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**About this Document**

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## Hampton Roads Trends in Employment by Occupation

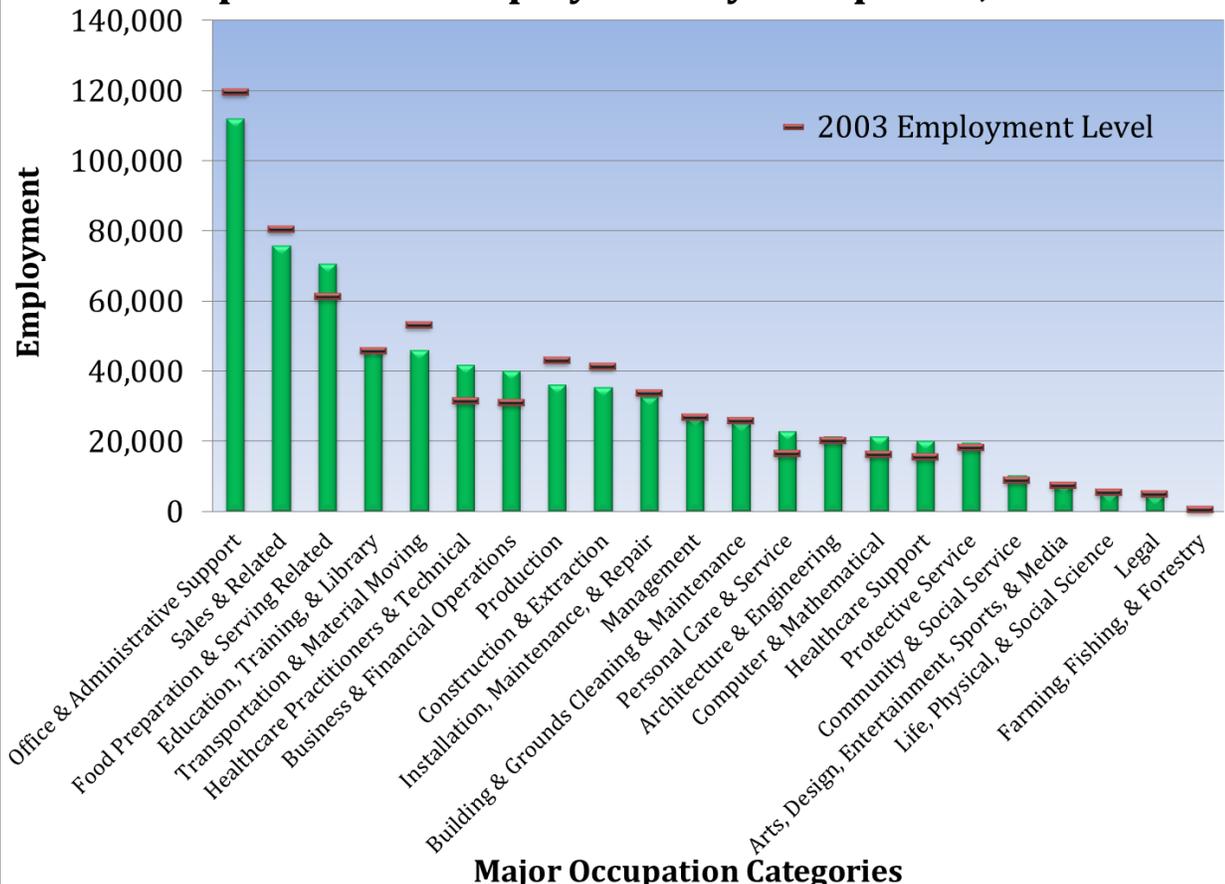
By James Clary, Senior Economist

Employment data provides the clearest indications about the performance and outlook of the regional economy. While overall employment levels and growth provide a baseline understanding of the labor market, more detailed information provides additional clarity regarding trends in employment and income. The Bureau of Labor Statistics (BLS) and the Virginia Employment Commission track employment within industries and occupations, with the annual release of regional occupational employment and wages allowing for a more detailed examination of trends in the Hampton Roads economy.

## Employment Totals

Analysis of simple employment totals provides the most accessible way to look at occupational data. The chart below displays the June 2013 employment estimates grouped into the 22 major occupational groups based on job similarity, as well as red lines indicating the 2003 estimate. Employment has varied significantly within these occupation groups. Employment shrunk in office & administrative support occupations (-7,490), transportation and material moving occupations (-7,000), and production occupations (-6,790). Alternatively, the number of jobs attributable to healthcare (+10,350), food preparation & serving (+9,510), and business & financial operations oc-

**Hampton Roads Employment by Occupation, 2013**



cupations (+9,410) have grown considerably over the past decade. Regionally, total employment measured through this survey increased by 19,040 since 2003.

Even within the major occupation categories, significantly different employment dynamics occur, as a result of a myriad of changes from improving technology to shifts in the economy.

The number of jobs in office & administrative support occupations declined by 7,490 positions between 2003 and 2013. Within that major category, there are 50 sub-categories for Hampton Roads in 2013, of which 29 lost employment over the past decade, and 17 gained employment (four were indeterminate because of data issues). So within that category, the number of executive secretary/administrative assistant positions declined by 1,220 (driven by technology), while first-line managers/supervisors increased by 1,640.

Unfortunately, there is only data for a comprehensive analysis on roughly two-thirds of the detailed occupations, because confidentiality requirements and data quality issues make analysis of 193 of the region's occupations impossible. This represents 115,000 jobs at least, or approximately 15.9% of employment covered in this data set. Also, while overall the major categories are broad and their coverage does not change significantly; in contrast, a change in a set of job titles that has relatively little impact on qualifications, salary, or tasks, might create a large difference in the employment in some of the detailed occupation categories. Over the past decade (2003—2013), two very similar occupations experienced extremely different labor market outcomes, one adding the greatest number of jobs while the other lost the most jobs. The fast-food cooks' occupation saw its employment shrink by 4,490 jobs to 1,500, while simultaneously, combined food preparation and serving workers including fast-food occupation increased by 9,140 to 23,210. It is difficult to establish to what degree this represents changing occupational employment, and to what degree this stemmed from reclassifying existing jobs. This makes detailed comparisons over an extended time period difficult.

### **Employment by Occupation vs. Employment by Industry**

The Bureau of Labor Statistics (BLS) reports employment identified both by industry and by occupation. The HRPDC regularly reports the industry employment data because the BLS releases that information on a monthly basis, while the occupation data will only be released annually for the region.

Occupation data possess several advantages over industry data. One, occupation data provides more information about the labor force and potential opportunities for job training. Two, large companies often have many different functions, and thus industry level data obscures important information.

One example of this would be the healthcare industry compared to healthcare occupations. The healthcare industry added 21,000 jobs between 2003 and 2013, while the healthcare & technical occupations added only 10,350. These numbers have significantly different implications for workforce and job training analysis.

## **Hampton Roads Occupations with Greatest Job Growth, 2003 to 2013**

<b>Rank</b>	<b>Detailed Occupation Category</b>	<b>2013</b>	<b>Change</b>
1	Combined Food Preparation and Serving Workers, Including Fast Food	23,210	9,140
2	Personal Care Aides	5,330	4,050
3	Retail Salespersons	28,450	2,690
4	Human Resources Specialists	2,920	2,340
5	Childcare Workers	3,320	1,690
6	First-Line Supervisors of Office and Administrative Support Workers	8,630	1,640
7	Waiters and Waitresses	14,210	1,580
8	Recreation Workers	3,260	1,480
9	Management Analysts	5,220	1,380
10	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	2,720	1,170

Source: Bureau of Labor Statistics, HRPDC

## Hampton Roads Occupations with Greatest Job Declines, 2003 to 2013

Rank	Detailed Occupation Category	2013	Change
1	Cooks, Fast Food	1,500	-4,490
2	Laborers and Freight, Stock, and Material Movers, Hand	9,670	-2,260
3	Light Truck or Delivery Services Drivers	3,380	-2,060
4	Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific	4,840	-1,620
5	Cashiers	18,410	-1,600
6	Carpenters	3,240	-1,580
7	Packers and Packagers, Hand	2,860	-1,270
8	Executive Secretaries and Executive Administrative Assistants	2,770	-1,220
9	Packaging and Filling Machine Operators and Tenders	1,370	-1,160
10	First-Line Supervisors of Construction Trades and Extraction Workers	3,460	-1,140

Source: Bureau of Labor Statistics, HRPDC

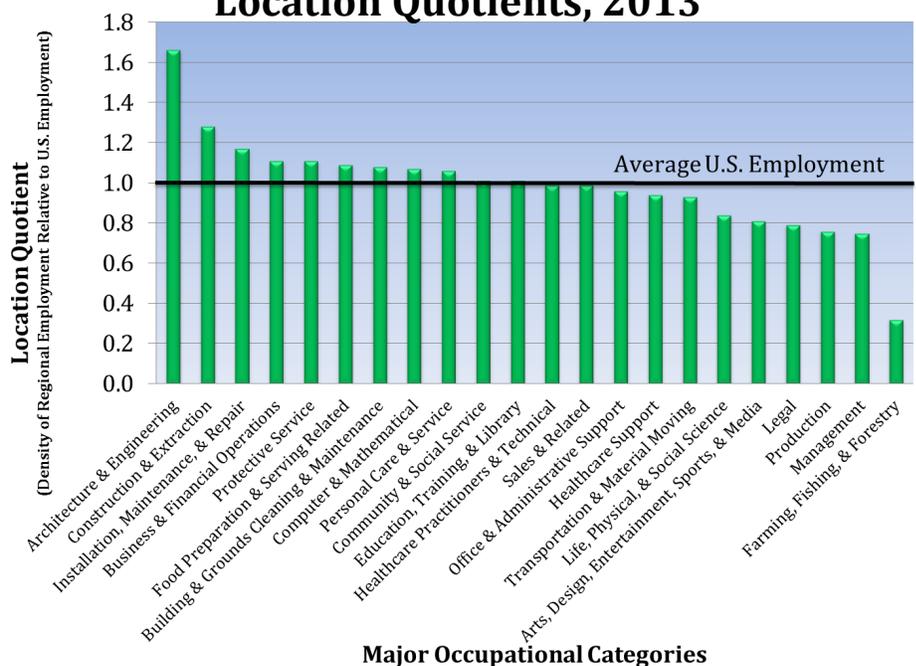
### Locations Quotients

While total employment provides a basic understanding of the region’s economy, it is also important to understand how employment in Hampton Roads deviates from that in the nation.

There are 112,020 jobs in office & administrative support occupations, constituting 15.5% of regional employment; however, this information does not indicate how that number deviates from the national average, or even it is deviates at all (employment in this field is 4% lower than the U.S. average).

The location quotient allows for more straightforward examination of the composition of jobs relative to the average, and for discovering which occupations a region specializes or concentrates within. As measured by the BLS, the location quotient shows the occupation’s share of an area’s employment relative to the national average. Thus a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in a region than it does nationally, while a location quotient of 0.5 would indicate that the occupation’s share regionally is half of its national employment share. Most occupations tend to have location quotients near 1.0, indicating that the share regionally mirrors the share nationally. One example of this would be cashiers, whose location quotient of 1.01 indicates that cashiers constitute

### Hampton Roads Occupational Location Quotients, 2013



#### Location Quotient

Location quotient (LQ) measures the concentration of employment in the region relative to the nation. A LQ of 1 indicate that the same percentage of individuals work in that category of occupations at the regional and national level. Computer & Mathematical occupations in Hampton Roads have an LQ of 1.07, indicating that regional employment in those occupations is 7% higher than the national average.

Source: Bureau of Labor Statistics, HRPDC

basically the same share of regional and national employment. This makes sense as very few things in a regional economy would cause the required number of cashiers to deviate significantly.

There are four major occupational categories that deviate significantly from the national averages. Employment in architecture & engineering are more concentrated in Hampton Roads than in the nation (66% higher), which stems mainly from higher employment in nuclear, naval, aerospace, and electrical engineering occupations. Additionally, construction & extraction occupations share of regional employment is 28% higher than that of its national share. Regionally, employment in this category draws no jobs from extraction occupations, and almost all of its employment derives from industrial construction occupations. Both categories seem to be heavily influenced by the federal presence in the region.

There are two occupation groups where the region has a significantly lower employment share than the nation. Farming, fishing, and forestry occupations will almost never constitute a large share of the employment in a metropolitan area.

## Hampton Roads Occupations with Highest Location Quotients (LQ) in 2013

Detailed Occupations	Employment	LQ
Ship Engineers	1,450	26.7
Marine Engineers & Naval Architects	690	19.0
Nuclear Engineers	1,640	18.3
Sailors & Marine Oilers	2,080	13.2
Riggers	1,020	10.7
Captains, Mates, & Pilots of Water Vessels	1,500	9.1
Commercial Divers	150	7.6
Pile-Driver Operators	130	6.4
Layout Workers, Metal & Plastic	440	6.0
Electrical & Electronics Installers & Repairers, Transportation Equipment	440	5.2
Door-to-Door Sales Workers, News & Street Vendors, & Related Workers	140	4.3
Radio, Cellular, & Tower Equipment Installers & Repairers	320	4.2
Photographic Process Workers & Processing Machine Operators	830	4.1

Source: Bureau of Labor Statistics, HRPDC

Far more interesting, employment in management occupation lags the nation's share by 25%, and that lag is widely spread through the detailed categories of management occupations (Hampton Roads' share is only greater than that of the nation in 5 of the 34 detailed occupations within management).

### Lower Wages not Occupational Structure

One issue that has not been discussed, is that wages in Hampton Roads are lower than those in the nation as a whole. For employment covered by this survey (this excludes Military, Federal, and several other groups), average annual salaries in Hampton Roads are 6% lower than the U.S. average salaries (\$43,650 versus \$46,440). Different employment patterns at the national and regional levels arise as a potential explanation, as management occupations pay a higher wage than any other major category, and the region has relatively low employment in those occupations. An easy way to test this results from normalizing Hampton Roads occupational employment to national employment shares, but even under the most generous assumptions, this only accounts for \$240 out of the total gap (\$2,790).

The median wage gap between Hampton Roads and the U.S. was 5.6% in 2013, if Hampton Roads' major occupations mean annual salaries were equal to those of the U.S., Hampton Roads' average salary would be \$46,176. The only three major occupational categories where Hampton Roads has a higher annual wage were farming, production, and food preparation. Wages in legal occupations were 14.9% lower, and those in arts, design, entertainment, sports, & media occupations were 18.0% lower.

Hampton Roads Economic Outlook:

# Anemic Recovery

By James Clary, Senior Economist

The national economy continues to experience steady growth since the recovery started, with GDP expanding at an annual average rate of 2.2%, and national employment adding 190,000 jobs per month since Jan-11. While this does not resemble the catchup growth normally achieved after a recession of this magnitude, the nation has recovered all of the employment it lost during the recession.

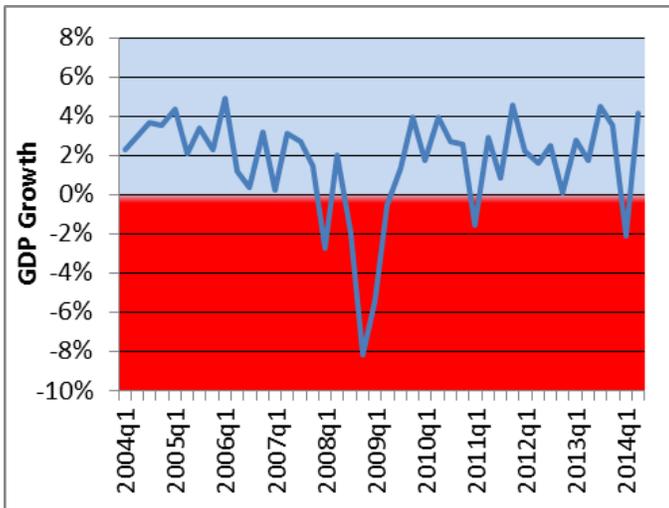
Hampton Roads has faced a much different recovery period. Employment began declining in Hampton Roads six months earlier than the rest of the nation due to the closing of the Ford plant in 2007. More recently, declines in department of defense spending and personnel levels have slowed the region’s recovery to a crawl. Employment in the region remains almost 28,000 jobs below its Jul-07 levels.

Retail sales and construction typically pull economies out of recessions, as pent-up demand accelerates spending during recoveries. Unfortunately, the weakness in the employment has prevented retail sales from seeing strong growth, and construction continues to face difficulties stemming from the housing correction.

## Hampton Roads Economic Indicators

### GDP, Annualized Growth Rate

United States, 2004Q1 – 2014Q2, Quarterly

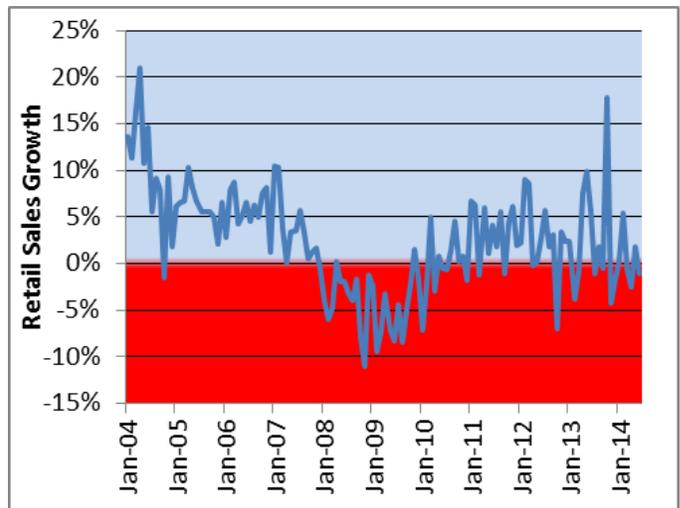


Source: Bureau of Economic Analysis, HRPDC

**GDP:** Gross Domestic Product combines consumption, investment, net exports, and government spending to determine the size and general health of the economy. U.S. gross product grew at 4.2% in the second quarter of 2014 following a disappointing, and surprising, 2.1% contraction in the first quarter of the year. That decline had some of its roots in the extreme winter weather the country experienced, and a portion of the growth in the second quarter was a rebound from that early weakness.

### Retail Sales, Year over Year Growth

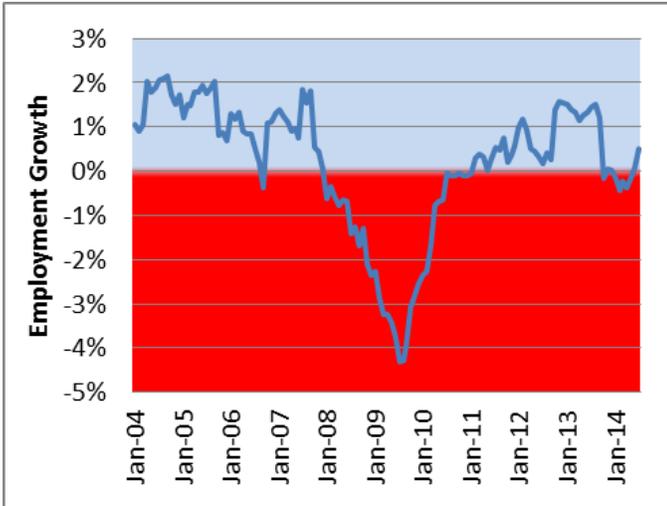
Hampton Roads, Jan 2004 – Jun 2014, Monthly



Source: Virginia Department of Taxation, HRPDC

**Retail Sales:** Hampton Roads’ retail sales, as measured by the 1% local option sales tax, serve as an indicator for consumption in the region. Since consumption composes 68% of economic activity in the U.S., the growth or decline of retail sales gives a strong indication of the direction of the local economy. Retail sales are down -1.1% in June-2014 as compared to June-2013. This follows the continuing pattern of regional retail sales growing slowly over time, but without the long-term steady growth that the U.S. has experienced.

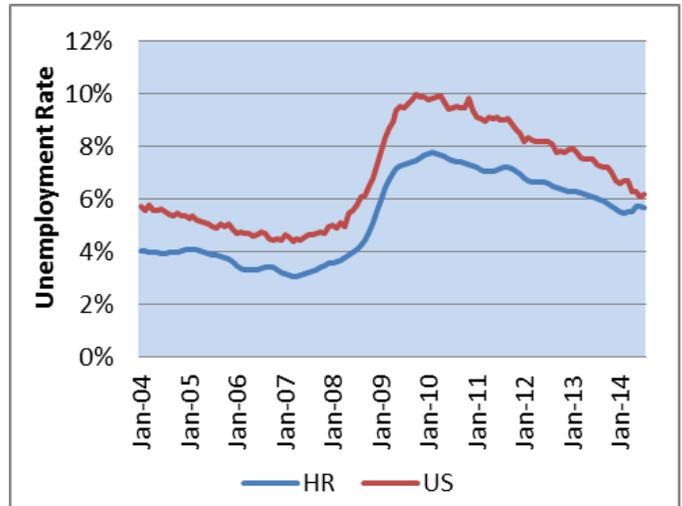
**Employment, Year over Year Growth**  
Hampton Roads, Jan 2004 – Jul 2014, Monthly



Source: Bureau of Labor Statistics, HRPDC

**Employment:** Non-agricultural civilian employment figures are considered the best estimate of labor market activity by the National Bureau of Economic Research. Hampton Roads averages 0.9% employment growth historically, but has only averaged 0.6% since the end of the recession. This remains a concern because, not only does employment need to grow to match an expanding population, but the region still suffers from a 27,900 jobs gap from peak employment in Jul-07.

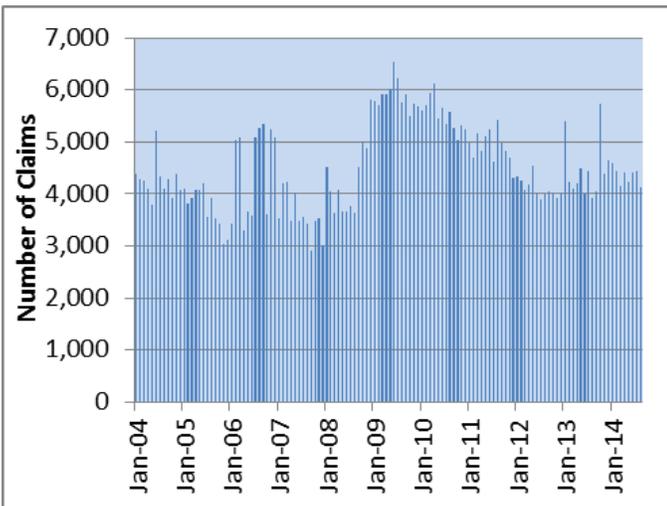
**Unemployment Rate, Seasonally Adjusted**  
U.S. & Hampton Roads, Jan 2004– Jul 2014, Monthly



Source: Bureau of Labor Statistics, HRPDC

**Unemployment Rate:** The unemployment rate is the percentage of the population which is actively seeking work, but is unable to obtain a position. Hampton Roads' unemployment rate has hovered around 5.7% over the past three months, even as the U.S. rate has continued to improve, and is only 0.4 percentage points below the Jul-13 level. In comparison, the U.S. unemployment rate declined by 1.13 percentage points between Jul-13 and Jul-14.

**Initial Unemployment Claims, Seasonally Adjusted**  
Hampton Roads, Jan 2004 – Aug 2014, Monthly



Source: Virginia Department of Labor, HRPDC

**Initial Unemployment Claims:** The number of Initial Unemployment Claims is a leading economic indicator, reflecting those who are forced to leave work unexpectedly, and thus revealing the strength of the job market with little lag time. The initial unemployment claims data is extremely volatile, but the region has seen this measure fall significantly from the 4th quarter of 2013 when sequester began to have a significant impact locally. Claims are now below the region's long-term average.

**Single Family Housing Permits, Seasonally Adjusted**  
Hampton Roads, Jan 2004 – Jul 2014, Monthly



Source: U.S. Census Bureau, HRPDC

**Single Family Housing Permits:** Permit data signals the level of construction employment and confidence regarding the future trajectory of the local economy. Single family permits still lag the long-term average of 473, despite increasing to 348 in Jul-13. The region has yet to embark on significant home building since the housing correction.