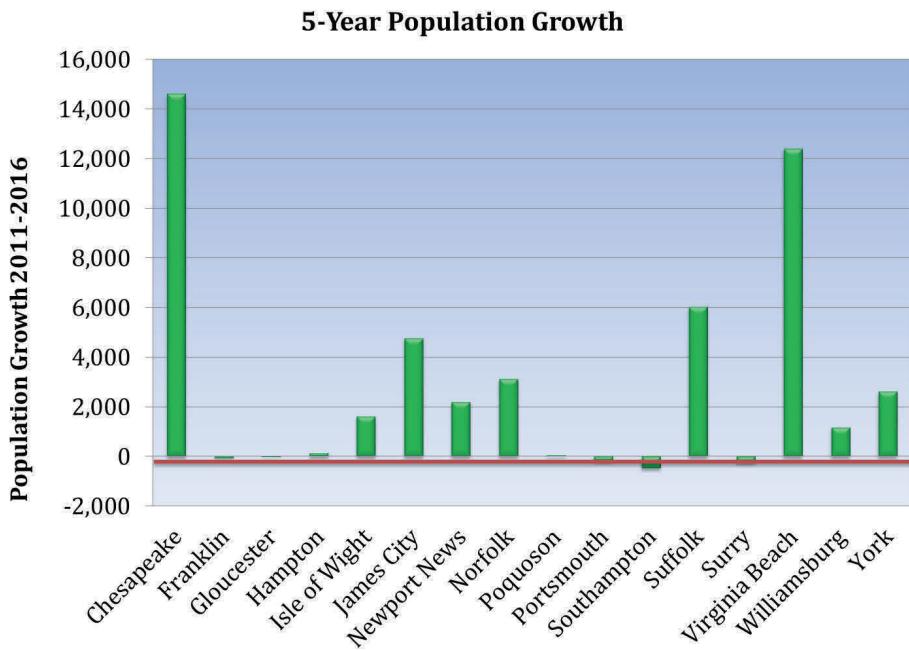
Population density indicates both the room for development within a locality, as well as giving a guide to the type of development that exists currently: urban, suburban, or rural.

Source: Weldon Cooper Center for Public Policy, HRPDC

## Figure 13.3 5-Year Net Population Growth

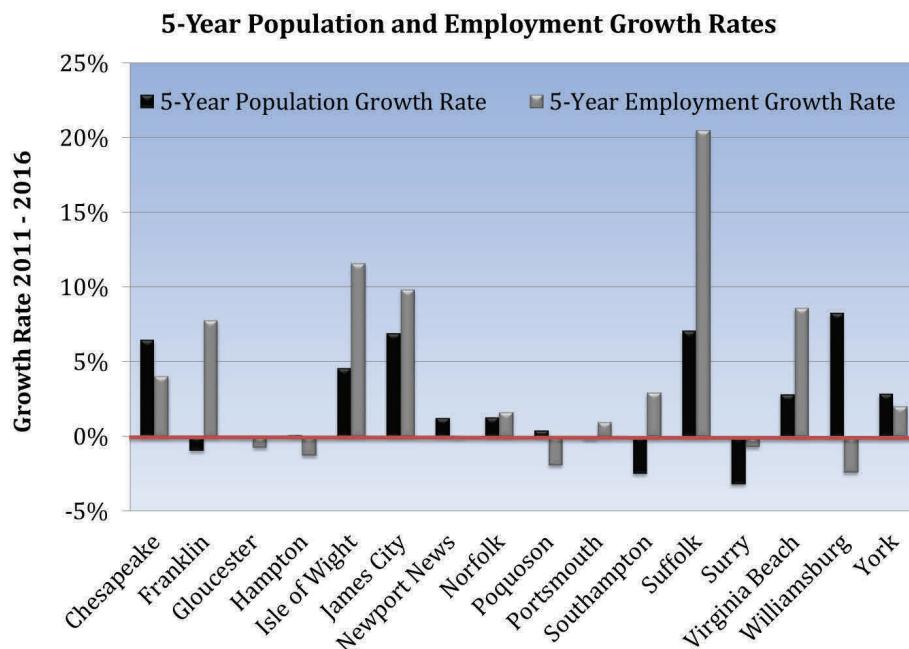
### Why is it important?

Raw population growth shows how quickly a locality is growing, which is very important for planning new infrastructure required within the city or county, and the Hampton Roads region overall.



Source: Weldon Cooper Center for Public Policy, HRPDC

## Figure 13.4 5-year Population and Employment Growth Rate



### Why is it important?

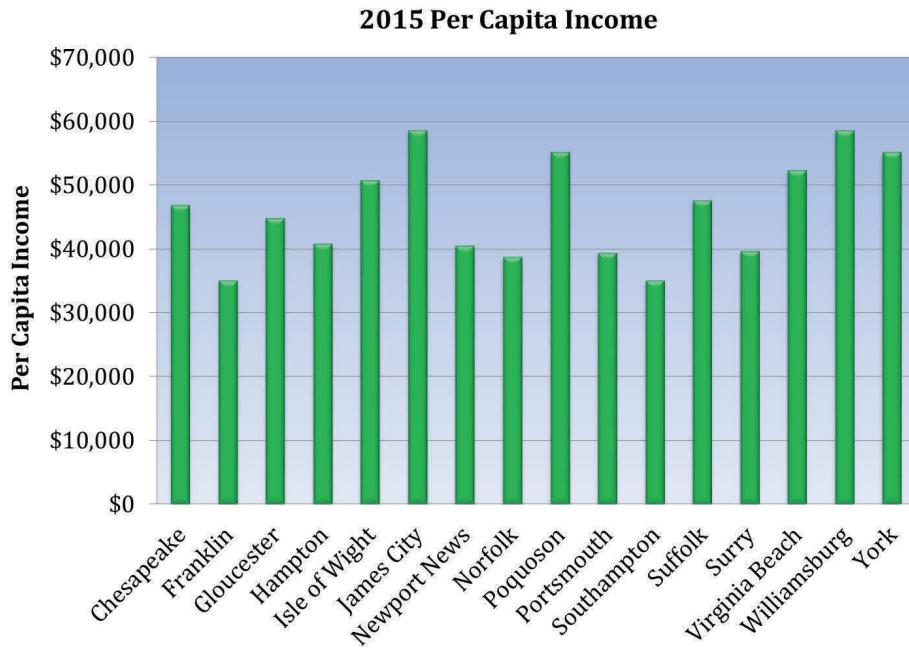
Population growth and employment growth are usually linked within the region and localities. Raw growth is important for calculating immediate infrastructure requirements. Growth rate is important for long-term projections on the changing nature of a locality.

Source: Weldon Cooper Center for Public Policy, Virginia Employment Commission, HRPDC

## Figure 13.5 Per Capita Income

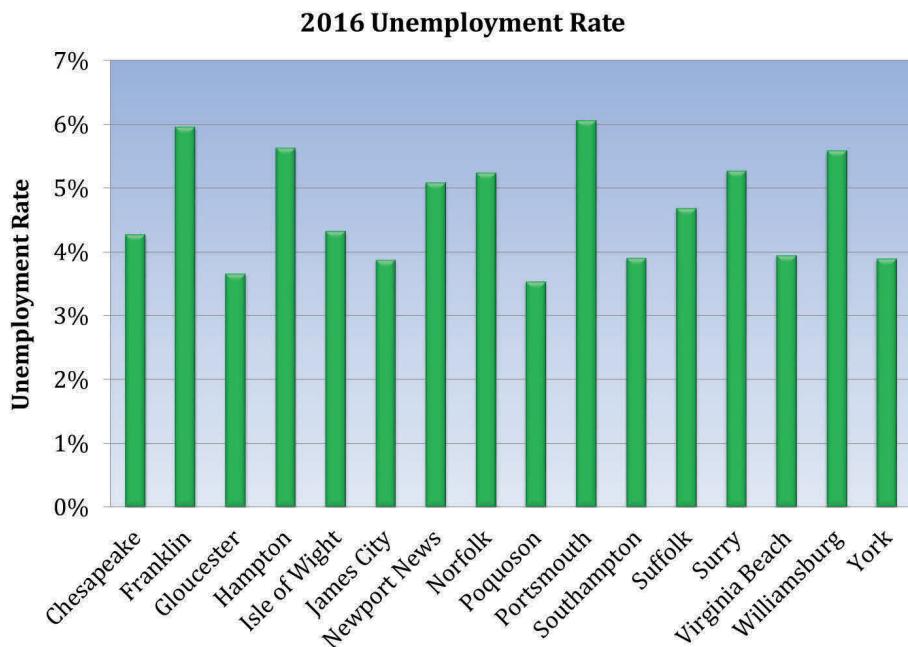
### Why is it important?

Per Capita Income is a basic measure of well-being within a locality. As a simple average, a locality could have a higher per capita income while still having a significant number of low-income families.



Source: Bureau of Economic Analysis, Virginia Department of Taxation, HRPDC

## Figure 13.6 Unemployment Rate



### Why is it important?

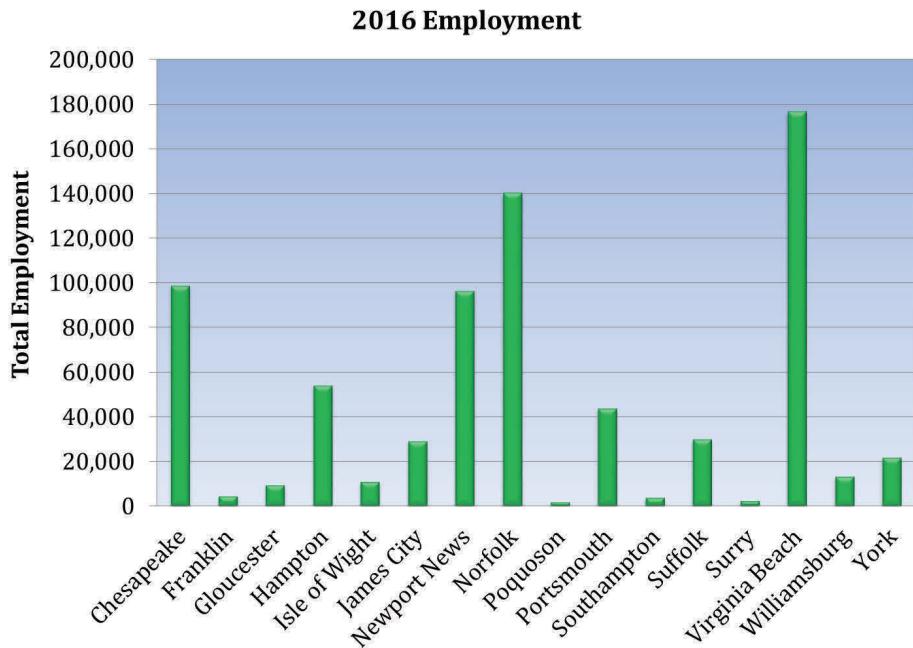
The unemployment rate indicates the number of individuals in a locality who are looking for jobs but unable to find them. This serves as an indicator of the conditions that a local population experiences. Labor market dynamics can vary substantially across jurisdictions and should be considered when making direct comparisons between each individual locality.

Source: Virginia Employment Commission, HRPDC

## Figure 13.7 Civilian Employment

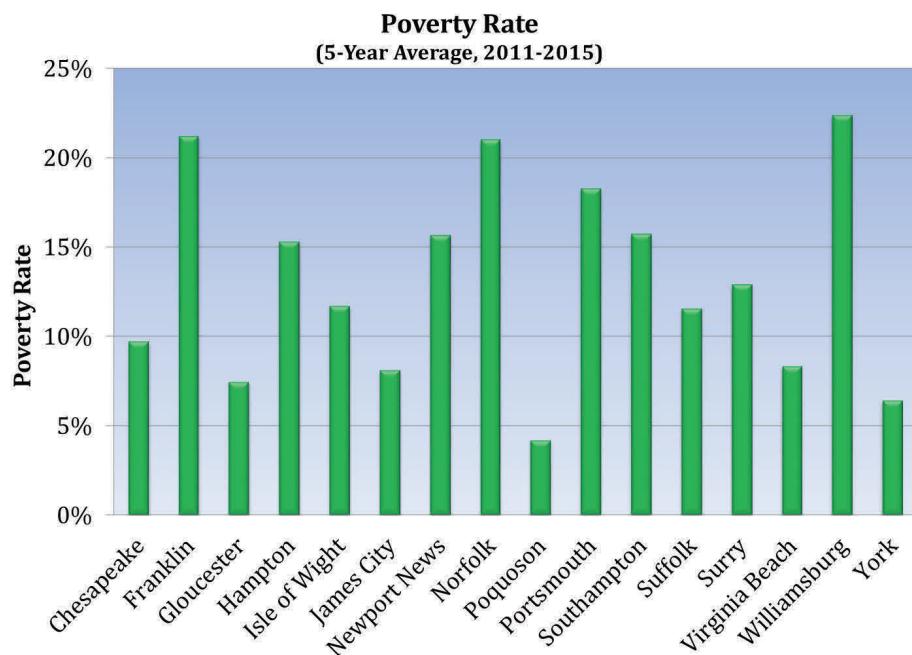
### Why is it important?

Employment measures the number of jobs located within a locality, rather than the number of people within the locality who have jobs. This indicator helps to identify the location of job centers.



Source: Virginia Employment Commission, HRPDC

## Figure 13.8 Poverty Rate (5-Year Average)



### Why is it important?

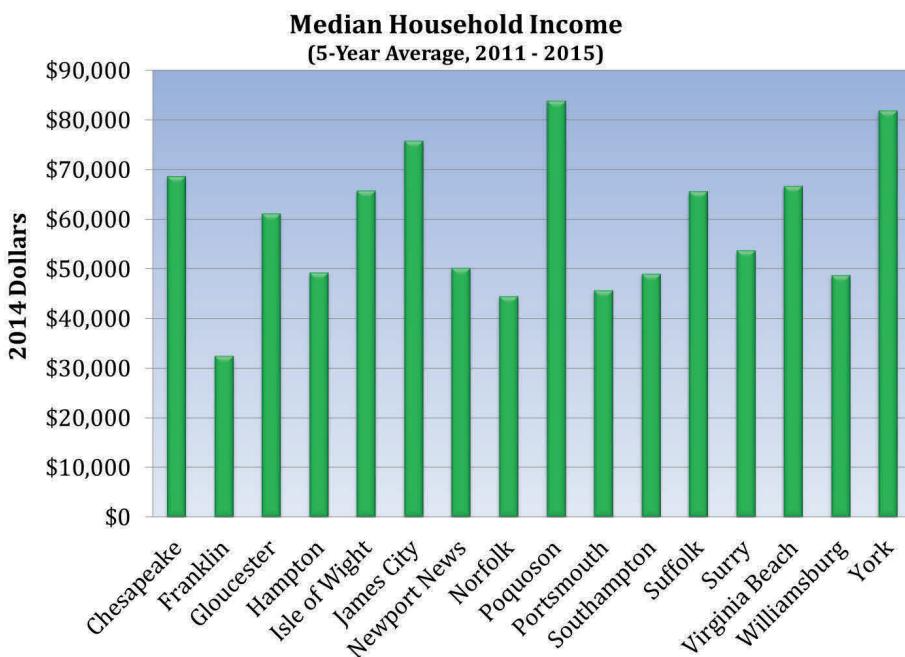
Individuals and families below the poverty line form the most vulnerable part of the region's population, and thus require a high level of support services. A high poverty rate also requires different types of interventions than might be needed in a community with a low poverty rate. In 2013, the poverty line for a family of four was \$23,624.

Source: U.S. Census Bureau, American Community Survey, HRPDC

## Figure 13.9 Median Household Income (5-Year Average)

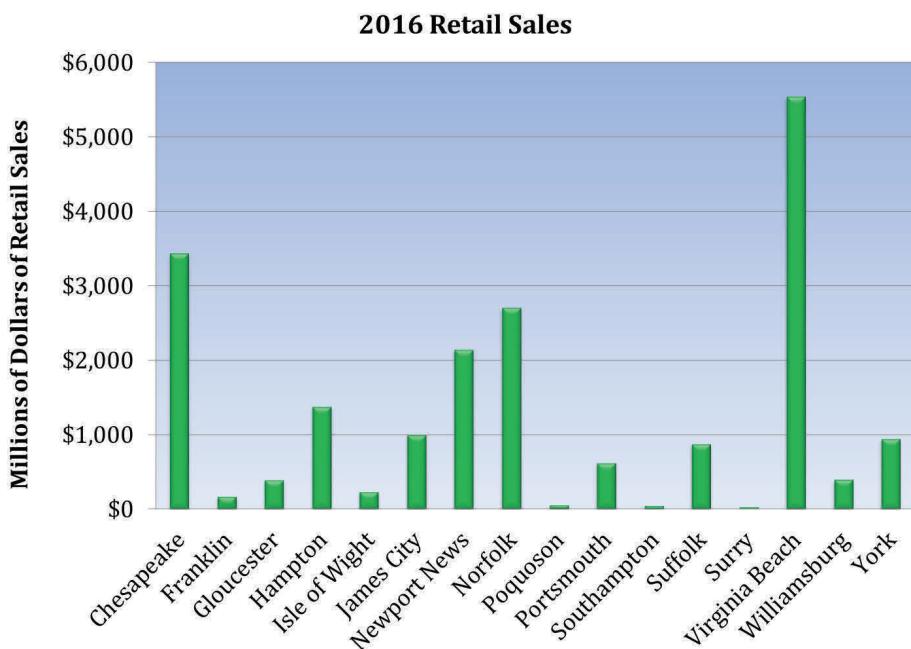
### Why is it important?

Median income serves as another measure of the well-being of a community. While per capita incomes will be skewed higher because of high earners, median household income indicates the income level at which half earn more and half earn less.



Source: U.S. Census Bureau, American Community Survey, HRPDC

## Figure 13.10 Annual Retail Sales



### Why is it important?

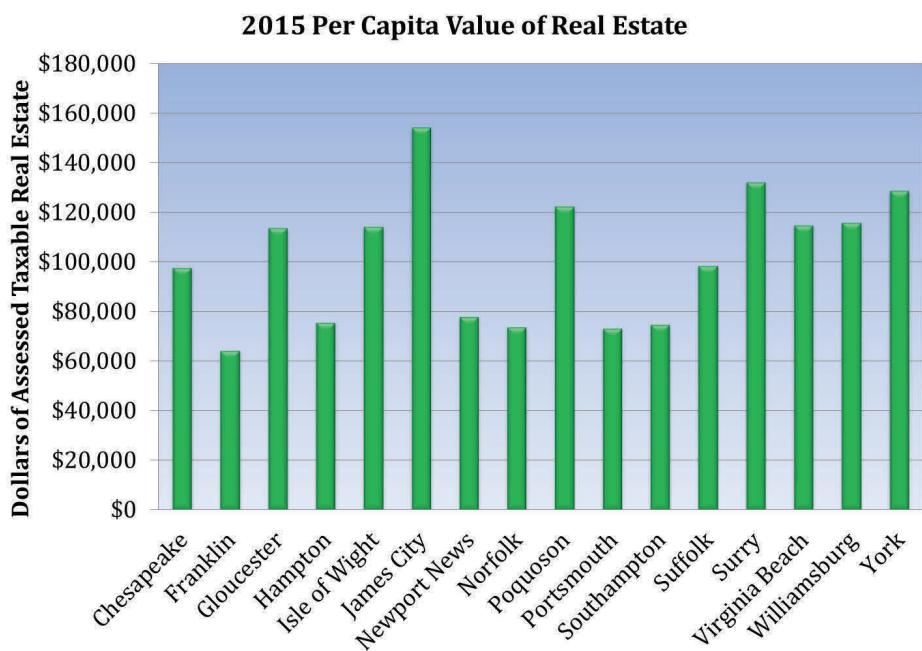
Retail sales indicate the level of economic activity in the region, and include the impacts of not only employment and income, but also residents' confidence about economic opportunities in the future. Retail stores tend to cluster in shopping centers, contributing to the high level of sales in some of the region's localities.

Source: Virginia Department of Taxation, HRPDC

## Figure 13.11 Per Capita Assessed Fair Market Value of Taxable Real Estate

### Why is it important?

Taxable real estate includes the fair market value of land and structures within a locality that are not exempt from property taxes. Adjusting this for the population within a locality indicates a combination of the desirability of real estate in that locality, the underlying economic conditions, and the capacity to generate revenue of the locality.



Source: Virginia Department of Taxation, HRPDC

## Figure 13.12 Real Property Tax Rate Per \$100 of Assessed Value



### Why is it important?

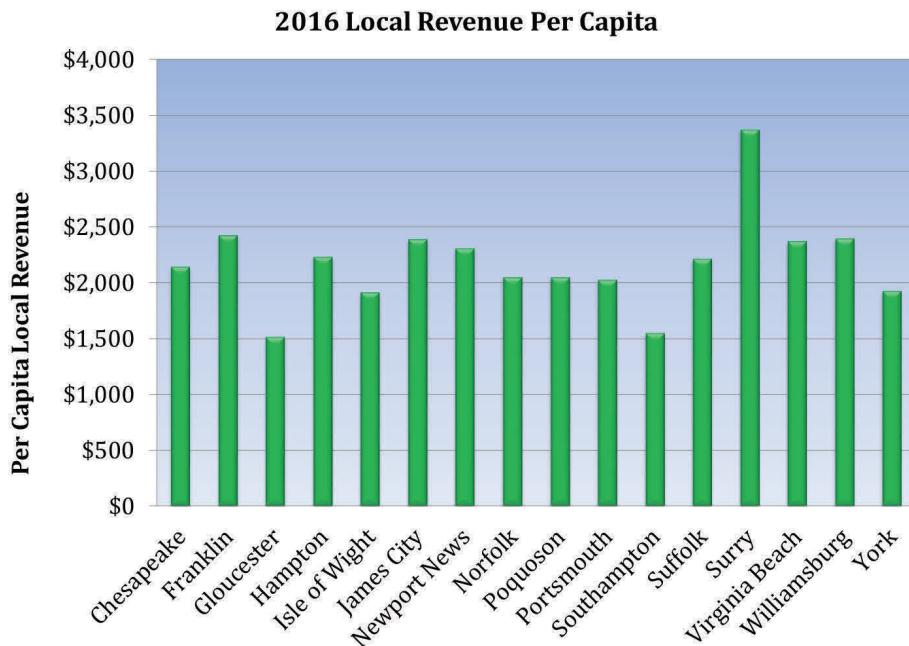
Property owners in Hampton Roads pay a variety of different tax rates depending on the locality in which their property is located. Additionally, a number of localities have special tax districts or additional local levels that pay for a specific service. Generally, the tax rate will be lower in counties than in cities because of the difference in both the level of services offered and the density of infrastructure that requires maintenance.

Source: Weldon Cooper Center for Public Policy, HRPDC

## Figure 13.13 Per Capita Local Revenue

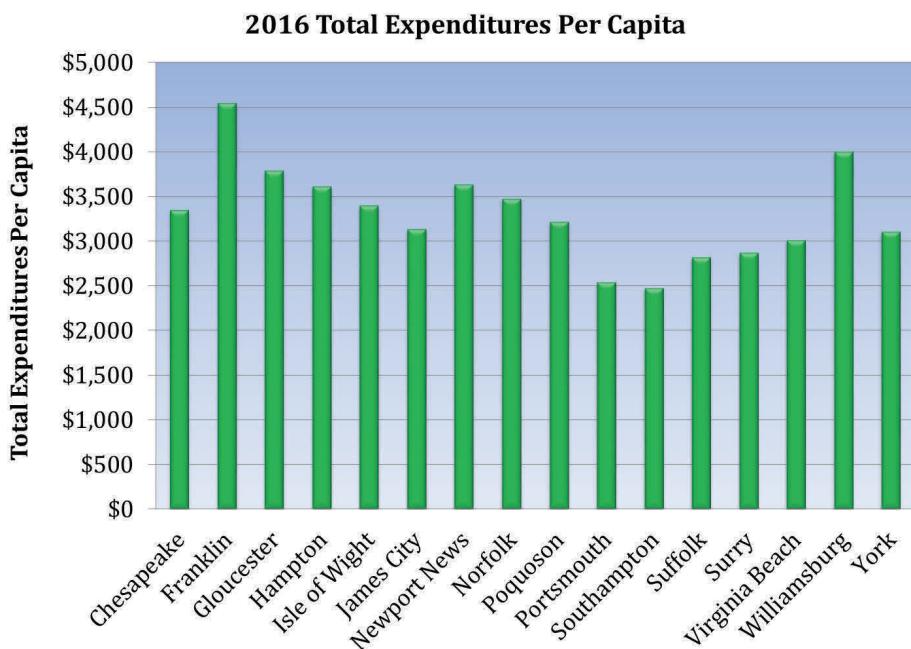
### Why is it important?

Local revenues are the direct contributions of regional citizens and businesses to the municipalities. These revenues come from diverse sources including personal property taxes, service fees, retail sales taxes, and public service corporation taxes.



Source: Virginia Auditor of Public Accounts, HRPDC

## Figure 13.14 Per Capita Total Expenditures by Localities



### Why is it important?

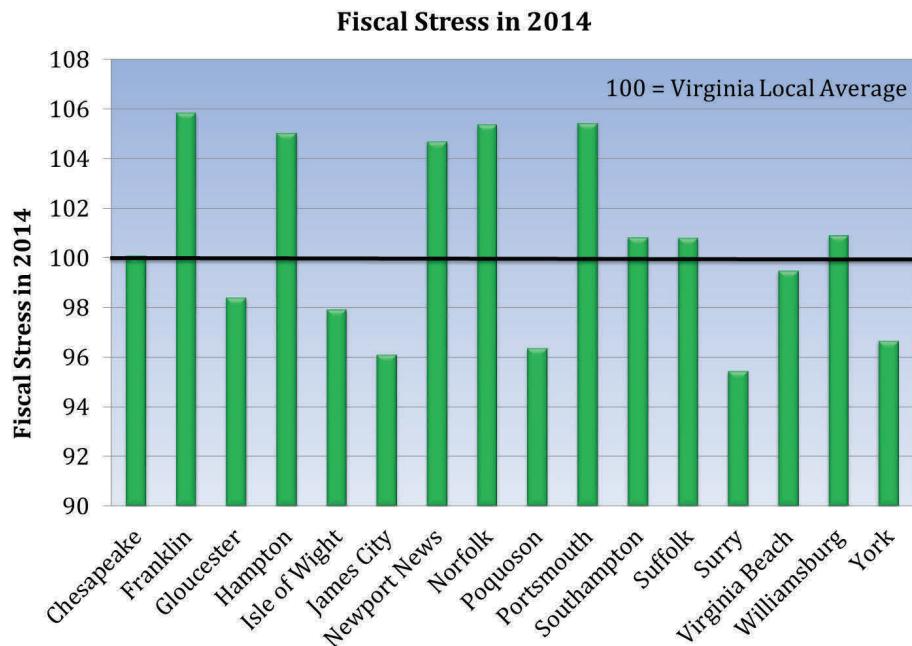
It is important to control expenditures for the size of a locality's population, as more populous cities will spend more because of their population. The funds for these expenditures include transfers from the Commonwealth, direct federal aid, federal pass through funds, and local revenues. Local revenues constitute between 45% (Southampton) and 75% (Surry) of local expenditures.

Source: Virginia Auditor of Public Accounts, HRPDC

## Figure 13.15 Fiscal Stress

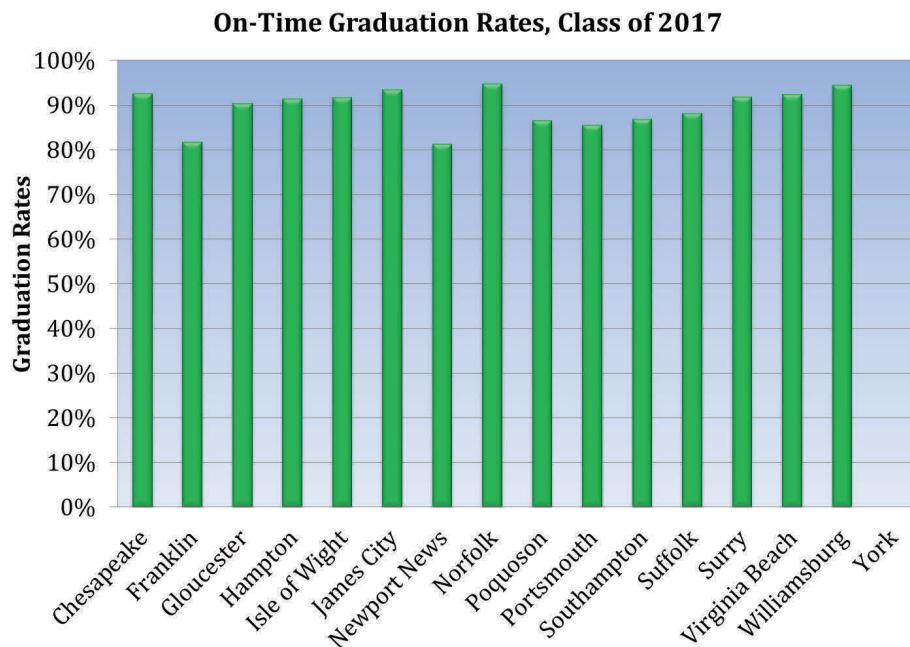
### Why is it important?

Fiscal stress indicates the tax burden that a locality has in place, as well as its capacity to raise additional revenue. The average score for Virginia localities is set to 100, and thus localities with scores above that value would be considered burdened. Fiscal stress measures the revenue effort of a locality in relation to its revenue capacity, while also incorporating its median income.



Source: Virginia Commission on Local Government, HRPDC

## Figure 13.16 On-Time Graduation Rates



### Why is it important?

Education remains the number one priority for most localities, receiving the highest levels of funding, as well as having a significant impact on the quality of life. The on-time graduation rate measures how many freshmen from the region were able to graduate within four years (including other forms of high school equivalency).

Source: Virginia Department of Education, HRPDC

## Section XIV

# Final Notes

The Hampton Roads Regional Benchmarking Study for 2017 takes a multi-faceted look at a variety of regional socioeconomic indicators. The document covers numerous diverse topics and provides context to better understand the region's performance. It is our sincere hope that this document will enable a more global perspective of regional well-being, assist in decision-making processes, and inspire further analysis.

The information included in this report is updated on a regular basis by the HRPDC staff and available electronically to the public free of charge. Feedback on making this document more clear and effective is gratefully appreciated, as are recommendations for additional benchmarks. If you have any questions, concerns, or feedback on this report, please contact HRPDC Chief Economist Greg Grootendorst ([grootendorst@hrpdcva.gov](mailto:grootendorst@hrpdcva.gov)).

The complete benchmarking report, as well as individual sections, and excel spreadsheets with the relevant data tables are all available for download at: <http://www.hrpdcva.gov/page/benchmarking/>.

Printed and bound copies are available for \$25 on request.