

# THE VIRGINIA ECONOMY IN TRANSITION

*Times of transition are strenuous, but I love them. We can make our new normal any way we want.*

– Kristin Armstrong



**T**he Virginia economy is in transition. It is moving slowly away from an economic base dominated by federal spending, especially defense spending, to one in which value-added private-sector activities, entrepreneurial instincts and international trade will play increasingly large roles. At the same time, it is learning to cope with rapid technological change that often features labor-saving devices that reduce the demand for some kinds of labor, even while they increase the demand for other occupations and specialties.

The transition can be exhilarating. Witness the economic energy of Northern Virginia, which now accounts for approximately 45 percent of the value of the Commonwealth's annual output, or the emergence of biotechnology cores in Richmond and Prince William County.

Yet, transition also can be painful. Witness the gradual decline in importance of mining and textile production in Virginia, or the inability of Hampton Roads almost one decade later to recover all of the jobs the region lost in the Great Recession of 2008.

**The transition process has been confounded by economic data sending us contradictory signals about our progress.** Virginia's rate of unemployment has been falling (good), but simultaneously the absolute size of our labor force and our labor force participation rate have been falling (not so good).

Consider as well the somewhat discordant economic growth numbers the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce distributed in September 2016. The BEA informed us that its advance estimate of the real (after inflation) rate of growth of the Commonwealth's economy in 2015 was a modest 1.4 percent, even while the rates were a hefty 3.7 percent in Hampton Roads and 3.9 percent in Richmond. Growth in the Washington/Alexandria/Arlington metropolitan area was a tepid 1.3 percent and the rest of the state's metro areas combined for a 1 percent contraction.

These numbers are difficult to interpret. The strong growth in Richmond and Hampton Roads would seem to suggest statewide growth above 1.4 percent, even with the D.C. metro area's growth at only 1.3 percent. The issue is that Northern Virginia (NOVA) accounts for a major share of the Virginia economy, but the NOVA metro area definition includes the District of Columbia and a good part of the District's suburbs in Maryland. However, the Virginia gross domestic product (GDP) estimates would only include the economic activity in Virginia counties and independent cities and not the D.C./Alexandria/Arlington region as a whole.<sup>1</sup>

**Looking at state compensation data, Northern Virginia accounts for 42 percent, Richmond and Hampton Roads combine for another 35 percent and the remainder of the metro areas in the Commonwealth account for the remaining 23 percent. Using these shares to weight the 2015 metropolitan GDP growth rates suggests a rate of growth around 1.9 percent for the state, close to the number released for 2015 GDP growth.** So, as in recent years, Virginia's rate of growth remained low in 2015 largely because growth in Northern Virginia remained weak.

GDP growth is a headline-grabbing calculation, but it is not without some issues. We need to sort out what has been happening across the entire economic landscape in the Commonwealth and its metropolitan areas.

Let's begin with Graph 1, which presents the annual growth rates for real (price-adjusted) GDP for the United States and Virginia since 2007. Whereas the prerecession period (2000-2007) was a time of prosperity for

the Commonwealth, GDP growth in Virginia since the Great Recession has trailed the national growth rate five years in a row.

In both 2012 and 2014, the gap between the national economic growth rate and our state economic growth rate was enormous. 2014 represented an economic low point for the Commonwealth. Virginia GDP growth was effectively zero (0.02 percent), while the nation grew at 2.4 percent. Viewed in this context, the 2016 Q1 real GDP estimate of 1.9 percent for the Commonwealth represents a welcome upward trend. The estimate for Q2 will be released in early December and we are forecasting growth around 1.9 percent again.

How do we explain Virginia's lethargic economic growth after the Great Recession? A slowdown in federal government spending – which accounts for almost 30 percent<sup>2</sup> of the Commonwealth's GDP – is the major culprit. This spending comes to Virginia in two major forms: expenditures on personnel and contract awards to business firms for construction, supplies and services.

Unfortunately, both the total wages earned by federal government personnel in Virginia and the dollar volume of government contracts awarded to Virginia firms trended downward between 2010 and 2015 (see Table 1). So also did the number of active-duty military personnel in the Commonwealth; we have at least 25,000 fewer active-duty military personnel in Virginia today compared to the turn of the century, and of course we have lost their spending as well.

**Transition or not, federal spending continues to be the engine that drives the Virginia economy. Northern Virginia (especially Fairfax County and Arlington), Norfolk, Newport News and Virginia Beach host the lion's share of the defense-related federal spending in the Commonwealth. Federal contracts (both defense and nondefense) were responsible for approximately 14 percent of the real gross state product in FY 2010, but by FY 2015, that share had receded to 11 percent.** In dollar terms, this represented a momentous \$10 billion reduction in federal contract activity in Virginia. Federal government contract awards and defense contract awards to firms headquartered in Virginia peaked in FY 2011 and have been declining ever since.<sup>3</sup>

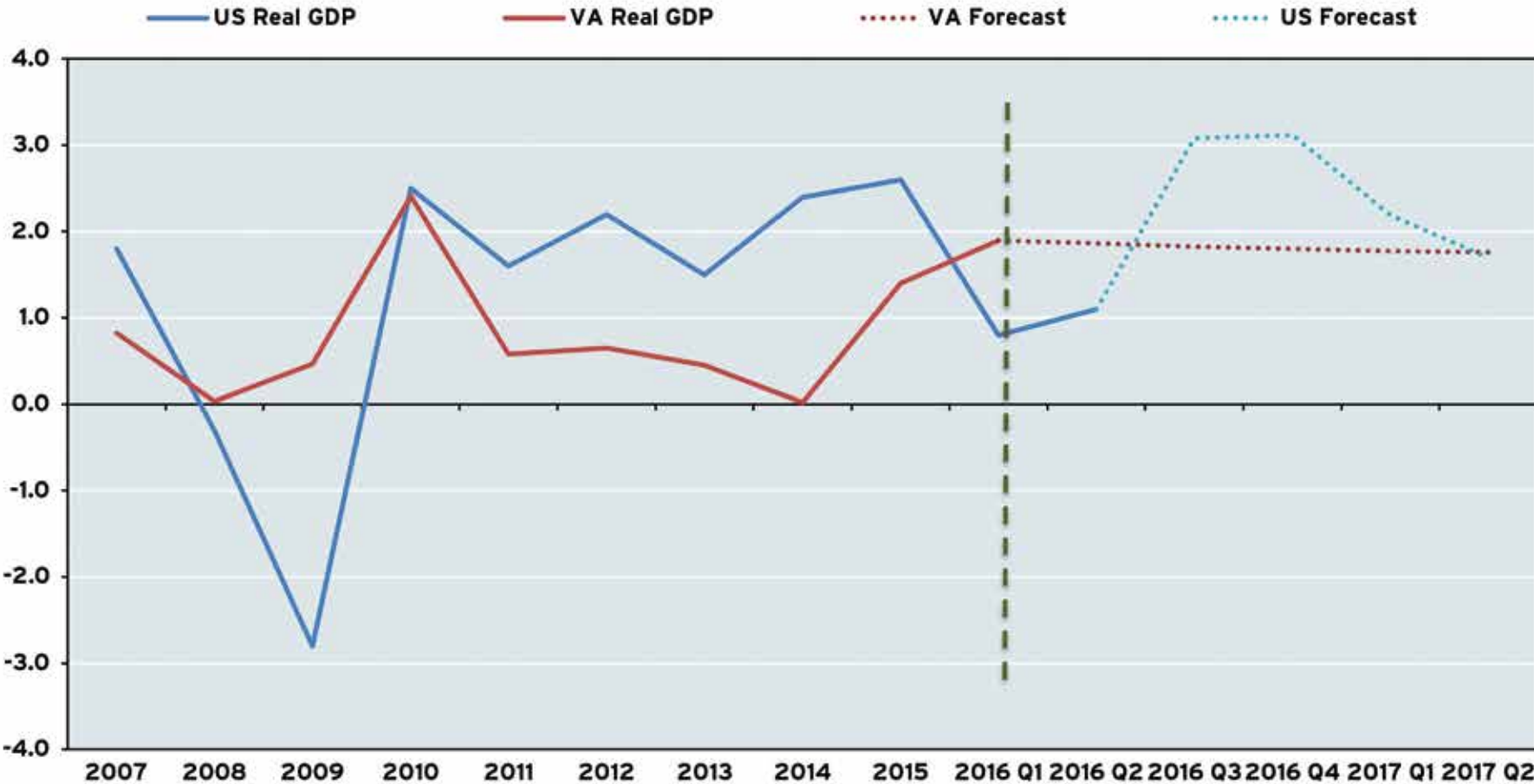
<sup>1</sup> This calculation is nearly identical to the procedure used by the BEA to drill down to metro area GDP estimates. For example, Virginia saw a slowdown in finance, insurance and real estate growth in 2015. The D.C.-Alexandria-Arlington metro has the highest share of compensation in that industry and, therefore, will contract relatively more than Richmond or Hampton Roads. For a full discussion of how metro area GDP is estimated, please see: <http://www.bea.gov/regional/pdf/GDPMetro2015.pdf>.

<sup>2</sup> So reports the Pew Charitable Trust, "Federal Spending in the States, 2005 to 2014," March 3, 2016, [www.pewtrusts.org](http://www.pewtrusts.org).

<sup>3</sup> The trend is adverse as well. Between FY 2014 and FY 2015, total federal contracts nationally contracted by 1.4 percent, but in Virginia contracted by 6.3 percent.

**GRAPH 1**

**UNITED STATES AND VIRGINIA ACTUAL AND FORECASTED REAL GDP, 2007-2016-Q2**



Sources: Bureau of Economic Analysis and the Center for Economic Analysis and Policy at Old Dominion University

**TABLE 1**

**TOTAL CONTRACT AWARDS FROM FEDERAL AGENCIES AND THE DEPARTMENT OF DEFENSE TO FIRMS IN VIRGINIA, FY 2010 TO FY 2015 (BILLIONS OF \$)**

	<b>Military Compensation</b>	<b>Total Contract Awards</b>	<b>Defense Contract Awards</b>
<b>FY 2010</b>	<b>\$13.619</b>	<b>\$58.890</b>	<b>\$41.017</b>
<b>FY 2011</b>	<b>\$13.408</b>	<b>\$60,217</b>	<b>\$42.873</b>
<b>FY 2012</b>	<b>\$13.260</b>	<b>\$55.227</b>	<b>\$37.865</b>
<b>FY 2013</b>	<b>\$12.845</b>	<b>\$51.117</b>	<b>\$33.454</b>
<b>FY 2014</b>	<b>\$12.693</b>	<b>\$51.929</b>	<b>\$33.673</b>
<b>FY 2015</b>	<b>\$12.664</b>	<b>\$48.663</b>	<b>\$29.612</b>

Source: usaspending.gov and calculations by the Center for Economic Analysis and Policy at Old Dominion University

## Sequestration: A Primer

Sequestration is a previously obscure legal term that first leaped into the public consciousness in 2011. It refers to someone taking legal possession of assets until specific debts have been paid. Since the Budget Control Act (BCA) of 2011, however, the word sequestration most often is used with reference to federal government budget spending caps that are part of the BCA. The original BCA reduced estimated baseline federal spending by a cumulative \$1 trillion between FY 2012 and FY 2021. The reductions were equally split between national defense and nondefense discretionary expenditures.

The BCA also established a Joint Select Committee on Deficit Reduction (JSCDR) with the express intent that it would achieve agreement on an additional deficit reduction package of at least \$1.2 trillion. As an

incentive, if agreement was not reached, the BCA mandated further across-the-board reductions in total discretionary spending of \$1.2 trillion, once again split evenly between national defense and nondefense discretionary expenditures. The BCA also required the president to withhold expenditures to achieve the “sequester level” spending caps in the event spending exceeded these caps. When the JSCDR failed to reach agreement on a deficit reduction package, the president implemented the sequester mechanism as required by the BCA in FY 2013.

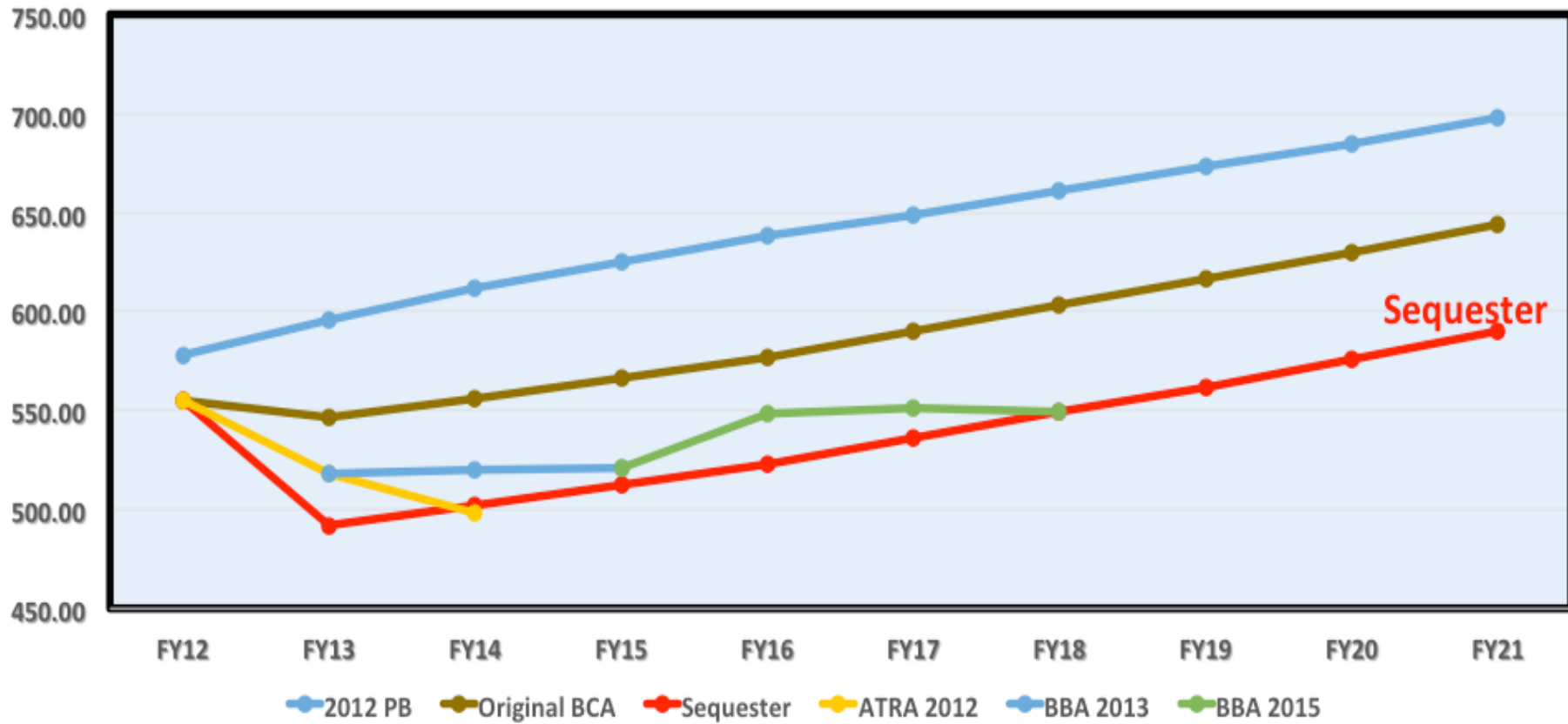
The red line in Graph 2 illustrates the sequester level of federal defense expenditures. The blue line estimates what expenditures would have been without any of the give-and-take just described. The three trapezoids above the red line represent sequestration relief – deals, if you will – that Congress made with the president since 2011 to alter the terms of the BCA. Each of these agreements added some defense spending, but as the graph indicates, each also was accompanied by an expiration date. Thus, the trapezoids did not constitute permanent spending increases.

The BCA caps, even with revisions, have significantly dampened prospects for future increases in defense spending. Even so, Congress has a long-established appetite for increased spending, with Republicans tending to prefer increased defense spending, and Democrats tending to opt for increased spending on nondefense-related social and infrastructure programs. The two parties may hammer out yet another compromise, but this is hardly guaranteed. Further, any deal that might be made will result in only marginal changes in the BCA, rather than a wholesale abandonment of it.

When all is said and done, absent the nation entering a war or major conflict, the overall outlook for defense spending is hardly sanguine. It is defense spending, or lack thereof, that will call much of the economic tune in Virginia over the next few years.

**GRAPH 2**

**FEDERAL DEFENSE BUDGETS WITH AND WITHOUT SEQUESTRATION, FY 2012 TO FY 2021**



Source: Congressional Research Service, "Defense: FY 2017 Budget Request, Authorization and Appropriations," April 12, 2016

## Sectoral Sources of Economic Growth in Virginia

**Data from the Bureau of Economic Analysis suggest that a slowdown in the economic activity in the government sector (federal, state and local) was responsible for shaving 0.6 percent from the 2015 real growth rate of Virginia.** Graph 3 provides these GDP contribution data for the government sector as well as for the other major sectors of the economy. Note that manufacturing exercised a negative 2.5 percent influence on the state's growth rate, even while it continues to account for 9 percent of Virginia's GDP.

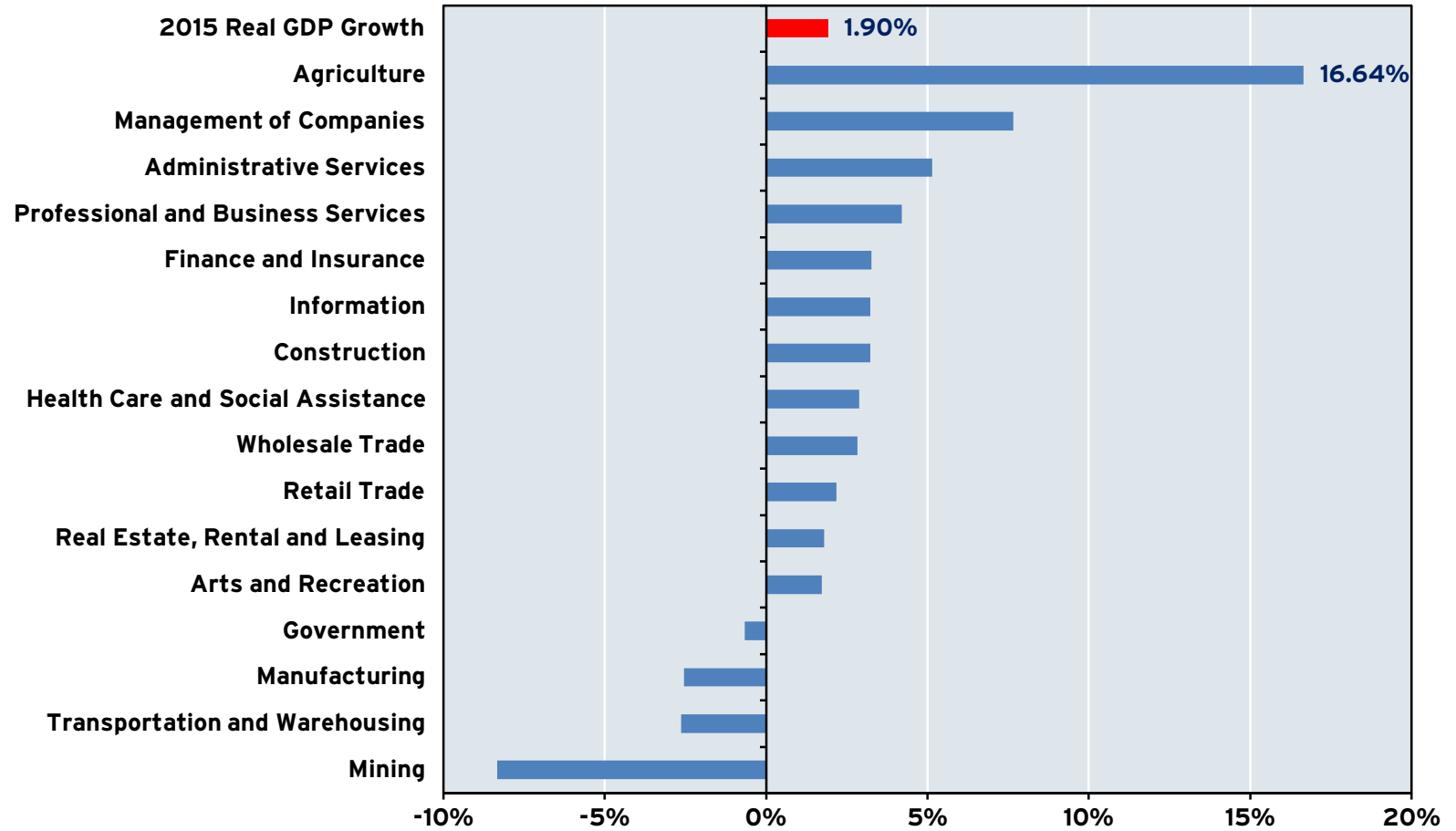
Somewhat surprising in Graph 3 is the strongly positive contribution of agriculture to the Commonwealth's economic growth in 2015. Relatively speaking, agriculture has been declining in importance in Virginia, but its impact on the state's economy in 2015 was considerable. On the other hand, mining continued its long-term decline in importance.

Graph 4 takes a longer-range view (2007-2015) and provides a look at the change in sector contribution to economic growth across the various sectors in the Commonwealth. The information sector and finance and insurance have experienced strong recoveries. Agriculture has experienced a remarkable turnaround during the recovery period. Mining, transportation and warehousing, manufacturing and government all remain negative or slightly positive contributors to growth in 2015. So, it is possible that structural changes have occurred in these industries. These sectors may never recover sufficiently to provide meaningful contributions to growth.



**GRAPH 3**

**INDUSTRY SECTOR CONTRIBUTIONS TO 2015 REAL GDP GROWTH**

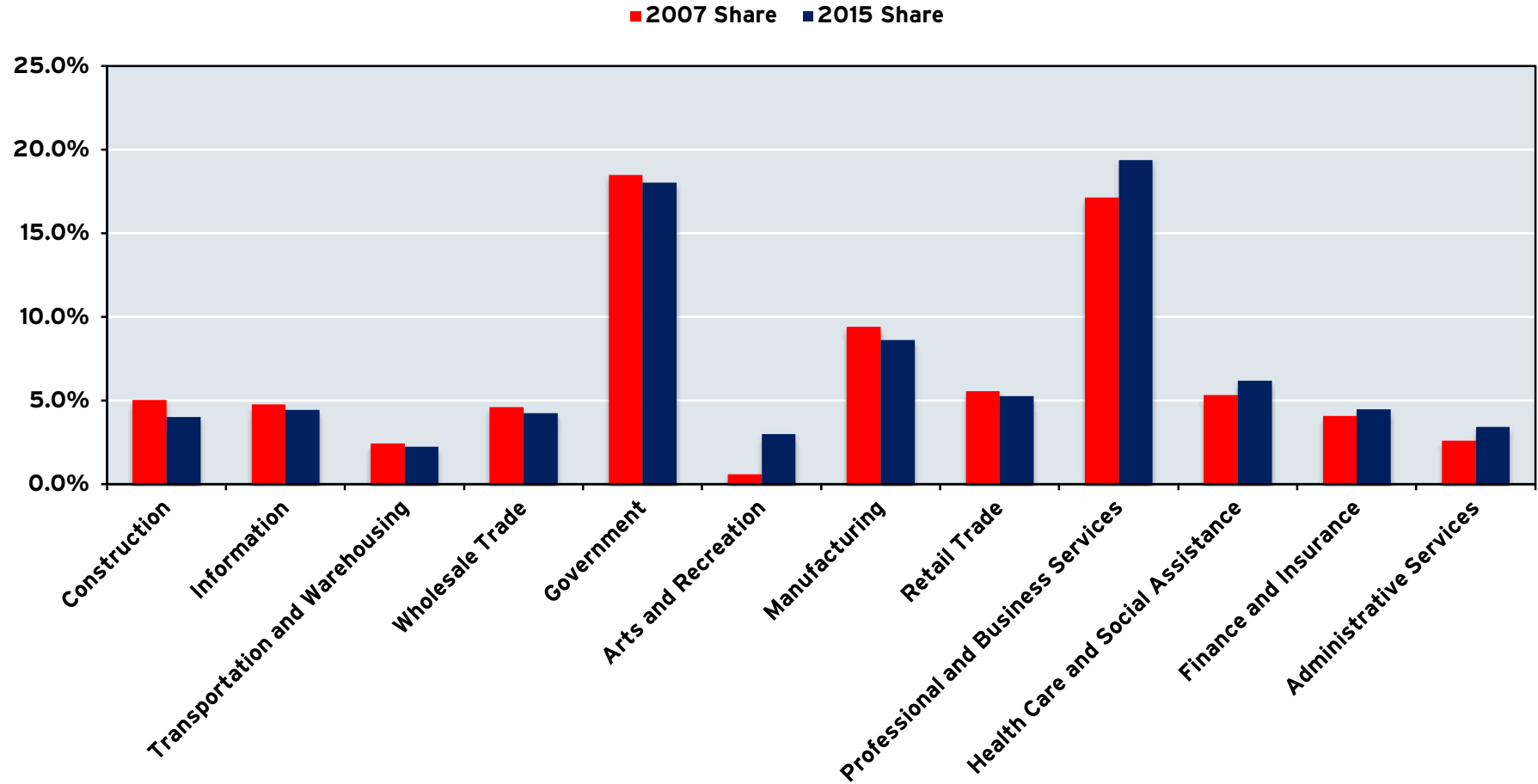


Sources: Bureau of Economic Analysis and the Center for Economic Analysis and Policy at Old Dominion University



**GRAPH 4**

**CHANGE IN INDUSTRY SECTOR CONTRIBUTIONS TO POSTRECESSION REAL GDP GROWTH, 2007-2015**



Sources: Bureau of Economic Analysis and the Center for Economic Analysis and Policy at Old Dominion University

# Virginia's Economy Has Been Diversifying, But...

For years, conversations in the Commonwealth have focused on the need to diversify the state's economy away from such strong reliance upon government activity and toward the private sector. The truth is that the state actually has been doing exactly this for nearly 20 years, albeit not as rapidly as some would prefer. Graph 5 illustrates the share of the Virginia economy that can be attributed to private industry. Private industry's share of real GDP was only 78 percent in 1997, implying that the government was responsible for 22 percent. In 2015, the private-sector share had risen to 82 percent. This increase may not seem large, but it corresponds to \$17 billion in output.

Still, before we congratulate ourselves for our diversification successes, we must recognize that most of the change during this decade can be attributed to congressional spending sequestration. Simply put, it was imposed on us. The federal government has not been spending as much in several areas important to the Virginia economy and it is this decline, rather than exuberant private-sector growth, that is primarily responsible for the increasing relative importance of our private sector.

Virginia now has recorded four straight years in which its real rate of economic growth has been less than 2 percent. Declining federal spending is the primary cause. This leads naturally to a question: Why have the federal government spending cuts been so painful for Virginia, but less so for most of our neighboring states?

The story starts with the Great Recession. Graph 5 illustrates how the recession disrupted what had been a slow, steady increase in private industry's share of GDP. Between 2006 and 2009, government expenditures became a larger share of the Commonwealth's GDP, as was the case during the 2001 recession. Counter-cyclical federal government spending in many cases took the place of private-sector expenditures.

Declining federal spending changed this pattern and put a chill on government spending and contracting in Virginia. This quickly translated

to lower economic growth rates for the Commonwealth. Further, if sequestration continues in a meaningful way, then Virginia is quite likely to continue in the economic doldrums and experience lower than average economic growth rates.

**Other states have not felt comparable pain from their contractions in federal spending. The major reason is that their private sectors, relatively speaking, are stronger than those of Virginia.** Graph 6 reports the private-sector share of gross state product for South Carolina, North Carolina, Maryland and Florida from 2012 through 2015. In 2015, Florida, at 88 percent, had the largest private-sector share. North Carolina was a close second at 87 percent, followed by South Carolina at 85 percent.

Not only are Florida, North Carolina and South Carolina less dependent upon federal spending than Virginia and Maryland, but also their economies are growing faster. Virginia and Maryland have tended to be "feast or famine" states that boom when federal government spending is rising (witness 2000-2006) and suffer when federal government spending declines (which describes most of this decade). Table 2 summarizes these relationships for the 2012-2015 time period.

**TABLE 2**

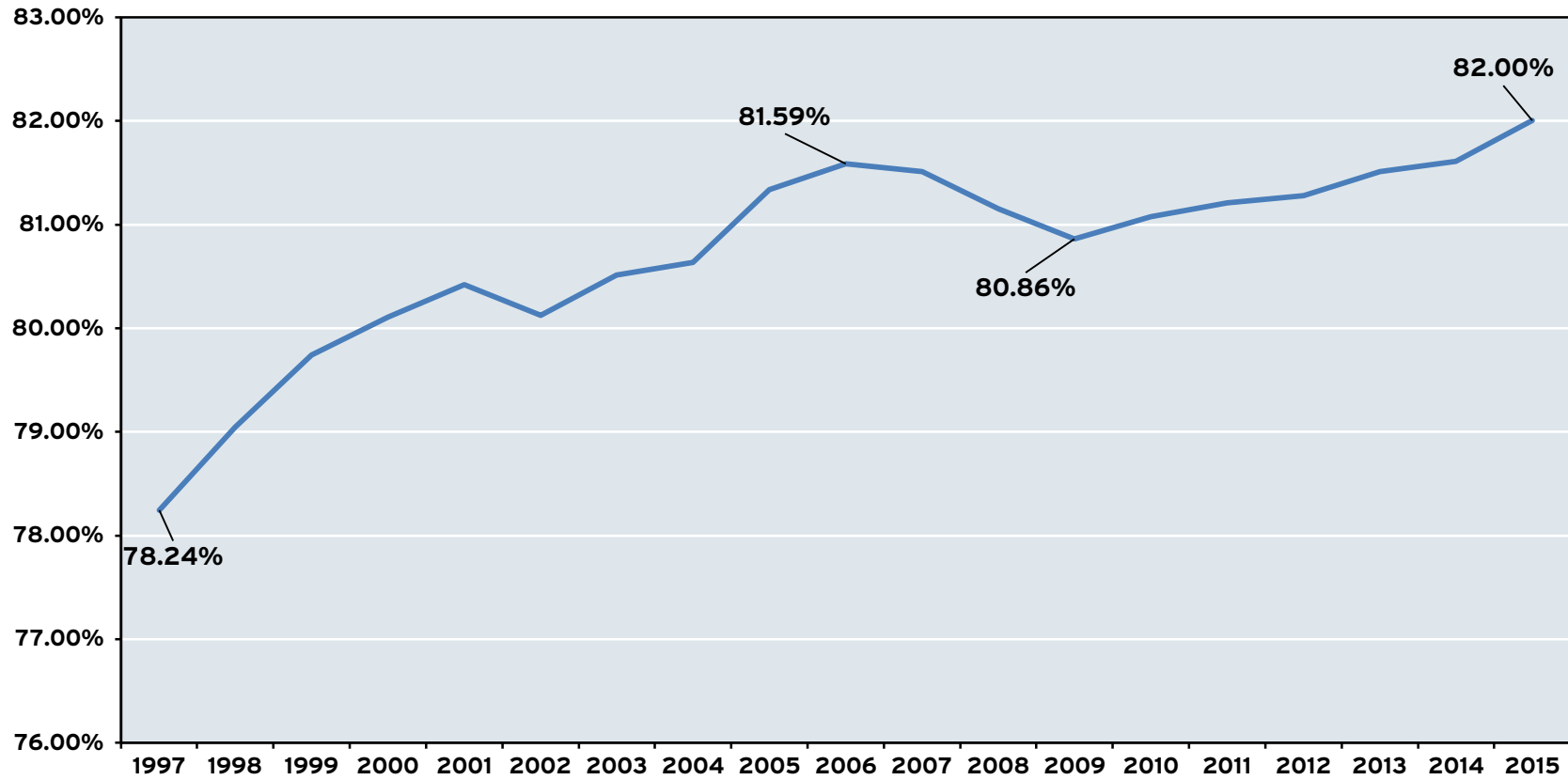
**REAL GDP GROWTH 2012-2015 - SELECTED STATES  
(2015 STATE RANKING GIVEN IN PARENTHESIS)**

	Virginia	Maryland	Florida	North Carolina	South Carolina
<b>2012</b>	0.7%	0.4%	1.8%	-0.3%	0.2%
<b>2013</b>	0.2	-0.1	2.3	1.3	1.1
<b>2014</b>	0	1.6	2.6	2.1	2.5
<b>2015</b>	1.4 (33)	1.5 (29)	3.1 (7)	2.7 (10)	1.9 (18)

Source: Bureau of Economic Analysis

**GRAPH 5**

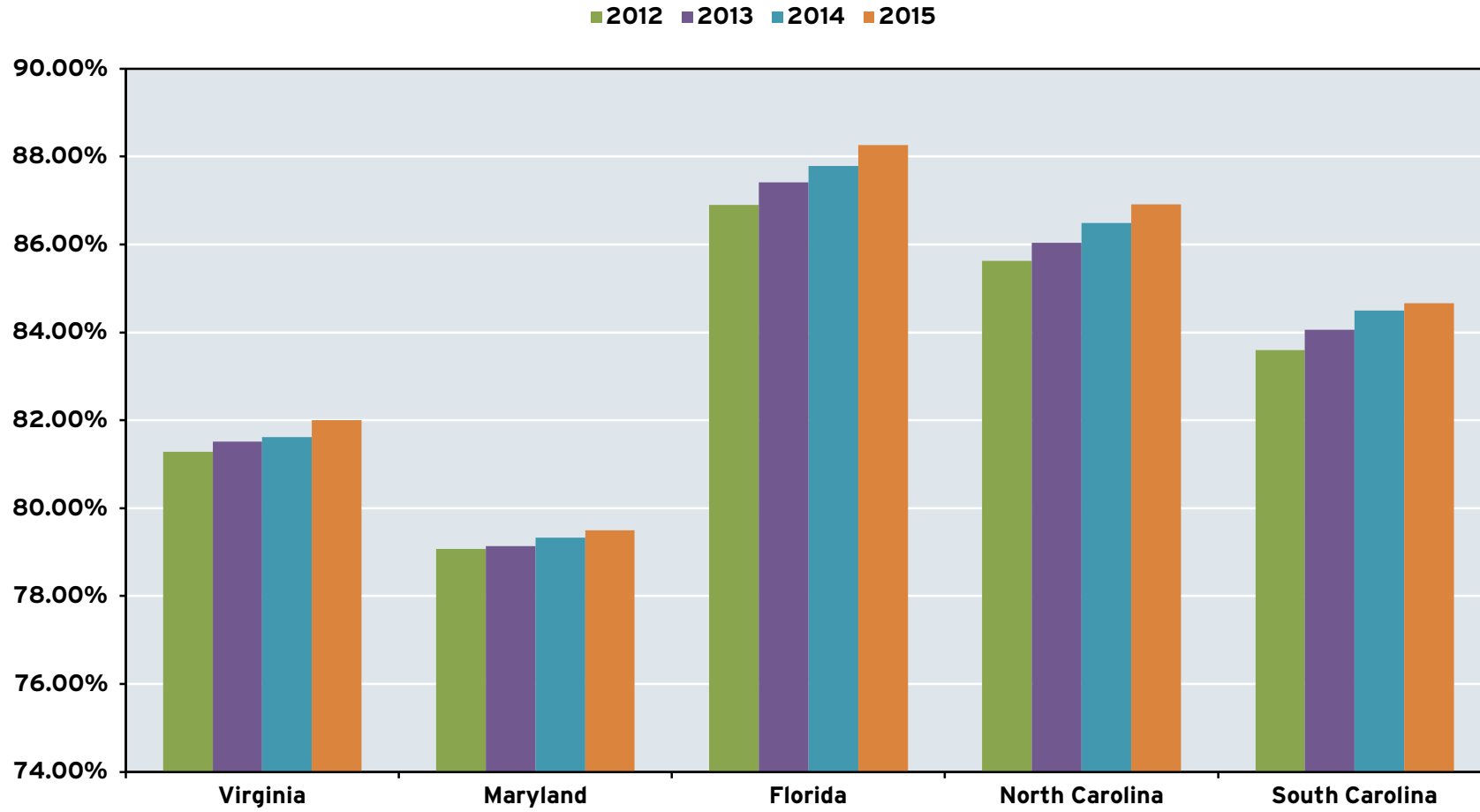
**PRIVATE-SECTOR SHARE OF GDP IN VIRGINIA, 1997-2015**



Sources: Bureau of Economic Analysis and calculations by the Center for Economic Analysis and Policy at Old Dominion University

**GRAPH 6**

**PRIVATE SHARE OF GDP FOR SELECTED STATES, 2012-2015**



Sources: Bureau of Economic Analysis and calculations by the Center for Economic Analysis and Policy at Old Dominion University

## Labor Market Conditions

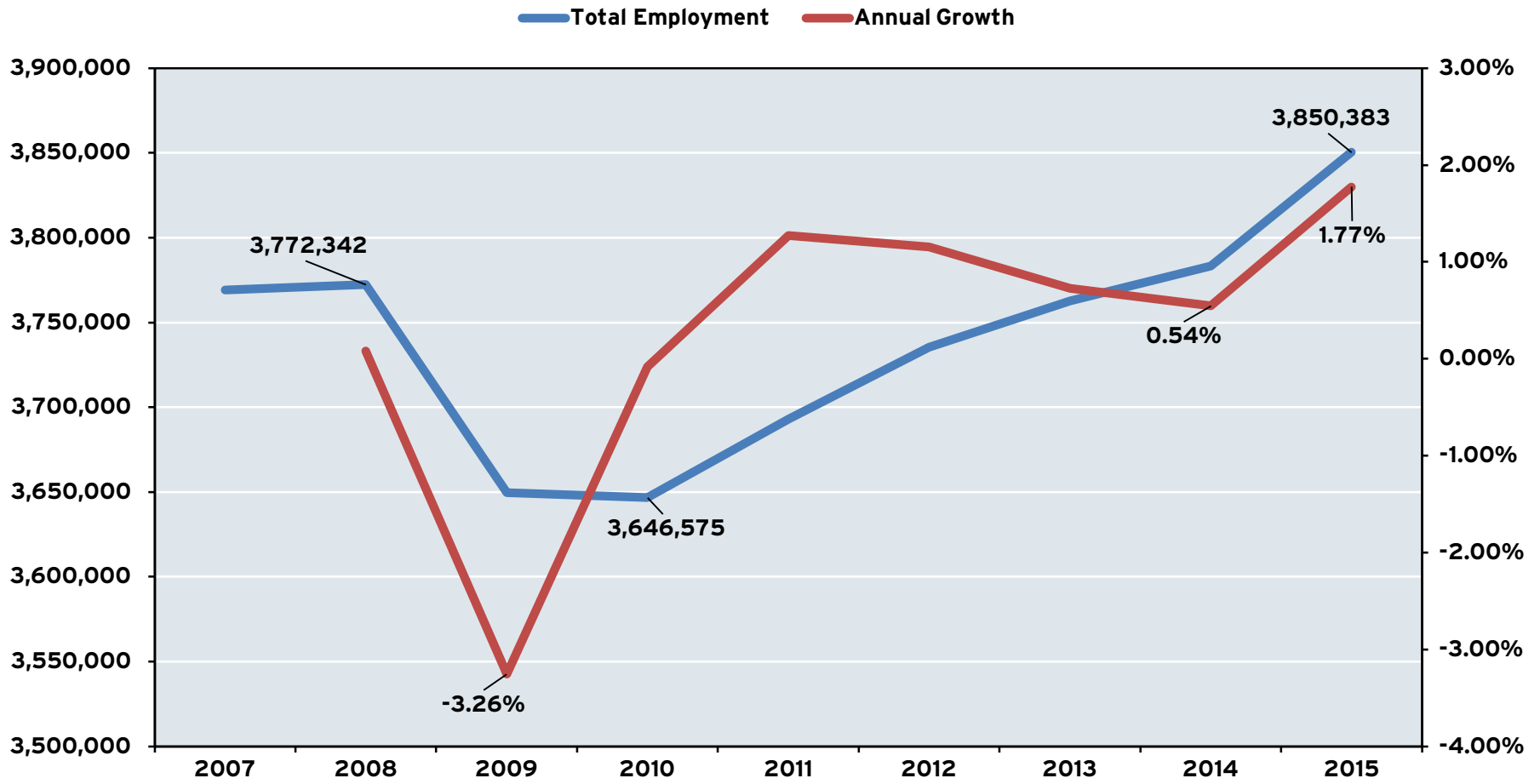
Labor market conditions in Virginia continued to improve during 2015. Total nonfarm payroll employment expanded by 285,600 jobs, or 1.8 percent above the 2014 level (see Graph 7). This marked the highest number of jobs added annually since 2012. The Commonwealth did add jobs in both 2013 and 2014, but at levels that significantly lagged the performance of other states and the United States as a whole. Hence, the Commonwealth's 2015 performance was a clear departure from mediocrity and a positive sign.

Graph 8 presents employment growth for the first seven months of 2016 compared to the same month in 2015. January, February and March were characterized by strong job creation in Virginia. However, since March, job growth in Virginia has decelerated noticeably. July had one of the smallest increases in employment growth in recent history. The data for August were better, but taken as a whole, 2016 job growth has been slower than expected. This was a contributing reason why Gov. Terry McAuliffe reported that the state's tax collections were trailing forecasts and state budgets had to adjust accordingly.



**GRAPH 7**

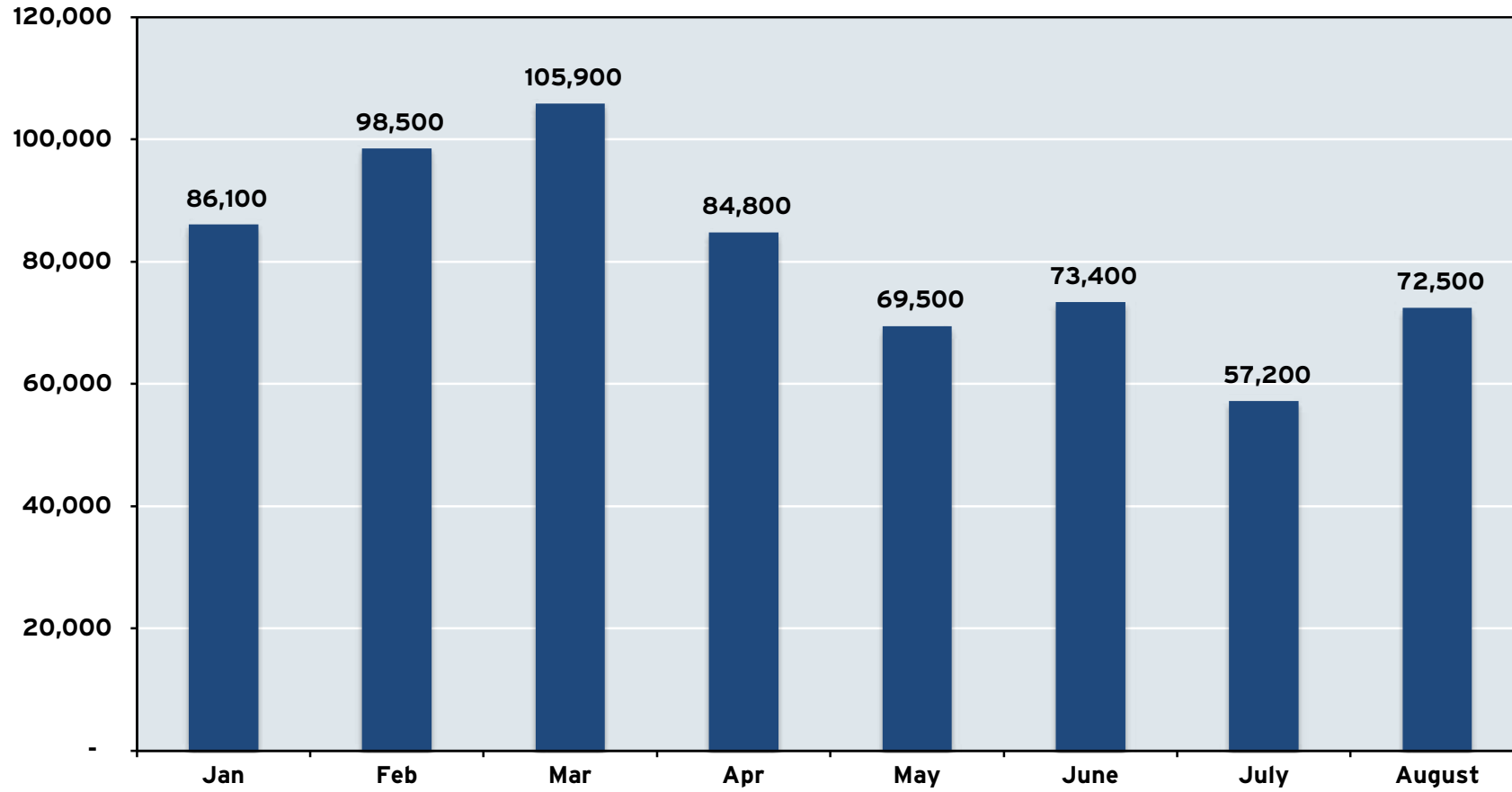
**NONFARM PAYROLL EMPLOYMENT (TOTAL AND ANNUAL GROWTH), 2007-2015**



Source: Bureau of Labor Statistics

**GRAPH 8**

**TOTAL NONFARM PAYROLL EMPLOYMENT GROWTH - 2016 COMPARED TO SAME MONTH 2015**



Source: Bureau of Labor Statistics

## THE JOB GROWTH REQUIRED TO REDUCE VIRGINIA'S RATE OF UNEMPLOYMENT

We can agree that the more jobs, the better. However, what constitutes strong job growth versus weak job growth? One way to evaluate job growth in Virginia would be to ask how much job growth would be needed to reduce our unemployment rate by a specific amount. Our July 2016 rate of unemployment was 3.7 percent. What magnitude of job growth is required to reduce this rate to 3 percent by July 2017? The answer: We would need to add a net of 4,858 new jobs each month for another 12 months.

Graph 9 tells us we were falling well short of generating the new jobs required to reduce our state's unemployment rate to 3 percent. March, April and May were well below the 4,858 net jobs goal. However, June, July and August were much improved.

Graph 10 confirms that for many years the rate of unemployment in Virginia was lower than that of the entire country. In July 2016, it was 1.2 percent below the national rate. In general, this has reflected the strength of the Virginia economy over time. Even so, one can expect this gap to narrow and even disappear if the Virginia economy continues to grow at a slower rate than the national economy.

## THE AVERAGE WEEKLY WAGES OF VIRGINIA WORKERS

Another important measure of labor market health is the level of wages earned by a typical worker. The good news is that average weekly wages per employee in the Commonwealth have been increasing. **The average weekly wage paid a Virginia worker in 2015 was \$918, a 4 percent increase over 2014. This easily exceeded the 0.8 percent growth in the Consumer Price Index between December 2014 and December 2015, so the real incomes and spending power of workers grew. Indeed, since the end of the Great Recession, the average weekly wage of a Virginia worker has risen 18 percent (from \$779.88 to \$918.41). It appears as if 2016 will continue this trend; wage data through 2016-Q2 show a 2 percent growth over 2015-Q2.**

## LABOR FORCE PARTICIPATION

Measured unemployment rates are heavily influenced by labor force participation. This is because unemployment is measured as a percentage of the existing labor force. One is considered to be in the labor force either if one already has a job, or does not have a job but is actively seeking one. Therefore, individuals who have dropped out of the labor market and are no longer seeking employment (for whatever reason) are not counted as members of the labor force. This reduces the size of the denominator when the rate of unemployment is computed and reduces the measured unemployment rate. Paradoxically, this may occur even though the reason the individuals dropped out of the labor force was that they could not find work.

Let's examine recent evidence concerning labor force participation.

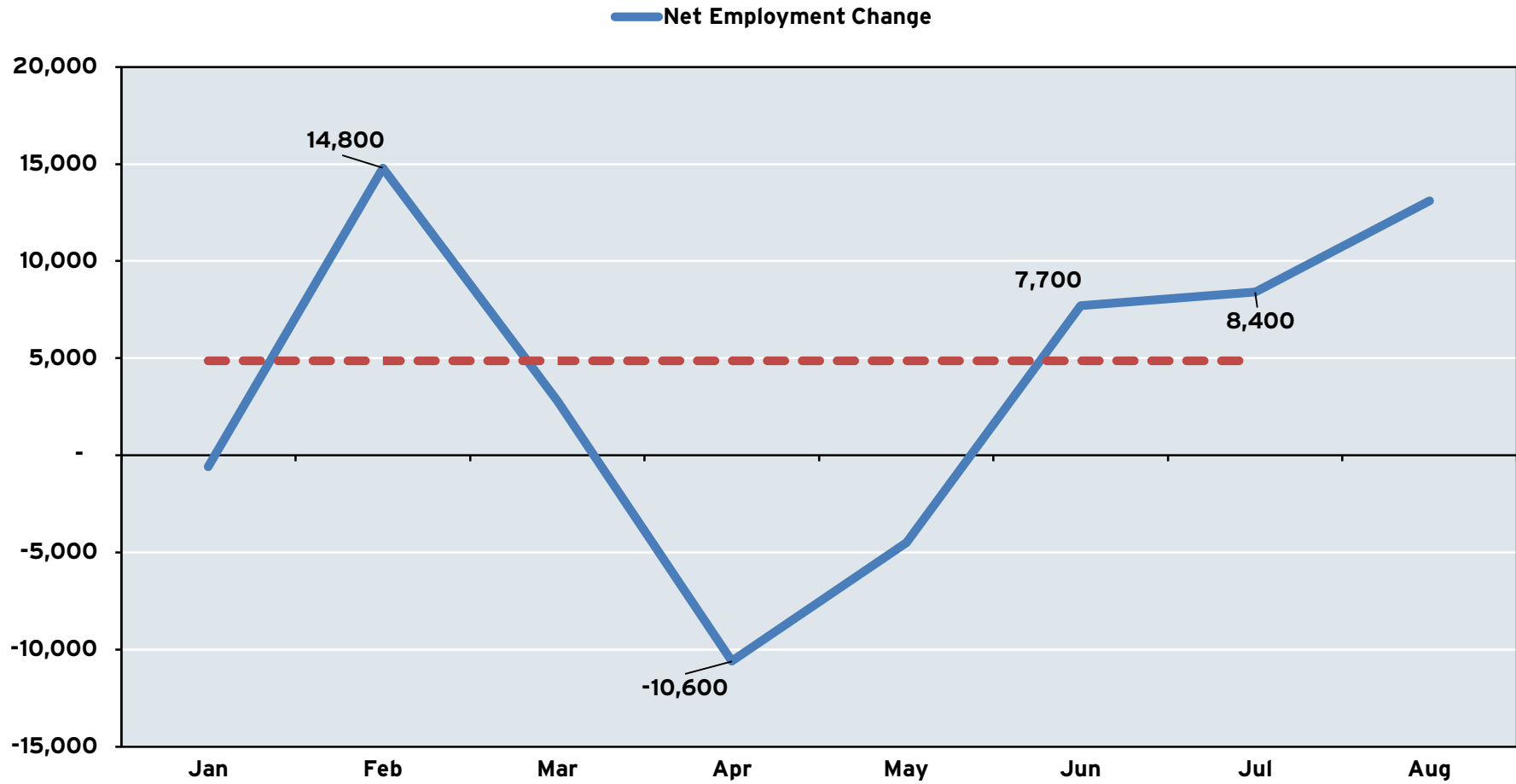
**Graph 11 shows the increase in the percentage of adults ages 16-64 who were not working in selected locations in Virginia. Virginians have been dropping out of the labor force at alarming rates, so much so that the absolute size of our state's labor force has been declining (see Graph 12).**

What has been driving these adverse labor force participation developments? There are five prominent hypotheses that purport to explain why labor force participation has been falling in Virginia as well as nationally. They are complementary explanations because each may have some validity. We will consider each in turn.



GRAPH 9

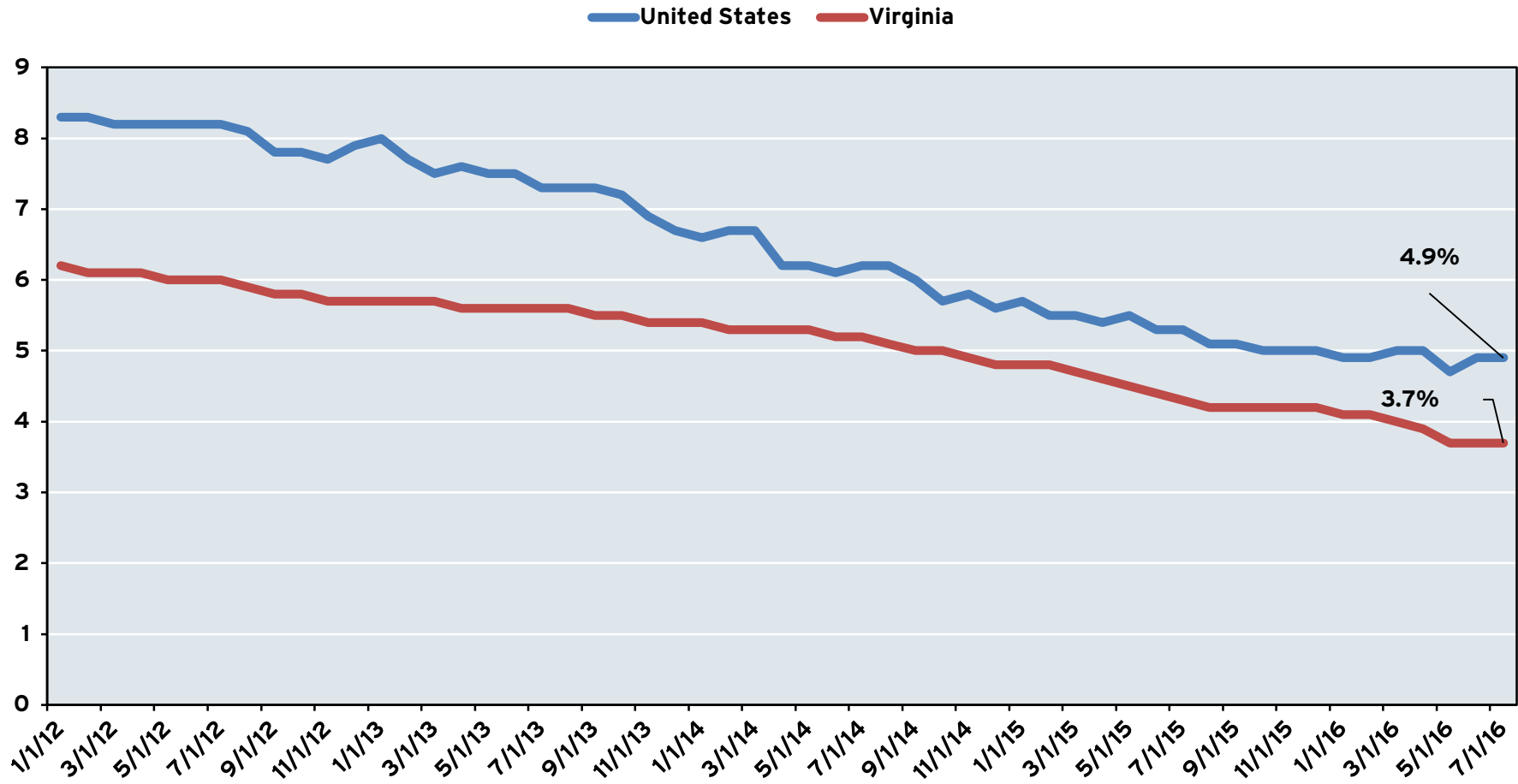
2016 MONTHLY NET EMPLOYMENT CHANGE - TOTAL NONFARM EMPLOYMENT



Sources: Bureau of Labor Statistics and Federal Reserve Bank of Atlanta Jobs Calculator

**GRAPH 10**

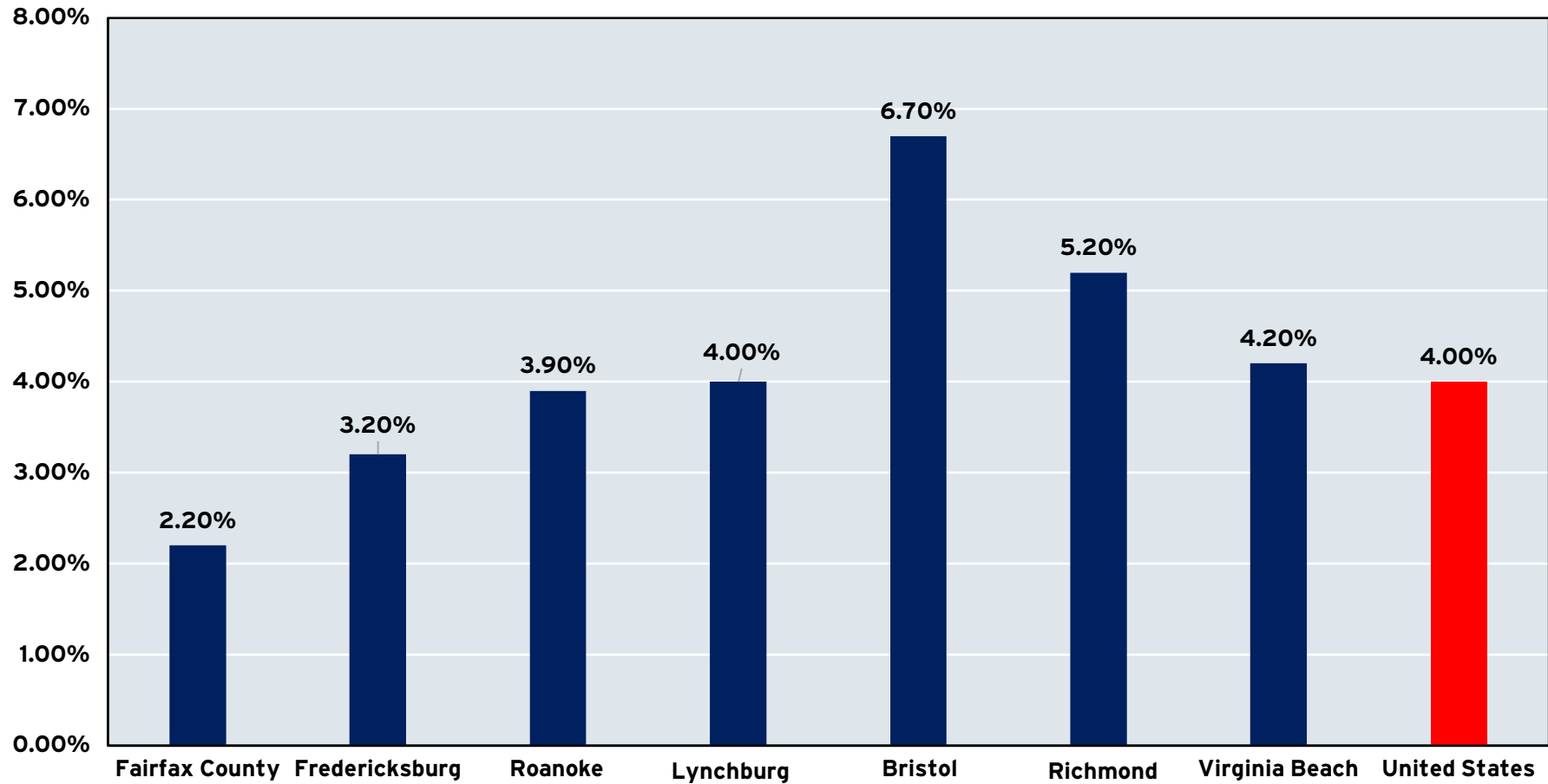
**NATIONAL AND VIRGINIA RATES OF UNEMPLOYMENT (U3), 2012-2016**



Source: Bureau of Labor Statistics

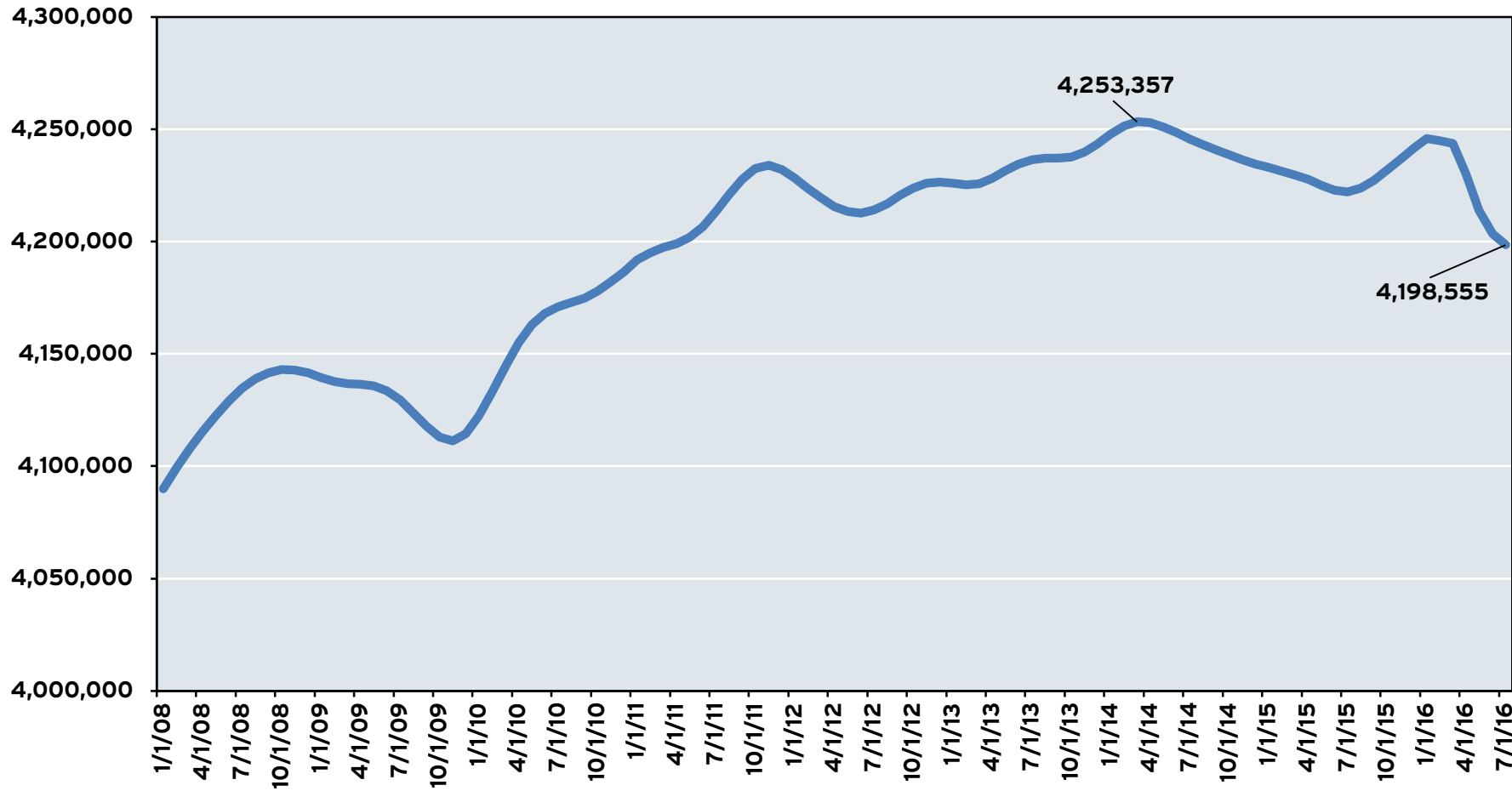
GRAPH 11

PERCENT INCREASE IN ADULTS AGES 16-64 NOT WORKING, 2009-2014



Source: Headwaters Economics, Economic Profile System, [www.headwaterseconomic.org](http://www.headwaterseconomic.org)

**GRAPH 12**  
**SIZE OF THE VIRGINIA LABOR FORCE**



Source: Bureau of Labor Statistics

## DISCOURAGED WORKERS

This explanation asserts that some people attempt to find a job, but cannot, and get frustrated and drop out of the labor force. The Bureau of Labor Statistics (BLS) calculates a variety of unemployment rates for the United States and individual states that attempt to capture this phenomenon. In addition to the conventional “U3” rate of unemployment that the media publicize, the BLS also computes a “U6” rate that is a broader measure of labor market weakness than the usual U3 unemployment rate. The U6 rate includes employees who are working part time, but would rather work full time, plus discouraged workers who have stopped looking for jobs. Because it is much more inclusive, the U6 rate always exceeds the more common U3 unemployment rate and the gap between the two grows rapidly during times of economic recession, when discouraged workers multiply in number.

**Graph 13 reports the U6 unemployment rates for the United States and Virginia between 2003 and 2016. There is little doubt that the discouraged worker effect is real. It is accentuated by what is often labeled “structural unemployment” – jobs are available, but those who are unemployed either are not qualified to fill them, or they are not in the right geographic location to do so. Prospective employees who are not qualified to fill available jobs undoubtedly do get discouraged and some stop looking.**

## CHANGING DEMOGRAPHY

Our population is aging and as it ages, one might expect an increasing proportion of people to drop out of the labor force because they have ended their useful work lives. Until recently, few argued with this supposition. However, as Graph 14 demonstrates, the labor force participation rates (LFPRs) of more mature individuals have been increasing in recent years. Perhaps more mature people find they cannot afford to retire as quickly. Whatever the reason, a demographic explanation for falling labor force participation rates no longer is persuasive.

## GENEROUS SOCIAL SAFETY NET

Some worry that the social safety net has become sufficiently generous that it enables people to avoid having to earn income. This

narrative involves an individual cobbling together some combination of unemployment compensation, Temporary Assistance for Needy Families (TANF), food stamps and the like to eke out an existence.

This explanation reflects a variant of what is termed “moral hazard” – negative behavior that can arise when people know they are insured or otherwise will be supported in a specific situation. Moral hazard is the bane of insurance companies because individuals covered by insurance subsequently often take greater risks.

Is this true for the social safety net? This is not clear. However, we can make two social safety net statements with confidence. First, real per capita safety net expenditures have been increasing in the United States. Second, large differences exist among the states in terms of the social safety net benefits they provide their residents.

With respect to increasing real safety net expenditures, the most rapidly growing social benefit is the Earned Income Tax Credit (EITC). However, it is paid as a supplement only to individuals who already are working, so it does not qualify as a program that discourages work. The second most rapidly growing social safety net expenditure is TANF, and here real per capita expenditures have approximately tripled between 2000 and 2014.<sup>4</sup> It could be a factor in declining labor force participation rates.

Differences in state social safety net expenditures might cause people in some states to move to more generous states, and some people in those states not to seek work. In 2013, in the most generous state, the average unemployment insurance benefit was \$6,894, whereas it was less than half of this (\$3,335) in the least generous state. Further, with respect to TANF, the proportion of poor families with children who received TANF in 2013 varied from a low of 3 percent to a high of 61 percent among the states.<sup>5</sup> Clearly, if TANF makes a difference, much would depend upon where one resides.

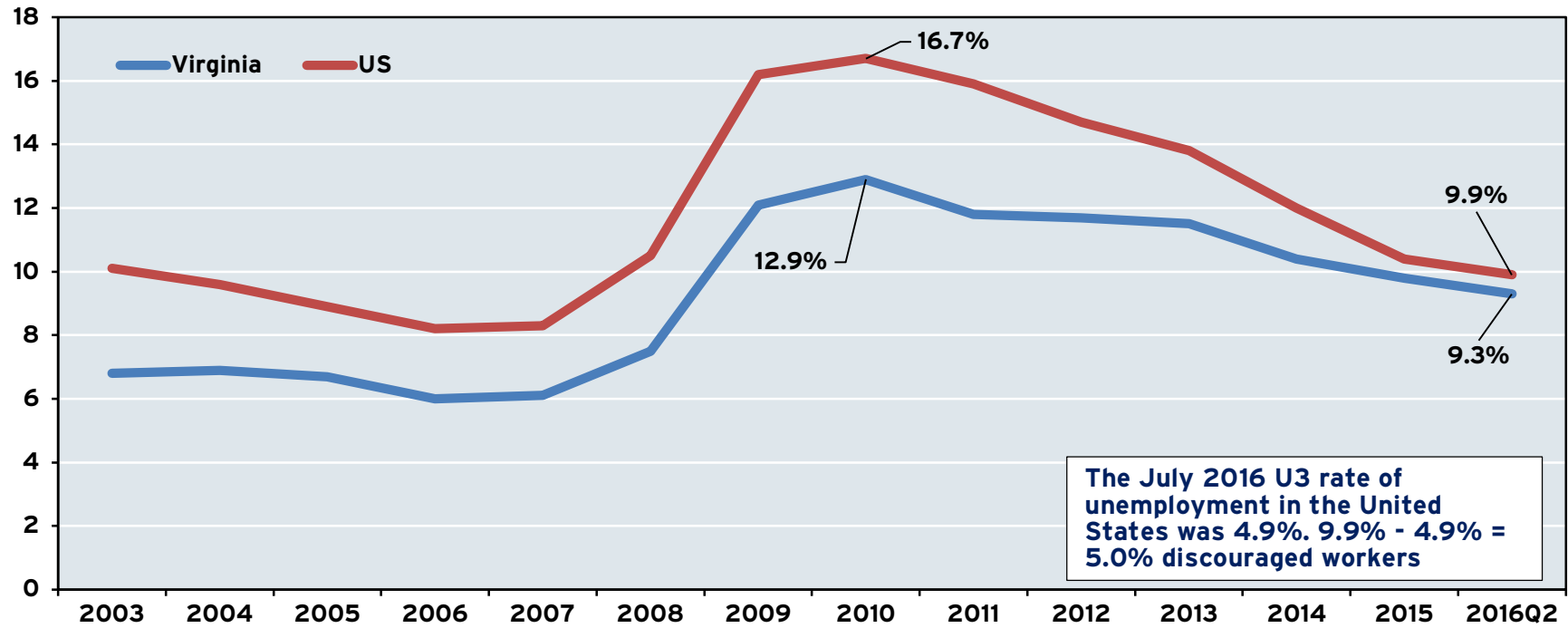
Nevertheless, empirical work suggests that the social safety net hypothesis cannot explain more than 10 to 20 percent of the variations in labor force participation. It is a political hot button explanation that has only limited empirical validity.

<sup>4</sup> Catherine Rampell, “The Changing Social Safety Net, in Charts,” *The Washington Post* (April 8, 2014), [www.washingtonpost.com](http://www.washingtonpost.com).

<sup>5</sup> Sarah Bruch, “Inequalities in Safety Net Programs Across the U.S. States,” Scholars Strategy Network (October 2015), [www.scholarsstrategynetwork.org/node/28104](http://www.scholarsstrategynetwork.org/node/28104).

**GRAPH 13**

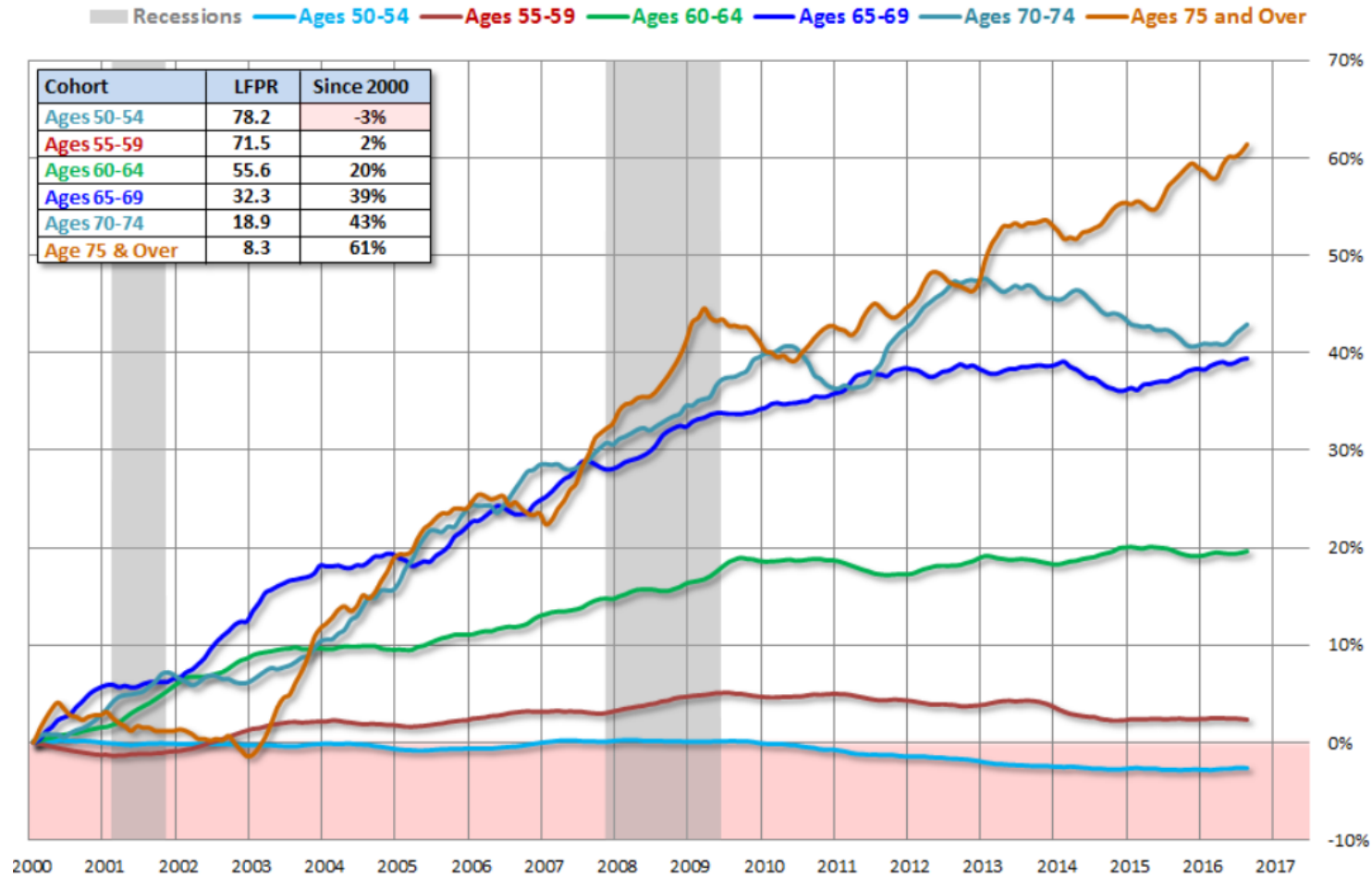
**THE U6 UNEMPLOYMENT RATE: VIRGINIA AND UNITED STATES, 2003-2016**



Source: Bureau of Labor Statistics

GRAPH 14

LABOR FORCE PARTICIPATION RATES OF MORE MATURE INDIVIDUALS



Source: Doug Short, "Demographic Trends for the 50-and-older Work Force," www.dshort.com (Sept. 7, 2016)

## RISING DISABILITY CLAIMS

National Public Radio reported in 2013 that nearly one in every four adults in Hale County, Ala., was receiving a federal disability payment.<sup>6</sup> In general, an increasing number of adults are successfully claiming disability (see Graph 15). This is true for the United States and also for Virginia. There is little doubt that this has reduced labor force participation, but by itself can explain no more than one-fifth of the recent declines in labor force participation that we have observed.

## INCREASED RATES OF COLLEGE ATTENDANCE

Until recently, some of the decline in the labor force participation of younger adults could be attributed to greater proportions of them attending college. This has come to an end, as Graph 16 illustrates. Headcount enrollments have been falling in most segments of higher education, including, especially, public two-year colleges, though by no means at all institutions.

## SUMMING UP THE LABOR FORCE PARTICIPATION RATE EVIDENCE

**There is no single explanation capable of elucidating the phenomenon of declining labor force participation in the United States or Virginia.** Quantitatively, the discouraged worker hypothesis (and related structural unemployment) appears to be the single most important explanation of falling labor force participation, but even after accounting for discouraged workers, one can only explain less than half of the changes we have observed in recent years. For the Commonwealth, there is also some evidence that disability claims are playing an increasing role, but these, too, explain just a portion of the labor force contraction.

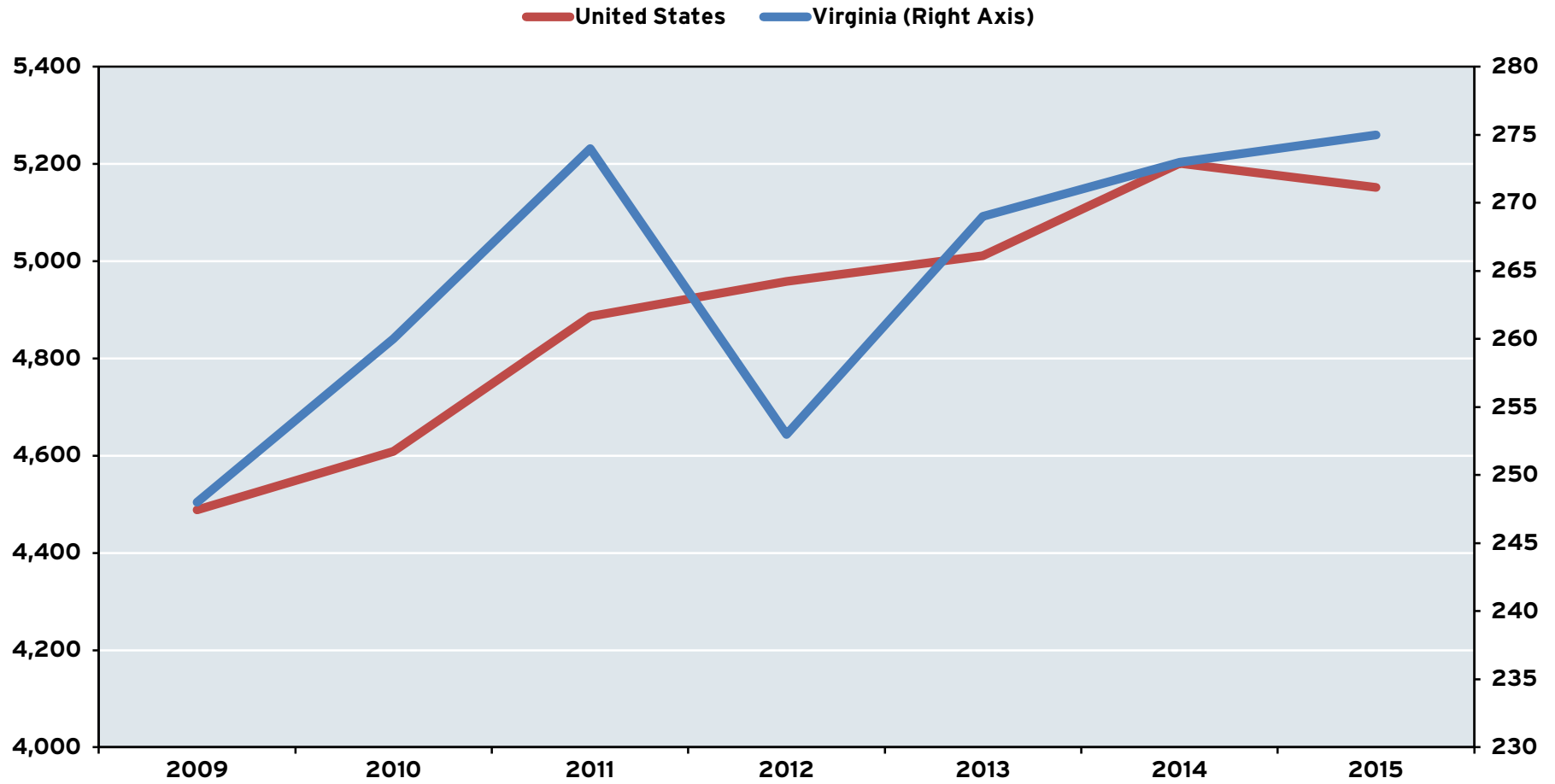
Plausibly, we must look for additional explanations that extend beyond the economic realm where declining labor force participation is concerned. Could it be that gradual changes in societal attitudes have occurred such that it now is socially more acceptable for many people not to be in the labor force, or to work only part time? And further, that laborsaving technological change will make such behavior commonplace? We do not have room to explore these possibilities here, but they are intriguing topics worthy of the attention of government at both the state and federal level.

<sup>6</sup> [www.npr.org/2013/03/25/175293860/in-one-alabama-county-nearly-1-in-4-working-age-adults-is-on-disability](http://www.npr.org/2013/03/25/175293860/in-one-alabama-county-nearly-1-in-4-working-age-adults-is-on-disability).



**GRAPH 15**

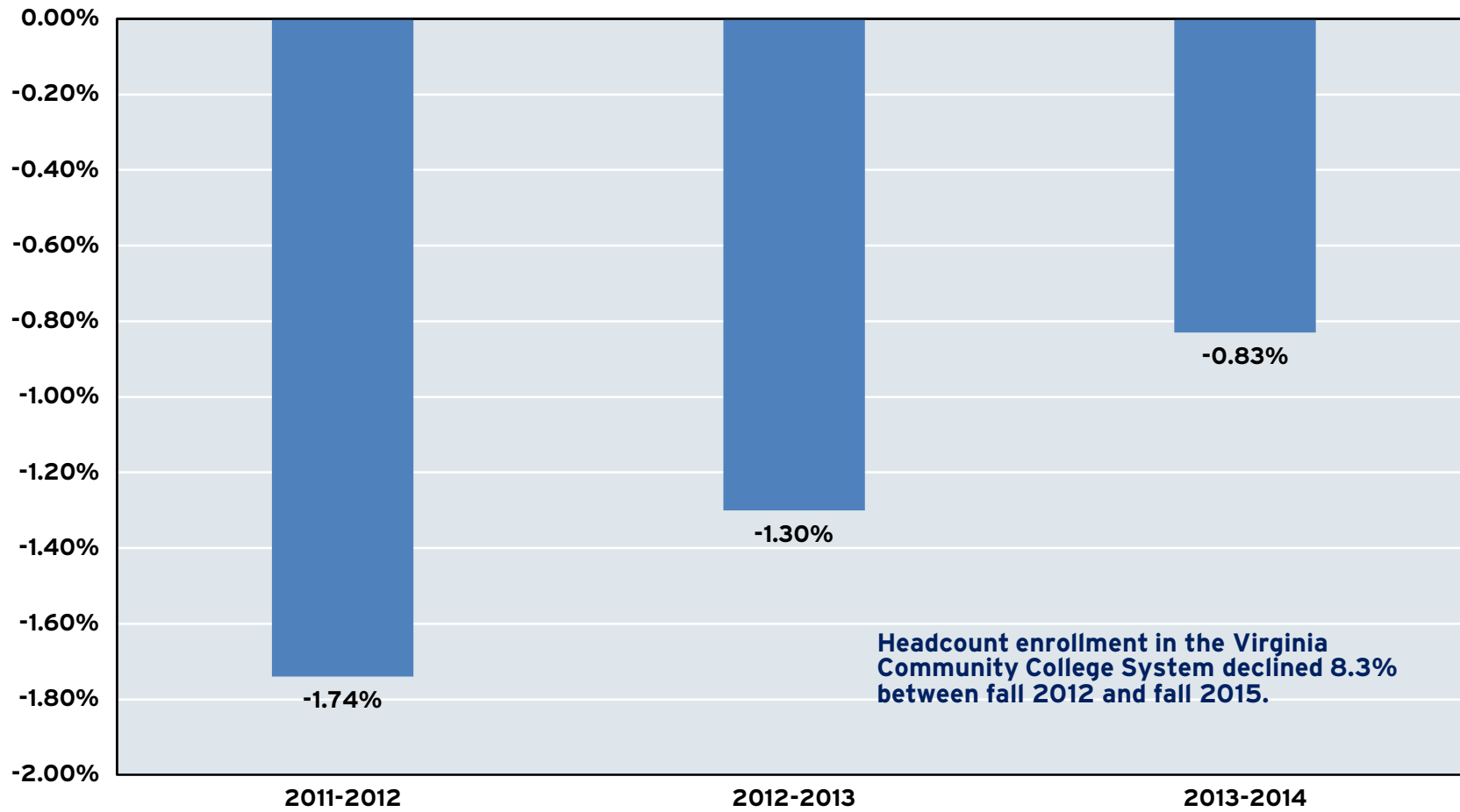
**RISING DISABILITY CLAIMS IN THE UNITED STATES AND VIRGINIA (IN THOUSANDS)**



Sources: Bureau of Labor Statistics and U.S. Census Bureau, 2009-2015 American Community Survey

**GRAPH 16**

**DECLINING COLLEGE HEADCOUNT ENROLLMENTS IN THE UNITED STATES, 2011-2014**



Source: National Center for Educational Statistics, [https://nces.ed.gov/programs/digest/d15/tables/dt15\\_303.25.asp?current=yes](https://nces.ed.gov/programs/digest/d15/tables/dt15_303.25.asp?current=yes)

## A Side Point: Where Do Net New Jobs Come From?

The employment numbers examined in this chapter all have been “net” levels. At the same time, some firms are shedding jobs, while other firms are adding jobs either through expansion of existing facilities or by the creation of a new firm. The final nonfarm payroll employment numbers that we report in this chapter are net jobs after all of such pluses and minuses have been taken into consideration.

**As is true in most states, new job creation in Virginia is largely caused by the expansion of existing firms. About 75 percent of job creation in Virginia comes from the expansion of existing firms.<sup>7</sup>**

While the state created 67,000 jobs in 2015, only 20,000 of those were jobs announced by the Virginia Economic Development Partnership.

## The Commonwealth’s Tax Revenue Shortfall

Gov. McAuliffe announced in August that the Commonwealth was not collecting the volume of tax revenues forecast for the 2016 fiscal year. To the extent that tax revenues are a leading economic indicator, the shortfall tells us that Virginia’s economic growth is decelerating. The rather modest Bureau of Economic Analysis gross domestic product growth estimates for Virginia in September 2016 (only 1.9 percent) support this notion.

It might also be true, however, that even though the Commonwealth has been gaining jobs overall, simultaneously it has been shedding high-wage

jobs and replacing them with low-wage jobs. There is some evidence of this in Northern Virginia (see the next chapter). If those who exit the labor force are more mature, then when they leave the labor force they take their higher wages with them, and less-experienced, lower-wage workers are hired in their place.

Of course, one also could easily argue that the forecasts of 2016 tax revenues made sometime in 2015 simply were too high and not properly connected to core economic numbers. Hence, the shortfall is the product of a forecast that was overly optimistic (which is not an uncommon governmental phenomenon).

Drawing upon the governor’s Executive Budget Document, which is submitted in December of each year, we can examine the average forecast errors made by those who forecast revenues and tax collections. **One can see in Table 3 that there are several years where U.S. GDP forecasts by Virginia staff exceed the actual growth in GDP. This is especially true in and around the Great Recession. This did not lead to egregious errors, however, in the Commonwealth’s revenue forecasts. During the eight-year comparative time span, actual tax revenue collections exceeded those forecast by a fraction of a percent.**

Hence, over the past decade there has been no consistent pattern of overestimation of state tax revenues. That said, the forecasters nonetheless were wide of the mark for FY 2016 and there will be pain inflicted as state agencies are forced to reduce their spending.

<sup>7</sup> Michael Mazerov and Michael Leachman, “State Job Creation Strategies Often Off Base,” Center on Budget and Policy Priorities, 2016.

**TABLE 3****VIRGINIA TAX REVENUE AND U.S. REAL GDP FORECASTS VERSUS ACTUAL, 2006-2015**

<b>Year</b>	<b>Revenue Forecast</b>	<b>Actual Revenues</b>	<b>U.S. Real GDP Growth Forecast</b>	<b>U.S. Real GDP Growth</b>
<b>2016</b>	<b>\$18,308.9</b>	<b>--</b>	<b>2.4%</b>	<b>--</b>
<b>2015</b>	<b>\$16,927.4</b>	<b>\$17,735.6</b>	<b>2.5%</b>	<b>2.6%</b>
<b>2014</b>	<b>\$16,970.9</b>	<b>\$16,411.4</b>	<b>2.1%</b>	<b>2.4%</b>
<b>2013</b>	<b>\$16,416.5</b>	<b>\$16,684.6</b>	<b>1.7%</b>	<b>1.5%</b>
<b>2012</b>	<b>\$15,726.6</b>	<b>\$15,846.7</b>	<b>1.7%</b>	<b>2.2%</b>
<b>2011</b>	<b>\$14,717.4</b>	<b>\$15,040.2</b>	<b>2.2%</b>	<b>1.6%</b>
<b>2010</b>	<b>\$13,921.8</b>	<b>\$14,219.5</b>	<b>0.4%</b>	<b>2.5%</b>
<b>2009</b>	<b>\$15,015.3</b>	<b>\$14,315.1</b>	<b>-0.4%</b>	<b>-2.8%</b>
<b>2008</b>	<b>\$16,087.3</b>	<b>\$15,767.0</b>	<b>2.1%</b>	<b>-0.3%</b>

Sources: Virginia Department of Planning and Budget and Bureau of Economic Analysis

## A Look at Virginia's Largest Metropolitan Areas

Uneven economic conditions exist across Virginia's metropolitan regions, continuing a postrecession pattern. Some metropolitan areas are doing well, while others are struggling. In last year's report, the only real metropolitan bright spots in the Commonwealth were the Richmond and Washington, D.C., regions. There are bright spots again this year, but the players are different – Richmond and Hampton Roads.

Table 4 presents real GDP growth rates for eight Virginia metropolitan areas between 2008 and 2015. The 2015 GDP economic growth rate estimates merit additional discussion. They are “advance estimates” that have been generated by the Bureau of Economic Analysis (BEA). The BEA is the same agency that is responsible for the national GDP estimates. Though we are nearly through 2016, the advance estimates released in September 2016 were for 2015, not 2016.

According to the BEA, Richmond and Hampton Roads performed quite well in 2015, growing 3.9 percent and 3.7 percent, respectively. The Washington, D.C., metro area saw positive, but slow economic growth (1.3 percent). Growth in the remainder of the metro areas was flat or down.

The BEA revises the estimates for each year and sometimes their revisions are startlingly large. In 2014, for example, the eventual revisions averaged 1.4 percent in absolute terms – a huge difference when the numbers

themselves are so small. As a consequence, it usually is better to assess metropolitan growth by focusing on longer time periods. The final column in Table 4 does this by computing average real economic growth rates for the time period 2008-2015. This is more informative than a single year's growth rate.

The long-term average growth rate numbers in Table 4 are disheartening. While the United States has averaged about 2 percent real economic growth during this period, only Charlottesville approached 2 percent among Virginia's metro regions. Richmond and Hampton Roads averaged 1.1 percent and 0.7 percent, respectively. This is despite the BEA's estimates that they grew 3.71 percent and 3.89 percent, respectively, in 2015.

We fully expect the BEA to revise downward both the Hampton Roads and Richmond growth estimates – perhaps even cutting them in half. At the same time, it also seems possible that economic growth in Northern Virginia may have been underestimated.

Nonetheless, the overall tenor of the numbers for the eight metropolitan regions is discouraging. **Between 2008 and 2015, four of the eight regions recorded many years of negative economic growth, epitomized by Lynchburg and Roanoke, both of which recorded negative economic growth rates in six of the eight years covered. Clearly, economic progress has not been evenly distributed across the Commonwealth.**

**TABLE 4****REAL GDP GROWTH, SELECTED VIRGINIA METRO AREAS, 2008-2015**

	2008	2009	2010	2011	2012	2013	2014	2015	2009-2015 Average
<b>Blacksburg</b>	-7.20%	-3.11%	1.46%	2.97%	7.47%	-3.78%	1.61%	-0.98%	1.20%
<b>Charlottesville</b>	1.24%	-0.19%	3.79%	3.22%	2.69%	0.59%	2.94%	-0.26%	1.90%
<b>Harrisonburg</b>	-4.64%	9.12%	3.34%	-0.91%	-0.53%	-1.38%	0.21%	-2.61%	-0.30%
<b>Lynchburg</b>	-1.06%	-0.45%	1.86%	-1.72%	-1.49%	-0.73%	0.79%	-0.64%	-0.30%
<b>Richmond</b>	0.00%	-0.98%	1.41%	-0.06%	0.91%	0.78%	0.62%	3.89%	1.10%
<b>Roanoke</b>	-0.52%	-1.79%	-1.59%	-1.01%	-0.58%	-0.14%	0.36%	0.80%	-0.30%
<b>Hampton Roads</b>	-0.29%	0.65%	-0.16%	0.66%	0.83%	0.28%	-0.73%	3.71%	0.70%
<b>Wash DC/ NOVA</b>	2.11%	0.02%	3.29%	1.56%	0.25%	-0.55%	0.96%	1.27%	1.00%

Sources: Bureau of Economic Analysis and calculations by the Center for Economic Analysis and Policy at Old Dominion University

## Concluding Remarks

If one were to view the Virginia economy as a patient undergoing a physical examination because she hasn't been feeling quite as good as she thinks she should, then as economic doctors we would be forced to conclude that her maladies have proven difficult to diagnose. This is because we are receiving conflicting signals about the Virginia economy. Several indicators suggest economic expansion. Unemployment rates have been steadily falling and are approaching levels not seen since early 2007. Wages have been rising at an average rate of about 2 percent a year during the recovery and 2015 saw exceptional wage growth in excess of 4 percent. Year-to-date numbers for 2016 (through June) show continued growth of 2 percent over year-to-date 2015.

Unfortunately, other indicators of the state's economy are less rosy. Virginia's labor force has been declining in size and its labor force participation rates have been declining as well. The state's labor force in July 2016 was essentially the same size as it was in March 2011 and is in the midst of a downward trend. The reasons for declining labor force participation are not well understood, but one way or another, society ends up having to support prime-working-age individuals who drop out of the labor force.

**What does the future hold? It appears that Virginia's economy is decelerating – not a fortuitous development, given that it was not growing very fast when the current slowdown began. This coincides with torpid international economic growth and immediate external economic stimulus does not appear to be on the horizon.**

Three of the most important sectors of the economy of the Commonwealth relate to defense spending, tourism and the Port of Virginia. All three have cooled, albeit for different reasons. One of the few economic bright spots is the growth of professional and business services employment in Northern Virginia, which we discuss in the next chapter.

In last year's report, we forecast that 2015 GDP growth would be 1.33 percent, and the Commonwealth recorded an actual growth rate of 1.4

percent. Hence, our model was right on target. At this time last year, we also were forecasting 1.98 percent real economic growth for 2016. The state's 2016-Q1 real growth rate of 1.9 percent (though for only one quarter) is right in line with this forecast.

**However, since the beginning of 2016, our model has been suggesting slower growth in each of the remaining quarters of 2016 and through 2017. As a consequence, we have revised our 2016 economic growth forecast for Virginia downward from 1.98 percent to 1.85 percent (Graph 1). We are forecasting national economic growth to pick up in the second part of 2016 and outpace the Commonwealth's growth rate through mid-2017.**

Reality in the Commonwealth is that most of the monthly economic data reported in the first half of 2016 have been underwhelming. There is little reason to believe that real GDP growth in 2016 will differ significantly from GDP growth in 2015.

Virginia's economy will grow in 2016, but less than 2 percent. It will not be a memorable year in terms of economic performance. We do forecast modest growth continuing into 2017 in employment, housing prices and average wages, plus continued improvement in the unemployment rate. The problem is that the moderate pace of growth of these indicators will not be sufficient to push the Commonwealth's real GDP growth above 2 percent.

A cause for concern is Virginia's relatively slow growth compared to other states. Our 2015 growth rate of 1.4 percent was a major improvement over 2013 and 2014. Even so, this still placed us only 33rd from the top among the 50 states. Seventeen states recorded GDP growth rates of 2 percent or higher, with California and Oregon posting growth rates in excess of 4 percent.

Our ability to change our future depends substantially on the actions of those we cannot control – the federal government, the Federal Reserve System, the People’s Republic of China, the European Union, etc. Even so, there are positive steps we can take that over time can move us forward at a more rapid rate. These include:

- making patient strategic investments in research and development, particularly in sectors with strong private-sector market demand;
- improving our educational system K through doctorate;
- developing new export-oriented markets for Virginia’s products;
- diversifying our economic structure;
- improving our transportation system;
- making competitive economic development efforts to attract new businesses or assist those that wish to expand; and
- improving our business regulatory climate.

We are not, after all, helpless actors in a play solely directed by others.